MAYO CLINIC

Mayo Magazine

AUTUMN 2007

Common *grounds*

From healing gardens to advanced imaging technology, at Mayo Clinic, the needs of the patient will always come first

ALSO INSIDE:

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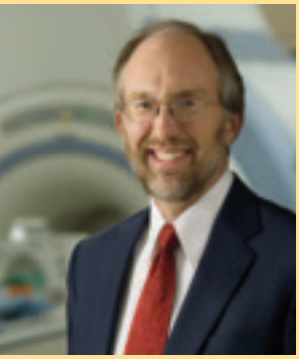

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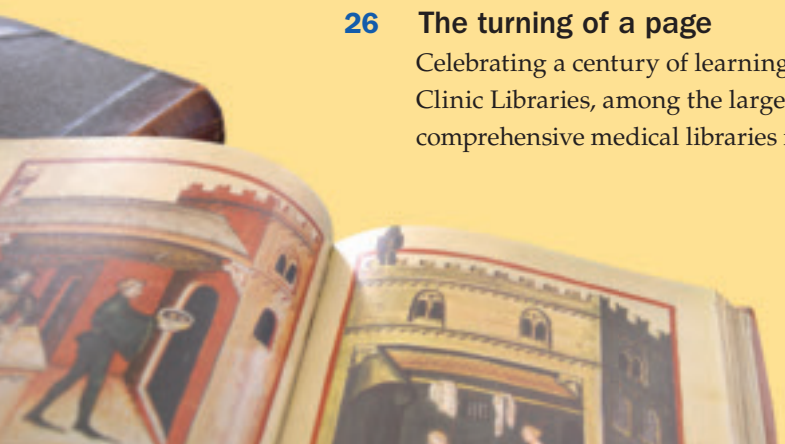
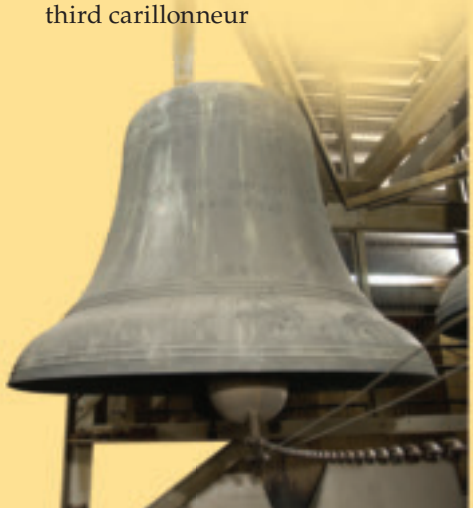




Cover photo by: Joseph M. Kane

A message from leadership

FORWARD-THINKING HOSPITAL

Health care delivery of the future will be very different from today. Clinics and hospitals will function in ways yet to be imagined. Treatment for many conditions will become virtual, and if not virtual, will use on-site technology and methods that may change the very nature of the hospital experience.

How do we prepare for new models of health care delivery when building a new hospital on the Mayo Clinic Jacksonville campus?

The hospital's design accommodates a great deal of change, including room for additional floors, new configurations with its universal room design and high-speed wiring for the virtual visits we all anticipate down the road. At the same time, it will help us improve our existing medical care by speeding treatment, improving collaboration between groups and eliminating thousands of minor steps in the care of our patients.

Bob Walters has played a key role in forging this new hospital built for today and tomorrow. With his help, goals for reinventing health care delivery are coming to fruition.

Sincerely,

Denis A. Cortese, M.D.

President and Chief Executive Officer, Mayo Clinic

HEALTH CARE OF TOMORROW

When the new hospital on the Mayo Clinic Jacksonville campus opens in the spring of 2008, it will be a dream come true for Mayo. This dream was made possible by collaboration among our colleagues at all three Mayo sites in Rochester, Arizona and Jacksonville. Teamwork at every level has helped assure that all facets of this complex building project have been addressed. Everything, from the structural design of the hospital itself to the artistic creation of a place that conveys a true sense of healing, has been considered.

Counted among our team members are our benefactors; people who have stepped forward to make this hospital a reality. Thanks to their generosity, we will be able to continue to provide the best care to every patient every day at Mayo Clinic Jacksonville. By lending philanthropic support to this project, our benefactors have proven once again that they believe in Mayo's long-term vision and their philanthropic support is a wonderful testimony to the trust they place in Mayo.

Sincerely,

Robert Walters

Head administrator, Mayo Clinic Jacksonville hospital project

healing gardens

Herman and LaDonna Meinders Garden




By Suzanne Winckler

It's noon on a breezy, balmy day in July. In Annenberg Plaza, a spacious garden courtyard surrounded by towering Mayo Clinic buildings, dozens of people are gathered on benches and ledges. Singly, in couples or small clusters, they are eating lunch, reading, talking or simply lost in thought. Others are crossing the plaza, on their way to an appointment or meeting. It's fairly easy to distinguish Mayo staff: their shiny black badges and favored mode of walking (briskly) give them away. The pale green leaves of the birch trees riffle in the wind. In the garden beds, bright yellow daylilies shine like sunbursts and petunias shimmer in shades of pink.

This is just one of many garden spaces at Mayo Clinic Rochester, which covers 35 city blocks, and there are even more gardens on the nearby campus of Saint Marys Hospital. Every plant — from the old-fashioned begonias and snapdragons to the salvia, papyrus and artemesia — has been chosen with care to achieve one purpose. "We create places for serenity," says Ted Bartel, who supervises the 15-member grounds crew at Mayo Clinic Rochester. "Our gardens give patients and our staff places for escape, relief and therapy. They have a chance to breathe and think and get to the roots of life."

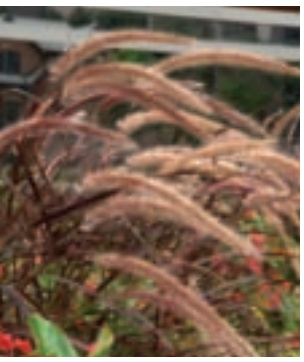
The Mayo family was keenly aware of the pleasure and solace afforded by gardens and green space. Patriarch of the family, William Worrall Mayo, M.D., purchased a 35-acre farm on the edge of Rochester in 1875 to pursue his interests in farming and animal husbandry, activities he especially enjoyed in his retirement. It was a beautiful setting, with magnificent views of the city and the Zumbro River, reached by a driveway lined with Lombardy poplars. His sons, Drs. William and Charles Mayo (better known as Doctors Will and Charlie), and their wives, Hattie and Edith, carried on this tradition of spacious grounds and lovely gardens around each of their homes. Dr. Charlie was particularly keen on gardening. He had a greenhouse at Mayowood, the family home, and "began raising chrysanthemums on such a scale and with such success that the annual chrysanthemum show at Mayowood, with its more than 60,000 blossoms, came to rank among the largest and finest in the country," wrote Helen Clapesattle in *The Doctors Mayo*.

The notion of creating welcoming surroundings, as evoked by the Mayo family homes, became part and parcel of the institution that bears their name. Michael Brennan, M.D., an endocrinologist at Mayo Clinic Rochester, is a passionate advocate for healing spaces in the health care setting. "Hospitals and clinics are all too often uncomfortable places," says Dr. Brennan. "Isn't it ironic that when illness strikes, patients should be forced to forgo the consolation and reassurance that a warm and welcoming environment imparts?" Early on, Mayo Clinic challenged this norm within the medical profession. In contrast, Mayo Clinic's buildings and grounds are welcoming and reassuring and express the primary value "the needs of the patient come first."

Mr. Bartel and the grounds crew take this charge very seriously. For them, gardening is art. "When you start putting different plants and trees together, you are creating a living art. Your canvas is your landscape," he explains. "You are creating an expression of color, form and texture."

At Mayo Clinic Rochester, the canvas is constantly changing. "In the spring, we want a flush of color. We can say, 'Ah, at last it's spring.'" That first burst of color comes with the blooming of 40,000 tulips, followed by a summer

Every plant has been chosen with care to achieve places of serenity.



The Mayo family was keenly aware of the pleasure and solace offered by gardens and green spaces. Mayo Clinic's buildings and grounds are welcoming and reassuring and express the primary value "the needs of the patient come first."

encore of 40,000 flowering annuals. Mr. Bartel, who has a great appreciation for Minnesota's native prairie landscapes, is also partial to grasses, both native and non-native species, in Mayo Clinic's gardens. "Grasses are so nice in the summer breezes."

With fall comes a splash of color with plantings such as chrysanthemums. Then, it's up to the evergreens to carry the patients and staff through the long winter. "It's important to have some evergreens in every planting. I always enjoy that first dusting of snow on the evergreens and even on the grasses — everything is so pure."

A native of southeastern Minnesota, Mr. Bartel began gardening with his parents as a youngster, and he and his wife, Jean Bartel, a Movement Disorder Lab technician in the Neurology Department at Mayo Clinic, tend to extensive flower and vegetable gardens at their home in Wasioja, Minn. His passion for gardening, at work and home, shows no signs of waning.

One of Mr. Bartel's greatest pleasures comes from the teamwork among the Mayo Clinic grounds crew. "We have very talented, dedicated people," he says with great pride. "Basically my job is to tell the head gardeners, 'Show me what you can come up with.' They're the ones who design the gardens. I want everyone to take ownership of their units. We all have to try new ideas, and that's especially true for gardeners who are really artists."

Mr. Bartel and his landscaping colleagues have counterparts at Mayo Clinic Jacksonville and Mayo Clinic Arizona who, with shovel and trowel, rake and hoe, are creating living canvases with the same attention to detail and focus on the patient. Dr. Brennan strongly believes that an essential part of providing beautiful, well-maintained settings for patients is to inspire confidence and set the tone for the medical exams and treatments they may receive. That trust often begins with the first tulips of spring in Rochester, amid a midsummer's display of crape myrtles in Jacksonville, or under a shady breezeway of paloverde trees in Arizona.

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"Our gardens give patients & our staff places for escape, relief & therapy."

Shared garden between the Hamilton Building and Mayo Medical School in Rochester, Minn.

A grounds crew of 26 people care for the landscapes at Mayo Clinic Campuses in Rochester, Jacksonville and Arizona.

Rochester:

Ted Bartel, *supervisor*
Matt Donovan
Ricky McGrath
Kathy Pahl
Nick Queensland
John Reeve
Mark Scott
Greg Week

Saint Marys Hospital:

Scott Bradley, *lead groundskeeper*
John Dols
Alan Domnick
Terry Hammon
Brian Kellner
Tom McEldowney
Mike Nadolny
Todd Ness

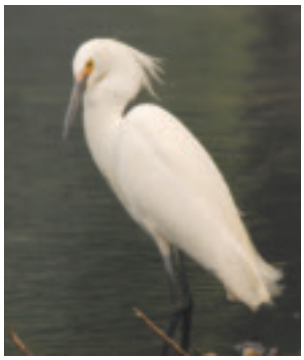
Jacksonville:

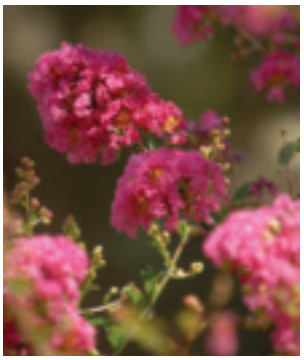
Rickie Firestine, *supervisor*
Derrick Griswold
Butch Mason
Brian Rose

Arizona:

Joel Blaker, *supervisor*
David Cohen
Lyon Dominguez
Juan Flores
Charles Rudnicki
Jesus Sainz

"They have a chance to breathe and think and get to the roots of life."





Mayo Clinic Jacksonville
Louchery Island

Tranquility in a tropical setting

Verging on tropical, Mayo Clinic Jacksonville's 392-acre campus is a landscape of majestic pines, palms and oaks. Several lakes are havens for wildlife such as the great blue heron and American egret. A favorite destination for patients is Louchery Island, set in one of the lakes and connected by a footbridge. Plantings of daylilies and crape myrtles, combined with a sculpture of large, suspended prisms, provide rainbows of color, while a fountain, which is a rotating granite sphere, is a soothing backdrop. "Calming and peaceful, flowing and tranquil" are the words grounds crew supervisor Rickie Firestine uses to describe the landscapes she cares for with three other members of the landscape team.

Ms. Firestine grew up in Jacksonville and is partial to the native trees and plants that thrive on Florida's coastal plain. She's been nurturing Mayo Clinic's trees, shrubs and flowers for 19 years. Ms. Firestine is especially proud of the many oaks she helped plant in 1988, which are now towering, shade-giving specimens. "We have several species," she explains, rattling off their names. She is also a proponent of palms. Numerous varieties grow on campus, including Washingtonia, Canary Island, coontie and cabbage palm, which is the state tree of Florida.

Against this green backdrop, Ms. Firestine and her team add pockets of color, including many flowering annuals and seasonally blooming shrubs and trees. In spring and again in fall, azaleas thrive in the many shady places on campus. In midsummer, crape myrtles provide bursts of pink and purple. The best reward of Ms. Firestine's job is working every day among Mayo Clinic patients. "Often they'll tell us how much they enjoy the trees and flowers," she says. "It's always a good feeling to know our work is making a difference for them."

"It's always a good feeling to know our work is making a difference."

Oasis in the desert

With 320 days of sunshine and an average annual rainfall of seven inches, Arizona offers a distinct landscaping challenge for an institution with a century of roots in the Midwest. Happily, the founding staff of Mayo Clinic Arizona, many of whom came from Rochester, embraced the desert and the Southwestern culture that reveres, and incorporates, shade into daily life.

The landscape canvas at Mayo Clinic Arizona is one of pastels — pale greens, soft grays, creamy yellows and dusky lavenders. The soft colors and undulating forms of the desert trees, cacti and shrubs are soothing and serene. Even in the height of summer, patients and staff can find refuge under the boughs of one of the many paloverdes — elegant green trees of the Sonoran Desert — planted along walkways and in courtyards on Mayo Clinic Arizona's campuses.

