

# Medical Bulletin

## Facing a brighter future

Reconstructive surgeons apply  
art and science to transform lives



**FALL 2010** Doctors decode the genes that make every cancer unique □ Frank Cerra reflects on 30 years at the hub of health sciences □ First-year classmates are just what Minnesota's Future Doctors ordered

## About the Medical School

THE UNIVERSITY of Minnesota Medical School encourages collaborations that spur innovations — discoveries that advance biomedical knowledge, patient care, and educational programs. The Medical School now trains 920 medical students and more than 800 residents and fellows and is home to 1,600 faculty physicians and scientists.

## About the Minnesota Medical Foundation

THE MINNESOTA Medical Foundation is a nonprofit organization that raises millions of dollars annually to help improve the quality of life for the people of Minnesota, the nation, and the world by supporting health-related research, education, and service at the University of Minnesota, including many Medical School initiatives.

### Frank B. Cerra, M.D.

Medical School Dean and  
Senior Vice President for Health Sciences

### Mark S. Paller, M.D., M.S.

Executive Vice Dean, Medical School

### Becky Malkerson

President and CEO,  
Minnesota Medical Foundation



UNIVERSITY OF MINNESOTA

Medical School



## ON THE WEB

 Visit [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras) to find web-exclusive content in the online version of the *Medical Bulletin*.

### Sculpting a new face

View slideshows about facial reconstruction and one doctor's ties to its use in WWII. Plus, learn more about the mechanics of smiling and facial reanimation.

### Future doctors

Watch slideshows about two exceptional medical students who are on intersecting paths.

### Global outreach in Nicaragua

View a slideshow about a pediatric resident's outreach work in Nicaragua and read excerpts from her online journal.

### Saving Henry

Hear a podcast and read a book excerpt about one family's journey to medicine's outer limits.

Web exclusives produced by Robyn White

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## Medical School News

# U researchers use stem cells to repair the skin of children with a life-threatening disease

**P**hysician-scientists at the University of Minnesota have for the first time demonstrated that a lethal skin disease can be successfully treated with stem cell therapy.

Medical School researchers John E. Wagner, M.D., and Jakub Tolar, M.D., Ph.D. — in collaboration with researchers in Oregon, the United Kingdom, and Japan — have used stem cells from bone marrow to repair the skin of children with a fatal skin disease called recessive dystrophic epidermolysis bullosa (RDEB).

It's the first time researchers have shown that bone marrow-derived stem cells can repair the skin and upper gastrointestinal tract and alter the natural course of the disease. Until now, bone marrow has only been used to replace diseased or damaged marrow.

"To understand this achievement, you have to understand how horrible this disease actually is," says Wagner. "From the moment of birth, these children

**My hope is to do something that might change the natural history of this disease and enhance the quality of life of these kids.**

– John E. Wagner, M.D.

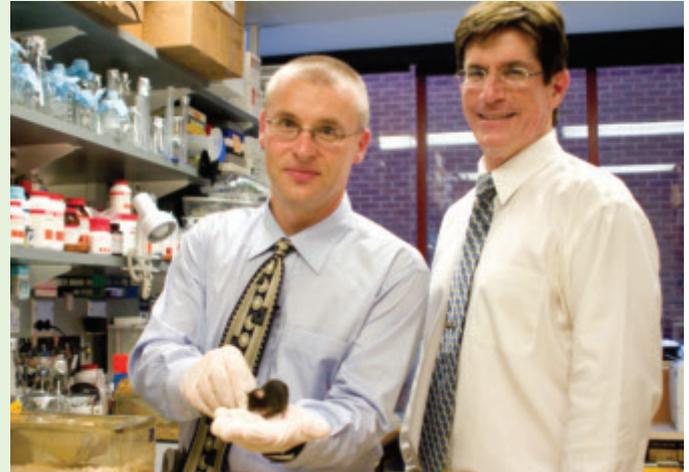
develop blisters from the slightest trauma... They live lives of chronic pain, preventing any chance for a normal life. My hope is to do something that might change the natural history of this disease and enhance the quality of life of these kids."