One of the favorite places for Mayo Clinic patients and staff, as well as walkers and joggers from nearby homes, is the one-mile Nature Trail on the Scottsdale campus. The trail is maintained by a Mayo Clinic volunteer group called the Desert Docents, who take great pride in the fact that all the vegetation is native. In fact, native plants (or hybrid varieties) — from the giant saguaro cactus to the small, frilly fairy-duster — far outnumber non-native trees and shrubs in the landscaped areas. These plants attract the many native birds, such as cactus wrens, curve-billed thrashers and Gambel's quail, which provide added enjoyment to patients and staff.

The members of the grounds crew at Mayo Clinic Arizona care for about 230 acres at seven sites, including the Phoenix campus (home to Mayo Clinic Hospital and Mayo Clinic Specialty Building), the Scottsdale campus and several family and primary care clinics.

Joel Blaker, supervisor of the grounds crew, has worked at Mayo Clinic Arizona for eight years and was Mayo Clinic's landscape contractor before coming on staff. He grew up in Scottsdale, loves the desert and is carrying on in the footsteps of his father who was a nurseryman. Mr. Blaker believes Mayo Clinic's mission begins before a patient even enters the door. "The patient comes first outdoors," he says. "We drop what we're doing if we see that someone needs a little help out of the car. And if they need directions we take them, we don't just tell them. I believe the most important part of our job is to make sure everyone has a great experience coming to Mayo." ■

Mayo Clinic Arizona Nature Trail

"We make sure everyone has a great experience coming to Mayo."

By Dianne M. Axen

Just a click away

The right answer can be found on AskMayoExpert

Physicians and scientists are producing more medical information today than ever before. On one hand, this is great news — new knowledge promises breakthrough medical advances. On the other hand, physicians face an immense challenge in trying to keep abreast of this emerging medical knowledge. Donald A.B. Lindberg, M.D., director of The National Library of Medicine, reports that Medline — an indexing service for research in medicine and related fields — holds the descriptions of more than 14 million scientific reports. Each year, 500,000 new articles are added — that's approximately 1,400 new articles every day. So how does a physician find the right information, at the right time for the right patient?

Finding the answers

Mayo Clinic began to aggressively address this question more than four years ago when it launched the Mayo Clinic Education Technology Center (ETC). The ETC serves all three Mayo campuses and meets many of the online learning needs of the five Mayo schools. The goal of the ETC is to create, capture and distribute medical knowledge. It began as a virtual or electronic center, making information accessible through Mayo's computer systems or other technology.

"That was our 'castle in the air,'" says Farrell J. Lloyd, M.D., M.P.H., director of the Mayo Clinic Education Technology Center. "And Thoreau says, if you build castles in the air, now your work is to put the foundation under them. That's what we are doing."

AskMayoExpert is one of several foundational projects being built within the ETC to help physicians manage the growing amount of medical information. AskMayoExpert bridges the patient's electronic chart with the information a physician needs to care for that patient.

Connecting these two information systems is no small order because the information exists in separate places. For example, every Mayo Clinic patient has an electronic medical record that contains physician notes, laboratory reports, appointment schedules, X-rays and other test results. But this is not the only information a physician needs to care for a patient. A physician also must be current on research, best-practice evidence, genetic information, new approaches to certain diagnoses, new drugs and potential drug interactions. And today's physician also must be mindful of costs, reimbursement issues, quality and safety needs.

Locating the right Mayo resource is as important as accessing the right information. In 2006, Mayo Clinic recorded more than 2.8 million patient visits. With a staff of 3,317 physicians, medical scientists and clinical research associates, finding the right Mayo expert could present a challenge.

That's where AskMayoExpert is coming to the rescue.

The push and pull of information gathering

"Helping Mayo physicians get the best information to make the best patient care decisions is the goal of AskMayoExpert," says Dr. Lloyd. "Expertise at Mayo is wide and deep. It's important for our physicians to quickly locate Mayo experts."

The Enterprise Learning System (ELS) supports AskMayoExpert. The ELS is a powerful software system capable of managing and storing information from many sources. Mayo Clinic is developing strategies that will connect the electronic medical record to other information resources, and provide physicians immediate access to the latest Mayo-specific information — anytime, anyplace.

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Photo by: Siddiqi Ray

QUESTION: How does a physician find the right information, at the right time for the right patient?

ANSWER: AskMayoExpert

Farrell J. Lloyd, M.D., M.P.H., director of the Mayo Clinic Education Technology Center

Mayo Clinic patient records are electronic and represent one of the largest electronic medical record systems in the world. Patient information is instantly available to Mayo caregivers via more than 16,000 computer terminals on Mayo's campuses. An average of 7.5 million transactions are processed between 8 a.m. and 9 a.m. every day. By noon, this number jumps to 15 million transactions.

Sometimes a physician needs information "pushed" to him or her. In AskMayoExpert, high-priority findings on an electrocardiogram report would be pushed to the physician who ordered the test. The system would automatically send an alert message and important information about the disorder directly to the physician. This gets immediate attention and may save valuable time especially if the physician is not an expert in that particular area (see: When every minute counts).

The Education Technology Center also is working to develop information "pull" within AskMayoExpert. This means a physician with a question about a topic can search AskMayoExpert and pull best-practice information, a list of Mayo experts and their contact information and educational material. The system even provides self-assessment questions for the physician to evaluate his or her understanding of the topic. This information is stored in the system for future use by physicians for board certification or Continuing Medical Education credit. It can be a win-win situation — the patient receives even better, faster care and the physician receives credit toward recertification through everyday work.

Behind the scenes

Multiple teams of diverse professionals are working on the steps necessary to roll out the AskMayoExpert initiative. For example, Mayo Clinic Libraries have licensed all the electronic journals and textbooks, creating a large electronic library to support the AskMayoExpert database.

When every minute counts

When Julia A. Files, M.D., chair of the Division of Women's Health, Mayo Clinic Arizona, received an e-mail notification that an ECG she had ordered suggested her patient had long QT syndrome, she opened the link to AskMayoExpert. She reviewed the information about her patient, a 60-year-old female who did not have any risk factors for long QT syndrome, a potentially lethal cardiac problem.

"I appreciated the information in AskMayoExpert, and I was directed to the correct evaluation," says Dr. Files. "I then scheduled the patient with one of our cardiologists listed as having expertise in this condition."

The cardiology workup did not reveal long QT syndrome. "I was able to reassure my patient that her risk of sudden death was not increased," says Dr. Files.

As a member of the AskMayoExpert Advisory Committee, Dr. Files is helping identify and address issues related to this new initiative. ■

"The library is using its expertise in searching literature and retrieving knowledge to bring best-practice evidence to the content experts — the physicians who decide what information will go into AskMayoExpert templates," says J. Michael Homan, director of Mayo Clinic Libraries. "The library is excited to partner in this way, because we are all about making sure people can access the knowledge they need." (For more information on the Mayo Clinic Libraries, see page 26.)

The vetting of medical and scientific information by Mayo physicians for Mayo physicians makes AskMayoExpert a unique product. According to Dr. Lloyd, Mayo Clinic is organized for projects like this. "Most organizations do not have an organizational structure that provides the governance, the delivery model and the expertise to make a project like this possible. The projects of Mayo Clinic's Education Technology Center take what Mayo Clinic Clinical Practice Committee says is important for clinicians to know, and use Mayo governance to identify the individuals to be responsible for developing the areas," says Dr. Lloyd. "The partnership with Mayo Clinic's practice and research activities is important to maintain the quality of clinical decision-making as AskMayoExpert evolves as a tool to improve workflow."

Sharing quality innovations and Mayo best practices

"At its core, Mayo Clinic is a learning organization," says Denis A. Cortese, M.D., president and chief executive officer, Mayo Clinic. "Yet, whenever I hear stories about innovation at Mayo, my first question is always the same — have we shared this improvement with the rest of the staff?"

AskMayoExpert is just one of the initiatives of Mayo Clinic Education and Technology Center, which facilitates the exchange of quality innovations and Mayo best-practice information.

"With benefactor support, Mayo is building the technology infrastructure that allows Mayo practitioners, educators and patients to experience the highest-quality patient care," says Dr. Lloyd.

AskMayoExpert is a project that needs ongoing attention and maintenance because of the changing nature of information. "I think of AskMayoExpert as a living system," says Dr. Lloyd. "It needs to be fed, watered and nurtured in order for it to grow and change."

In return, the system is able to research itself by tracking user information such as: Where do users go for information? What questions are they asking? How is the information being used? Eventually, learners' needs will help drive changes in the system.

"Mayo is a professional learning organization and that's a dynamic process," says Dr. Lloyd. "AskMayoExpert is an application to connect problems that clinicians need solved, with people who have the expertise to solve them."

Connecting information and patients

The ETC coordinates all of the tools being developed at Mayo to harness, sort, critique, use and share that knowledge, not only for its own patients, but to advance medicine all over the globe. The future at Mayo promises to make information more manageable for the physician, medical student and other staff, but the real benefit is to the patient. AskMayoExpert is technology that connects the best available information to the best interests of the patient.

"The thing I love about this, and why I love my job, is Mayo Clinic has provided such a valuable resource to the world," says Dr. Lloyd. "It's a way to preserve Mayo's legacy and Mayo's culture of sharing and delivering knowledge to those who need it." ■

"With benefactor support, Mayo is building the technology infrastructure that allows Mayo practitioners, educators and patients to experience the highest-quality patient care. **AskMayoExpert** is an application to connect problems that clinicians need solved, with people who have the expertise to solve them."

By Michelle Felten

Inside OUT

Imaging technology, facility advance science

The sight was clearly something not seen every day. On the street below, people went about their business, occasionally glancing up to check the status of the large inanimate object dangling in the sky. Throughout the afternoon, they monitored the progress as the giant magnet was carefully lifted from a semitruck and hoisted into the air by crane. Passersby watched as workers inched the oversized magnet, a little this way, a smidge that way, to finally ease it through the just-big-enough opening in the side of the building.

The above scene was repeated twice that July afternoon as two magnets, one seven tons, the other 14 tons, arrived on the Mayo Clinic Rochester campus. Their destination was the new Opus Building-Mayo Clinic Center for Advanced Imaging Research.

The only things these two superconducting magnets have in common with those that generally adorn refrigerator fronts are their rounded shape. These powerful spheres will be used to coax detailed information about the human body from beyond the boundaries of what the eyes can see.

History lesson with a forward twist

When it comes to seeing inside the body, most people think of X-ray … that tried-and-true method for examining bone that's been around since 1895. Its discoverer, German physicist Wilhelm Roentgen, could scarcely have imagined how far the science of examining the body from the inside out would advance.

Today, X-ray is just one of an array of imaging methods. A sampling of other imaging techniques includes X-ray computed topography (CT) to see the position of organs; magnetic resonance imaging (MRI) to view the contrast of soft tissue such as the gray and white matter of the brain; and ultrasound to detect moving objects at high speed such as the movement of valves within the heart. In fact, there are very few structures, spaces or folds within the human body that can't be seen by one imaging test or another, according to Stephen Riederer, Ph.D., director of the Magnetic Resonance Laboratory at Mayo Clinic.

"We've been able to view the inside of the body with great detail and accuracy for many years now, but as scientists and radiologists, we always want to see more," says Dr. Riederer. "The advancements that will come as a result of the new Opus Building will allow us to continue working on ways to improve the level of detail seen and to develop better biomarkers and contrast agents." (Think thick, pink barium solution consumed before a colonoscopy.)

"New techniques in MRI will help in a number of key areas including early diagnosis, improvements in the way we measure the progression of disease and in our understanding the biology of the disease itself. Improvements in these types of measures will not only help in the clinical care of patients, but will aid in developing therapies to treat disease," says Clifford Jack, M.D., who heads the effort toward creating better biomarkers and contrast agents.

A 3-D view of the world

The human body is a 3-D structure and radiologists are trained to think in these terms.

"In fact, one might say that it's even more than three-dimensional because some structures of the body, such as the heart, can change with time," says Dr. Riederer. "As imaging gets more refined, radiologists are better able to look at images and act as consultants to clinicians in making diagnoses. When used properly, imaging can greatly reduce exploratory surgeries previously performed to diagnose problems, and can more quickly guide treatment therapies. Advanced three-dimensional data eliminates the guesswork. "

Photo by: Siddiqi Ray

Stephen Riederer, Ph.D.

Diagnostic imaging — imaging used to identify disease — has been one of the leading advances in medicine for more than 30 years. During that time, Mayo Clinic has been in the business of diagnosing patients based on scans of one kind or another. In fact, the first CT scanner in the United States was installed at Mayo Clinic on June 19, 1973, after Hillier (Bud) Baker, M.D., with authorization from the Mayo Clinic Board of Governors, went to England to purchase the device. Although long obsolete, the scanner is now on display in the Gonda Building as historical tribute to Mayo's radiological roots.

However, the question is one of detail for Dr. Riederer and his staff of about 75 in the Department of Radiology. "Mayo Clinic has the largest clinical imaging practice in the world with more than 1 million exams conducted annually," he says. "The new Opus Building and the state-of-the-art imaging equipment provide even more opportunity for Mayo to further develop imaging techniques. As a science, imaging is on the threshold of profoundly impacting 21st-century medicine."

No boundaries

The Opus Building and its high-tech imaging inventory thrill more than just the radiologists, researchers and graduate students who use the facility on a regular basis. The benefits of this facility, which was a collaborative effort between Opus Corporation, the National Institutes of Health and Mayo Clinic, stretch across all disciplines at Mayo Clinic and address all diseases and organ systems.

"What we do on the research side is devise and enhance imaging techniques that our colleagues on the clinical side can then use to help our patients," says Dr. Riederer. "As we work side by side to evaluate tools, we speed the process of discovery toward its destination of improved care. Mayo has always been on the forefront of imaging research, and now our new, incredible facility will help assure our success as we work to further advance imaging methods and applications."

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Opus Building, open for business

The Opus Building-Mayo Clinic Center for Advanced Imaging Research officially opened in September. The dedication ceremony coincided with the 20th anniversary of the creation of the Magnetic Resonance Research Laboratory at Mayo Clinic Rochester.

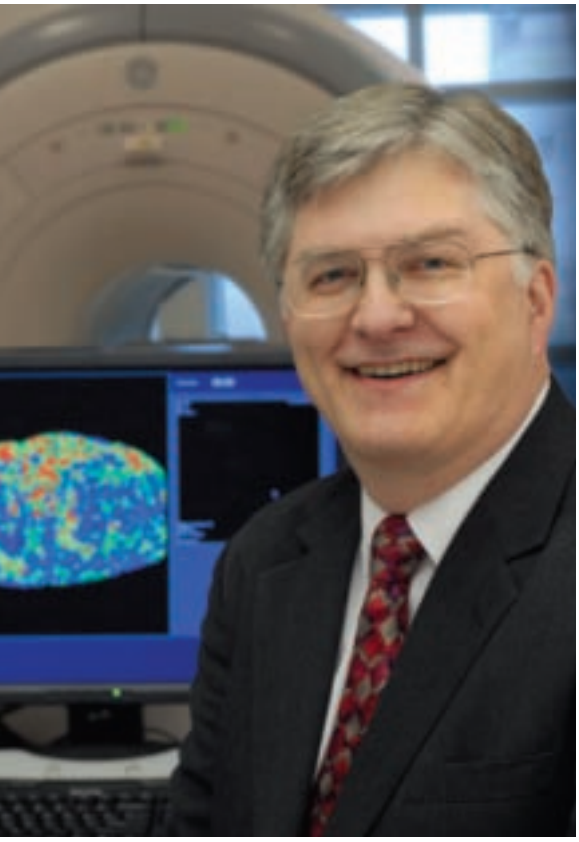
Highlights of the facility and the types of research and education efforts that will take place there include:

Research initiatives:

- Further development of methods for imaging the cardiovascular system using advanced MRI techniques
- MRI elastography, a technique in which the stiffness of internal organs can be determined noninvasively by measuring ultrasound-induced waves with MRI technology
- Development of high-detail measurement and characterization of structures within the brain to study Alzheimer's disease
- High-speed computed tomography to study blood flow through the heart

Education initiatives:

- A lecture hall that will be used to teach courses offered by biomedical engineering and other programs within Mayo Graduate School
- Imaging equipment and laboratory space within the facility that will be used by graduate students within Mayo Graduate School for study related to their respective Ph.D. and dissertation projects ■



Richard Ehman, M.D.

New technique has broad application

For centuries, physicians have used a traditional physical examination technique called "palpation" to detect diseases by simple touch. Unfortunately, many parts of the body are not accessible for palpation and the technique may not reveal the presence of disease until it is advanced.

Radiology researchers at Mayo Clinic have invented a diagnostic imaging tool with the remarkable capability of displaying the same tissue properties that are examined by palpation. In magnetic resonance elastography (MRE), acoustic waves are transmitted into the body and imaged as they make their way through tissues using a special magnetic resonance imaging (MRI) technique. The wave images are processed using an advanced computer algorithm to generate diagnostic images called elastograms, which display the mechanical properties of tissue.

The research team, led by Richard Ehman, M.D., professor of radiology, is targeting this new technology toward applications ranging from detecting breast cancer to diagnosing brain disease.

Research shows that MRE is an effective way to diagnose a condition called hepatic fibrosis, which is an important complication of many diseases that affect the liver. This diagnosis cannot be made with conventional imaging technologies such as computed tomography, magnetic resonance imaging and ultrasonography.

To allow MRE for patients, researchers moved technology out of the laboratory and implemented it on existing MRI systems at Mayo Clinic. As a result, MRE technology is now available at Mayo Clinic Rochester and Arizona, and soon in Jacksonville. This advance offers patients and their physicians a powerful new alternative to invasive biopsy for diagnosing liver fibrosis. Early diagnosis and treatment can help prevent irreversible liver cirrhosis.

"Some of the most pivotal advances in health care over the last decades have innovations in medical imaging," says Dr. Ehman. "Research in advanced medical imaging technologies has profound implications to the practice of medicine that we are only fully beginning to appreciate."

Dr. Ehman's main clinical interest is body, musculoskeletal and cardiovascular MRI. His research program focuses on developing methods to eliminate flow and tissue motion artifacts in MRI, approaches for vascular imaging and development of MRE. Dr. Ehman is the principal investigator and a co-investigator on several major grants from the National Institutes of Health. Mayo Clinic holds more than 20 patents for his inventions.

Training the next generation

Clifton Haider has a commitment to research and education. It's the primary reason he came to Mayo Graduate School after graduating with a bachelor's degree in biomedical engineering from The University of Iowa in 2003. His focus at Mayo is also the biomedical engineering program.

"One of the greatest things is that Mayo has the resources to give students the freedom to choose which lab we want to work in. Mayo also promotes collaboration in its program," says Mr. Haider, who is a senior graduate student in the Magnetic Resonance Research Laboratory directed by Dr. Riederer.

"Mayo Graduate School has incredible resources, quality instructors and the ability to move ideas into the clinical setting," says Mr. Haider, illustrating the relationship between education and patient care.

Photos by: Siddiqi Ray

The principal mission of Mayo Graduate School is to train future leaders in biomedical research and education by providing advanced scientific training toward Ph.D. degrees in biomedical research and by promoting a collaborative environment dedicated to scientific discovery. Approximately 130 Ph.D. and M.D.-Ph.D. candidates have access to more than 200 graduate faculty. This low student-to-faculty ratio gives students the opportunity for close collaboration with internationally recognized researchers who serve as thesis advisers.

Drs. William and Charles Mayo recognized that the highest-quality medical care is best delivered in an environment that fosters innovative biomedical research and education programs. They laid the groundwork for more than a century of excellence in medical practice, education and research.

Philanthropy is essential to advancing medicine and teaching future health care leaders. As Mayo researchers focus on developing new and better ways to predict, diagnose, treat and prevent a wide range of illnesses, they help bring those laboratory discoveries to the care of patients. ■

Clifton Haider

First Mayo-trained female radiologist

Eva Gilbertson, M.D.

In 1946, Eva Gilbertson, M.D., became the first woman to complete the radiology program at Mayo Clinic Rochester. She's been breaking new ground ever since.

Although she says, emphatically, that she never felt harassed or discriminated against as a woman in a largely man's world, Dr. Gilbertson is pleased to see that women now make up half of all medical school enrollments. She hopes that her early efforts helped pave the way for younger generations of women in medicine.

After her work at Mayo, Dr. Gilbertson interned at a hospital in Portland, Ore., and later went into private practice in Seattle for 25 years before retiring. She came out of retirement when she was asked to cover for a colleague for two weeks. She ended up staying for 12 years before retiring permanently, she says.

During those dozen years, Dr. Gilbertson volunteered to be part of a small team of physicians who went to Alaska to provide care to native people at isolated hospitals. "God has been good to me," she says. "I felt I should help other people."

Throughout her career, Dr. Gilbertson kept her ties to Mayo Clinic. She says that many of her colleagues were also trained at Mayo, and that she always took advantage of continuing education opportunities offered at Mayo to stay current in the field of imaging. She also established and maintains fiscal ties to Mayo by supporting the Alumni Radiology Fund as a member of The Doctors Mayo Society, and by recently establishing the Eva L. Gilbertson Endowed Research Fund in Biomedical Imaging. "In too much of medicine today," she says, "the human dimension is lost, but not at Mayo. Mayo Clinic continues to have strong values and a focus on the individual patient." ■

By Suzanne Winckler

The Village at Mayo Clinic

A place of support and healing

Cancer and transplant patients and their caregivers soon will have a new home away from home at Mayo Clinic Arizona. On Nov. 3, the first ceremonial dirt flew, kicking off construction of the Village at Mayo Clinic. When completed, this innovative new community will provide a warm and welcoming environment for patients at a pivotal time in their treatment and recuperation. The new facility will be on Mayo Clinic Arizona's Phoenix campus near Mayo Clinic Hospital and Mayo Clinic Specialty Building.

The Village at Mayo Clinic represents a unique convergence of collaboration, concept and design. Three partners — Mayo Clinic, Arizona Transplant House and the American Cancer Society — saw the opportunity to create a new kind of dwelling for transplant and cancer patients. The Village at Mayo Clinic is a triumph of cooperation involving the blending of procedures and policies of three governing bodies. It will be the only facility in the country designed as a small, cohesive community to create the most supportive environment for patients.

"We are keenly interested in creating a home-like atmosphere, which is difficult to achieve with a hotel or apartment type of design," says Tom Davie, who will serve as executive director of the Village at Mayo Clinic.

Very special homemakers

"We want to make the journey easier for people who are going through a health care crisis, whether they are coping with transplant surgery or cancer," says Mary Davie, who with her husband, Tom, shares a steadfast commitment to transplant patients and their caregivers. Mrs. Davie was a social worker in the Transplant Program at Mayo Clinic Rochester for 14 years and helped found the Gift of Life Transplant House there. In 1998, soon after the Davies relocated to Arizona, they began raising funds to replicate a transplant home for Mayo Clinic patients in Arizona.

They found the ideal setting at a former Arabian horse ranch given to Mayo Clinic by benefactor Sally Tweed Groom. Thus was born the Arizona Transplant House at Brusally Ranch (named for Sally and her brother Bruce). Mr. Davie is director of the facility, and Mrs. Davie is president of the Arizona Transplant House board. They are actively involved in the transition to the new facility and will continue in their leadership roles when the Village at Mayo Clinic opens.

Over those years, the big, rambling Spanish-style home at Brusally Ranch has provided an inviting and serene haven to more than 2,500 transplant patients and their families. The Davies are determined to create that same special atmosphere at the Village at Mayo Clinic.

"Mayo Clinic Arizona's liver, kidney and bone marrow transplant programs just continue to attract more patients, and with the addition of the heart transplant program in 2005, we really began to reach our capacity at the Arizona

Illustrations courtesy of Mittlestaedt Cooper & Associates Ltd.

The Village at Mayo Clinic represents a unique convergence of collaboration, concept and design

Transplant House," says Mr. Davie. "With only seven rooms, Brusally Ranch simply can't meet demand anymore. To maintain the kind of service we want to provide, we knew we had to expand."

Mrs. Davie notes another reason for the expansion. "The Arizona Transplant House board members saw a great unmet need for cancer patients who often require six or seven weeks of daily radiation therapy or prolonged cycles of chemotherapy. So we decided to add cancer patients to our mission," she says.

Necessity, the mother of collaboration

At the same time that Mayo Clinic Arizona and the Arizona Transplant House board were contemplating this major transformation of services, the Great West Division of the American Cancer Society was laying the groundwork for establishing a Hope Lodge in Phoenix for cancer patients and their families. The 24 Hope Lodges currently in operation are primarily on the eastern seaboard. There are none in the Great West Division, a 12-state area that includes Arizona. The closest Hope Lodge happens to be in Rochester, Minn., a few blocks from the Mayo Clinic campus.

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"What our collaboration is really about is sharing your place with a stranger because that stranger needs help. That basic principle goes to the heart of this very special project."

— Clyde Kunz

"When discussions began several years ago, everyone agreed we would look at Phoenix first and explore collaborating with Mayo Clinic Arizona, primarily because our relationship with Mayo Clinic Rochester has been so successful," says Clyde Kunz, director of campaign development for the American Cancer Society in the Great West Division. "The Hope Lodge in Rochester is looked to as the standard of excellence for all Hope Lodges within the organization. Wouldn't it be great, we said to ourselves, to replicate that success in Arizona?"

The conversation began, and over the course of two years, Mayo Clinic Arizona, Arizona Transplant House and the American Cancer Society agreed upon the details of their collaboration. The Village at Mayo Clinic will grow in phases, beginning with construction of a large community house, surrounded by five casitas. Each casita is about 4,900 square feet and will accommodate up to 12 people with private bedrooms and bathrooms for six patients and their caregivers. Two of the casitas will be for Mayo Clinic transplant patients and three will be Hope Lodges for cancer patients in need of accommodations in Phoenix, regardless of where in the city they are receiving their care.

It would be hard to find a more perfect alignment of necessity and, more importantly, of mission. Mayo Clinic Arizona, the Arizona Transplant House and American Cancer Society share one vital interest: to make the journey easier for people at a physically and emotionally challenging time in their lives. Now they have found, quite literally, common ground.

"The Village at Mayo Clinic evokes the concept of 'My house is your house,'" says Mr. Kunz. "What our collaboration is really about is sharing your place with a stranger because that stranger needs help. That basic principle goes to the heart of this very special project." ■

"The success of this community depends on people coming together to make a very worthwhile thing happen. It will take a village of generous people to build this village."