Since the study began at the University in 2007, 10 children with the most aggressive forms of EB have received transplants at University of Minnesota Amplatz Children's Hospital. While all of the children have responded to the transplants, the magnitude of each response has varied.

The research results appeared in the August 12 issue of the *New England Journal of Medicine*.

"Bone marrow transplantation is one of the riskiest procedures in medicine, yet it is also one of the most successful," Tolar says. "Patients who otherwise would have died from their disease can often now be cured."

This research is supported in part by grants from the National Institutes of



Research by Jakub Tolar, M.D., Ph.D., and John E. Wagner, M.D., moved quickly from mouse studies in the laboratory to showing success in patients.

Health, the University of Minnesota Academic Health Center, Epidermolysis Bullosa (Liao Family) Research Fund, Sarah Rose Mooreland EB Fund, Children's Cancer Research Fund, and agencies in Japan. [MIB](#)

*Read the news release, watch a video on the research, and meet some of the children who participated in the clinical trial at [www.ahc.umn.edu/eb](http://www.ahc.umn.edu/eb).*

## University, Fairview launch \$175 million campaign for children's health

The University of Minnesota and Fairview Health Services in September launched a \$175 million campaign to support pediatric research, education, and care at the new home for University of Minnesota Amplatz Children's Hospital. The campaign, led by the Minnesota Medical Foundation, has already achieved nearly half of its goal.

University of Minnesota Amplatz Children's Hospital is Minnesota's first and only academic pediatric hospital engaged in basic science, translational research, and leading-edge patient care.

"Minnesotans understand the unique role that an academic children's hospital has for our state and our kids and will support this campaign," says community volunteer Rich Ostlund, who chairs the University of Minnesota Amplatz Children's Hospital Philanthropic Board.

The new, 227,000-square-foot hospital will be located on Fairview's Riverside campus in Minneapolis. It will include 96 acute care hospital beds, state-of-the-art medical/surgical units, a pediatric intensive care unit, and a dedicated pediatric emergency room, in addition to transplant services units and Minnesota's only pediatric dialysis unit. <sup>MB</sup>



Learn more about the new hospital and view photos from the campaign kickoff event at [www.uofmhope.org](http://www.uofmhope.org).



A family-friendly event on September 25 celebrated the public launch of the campaign.

PHOTO: WILLETTE PICTURES

## U hospitals rank among nation's best

The University of Minnesota Medical Center, Fairview and University of Minnesota Amplatz Children's Hospital are again among an elite group of hospitals named the nation's best by *U.S. News & World Report*.

The annual rankings are based in part on reputation, death rate, and care-related factors such as nursing and patient services.

This year University of Minnesota Medical Center, Fairview ranked among the top 50 hospitals in the United States in six medical specialties: kidney disorders (18th), pulmonology (23rd), gastroenterology (29th), cancer (37th), otolaryngology (44th), and orthopaedics (46th).

University of Minnesota Amplatz Children's Hospital this year was named among the nation's top 30 children's hospitals in two medical specialties — kidney disorders (9th) and cancer (24th). <sup>MB</sup>

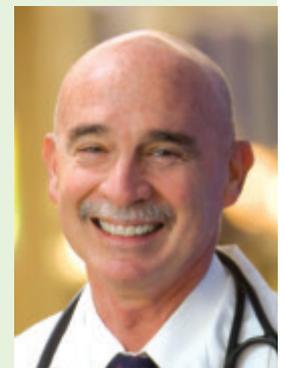
## Medical School, AHC name Friedman as leader

As two high-level University of Minnesota leaders' retirement dates draw near, the Academic Health Center (AHC) and Medical School are making plans for the transition.

Frank B. Cerra, M.D., who currently serves as the University's senior vice president for health sciences and dean of the Medical School, will retire December 31 (see related story on page 19). University President Robert H. Bruininks, Ph.D., plans to retire June 30.

Bruininks in September named the Medical School's Department of Pediatrics chairman Aaron Friedman, M.D., as vice president of health sciences and dean, effective with Cerra's retirement. In his announcement, Bruininks said that he would urge the next University president to conduct a national search for a permanent replacement.

Friedman, who holds the Ruben-Bentson Chair in Pediatric Community Health, also is the pediatrician-in-chief at University of Minnesota Amplatz Children's Hospital, a member of University of Minnesota Physicians' board of directors, and chair of the Medical School's education council. He arrived at the University of Minnesota in 2008.



Aaron Friedman, M.D.

"I chose Dr. Friedman because he is an entrepreneurial and visionary change agent skilled at building effective working relationships and inspiring a unified vision to accomplish shared goals," Bruininks wrote in a message to the AHC community in September. "These qualifications, as well as his personal integrity, high energy, and ability to work across academic and organizational boundaries, made him the ideal candidate for this position."

Friedman began his duties on a part-time basis on October 15. He and Cerra will work together through December to make the transition as smooth as possible. <sup>MB</sup>

# Medical School–Duluth first in graduating rural M.D.s

PHOTO: COURTESY OF JENNIFER VESELY



The Medical School–Duluth Campus specializes in educating students committed to practicing primary care and serving the health-care needs of rural communities.

THE UNIVERSITY of Minnesota Medical School–Duluth Campus ranks first among schools graduating M.D.s who practice in rural areas and second among the 18 allopathic and osteopathic medical schools reviewed in a study published in the April issue of *Academic Medicine*.

“We’re proud that our campus has been achieving its mission to graduate physicians who will practice in rural communities,” says Gary Davis, Ph.D., regional campus dean of the University’s Medical School–Duluth Campus. “And now it’s gratifying to see independent researchers publish that fact.”

The authors examined a 10-year group of practicing M.D.s and D.O.s who graduated from medical school between 1988 and 1997.

According to the study, 36 percent of University medical graduates who completed their first two years on the Duluth campus and finished in the Twin Cities became physicians in rural communities, although James Boulger, Ph.D., the Duluth school’s director of alumni relations, says the figure is actually 50 percent.

The authors found that only 10 medical schools had more than 25 percent of their graduates in rural practice. Among the medical school graduates in the cohort studied, only 11 percent were working in rural locations. MB

## Want to reduce your risk of skin cancer? Quit tanning indoors, study says

Indoor tanning is linked to an increased risk of melanoma, according to a new study from the University of Minnesota’s Masonic Cancer Center and School of Public Health.

“There was no safe tanning device,” says DeAnn Lazovich, Ph.D., M.P.H., leader of the study and coleader of the Masonic Cancer Center’s Prevention and Etiology Research Program. “We also found—and this is new data—that the risk of getting melanoma is associated more with how much a person tans and not the age at which a person starts using tanning devices. Risk rises with frequency of use, regardless of age, gender, or device.”

And indoor tanning is a cancer risk that can be avoided, Lazovich adds.

Melanoma is the most serious form of skin cancer and one of the fastest increasing cancers across the country. About 69,000 people in the United

States will be diagnosed with melanoma this year. And although melanoma accounts for only about 4 percent of all skin cancers, it causes about 79 percent of deaths from skin cancer.

This study, the largest of its kind, involved 1,167 Minnesotans diagnosed with melanoma and 1,101 Minnesotans without melanoma. It found that:

- People who use any type of tanning bed for any amount of time are 74 percent more likely to develop melanoma than those who have not used tanning beds;
- 62.9 percent of the group with melanoma and 51.1 percent of the control group had tanned indoors; and



DeAnn Lazovich, Ph.D., M.P.H.

- Frequent users of indoor tanning beds—defined as those who have used indoor tanning for more than 50 hours, 100 sessions, or 10 years—are 2.5 to 3 times more likely to develop melanoma than those who never use tanning devices.