— Mary Davie

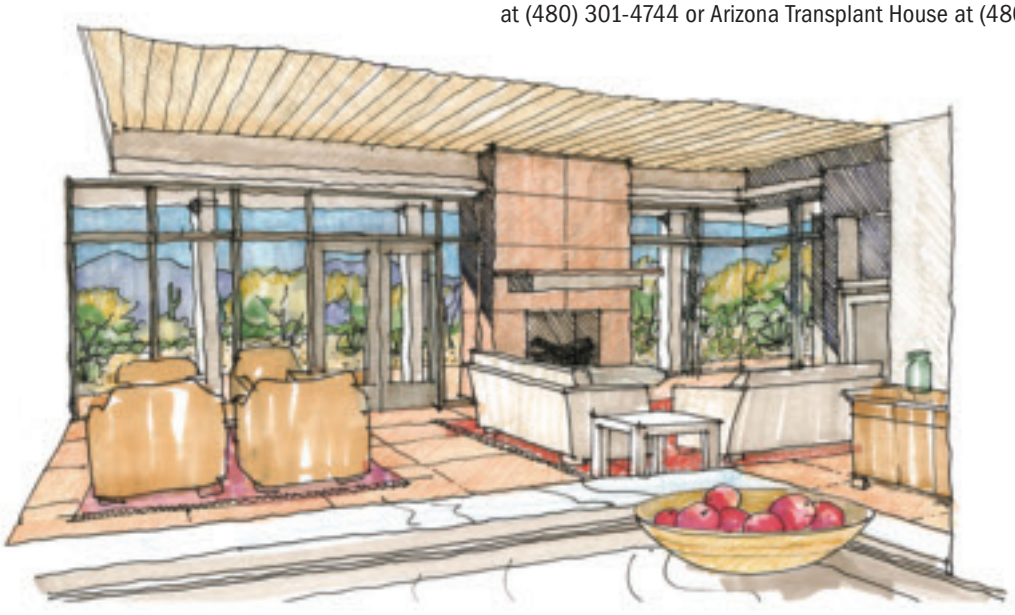
Illustrations courtesy of Mittlestaedt Cooper & Associates Ltd. Photo by: Siddiqi Ray

Tom and Mary Davie

A village built on generosity

The Village at Mayo Clinic will be built on the bedrock of generosity. The American Cancer Society, Mayo Clinic and the Board of Directors of Arizona Transplant House are inviting benefactors to contribute to the project. "The success of this community depends on people coming together to make a very worthwhile thing happen," says Mrs. Davie. "It will take a village of generous people to build this village."

For information about Mayo Clinic's transplantation and cancer programs, see *www.mayoclinic.org/transplant/* and *cancercenter.mayo.edu*. American Cancer Society information is available at *www.cancer.org* or by calling (800) 227-2345. To make a gift to support the Village at Mayo Clinic, contact the American Cancer Society at (602) 224-0524, Mayo Clinic Department of Development at (480) 301-4744 or Arizona Transplant House at (480) 609-1324. ■



"The Village at Mayo Clinic evokes the concept of 'My house is your house.'"

— Clyde Kunz

By Dee Bennett Perry

A new gold standard

DIEP, a better alternative for breast reconstruction

When Kelley Graham's breast biopsy revealed she had cancer, the 41-year-old woman was told the cancer was too far advanced for a lumpectomy, a simple removal of the cancerous lump. Her physicians strongly recommended a mastectomy, removal of the entire breast and surrounding tissue. "I cried for about 30 minutes and never cried again," says Mrs. Graham. "I am a 'you just gotta do what you just gotta do' kind of person. My husband is the same way. We just did it together." For Mrs. Graham and the more than 200,000 women in the United States who are diagnosed with breast cancer each year, there are difficult decisions to be made. Among those is the question of whether to have breast reconstruction, and if so, which type.

William Casey, M.D.

For several decades, the transverse rectus abdominis myocutaneous (TRAM) flap procedure had been the gold standard following breast cancer surgery. The TRAM procedure uses a woman's (autologous) tissue from the tummy area, tunneling that tissue "flap" (skin, muscle, fat and blood supply) under the skin to the chest area where it is then brought into the mastectomy site and used to construct a new breast. The tissue's blood supply is left intact. This is possible because the arteries and veins attached to the muscle are a continuation of vessels starting beneath the anterior ribs in the chest.

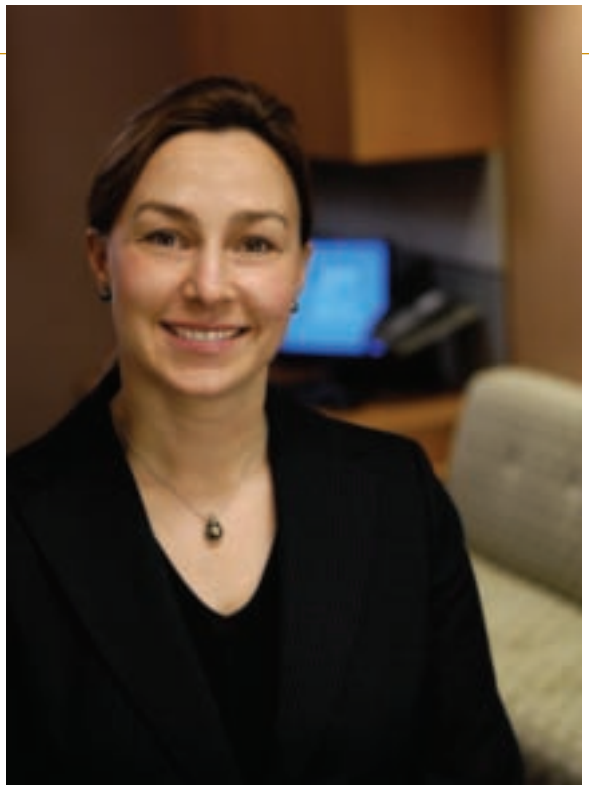
Advanced reconstruction

Now, William Casey, M.D., and Alanna Rebecca, M.D., plastic and reconstructive surgeons at Mayo Clinic Arizona, offer a more advanced breast reconstruction procedure. The Deep Interior Epigastric Perforator (DIEP, pronounced "deep") free flap reconstruction doesn't involve moving the abdominal muscle from the abdominal wall, as is required for the TRAM flap breast reconstruction. Leaving the muscle intact means patients have minimal loss of abdominal wall strength, and fewer problems with hernia, abdominal wall bulging and postoperative pain than with TRAM.

"DIEP reconstruction is the best thing going so far, and I don't see anything going beyond this in the near future."

— William Casey, M.D.

Photos by: Randy J. Ziegler



Alanna Rebecca, M.D.

"Many of our patients are opposed to having implants, since choosing implants requires maintenance surgery every 10 years to have the implants changed. There really are not a lot of other options, so DIEP reconstruction is one of the best solutions."

— Alanna Rebecca, M.D.

The DIEP free flap surgery requires meticulous microsurgical skills. Drs. Casey and Rebecca are among the few surgeons in the country trained to perform the intricate microvascular breast surgery, which can last up to 10 hours. DIEP was developed to give women a faster recovery and the added bonus of preserving their abdominal muscles.

Removal of the tissue flap from the tummy area begins the microsurgical process, requiring careful dissection of the vessels so they can be reconnected at the chest wall. Muscle fibers are divided, but not cut, to preserve at least one artery and one vein, requiring an in-depth knowledge of vascular anatomy.

"DIEP reconstruction is the best thing going so far, and I don't see anything going beyond this in the near future," says Dr. Casey, who receives many patient referrals by word-of-mouth from friends and families of patients, as well as from individuals who read about DIEP breast reconstruction on Mayo Clinic Web sites.

Mrs. Graham chose DIEP breast reconstruction based on her discussion with Dr. Casey about how the surgery would shape and form her breast. She is happy with the results and says, "I have lost no strength in my abdomen. I don't have long-term aftereffects or complications from my surgery. My breast looks very natural, and I am not the least bit self-conscious."

Dr. Rebecca explains, "Because many women are active, they don't want to sacrifice their abdominal muscles for the surgery if they have a choice. A unilateral (one breast) TRAM can take up to 25 percent of the abdominal wall muscle strength and a bilateral (both breasts) TRAM reconstruction takes all muscle from the front of the abdominal wall. This means women who have this procedure can no longer do a sit up, and they have to push themselves up to get out of bed. Their chance of hernia is extremely high, which will require a big mesh reconstruction of the abdominal wall."

"A lot of these women will also have back pain because they no longer have their abdominal muscles for support. If you sacrifice two of these muscles (the rectus), you disrupt the entire body core," adds Dr. Casey. "Women who choose DIEP tend to be women who enjoy an active lifestyle and don't want it altered. This becomes part of their decision-making process."

"Many of our patients are opposed to having implants, since choosing implants requires maintenance surgery every 10 years to have the implants changed. There really are not a lot of other options, so DIEP reconstruction is one of the best solutions and is becoming well-known," says Dr. Rebecca.

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Coordinated efforts

Drs. Casey and Rebecca work closely with other surgeons in the Mayo Clinic Arizona Breast Clinic. If a patient is a candidate for DIEP reconstruction, it can be performed immediately following the mastectomy.

"Coordinating the surgery in this way, the surgical team saves as much of the patient's breast skin as possible to use for immediate reconstruction," says Dr. Casey. "Combining the procedures means the patient only has to undergo one surgery. And performing the surgeries together gives the best overall aesthetic results."

Many younger women who have breast cancer consult with Katherine Hunt, genetic counselor at the Breast Clinic at Mayo Clinic Arizona. Genetic testing can determine if they have a predisposition to breast cancer or have the BRCA1 or BRCA2 gene, which may also increase their chance of breast cancer recurrence. This information may impact their surgical decision.

"If they choose to have a mastectomy done on the unaffected breast, we'll do bilateral DIEP surgery," says Dr. Rebecca.

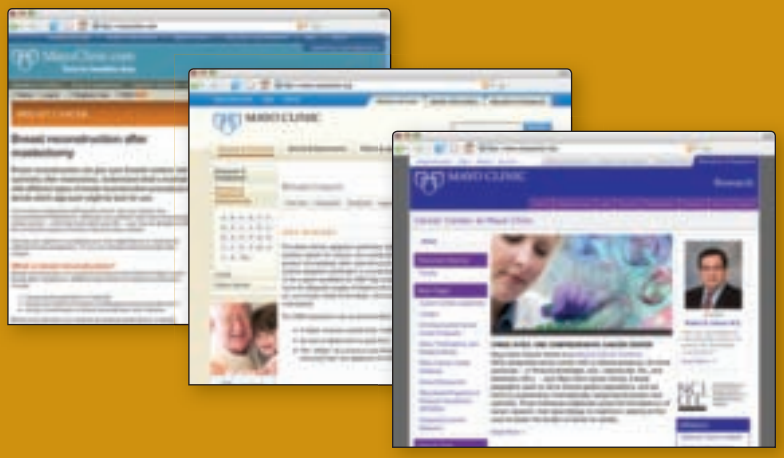
The preferred option

A recent study, published in the journal *Plastic and Reconstructive Surgery*, compared the DIEP and TRAM surgeries. "The data support the DIEP flap as the preferred option over the TRAM flap for autologous breast reconstruction in postmastectomy patients," the study concluded. "Minimal damage to the rectus abdominis muscles and fascia, fewer abdominal wall hernias and shorter hospital stays are all advantages to the less-invasive DIEP breast reconstruction."

"I would do it all over again," says Mrs. Graham. "Dr. Casey and his physician's assistant, Rachelle Ramirez, are the best. They answered all of my questions, and Dr. Casey came to my room immediately after surgery to check on me. I cannot say enough about the Plastic Surgery Department at Mayo Clinic Arizona. They are excellent." ■

Surfing for DIEP

Women can turn to Mayo Clinic's Web sites for valuable information to discuss with their doctors if faced with the difficult decision of what to do when a mastectomy is recommended. Search "DIEP" or "breast reconstruction" to access the information on these Web sites.



MayoClinic.com

Mayo Clinic's health information Web site, *mayoclinic.com*, includes information regarding the DIEP flap procedure if you are considering breast reconstruction after mastectomy.

MayoClinic.org

Mayoclinic.org is the Web site regarding medical services available at all three Mayo Clinic campuses. This Web site provides detailed information on all treatment options, including the DIEP procedure, under the topic Breast Reconstruction After Cancer, as well as appointment requests at Mayo Clinic.

MayoClinic.edu

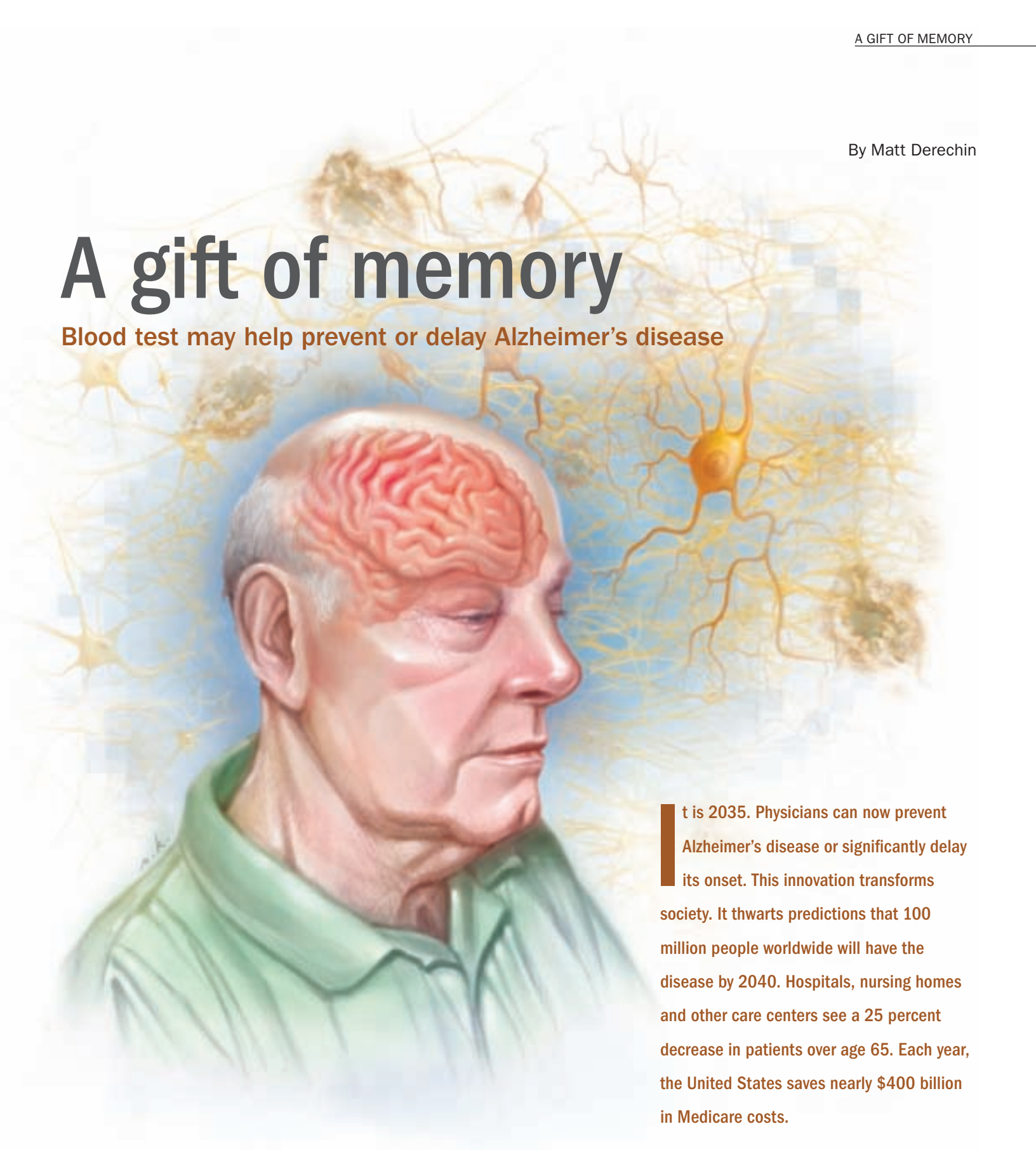
MayoClinic.edu is the Web site that includes information about Mayo Clinic's mission and values, resources, patient education, history and culture, governance, locations and integrated practice. This Web site provides links to more information on the DIEP procedure, as well as links to the Mayo Clinic Cancer Center.