Funded by the National Cancer Institute and the American Cancer Society, the study was published May 27 online in *Cancer Epidemiology, Biomarkers, and Prevention*, a journal of the American Association for Cancer Research. MB

MB Find a video and podcast about the study linking indoor tanning to a higher melanoma risk at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

## Find more news online

**BRAIN IMAGING STUDY** The University's Center for Magnetic Resonance Research will colead the \$30 million NIH Human Connectome Project, an imaging study of anatomical and functional connections in the human brain.

**SPORE GRANT** The University of Minnesota and the University of Alabama at Birmingham have been jointly awarded a five-year, \$11.5 million Specialized Program of Research Excellence grant for pancreatic cancer research.

**BMT RESEARCH GRANTS** Masonic Cancer Center scientists have received renewed grants totaling almost \$26 million from the National Cancer Institute to study hematopoietic stem cell transplantation and cell therapies to treat blood and bone marrow disorders.



Read more at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

## U researchers find two FDA-approved drugs that may fight HIV

In a recent study, University of Minnesota researchers discovered that a combination of two cancer drugs may be an effective treatment for HIV.

The drugs—decitabine and gemcitabine—are both already approved by the U.S. Food and Drug Administration (FDA) and now used in cancer therapy. When tested in mice, the two drugs together caused the HIV virus to mutate itself to death—an outcome researchers call “lethal mutagenesis.”

This is the first time the approach has been used to attack HIV without causing toxic side effects.

The study, published in the August *Journal of Virology*, is a collaboration between molecular virologists Louis Mansky, Ph.D., and Christine Clouser, Ph.D., of the Institute for Molecular Virology and School of Dentistry, as well as medicinal chemist Steven Patterson, Ph.D., from the Center for Drug Design.

Because the drugs are already FDA approved, the researchers believe that if their research is effective in large animal models, it will be easier to develop the drugs for human use.

“The findings provide hope that such an approach will someday help the 33 million people worldwide who currently live with HIV,” Mansky says.

## Masonic Cancer Center researchers create breathing lungs in the laboratory

University of Minnesota scientists have achieved another research “first”—creating breathing lungs in the laboratory.

This innovation comes two years after a different group of University researchers used a similar technique to create a beating heart in the laboratory.

A team led by the Masonic Cancer Center's Angela Panoskaltis-

Mortari, Ph.D., and assistant scientist Andrew Price used a process called whole-organ decellularization to remove cells from the lungs of dead adult mice and implant healthy stem cells derived from unborn mice into the decellularized natural framework of the lungs.

After about seven days in an incubator, the infused cells attached themselves to the matrix while breathing with the aid of a tiny ventilator.

The work appeared in the August 6 issue of *Tissue Engineering*.



PHOTO: JACOB PORTNOY

Scientists Angela Panoskaltis-Mortari, Ph.D., and Andrew Price say their research could be a step toward supplementing the supply of donor lungs for transplant.



Watch a video about the creation of breathing lungs in the lab at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

# Global Outreach | Ashley Balsam, M.D.

LOCATION: Jalapa, Nicaragua MISSION: Treating newborn jaundice



## Back-to-the-basics care

A medical resident uses an improvised light box to prevent jaundice-related disabilities in newborns

**A**fter finishing a 30-hour hospital shift, Ashley Balsam, M.D., a third-year internal medicine and pediatrics resident, doesn't go straight to bed. "I'm going to play soccer," she says.

That energy is typical of Balsam. Her normal routine includes doing rotations at University of Minnesota Medical Center, Fairview, playing soccer on a team with other residents, and caring for her new puppy, Chopper. She also finds the time and passion to volunteer with local outreach programs and travel to Nicaragua, where she's studying the long-term effects of neonatal jaundice.

### Spotting the problem

As part of an international rotation, Balsam spent two weeks last February working at a hospital in the city of Jalapa, Nicaragua, providing health care for "los pipitos" — children with disabilities.

"It's very bare bones. You're forced to rely on your clinical knowledge," Balsam says, noting that the hospital had no x-ray or ultrasound machines and just one oxygen tank for the entire facility.

Balsam and her colleague, fellow resident Janielle Nordell, M.D., accompanied by faculty member Teri Reid, M.D., treated a number of children with cerebral palsy, hearing problems, and

developmental disabilities. They learned that the children had had uneventful births but developed disabilities later. Balsam's group suspected that untreated jaundice at birth may have been the underlying cause.

Jaundice is a yellowing of the skin that occurs when the body is waiting for the liver to process bilirubin — a byproduct of the normal breakdown of red blood cells. If the bilirubin level gets too high, it can cause developmental problems.

In the United States, neonatal jaundice is easily treated and often diagnosed in the first few days after birth, while babies are still in the hospital. But in Nicaragua, most mothers and babies stay in the hospital for only about eight hours after birth, so the chance to diagnose and treat jaundice is often missed.

The medical team checked bilirubin levels in the 10 newborns who were delivered in the hospital during Balsam's stay in Jalapa. Of these 10, two had bilirubin levels that were in the range that required treatment with phototherapy.

PHOTOS: COURTESY OF ASHLEY BALSAM



Medical resident Ashley Balsam, M.D., got to know the children in Jalapa.



View a slideshow about Balsam's work in Nicaragua and read excerpts from her online journal at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

## DIY treatment approach

Phototherapy is the use of bright blue light to treat jaundice. “The UV rays in the light allow the bilirubin to be processed without the liver,” Balsam says. On its own, a newborn’s liver can take three to four days to remove excess bilirubin.

To administer the treatment, Balsam and her colleagues built a wooden phototherapy box. “We brought with us a simple design for how to build a phototherapy treatment box with fluorescent lights and wood,” she says. “We fancied it up with wheels.”

Balsam borrowed the design from Tina Slusher, M.D., a physician at Hennepin County Medical Center who used the same type of box to treat jaundiced newborns in Africa. Staff in Jalapa helped build it, learning the technique so they could make more boxes later.

The jaundiced babies are placed in the light box and exposed to UV rays. The treatment time depends on their bilirubin levels. “We treated 10 babies and none have [developed] problems from jaundice,” Balsam says. Since she left Jalapa, more than 10 babies have received phototherapy treatment, and her group has sent funds for constructing a second phototherapy box.

A big challenge in the process has been to build nurses’ confidence in administering the treatment. “The nursing staff was nervous [about the box],” Balsam says. “We had to do a teaching session, and after that they were really supportive.”

Another challenge was convincing the newborns’ parents that the treatment would help. “It took three to four hours of talking with them first,” says Balsam, who speaks Spanish.



A mother keeps a close watch as her baby is treated for jaundice in one of the phototherapy boxes Balsam and her colleagues built.

## Continuous learning

Working directly with families changed her view of what it means to deliver care. “We had this excitement over helping these babies, but it took sitting down and having a relationship with the families to make it happen,” Balsam says. “If the family doesn’t trust you, you’re not going to be effective.”

Balsam has since traveled back to Nicaragua and is planning another trip in February. “On our return trip in July, we made very basic handouts about jaundice and went out into the community to talk with pregnant women about recognizing [it] in their own babies.”

Now Balsam is awaiting approval from the Institutional Review Board—the group that monitors medical research involving human subjects—to begin a formal study on jaundice treatments and outcomes in babies in Nicaragua.

“If phototherapy treatment works, I think it will make a big difference,” she says. <sup>[MIB]</sup>

By ROBYN WHITE, associate director of editorial services at the Minnesota Medical Foundation

## NEONATAL JAUNDICE

In Nicaragua and many other countries, births do not always occur in a hospital, and in some hospitals mothers and their newborns are discharged eight hours or less after delivery, says Ashley Balsam, M.D. She also provided these statistics:

- Neonatal hyperbilirubinemia (jaundice) remains a leading cause of preventable brain damage, physical and mental disabilities, and premature death worldwide.
- The American Academy of Pediatrics recommends that pediatricians evaluate babies for jaundice within 48 to 72 hours of hospital discharge.
- In 2005 an estimated 33 percent of women in Nicaragua had access to a “trained attendant” during and after birth.