Illustration by: Michael King

By Matt Derechin

A gift of memory

Blood test may help prevent or delay Alzheimer's disease



It is 2035. Physicians can now prevent Alzheimer's disease or significantly delay its onset. This innovation transforms society. It thwarts predictions that 100 million people worldwide will have the disease by 2040. Hospitals, nursing homes and other care centers see a 25 percent decrease in patients over age 65. Each year, the United States saves nearly $400 billion in Medicare costs.

Steven Younkin, M.D., Ph.D.

Neill Graff-Radford, M.D.

Ronald Petersen, M.D., Ph.D.

Today, that scenario is science fiction. But Mayo Clinic researchers believe it could become nonfiction, and they recently announced progress toward that future. In March, they published research showing that a blood test may help predict a person's risk of Alzheimer's disease years before symptoms appear. The blood test measures a ratio of proteins, amyloid beta 42 (AB42) and amyloid beta 40 (AB40), which are major components of plaques that form in the brains of people with Alzheimer's disease.

Mayo researchers discovered the test's potential by analyzing clinical data and blood samples collected from 1992 to 2003 on a group of 563 people. At the start of the study, the median age of the group was 78 and all participants were cognitively normal. At the end of the study, 53 had Alzheimer's disease or mild cognitive impairment, a memory disorder that frequently precedes Alzheimer's.

Three to five years before symptoms occurred in these study participants, their blood samples began showing decreased levels of AB42, while the level of AB40 increased or decreased more slowly. The researchers used these data and clinical evaluations to develop a scale to predict a person's risk of developing symptoms of Alzheimer's disease or mild cognitive impairment in two to 10 years.

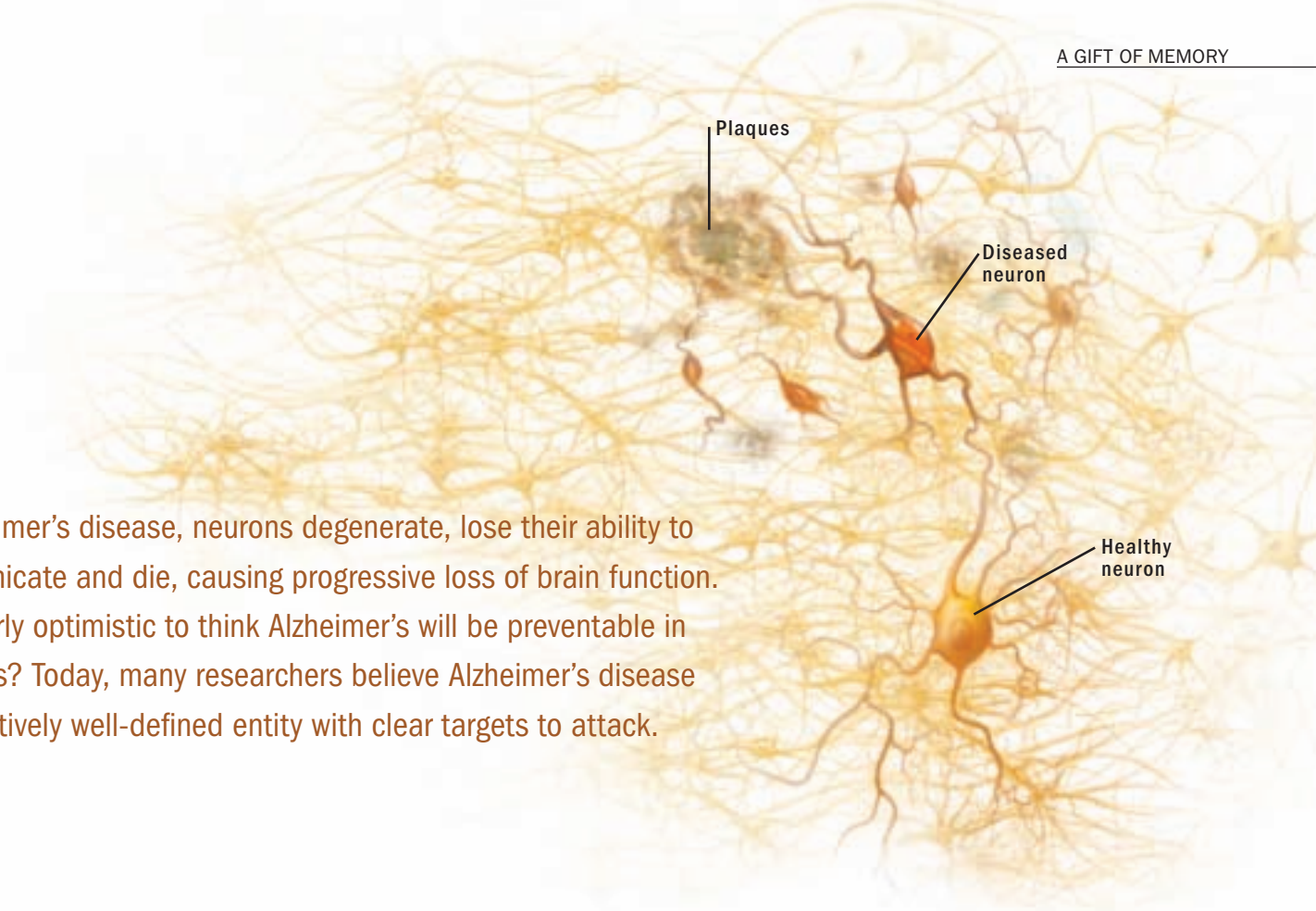
Study participants with the lowest ratio of AB42 to AB40 in their blood — low levels of AB42 and high levels of AB40 — were three times more likely to develop symptoms of Alzheimer's disease or mild cognitive impairment in three to five years. The researchers now want to see if the study results will be replicated in a larger group of 3,000 people. Recruitment has begun, and the team expects to complete the study in 10 years.

If it proves accurate, the blood test will revolutionize Alzheimer's disease care, researchers say. "Alzheimer's disease could be treated like heart disease is today, with tests to identify risk, much like a cholesterol test is used, and therapies to prevent the disease or reduce its risk," says Steven Younkin, M.D., Ph.D., who leads the research along with Neill Graff-Radford, M.D., and Ronald Petersen, M.D., Ph.D.

Today, effective treatments don't exist for Alzheimer's disease, but that could change soon, Dr. Graff-Radford says. "We're moving from symptomatic therapies to disease-modifying therapies," he says. "Several of these treatments are in phase III clinical trials and may become available in three to five years."

If accurate, the blood test would help researchers study these and other treatments as preventive agents, and greatly reduce the costs to perform such a study. Today, researchers say an accurate prevention study for Alzheimer's disease would require large numbers of patients and cost more than $30 million, according to Dr. Graff-Radford. With a tool,

Photos by (left to right): Randy J. Ziegler, Daniel Hubert Illustration by: Michael King



In Alzheimer's disease, neurons degenerate, lose their ability to communicate and die, causing progressive loss of brain function. Is it overly optimistic to think Alzheimer's will be preventable in 30 years? Today, many researchers believe Alzheimer's disease is a relatively well-defined entity with clear targets to attack.

such as the blood test, to more accurately identify high-risk patients, researchers could perform a valid prevention study with fewer participants and at much less cost.

The test also could help physicians maximize the benefits of the coming generation of Alzheimer's therapies, says Dr. Petersen, by helping physicians introduce these therapies earlier, when they have the best chance of impacting the disease.

"We have to be careful how we describe this because we don't know if the test will pan out, but it could be huge," he says. "It's safe, easy to perform and cost-effective. Because of that, you can envision performing it routinely on patients as a first screen. If it shows increased risk, we could perform other tests, such as imaging, to refine the risk and then discuss whether a patient may want to begin therapy even before symptoms appear."

Perspectives and partnerships

Is it overly optimistic to think Alzheimer's will be preventable in 30 years? The progress of the last 30 years offers insight. Three decades ago, Alzheimer's disease was diagnosed almost exclusively in people ages 45-65. The same symptoms in people over age 65 were thought to be unfortunate side effects of aging.

That view eventually changed, and in the 1990s, Dr. Younkin and other pioneers helped shape the future of the field by showing that AB42 is a central culprit in Alzheimer's disease. Today, many researchers believe Alzheimer's disease is a relatively well-defined entity with clear targets to attack.

Researchers at Mayo are aiming for these targets in many ways. Along with the blood test, they are developing an imaging technique to help diagnose Alzheimer's earlier. Another Mayo team has collaborated with scientists at the University of San Diego on the discovery of a new drug, called R-flurbiprofen (Flurizan), now in phase III clinical trials.

Philanthropy is spurring this progress. The blood test and imaging research is funded by a joint gift from Robert H. and Clarice Smith and the family of Abigail Van Buren of "Dear Abby" fame. An earlier gift from the Smiths helped Mayo researchers discover R-flurbiprofen.

Benefactor gifts also help Mayo retain the infrastructure necessary for Alzheimer's disease research, which is especially vast. In addition to physicians and scientists, it requires psychologists, statisticians, storage for biological samples and other components.

"We have an entire engine ready to make an impact on Alzheimer's disease," Dr. Graff-Radford says. "So philanthropy is more important now than it's ever been." ■

By Dianne M. Axen

The turning of a page

Celebrating a century of learning with Mayo Clinic Libraries

In 1907, when Mayo's first medical librarian, Maude Mellish, was hired to organize and develop a library, she was led to a coal bin in a cellar where Mayo's scholarly papers and journals were being stored for safekeeping. At that moment, she must've realized she had her work cut out for her.

Within two years, a medical library was built — the first building erected by Mayo Clinic. As the clinic's founding librarian, Ms. Mellish initiated the critical work of connecting clinic staff to a wealth of medical information. When she died in 1933, Mayo Clinic closed for her funeral.

Today, Mayo Clinic Libraries are among the largest and most comprehensive medical libraries in North America. A special centennial celebration took place in October 2007, during Heritage Days, an annual event that celebrates the pioneering spirit of Mayo's founders.

"We are proud of our history, yet what's important is our future," says Dawn Littleton, head of public services and co-chair of the centennial celebration of Mayo Clinic Libraries. The celebration included a unique two-day symposium designed to draw librarians and information leaders from around the country for dialogue about what's to come. Futurist Ray Kurzweil delivered the keynote address on the impact of 21st-century technology on human health and society, which was followed by responses from a distinguished panel.

"We are encouraging one another to try to think like futurists," says Ms. Littleton. "What will be going on in 20 years and how do we get there?"

Mayo Clinic Libraries Director J. Michael Homan has led the libraries through sweeping technological changes in the past decade. Currently, Mayo Clinic Libraries consist of an integrated electronic network that supports 16 libraries, located in Rochester, Jacksonville, Arizona and throughout Mayo Health System in Minnesota, Iowa and Wisconsin.

"Libraries offer the resources and services that enable the health care team to bring the best practices directly to the care of patients," says Mr. Homan. "Libraries also help Mayo Clinic researchers move the science of medicine forward by providing tools for top-quality scholarship."

A sense of place

The Mayo Medical Library, on the 12th floor of the Plummer Building, is especially awe-inspiring. Across the entire beamed ceiling are the names of scientists, scholars and inventors throughout history who have changed the world in one way or another. Henry Plummer, M.D., who designed the building, is credited for selecting the prominent scholars memorialized on the beamed ceiling. And it was also his decision to leave one space open.

"The story goes that one space was left blank by Dr. Plummer to satisfy his visionary ploys, and it is not to be filled until the most important discovery of all times

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Photos by: Siddiqi Ray

In 1907, Maude Mellish, seen below on the flat screen TV, became Mayo Clinic's first librarian. During her 26-year career, she developed Mayo Clinic Library into a comprehensive resource for staff members and other professionals. Today, Dottie Hawthorne, J. Michael Homan and Dawn Littleton carry her vision into the future.

Left to right: Dottie Hawthorne, J. Michael Homan and Dawn Littleton

Henry Plummer, M.D., who designed the Plummer Building, is credited for selecting the prominent scholars memorialized on the beamed ceiling. It was also his decision to leave one space open to accommodate the most important discovery of all time in science, medicine or technology.

in science, medicine or technology has occurred," says Dottie Hawthorne, outreach librarian and co-chair of the centennial celebration. "It was meant to challenge the physicians and researchers to be the brightest and best in their fields of endeavor, and when I tell the story to new residents as they tour the library, they always stand tall as if they're up for the challenge."