Rebuilding faces

Rebuilding faces

# Rebuilding lives

Reconstructive surgeons give people another chance for a normal life

IN FEBRUARY 2007, 23-year-old Katie Salomonsen woke up with the right side of her face red and swollen. She went to Fairview Southdale Hospital, where doctors found an abscessed wisdom tooth. Three days later, an oral surgeon extracted the tooth. During the surgery, he discovered that the entire roof of Salomonsen's mouth was black and scattered with ulcers. He had never seen anything like it and he biopsied the tissue.

Unbeknownst to anyone, an airborne fungus called *Rhizopus* had been attracted to Salomonsen's abscessed tooth. Once in her mouth, it fostered the rare and deadly infection rhinocerebral mucormycosis (RCM) that burrowed under her hard palate and was swiftly moving through the sinus cavity behind her right eye and toward her brain.

When the pathologists identified the infection, Salomonsen's doctor recommended that she transfer immediately to University of Minnesota Medical Center, Fairview. There, he said, she'd have the best chance for survival.

What happened to Salomonsen in the weeks and months that followed shows the power of collective expertise and combined experience, accompanied by a heavy dose of calculated risk-taking. No one at the University had ever seen active RCM, but physicians from seven different disciplines came together to throw everything at it that they had, including drastic surgeries to halt its spread.

It would take a full and harrowing year to stop the infection. Salomonsen, who had recently finished chemotherapy and radiation for a brain tumor, battled every inch of the way. The fight for her life left her without an upper jaw, soft

and hard palates, the cheekbone and sinuses on her right side, and a piece of her brain's frontal lobe.

Eating and swallowing were extremely difficult. People had a hard time understanding her speech. She had trouble breathing through her scarred sinuses, and her face was sunken drastically on the right side.

"I was scared of everything at this point," says Salomonsen. "I didn't know what life was going to bring me."

The surgeries also left two openings to her brain, one on the roof of her mouth, the other on the right side of her head. In both spots, the leather-like covering of the brain called the dura remained the only protection from serious bacterial infections like meningitis.

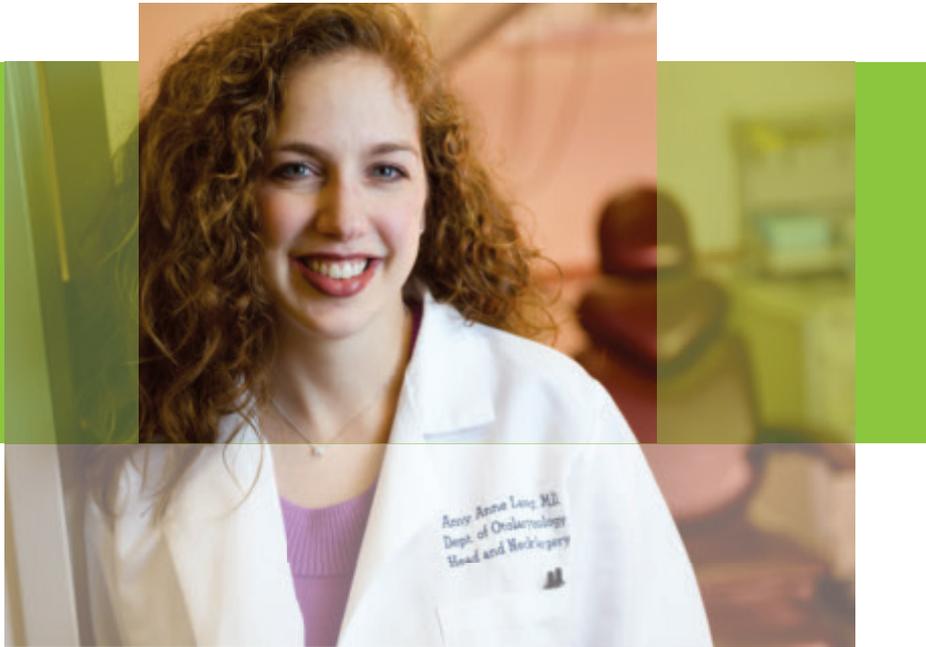
For a year and a half, Salomonsen slowly regained her strength, and in spring 2008, it was time to begin rebuilding her face.

### Second chance

David Hamlar Jr., M.D., D.D.S., is helping Salomonsen bring her life back toward normal. He joined the Department of Otolaryngology in 1994, adding a range of skills to a department that was already one of the best in the country. He is often called to do facial reconstructions to repair major injuries caused by traumas like car accidents, suicide attempts, and physical assaults. As a flight surgeon in the Air Force Reserves, he has deployed to Iraq and Afghanistan several times to care for military personnel with multiple injuries, many caused by improvised explosive devices. In addition, he sees veterans at the Minneapolis Veterans Affairs Medical Center.



Facial reconstructive surgeon David Hamlar Jr., M.D., D.D.S., talks to Katie Salomonsen about progress after her surgeries.



Amy Anne Lassig, M.D., and her colleagues focus on getting patients back to their normal lives after head and neck cancer treatment.

“My goal is to reconstruct the foundation destroyed by my patients’ wounds,” he says of his surgery. “Missing bone should be replaced, as should soft tissue. I replace the larger building blocks; they can be fine-tuned later.”

Although Salomonsen had already been through so much, she was eager to meet Hamlar and start the reconstruction process.

“I was so happy,” she says. “Every time we had an appointment with him, he would say, ‘This is what I want to do and this is what’s going to happen.’ And then he’d ask, ‘Is this OK with you?’ He always made sure that I was all right with everything that was planned. I started being more hopeful about my life.”

The essential first surgeries for Salomonsen were to close the passageways to her brain.

To make it easier for her to speak and eat, Hamlar used what’s called the “free flap” technique, which involves using a piece of tissue or bone from

one part of the body and putting it in another. It’s called “free” because the piece is completely separated from the donor site along with its pedicle of bundled blood vessels. The surgeon then stitches it in place and connects its pedicle to the reconstructed site’s own blood vessels.

Using a piece of Salomonsen’s belly muscle, including the skin, Hamlar refashioned her palates—the muscle and fat formed the hard palate; the skin mimicked the soft palate.

To fill the opening on the side of her head, Hamlar chose a product called PEEK—polyether ether ketone—a tough-as-bone material that can be sculpted. Working closely with a prosthesis maker, he made sure that the piece would exactly fit the space in her skull.

To put it in place, Hamlar made an incision along Salomonsen’s hairline and pulled down the skin of her face. After cleaning out the bone and tissue the infection had destroyed, he fitted the prosthesis and pulled the skin up over it, stitching it neatly in place.

“Not only did the prosthesis protect her, but it gave normal contour back to her face,” says Hamlar.

Salomonsen has many more surgeries ahead, with long healing times in between. Those surgeries include reconstructing an upper jaw and then implanting dentures, and refashioning her nose to make breathing easier. Joining Hamlar in this work will be his facial plastic and reconstructive colleagues, as well as an oral maxillofacial surgeon and maxillofacial prosthodontist.

“David Hamlar has always treated Katie with great compassion, insight,

and skill,” says Salomonsen’s mother, Colleen Forar. “What he has done for her is life-changing, not just by medical standards, but in the way that Katie sees herself and her future.”

### **Toward an ordinary life**

Surgeons in the Department of Otolaryngology work every day to give people back essential parts of themselves. Those may be actual physical parts, like missing jawbones or noses destroyed by cancer. Or they may be the ability to swallow or chew. Together, these various parts create something less tangible but often more crucial: our sense of self.