"For me, the blank space is a vision statement," says Ms. Littleton. "It says, 'It is possible to make such a discovery and when it happens, we have a place waiting to honor it.'"

Architecture and space conducive to reflection, study and scholarship are a distinction of Mayo Clinic Libraries. All of the libraries are unique spaces.

"I'm not sure if Dr. Plummer had some idea or intuitive sense that tall ceilings help you think big, but Mayo Clinic Libraries all have soaring, beautiful ceilings — from the reading room in the Great Hall to the Wedgwood frieze in the new Cybercafé, study spaces in Mayo Clinic Libraries are geared for scholarly thought," says Ms. Littleton.

For a virtual tour of Mayo Clinic Libraries, or to learn more about the names on the beamed ceiling in Mayo Hall, go to: *www.mayo.edu/library/about-us.html* and click Our Facilities.

Honoring Maude Mellish (Wilson)

Maude Mellish was born and raised in Faribault, Minn., and arrived in Rochester from Chicago on March 1, 1907 as the first librarian of Mayo Clinic. During her 26-year career, she developed Mayo Clinic Library into a vital resource for staff members and other professionals. She directed the Division of Publications, which included the editorial section, the medical library and the art studio. In 1926, she began the weekly *"Proceedings of the Staff Meetings at Mayo Clinic."* Today, this publication has evolved into the internationally recognized *Mayo Clinic Proceedings*, one of the largest general-interest medical journals in the world.

Mayo Clinic Heritage Days honored Maude Mellish with a solo performance by author and performer Megan Cole titled, *"The Mystery of Maude Mellish Wilson."* The performance provided a glimpse into the life and times of this remarkable woman, and the important role she played at Mayo Clinic. ■

Photos by (left to right): Joseph M. Kane, Siddiqi Ray, Mayo Clinic Media Archives

Providing the tools for scholarship

Mayo Clinic Libraries blend traditional collections with the digital world and expert services to support Mayo's mission of extraordinary patient care. While the priority of most academic health centers is on the education of students and staff, the priority of Mayo Clinic Libraries is on supporting patient care.

Information services, in-depth library research assistance, expert literature research, electronic document delivery and online training services help library patrons effectively use traditional and digital resources. All of the libraries are open to all Mayo Clinic staff, students and faculty, and all have equal borrowing and service privileges. Mayo Clinic Libraries and digital resources are accessed more than 11 million times each year.

The hospital libraries for inpatients and their families are a branch of Mayo Clinic Libraries. These libraries offer patients a wealth of services including books, DVDs, CD players, relaxation tapes, video games for kids, computers and sometimes just a welcome reprieve from a hospital room.

The Mayo History of Medicine Library, located on the 15th floor of the Plummer Building, is a specialized library that houses several thousand volumes of rare medical classics (from 1479) and early journal literature (from 1665).

Staff training is an important function of Mayo Clinic Libraries. Library staff offers instruction on topics such as Google or Endnote, guidance on copyright and licensing issues and new features of the library. ■

"Our focus on service results in long-term collegial relationships with Mayo staff and students. Our expertise and competence in information delivery creates a real atmosphere of trust."

— Pat Erwin
reference librarian and expert researcher,
and Seiga Ohmine who is currently enrolled in
the Mayo Clinic Molecular Medicine Program

"Endowed with exceptional ability, untiring perseverance, sound judgment and indomitable courage, she dedicated her life to the literary development of The Mayo Clinic and The Mayo Foundation."

— William J. Mayo, M.D., and Charles H. Mayo, M.D.

By Matt Derechin

Robert Walters

Head administrator, Mayo Clinic Jacksonville hospital project

Hurricanes, state regulations and rising steel prices don't make for smooth sailing when it comes to construction projects. Regardless, efforts to build the new 214-bed hospital on Mayo Clinic's Jacksonville campus has moved forward and completion is set for spring 2008.

The hospital's opening will be a dream come true for Mayo. For the first time, Mayo services in patient care, medical education and research will be consolidated on the Jacksonville campus. On a nostalgic note, it also means that a remarkable partnership will end. For the last 20 years, all of Mayo's inpatient care has been provided at St. Luke's Hospital, the oldest private hospital in Florida, which is 12 miles from the clinic campus.

Leading many aspects of this historic transition is Robert Walters, head administrator for the new hospital project since its inception in 2000. A Mayo Clinic staff member since 1988, Mr. Walters is also a former chief administrative officer of Mayo Clinic in Jacksonville. In this interview with *Mayo Magazine*, he discusses the hospital project to date, its importance to Mayo Clinic's future in Florida and what it means for patients.

What's the most surprising thing so far about the hospital project?

Perhaps not surprising but reaffirming is the wonderful support we've received across the entire Mayo Clinic enterprise. Our colleagues from Rochester, Arizona and Jacksonville have been a tremendous asset.

Teamwork has helped assure that all facets of this complex project have been addressed. Building for a footprint that you expect to last 50 to 100 years in Florida, where the water table is only 8 inches below the surface, is really a marvel. We were able to put pilings 150 feet down into limestone shelves to provide the support needed for a 16-story building. The building won't be that tall initially, but we need to be structurally ready to add floors up to that height.

What do you think patients will appreciate most about the new hospital?

The most prominent thing patients will see is the large patient rooms. The rooms in the new hospital are about 350 square feet, compared to about 160 square feet at St. Luke's Hospital.

And hopefully, patients will also feel a difference when they walk into the lobby. Mayo excels at creating buildings that convey a sense of healing, and the team has worked hard to incorporate that into the hospital. The staff in Campus Planning and Projects has done an incredible job in that regard.

Photos by: Michael LeGrand

Leading many aspects of the new Mayo Clinic hospital project in Jacksonville is Robert Walters, head administrator of the project since its inception in 2000. In this interview with *Mayo Magazine*, he discusses the project to date, its importance to Mayo's future in Florida and what it means for patients.

Robert Walters

The integration of all of our services on one campus also will make a tremendous difference for our patients. It will give us the ability to use many of our diagnostic resources across both the inpatient and outpatient areas. And having everything at one site will help our patients better understand where they need to go for various services.

What's the most significant impact on the campus as a whole?

It's going to become a lot busier. The St. Luke's campus has about 2,000 employees; the clinic campus has about 2,500 employees. Now we're going to have one campus with about 4,500 employees. And having inpatient and outpatient services at one location will make it a 24-hour, 7-day-a-week campus.

Why is it important to integrate inpatient and outpatient services?

The physical connection of the inpatient and outpatient care allows us to better connect our physicians and patients from a service perspective. Any time a physician wants to visit a patient in the hospital, he or she will be able to just walk down the hall.

Integration also provides better support for our academic programs. For instance, we'll have wide corridors and more conference room space to make it easier for teaching teams to go on rounds and hold meetings.

"One of the most important things I've learned is in the area of project management. When you take on a project of this size, or any project for that matter, you want your plans to be perfect. But what you learn is that things are dynamic, things change, and what makes a project succeed is the team's ability to react and adapt to changes."

— Robert Walters



What are the unique aspects of the new hospital?

Each patient room can be used as either an intensive care unit room or as a typical inpatient room. The room size is also part of putting together a 50- to 100-year footprint for the hospital. The belief is, over time, that more equipment will be brought to the patients' bedsides as opposed to sending patients around the hospital for their tests. The large rooms will better support this model.

Another feature that sets the hospital apart is its ability to withstand up to a Category 5 hurricane. That's a difficult feat because there is no upper limit on the wind speed for a Category 5 storm. But we've worked with the city to ensure we have the proper infrastructure in place. Between Hurricane Andrew in South Florida and Hurricane Katrina in New Orleans, hospitals have learned a lot of lessons about emergency power, water systems and the basic infrastructure needed to withstand a major hurricane and continue to operate in its wake. So, we're very excited and very proud to say that we believe the new hospital will withstand this type of natural disaster.

Philanthropy was a big part of making this hospital a reality. Tell me about that.

Philanthropy was one of the contingencies for embarking on this ambitious project. A specific amount of funds needed to be pledged to the project to begin. For the first time ever, the required funding needed to be obtained almost exclusively from external sources, that is, the sale of St. Luke's Hospital and philanthropy.

Does philanthropy have an impact beyond the financial realm?

Absolutely. Philanthropy is driven by grateful patients, by people who believe in what we're doing. They believe in the care that is available at Mayo Clinic and they believe in Mayo Clinic's long-term vision. To me, philanthropic support is a wonderful statement on the trust our benefactors have in Mayo Clinic, and this show of support is a big morale boost for our staff.

What will your emotions be when the hospital opens?

My biggest emotion will be excitement because this is a dream come true for Jacksonville; a dream that has been 22 years in the making.

But I will also be filled with anticipation. It's one thing to open the front doors, but it's another to see if all the plans we've made on the operations side — staffing decisions, information systems decisions, years of planning — roll out to be what we expect. These questions will be answered over the first six months or so and will help us identify issues and opportunities to address as we go forward.

Is that what you love most about this project — the planning aspect?

Yes. To have the trust of Mayo Clinic to pull this all together, and to work as a team on a project of this magnitude has been a once-in-a-lifetime experience.

Photos by: Michael LeGrand

The project was delayed some from the expected start date, but now is a little ahead of schedule. How has this been accomplished?

Actually, at this point, I would say we are on schedule. As many know, we received approval from the state to go ahead with the project in 2001, and we were ready to go. But the approval process allows other local health care organizations to challenge the state's decision. That appeals process began in early 2002 and concluded in 2005. This delay had a huge impact on our planning, and we saw steel and concrete prices spike during this time. Certain other materials, like wood, became hard to get due to hurricanes impacting Florida in 2005. But thanks to our facilities team, we got all of this resolved. They've been a wonderful partner.

Having said all of that, the construction has been extraordinarily well-managed since it began in 2005, and we've been fortunate as far as hurricanes go. Although we had those three hurricanes come through Florida in 2005, Jacksonville was basically untouched. That was a wild card that could have had a major impact on the schedule.

Listening to you talk, I'm amazed at how many bits of knowledge you must have gained from this experience.

It's been a learning experience. One of the most important lessons I've learned is in the area of project management. When you take on a project of this size, or any project for that matter, you want your plans to be perfect. But what you learn is that things are dynamic, things change, and what makes a project succeed is the team's ability to react and adapt to changes. ■

"Philanthropy is driven by grateful patients, by people who believe in what we're doing. They believe in the care that is available at Mayo Clinic and they believe in Mayo Clinic's long-term vision."

— Robert Walters

In their own words:

Why doctors choose to practice at Mayo Clinic

Ryan J. Uitti, M.D.

"At Mayo Clinic, I'm able to devote about 90 percent of my time to caring for people with movement disorders. Most of my patients have Parkinson's disease. In most medical practices, physicians don't have the opportunity to concentrate so closely on one area of their specialty. At Mayo Clinic, people like me can exist."

— Ryan J. Uitti, M.D.
Neurology, Mayo Clinic Jacksonville

Grateful patients, loyal benefactors

Mayo's Annual Giving Program not only assures that our patients have the best care available, it also assures that our physicians and allied health staff have the resources necessary to provide the quality care our patients expect and deserve. The reasons physicians choose to practice at Mayo Clinic are as varied as the reasons our benefactors choose to give. Whether your goal is to sustain the level of care Mayo is known for worldwide, to help advance medical research so that patient care will continue to thrive, or to help educate the physicians of tomorrow, your annual gift works to help Mayo provide the best care to every patient every day.

For more information about our Annual Giving Program, call Jim Isaak at (507) 284-0970 or e-mail *isaak.jim@mayo.edu.*

Photos by: Randy J. Ziegler

Stewardship report

The many ways you can support Mayo's mission

These stewardship pages highlight members of our recognition groups. Many benefactors belong to one or more of these groups to enhance their philanthropic experience.

Mayo Principal Benefactors

The designation of Principal Benefactor was established in 2003. It honors individuals and organizations who contribute $1 million and more to support the mission of Mayo Clinic. We are honored to recognize an elite group that represents the foremost supporters of Mayo Clinic. By supporting innovation and discovery, these benefactors touch the lives of people throughout the United States and around the world.

Contact: James Hodge
hodge.james@mayo.edu

Mayo Major Benefactors

The designation of Major Benefactor was established in 1970. It honors individuals and organizations who contribute $100,000 and more to support the mission of Mayo Clinic. These philanthropic gifts help Mayo Clinic provide the best care to every patient every day. They also support medical innovations that benefit people throughout the United States and around the world. The generosity of these gifts help Mayo uphold the tradition of its founders.

Contact: Roberta Allan
allan.roberta@mayo.edu

Mayo Annual Giving Program

The Mayo Annual Giving Program was established in 2000. It is Mayo Clinic's newest membership organization and is the only annual giving group of programs offered at Mayo Clinic. Annual contributions ensure that Mayo will have the necessary resources to continue providing compassionate care for our patients, advancing medical progress and educating future physicians. Members of this group can provide annual support at one of six giving levels ranging from our Mayo Friends level of $1,000 a year, to our Mayo Leadership Circle level of up to $99,999 in a calendar year.

Contact: Jim Isaak
isaak.jim@mayo.edu

The Mayo Legacy

The Mayo Legacy is an organization of Mayo patients, staff and benefactors who provide a bequest in their will or another type of planned gift to support our work. There are no membership fees or required gift amounts to join The Mayo Legacy. Currently, more that 3,400 individuals belong to The Mayo Legacy. Members live in 49 states and 13 countries.

Contact: Laird Yock
yock.laird@mayo.edu

The Doctors Mayo Society

The designation of The Doctors Mayo Society was established to honor individuals who provide alumni financial support for Mayo programs. Gifts are given to perpetuate the excellence of medical practice, education and research at Mayo Clinic. This benefactor category is open to members of the Mayo Clinic Alumni Association, Mayo Clinic Administrative Voting Staff and public members of the Mayo Clinic Board of Trustees.

Mayo Alumni Laureates

The designation of Mayo Alumni Laureates was established to honor benefactors who are alumni of Mayo Graduate School, Mayo School of Graduate Medical Education or Mayo Medical School, as well as their spouses.

Contact: Robert Giere
giere.robert@mayo.edu

For more information on philanthropy at Mayo, please visit: *www.mayoclinic.org/development*

PRINCIPAL BENEFACTOR: **W. Hall Wendel Jr.**

Work hard, play hard, give generously

By Michelle Felten

"If they write a book on what I missed, I hope it will fill only two chapters."

This sentiment encompasses his story … to say he has lived life to the fullest is an understatement. As former Chair and CEO of Polaris Industries for twenty years, Mr. Wendel revels in a good challenge, both in business and his personal life.

In 1981, he and his management team went against conventional thinking and bought a snowmobile business at a time when other companies were scrambling to get out. Although their risk was significant, their rationale was solid.

Polaris' reputation for performance and dependability was undeniable. And the strong work ethic and can-do spirit of its employees was unequaled. "These two factors pretty much assured us of success. Further, in the winter, for those who enjoy the outdoors, snowmobiles are indispensable; we knew the industry wasn't going to disappear."

Wendel also recognized the need to reduce cost, improve product quality, and diversify the business into other (related) product lines: ATVs, watercraft, utility vehicles, and most recently motorcycles. "Products that fit our strengths in engineering, manufacturing, marketing and distribution."

In just a few short years, Polaris was on a financial fast track. "We knew we were out of the woods when we paid off all our debt — five years ahead of schedule," he says. "Our next goal was to grow the company, but our success has gone beyond our wildest dreams. What started as a company with $25 million in sales and a loss, grew into a company of nearly $2 billion in sales and over $100 million in profit, with nearly 4,000 employees worldwide."

Mr. Wendel has always had a bent towards philanthropy. In the early 80's, he established a scholarship program for the children of Polaris employees, enabling them to attend a college or Vo-tech school of their choice.

He later established the Wendel Foundation and expanded this to include underprivileged, inner city youth in Minneapolis/St. Paul, MN and Miami, FL.

"My parents always taught me to give back. They instilled in me the values I have today: integrity, honesty and perseverance. And they gave me the opportunity to attain an excellent education. In a sense, I won the gene lottery."

On a more personal side, his philanthropic spirit has mirrored his adventurous spirit. An avid marathon runner, mountain climber, sailor, and thrill seeker, his quests have been many. He has completed many marathons, won the Bermuda Race, and sailed 15,000 miles from Miami, FL to Sydney, Australia. He has also climbed the seven summits (the highest mountain on each of the seven continents), culminating on Mount Everest in 1994. His adventures, however, have come with a price: the replacement of both shoulders and knees. "Good as new," he says. " I do everything (physically) I want to do." During his surgeries and follow-up care, Mr. Wendel became interested in orthopedics. "Regarding my replacement surgeries, I like the idea of finding new solutions to old problems, using high-tech medical devices. I want to do what I can to keep Mayo on the leading edge of musculoskeletal research."

His recent gift will help assure that goal. His gift of $27.5 million will fund the W. Hall Wendel, Jr. Musculoskeletal Center at Mayo Clinic and has established an endowed professorship, which was received by Dr. Kenton Kaufman. ■

W. Hall Wendel Jr.

Photos by (left to right): Randy J. Ziegler

MAJOR BENEFACTOR: Sandra S. Pobanz

Beating the odds

By Dianne M. Axen

The odds might say it's unlikely that a small-town couple, who battled life-threatening illnesses and financial hardships, would someday endow a Mayo Clinic Fellowship. But the odds would be wrong.

Wilbur and Grace Pobanz never believed in giving up. "In the face of overwhelming obstacles, they simply tried harder," says their daughter, Sandra S. Pobanz of Moline, Ill. She describes how Mayo Clinic changed her parents' lives.

"My parents had hit rock bottom before they came to Mayo Clinic in 1942," says Sandra. "My father, then 34, had been in and out of hospitals for two years. Local physicians couldn't determine what was causing his heart to race. Mother supported the family on earnings of $7 per week until the day she nearly died from a hemorrhaging ectopic pregnancy."

Following that crisis, their local physician referred Mr. Pobanz to Mayo Clinic. With few resources, the couple made the trip to Rochester. Mayo physicians diagnosed his condition as acute tachycardia and started appropriate treatment. Before long, life began to improve for the couple. Mr. Pobanz regained his strength and eventually became vice president of a major agricultural corporation. Mrs. Pobanz continued to be his main source of help and moral support. During this time, their daughter, Sandra, was born. The Pobanz family never lost sight of their first Mayo Clinic experience.

"When somebody puts you back on your feet and you've had a life that you wouldn't have had otherwise, you remember those people the rest of your life," says Sandra, who still has the card from the appointment that saved her father's life and the receipt for the $75 Mayo Clinic bill.

A Phi Beta Kappa graduate of Augustana College in Rock Island, Ill., Sandra earned a Bachelor of Arts in Business Administration degree. She worked as a financial budget manager for 27 years at the U.S. Army Armament Command in Rock Island. She's been an active volunteer in her community and for Navajo Ministries, Farmington, N.M. But she says caring for her parents has been her most satisfying accomplishment.

In later years, Sandra's mother was treated by Mayo physicians Roger F.J. Shepherd, M.B.B.Ch., and Thomas M. Habermann, M.D., until her death at 85. Her father lived to be 95. Sandra recently published a book, *Grace*, in honor of her parents and dedicated to Mayo Clinic. "Without question, Mayo is the best care in the world."

In 2004, Sandra established the Mayo Clinic Pobanz Family Predoctoral Research Fellowship. Last year she met the first scholarship recipient, Rebecca L. Schmidt.

"Becky's one of the most dedicated women I've ever met," says Sandra. "I told her that common sense would not have predicted this. There would be no philanthropy if not for Mayo saving my father's life."

Sandra S. Pobanz

Sandra recently published a book, *Grace*, in honor of her parents and dedicated to Mayo Clinic.

And now, thanks to the family's generosity, Ms. Schmidt is working to save the lives of others through her research in cancer and other illnesses.

"It is very satisfying to know that our estate gifts will carry on the Mayo legacy, enabling students and researchers to learn and to help improve the health of humanity in the future," says Sandra. ■

PRINCIPAL BENEFACTORS: Jay and Deanie Stein

The gift of giving

By Matt Derechin

To discuss philanthropy with Jay and Deanie Stein of Jacksonville, Fla., is to realize that giving can be a gateway to many profound experiences.

One example is the unforgettable moment when Mr. Stein made his first sizable charitable donation — a founding gift to the United States Holocaust Memorial Museum in Washington, D.C.

"I was overwhelmed and grateful to be able to support the museum in that way," says Mr. Stein, chairman of Stein-Mart, a national department store chain founded by his family in 1908. "I broke down in the middle of making the gift. The museum chairman at the time was with me, and he said, 'I thank you for your generosity, but I love you for your tears.'"

The Steins have also seen philanthropy inspire people in remarkable ways. Such is the case with their annual bicycle challenge to elementary school children in Jacksonville. Around the holidays, they donate 2,500 bicycles to more than 50 elementary schools around the city, as rewards for students who challenge themselves academically.

"Some of the recipients have given their bicycles to other, less-fortunate children in their communities," says Mrs. Stein. "It's extraordinarily moving."

And at Mayo Clinic, philanthropy helps the Steins celebrate friendship. The Steins' generosity to Mayo includes a cancer research gift in honor of Timothy Woodward, M.D., a gastroenterologist at Mayo Clinic Jacksonville.

Jay and Deanie Stein

"We never hesitate to call Dr. Woodward when an issue arises, and he calls us often, just to know how we are feeling," Mr. Stein says. "In short, he and his family have become our family."

A lifetime of giving

Although the Steins support a diversity of causes, their giving is united by a smaller set of inspirations.

The first is a desire to meet unmet needs, which they say stems from their childhood. "Both Jay and I grew up in less-affluent parts of the country, and because of that, we recognize that there are people with great needs," says Mrs. Stein.

Continuing excellence is a second — if not equally prominent — theme in the Steins' giving, and it is an important factor in their support for Mayo Clinic. In addition to cancer research, the Steins have supported the construction of the new hospital on the Jacksonville campus, and they advocate on Mayo's behalf in the community.

"We are blessed to have wonderful hospitals and physicians in this city," says Mr. Stein. "But there is no substitute for Mayo's coordinated, collaborative approach to medicine. Outside of our faith, there is no organization that contributes more to our lives than Mayo."

Describing Mayo's contribution to his family, Mr. Stein says it reminds him of the adage: "'Take care of those who take care of you.' That's a good tool for a fulfilling life, and it applies to our relationship with Mayo," he says. "How do we take care of Mayo Clinic? We express our appreciation, and we back it up with what will hopefully be a lifetime of giving." ■

Photos by (left to right): Dennis P. Heslin, Jodi O'Shaughnessy Olson

PRINCIPAL BENEFACTORS: Rosemary A. Crisp and Harry L. Crisp II

Faith, family and friends

By Dianne M. Axen

Rosemary Crisp's first recollection after surgery was waking up in her hospital room at Mayo Clinic to see her husband and their six children — lined up, three on each side of her hospital bed. The news was not good. The tumor was malignant. She had ovarian cancer.

"I still remember the children's wide eyes. They were frightened and I felt for them. It was one of the most defining moments of my life. But I felt that somehow we would get through it," says Mrs. Crisp.

Almost 12 years have passed since that day, and Mr. and Mrs. Harry L. Crisp II and their children, now adults, have again gathered at Mayo Clinic — this time for a joyful reason.

On June 1, 2007, Mayo recognized the Crisps for their generosity in establishing the Rosemary Berkel Crisp, R.N., and Harry L. Crisp II Endowment for Research in Female Cancers. This Principal Level gift honors Mrs. Crisp's longtime physician, Brigitte A. Barrette, M.D., assistant professor and consultant in gynecology and oncology at Mayo Clinic Rochester.

"It's been a long and complicated journey," says Dr. Barrette. "There have been some very good days and some difficult ones. I haven't always had all the answers, but fortunately at Mayo, outstanding teamwork allows us to find the answers."

Throughout the journey, Mrs. Crisp says faith, family and friends have inspired her.

Harry L. Crisp II and Rosemary A. Crisp

"At home, it is also a team effort," says Mr. Crisp. "When Rosemary's hurting, I'm hurting."

Mr. and Mrs. Crisp, of Marion, Ill., own Pepsi MidAmerica, which distributes Pepsi products in portions of Illinois, Missouri, Arkansas, Kentucky and Tennessee. For the past 71 years, the Crisp family has owned and operated the company, one of the largest family-owned bottlers in the United States.

In addition to being a partner in business, Mrs. Crisp has also followed her passion for nursing. In 1958, she graduated as a registered nurse from St. Mary's Hospital School of Nursing in Evansville, Ind. She's received numerous awards and honors for her achievements as a leader of local, state and national nursing programs.

"Someone once said that nursing is the door to the world," says Mrs. Crisp. "I think it's true. I love people and I've loved working with people." Mrs. Crisp remains active in major nursing initiatives such as research scholarships, national education programs and preventive health care.

The Crisps believe in "trying to make this world a little better than when we came into it," they say.

"I am deeply honored by the generosity of Mr. and Mrs. Crisp," says Dr. Barrette. "Their philanthropy will help provide the tools to allow us to serve our patients through clinical and basic research and help eliminate the suffering of ovarian cancer."

"I'm so proud we have this research fund in perpetuity so the future may bring a lasting effect on quality of life," says Mrs. Crisp. "Maybe I'll look down from heaven one day and see some of the people who've been helped along the way." ■

News at Mayo Clinic

Executive assistant to Mayo Clinic's CEOs retires after 35 years

Bonnie Kane has witnessed Mayo Clinic's history, growth and world-renowned status through the eyes of her boss, Mayo's chief executive officer.

For 32 of her 35 years at Mayo, Ms. Kane has supported four of Mayo Clinic's CEOs, W. Eugene Mayberry, M.D., Robert Waller, M.D., Michael Wood, M.D., and Denis Cortese, M.D.

"All of them have been so genuine," she says. "An awareness of their level of responsibility makes me conscious to represent them in a way that speaks well of them and the institution. I love this place and I love being part of the team as we work to fulfill our mission to provide the best possible care for our patients."

Ms. Kane retired in November. "I look forward to retirement and to indulging my passion for quilting, continuing my church activities and traveling with my husband," she says. "I am excited about the next phase of life."

"Bonnie has been a valued administrative assistant whose experience from having worked in this role for many years has been helpful to me. We all wish her well in her retirement and thank her for her years of service to Mayo Clinic," says Dr. Cortese.

A simple act of kindness helps raise funds

On May 19, 2007, after weeks of preparation, Morgan Lyons and Marisa Toivonen celebrated their 13th birthdays, a special day three families and many friends will never forget.

Morgan and Marisa have been best friends as far back as they can remember. With their birthdays less than two weeks apart, the girls decided to have a joint birthday party. The planning began, and the guest list grew. With 42 friends invited and unable to decide whom to cut from the list, Morgan's mother, Shelly, recommended the girls request monetary gifts. In return, they would give this to a local charity. Morgan and Marisa's enthusiasm soared when Marisa suggested they donate the money to the Mayo Eugenio Litta Children's Hospital in Rochester, Minn., in honor of her cousin, Noah Hanson, who is a patient at the hospital.

The news of this event spread rapidly. "They were all very excited. One friend had her own bake sale and raised $85," said Morgan. When asked why they chose to give the money to Mayo, Marisa simply stated, "We wanted to help Noah."

Philip Fischer, M.D., director of Mayo Clinic's Pediatric Diagnostic and Referral Services, gratefully accepted the gift of $855 during an ice cream social recognizing the girls for their contribution. The money will go toward new DVDs, crayons and markers, coloring books, puzzles and Play-Doh. Noah was thrilled to hear what a wonderful thing the girls were doing. "It makes you feel good when you help others and to know you did a good thing," said Morgan.

Morgan Lyons and Marisa Toivonen, pictured above with Noah Hanson, gave a gift in Noah's honor to the Mayo Eugenio Litta Children's Hospital in Rochester, Minn.

Photos by (left to right): Randy J. Ziegler, Siddiqi Ray

A talented, young pianist gives back

Shortly after beginning piano lessons at the age of 4, it was clear that Emma Schneider had a love for music — a captivating musical talent. At age 10, Emma studied musical education at McPhail Center for Music in Minneapolis, Minn., which resulted in honors recitals, master classes, performance scholarships and participation in a concerto competition. She has a dream of playing at Orchestra Hall in Minneapolis.

The Schneider family has a history with Mayo Clinic that goes back to when Emma's uncle was seen at Mayo for a heart transplant over 25 years ago. Julie Schneider, Emma's mother, knows firsthand the hardships imposed on families who come from out of town to receive care at Mayo. In May of 2007, Emma held a benefit concert and raised money selling her CD, "Impromptu: Piano Classics by Emma Schneider." The dollars raised from this event were given to the Poverello Foundation, a charitable entity, which uses contributions to help Saint Marys Hospital patients who are unable to meet their financial obligations incurred during a Mayo Clinic hospital stay.

Mrs. Schneider said that she "has always thought of Rochester, Minn., as a quaint, loving city." Because of their love for the city, the family continues to visit, and Emma goes from piano to piano to play for patients and their families.

Dan Abraham Healthy Living Center open house

In October, Dan Abraham, Mayo Clinic benefactor and supporter of the Healthy Living Center that bears his name, visited Rochester with his friends and family to formally dedicate the building and its programs. One special friend of Mr. Abraham's, former President Bill Clinton, attended the ceremony and spoke to invited guests.

Emma Schneider demonstrates her musical talents by playing one of Mayo Clinic's pianos.

The new Dan Abraham Healthy Living Center is the culmination of a long relationship with Mr. Abraham, the founder of Slim-Fast. "I want the staff of Mayo Clinic to be the healthiest work force in the nation, and it is my dream that this building, its equipment and its staff will motivate everyone here to seek a healthier lifestyle," says Mr. Abraham.

Mayo Clinic Health Policy Center: experts talk payment reform

The medical payment system must be restructured to reward value, coordinated care and patient involvement in decision-making, according to more than 45 health care policy experts who gathered at Dartmouth College for a forum on payment reform. The forum was part of the Mayo Clinic Health Policy Center's long-term, nationwide initiative to shape the future of health care.

"Many people remark, 'health care costs are out of control; we would like to get what we pay for,'" says Robert Smoldt, co-host of the forum and executive director of the Health Policy Center. "If providers are paid based on the value they deliver to patients, then they will be motivated to increase quality and decrease costs."

Participants agreed that the United States is not providing the highest–quality care for the money spent, and noted problems with the current payment system.

Participants representing many sectors evaluated several innovative ways to pay for care. There was little support for the current Medicare pay-for-performance model. These payment approaches, which are not mutually exclusive, show the most promise for increasing effectiveness and reducing costs:

- Certification of shared decision making for major surgery — medical centers would be compensated for establishing a formal program in which patients actively participate in treatment decisions. All candidates for elective surgery would be offered the program. Medical centers with high-quality patient decision scores would receive a bonus.
- Chronic condition coordination payment — For care of patients with chronic conditions, a "medical home" would be identified and paid a single periodic, prospectively defined "care management payment" to cover care management, preventive care and minor acute care episodes. The amount would be adjusted

for the severity/risk of the patient. Acute episodes and long-term care associated with the condition would be paid separately.

- Mini capitation — Payments to hospitals and physicians managing the hospital care for acute episodes would be bundled together into a single payment. One lump sum payment for both physicians and the hospital would require the two groups to work together to integrate services.

More information is available online at *www.mayoclinic.org/healthpolicycenter/.*

William F. O'Connor Gastroenterology Clinic

A $15 million gift from The William F. O'Connor Foundation will endow gastroenterology cancer research and name the ninth floor of the Gonda Building the William F. O'Connor Gastroenterology Clinic.

William F. O'Connor was a "legendary figure on the floor of the Chicago Board of Trade," say industry sources. He became a member of the exchange in 1955 and always stood out in the crowd with his "ever-present green plaid jacket and shock of white hair." In 1959, he co-founded O'Connor & Company; in 1972, the First Options of Chicago; and in 1977, O'Connor and Associates. He also served as chairman of the Chicago Board of Trade in the 1990s. According to the *Chicago Sun-Times*, he was "a tenacious Irishman who elevated Chicago's financial markets to international prominence."

Nearly every year since Mr. O'Connor's death in 1999, Mayo has been the recipient of major gifts from his foundation, The William F. O'Connor Foundation. These gifts honor the outstanding care foundation members experience at Mayo.

The T. Denny Sanford Pediatric Outpatient Center's nature theme provides a calming environment.

Pediatric Center grand opening draws a crowd

Mayo Clinic recently celebrated the grand opening of the Mayo Clinic T. Denny Sanford Pediatric Outpatient Center. The event highlighted the new pediatric center's nature theme, and included activities and displays encouraging kids to take care of themselves and the world around them.

The new center brings together many pediatric subspecialty staff and services into a single location dedicated to children. It features an inspiring Midwest nature theme designed to calm, as well as engage patients and their families visiting the clinic. The center opened for patient care in July.

Mayo Clinic Center for Translational Science Activities

The new Mayo Clinic Center for Translational Science Activities (CTSA) hosted a day of events for the community and Mayo Clinic staff in August.

CTSA integrates and coordinates the vast resources of Mayo to train, equip and support the clinical research teams of today and tomorrow. CTSA has four main areas of focus, each addressing a key component of clinical and translational research: Education resources, research resources, community engagement and service centers.

"Mayo Clinic is the premier medical institution in the world and — in partnership with Mayo — Rochester is an emerging biotechnology center," Mayor Ardell Brede said. "The University of Minnesota in Rochester will attract the 'rock stars' of science, and the CTSA will attract the best and brightest minds."

CTSA is funded by the National Institutes of Health.

Redesigned Mayo Clinic Web site launched

Oct. 9, 2007, was the launch date for the completely redesigned *mayoclinic.org* Web site. *Mayoclinic.org* is the virtual "face" of Mayo Clinic to the 1 million patients, prospective patients and referring physicians who visit the site monthly. In 2006, more than 150,000 patients used the site to access Web forms or Web-only telephone numbers for appointments.

The design team conducted qualitative and quantitative patient research and testing to learn what patients look for on the Internet and how they want information organized. The team interviewed patients, physicians and Mayo leadership at all three Mayo locations.

All information on the original *mayoclinic.org* site remains on the redesigned site. The new navigation will feel much more natural to patients and other visitors to the Web site. Mayo's two other Web sites — *mayo.edu* (education and research program information) and *MayoClinic.com* (consumer health information) — have also been changed to increase their compatibility with *mayoclinic.org.*

Photos by (left to right): Joseph M. Kane, Randy J. Ziegler, Scott R. Dulla

The Suites at Saint Marys

The Suites at Saint Marys offer patients the opportunity to choose private, world-class accommodations during a hospital stay at Mayo Clinic Rochester. Patients who opt for this service receive the same high-quality care unique to all Mayo patients while enjoying special amenities and services such as private luxury rooms with master bathrooms, elegant in-room gourmet dining and on-site concierge services. Each suite is equipped with modern conveniences, providing guests with the utmost in privacy and comfort.

For more information, please visit *www.mayoclinic.org/saintmaryshospital/suites.html.*

Trustees recognize named professors

Named professorships at Mayo Clinic represent the highest academic distinction for a faculty member. Faculty is appointed through peer nomination, and is confirmed by Mayo's senior leadership. Individuals are recognized for distinguished achievement in their specialty areas and service to the institution.

At its quarterly meeting in Rochester, Minn., the Mayo Clinic Board of Trustees recognized four consultants by awarding named professorships:

Charles Erlichman, M.D., received the Peter and Frances Georgeson Professorship in Gastroenterology Cancer Research, established in 2006. Dr. Erlichman, who joined Mayo in 1994, is developing novel therapies to treat cancer. He is a leader in developing a chemotherapy regimen proven effective in treating colon cancer. Dr. Erlichman also leads an academic medical center consortium performing the second phase of clinical trials of novel agents in cancer patients.

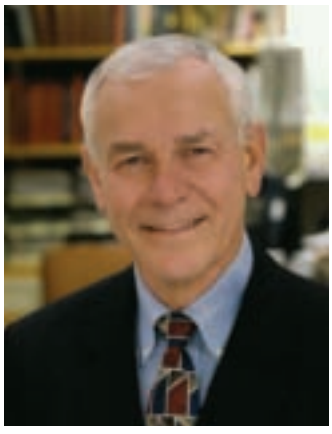
Bernard Morrey, M.D., received the John and Posy Krehbiel Professorship of Orthopedics. Dr. Morrey is the emeritus chair of the Department of Orthopedics and a professor of orthopedics. Recently fulfilling a Board of Governors term, he is involved in Mayo practice optimization efforts. Dr. Morrey has served in several national leadership capacities, including terms as president of the American Academy of Orthopedic Surgeons, the American Orthopedic Association and the American Shoulder and Elbow Surgeons.

Donald Tindall, Ph.D., received the Carl Rosen Professorship in Urology, established by Carl Rosen in 1983 as a tribute to David Utz, M.D. Dr. Tindall, whose major research area is the mechanism of androgen action in prostate cancer, is vice chair of urology research, a professor of biochemistry and molecular biology, and a consultant in the Department of Urology. Dr. Tindall has served as president of the Society for Basic Urologic Research, chair of the 12 site-visit teams for the National Cancer Institute and co-chair of the Prostate Cancer Review Group for the National Cancer Institute.

Thomas Colby, M.D., received the Geraldine Colby Zeiler Professorship in Cytopathology, established in 1992 by William Zeiler, M.D. Dr. Colby joined Mayo in 1986 and is chair of Laboratory Medicine and Pathology at Mayo Clinic Arizona, professor of pathology at Mayo Medical School and a consultant in Surgical Pathology.

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

Charles Erlichman, M.D.



Bernard Morrey, M.D.

Donald Tindall, Ph.D.

Thomas Colby, M.D.

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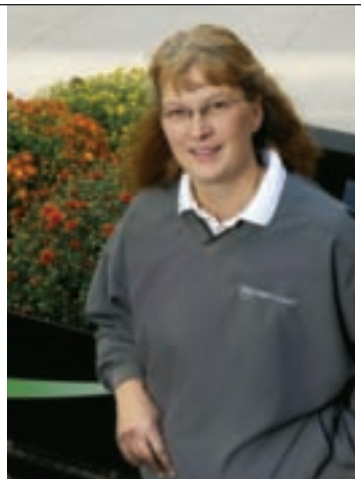

ON THE COVER
Kathy M. Pahl planted the mums on Annenberg Plaza, which are seen on the cover. The Annenberg Plaza was a gift to Mayo patients, families and staff from Leonore and Walter Annenberg and the Annenberg Foundation. The plaza represents the Annenberg family's wish to share their love of art and nature with the Mayo community and to provide a place of rest, refuge and inspiration for all who come to Mayo Clinic.

Mayo Magazine

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Carillonneur

Jeffrey Daehn

By Dianne M. Axen

Jeffrey Daehn

Winding his way up the spiraling 93-step staircase, Jeffrey Daehn takes his place in history as the third carillonneur at Mayo Clinic. The tower at the top of the Plummer Building in Rochester houses the carillon, a gift from Drs. William J. Mayo and Charles H. Mayo.

A carillon (care-uh-lawn) is a musical instrument comprised of at least 23 bronze cup-shaped bells. In 1977, 33 bells were added to the original 23-bell Rochester carillon. The bells were gifts from Frances G. Sheets and Isabella Gooding Sanders, descendents of Alphonso Gooding, a Rochester pioneer. Today, the Rochester carillon is among the most complete carillons in North America.

A native of Oak Park, Ill., Mr. Daehn holds music degrees from Valparaiso University in Indiana, and Union Theological Seminary in New York City. He moved to Rochester, Minn., in 1977 and served as organist and minister of music at Zumbro Lutheran Church for 20 years. During that time, he met former Rochester carillonneur, Dean Robinson. Mr. Robinson encouraged Mr. Daehn to learn to play the carillon, and later provided instruction. Sadly, Mr. Robinson passed away in 2004, ending a 46-year career as Mayo's carillonneur.

After Mr. Robinson's death, Mr. Daehn was asked by Mayo to consider taking the post, and he agreed. Later Mr. Daehn learned that Mr. Robinson had recommended him as his successor.

Mayo hosts artists from all over the world to play the carillon. "Not only is this a treat for the Rochester community, it's also enlightening for me to hear these people play," says Mr. Daehn.

And many visitors come to see as well as hear the carillon each year. "They are in awe of the instrument and curious about how it works," says Mr. Daehn.

The musical talent and interpersonal skills that Mr. Daehn brings as Mayo carillonneur are in perfect harmony with the Mayo culture. He considers the Rochester carillon an instrument that nurtures the spirit.

"I think the Mayo brothers were onto something when they gifted the carillon," says Mr. Daehn. "Today we refer to it as holistic health — although they may not have articulated it that way back then. You see various aspects of it every day as you walk around Mayo Clinic. One day, you see a patient sitting down to play one of the grand pianos around the clinic, the next day it's a doctor playing his dulcimer. Music is a nurturing part of our existence. The carillon plays into that. It speaks to people."

Several days a week, Mr. Daehn's performance schedule includes playing the carillon at the end of the workday, providing a sense of calm as people leave for the day.

"At the end of the day, just that sound coming down from above changes the feel of the day from humdrum to something saying, 'This is still a special place — even among all the traffic noise and hustle bustle, this is still a very special place,'" says Mr. Daehn.

MAYO CLINIC

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