“We help patients heal and get back to their normal lives, their work, and their families,” says Amy Anne Lassig, M.D., a head and neck oncologist and microvascular surgeon. “Whatever we can do to optimize an outcome for patients is priceless to them. That’s why we do our best.”

Lassig is one of only a handful of surgeons in Minnesota, and among three in the department, who excise head and neck cancers and then reconstruct the lost tissue or bone, sometimes in a single surgery that can last 15 to 20 hours or more. She does the microvascular part of her work bent over a microscope, sewing together tiny blood vessels.

At the University, the survival rate for patients with head and neck cancers is above the national average. And the success rate for reconstructive surgery is extremely high, even though the department tends to get the most complicated cases in the state and patients whose treatments have failed elsewhere, according to Lassig.

“These procedures are very finicky,” she says. “If they’re not done correctly, the reconstructed tissue or bones will not survive.”

In a recent surgery, Lassig and her colleagues removed half the tongue of a young mother who has oral cancer. Using the free flap technique, Lassig replaced the lost tissue with a section of the woman’s forearm.

Without the reconstructive surgery, the woman would not have been able to manipulate food in her mouth or speak clearly.

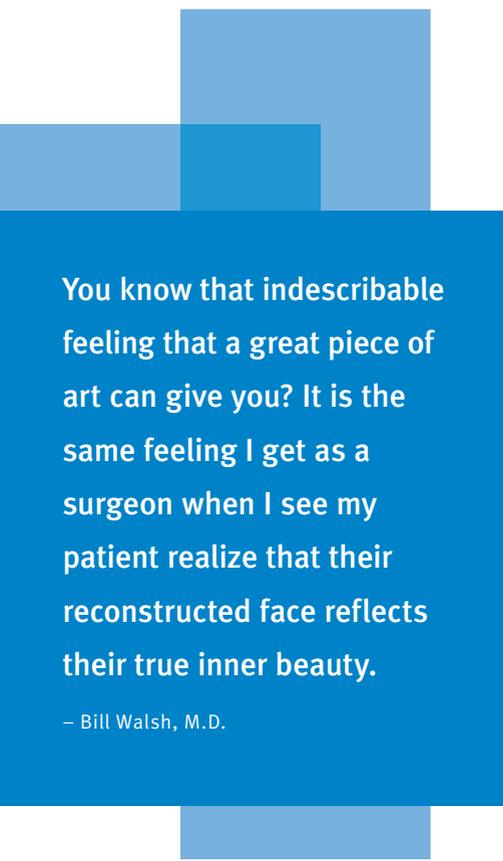
Following the successful surgery, “her articulation is excellent,” says Lassig. “She’s a wife and mother with two children to care for and she’s completely functional in the world and understandable to those she meets.”

### **Art unseen**

With surgery on the face and neck, preserving every millimeter of healthy tissue is crucial. Tissue left intact results in a more normal appearance, less reconstruction needed, and a site that can potentially support a facial prosthetic.

**We help patients heal and get back to their normal lives, their work, and their families. Whatever we can do to optimize an outcome for patients is priceless to them. That’s why we do our best.**

– Amy Anne Lassig, M.D.



You know that indescribable feeling that a great piece of art can give you? It is the same feeling I get as a surgeon when I see my patient realize that their reconstructed face reflects their true inner beauty.

– Bill Walsh, M.D.

If a nose, for example, is completely removed because of cancer or an ear is sheared off and lost in a car accident, they may need to be replaced with an implant. Unlike Salomonsen's prosthesis, which is covered with her skin, these prostheses do not become an integral part of a person's body. They are held on by catching under folds in the skin or sinuses, with adhesives, by attaching to metal implants imbedded in the skull, or by fixing them to eyeglasses. Prostheses are designed to be removed. Made from silicone, these small works of art are completely unremarkable. And that's a good thing.

As a working medical illustrator and facial and plastic reconstructive surgeon, the University's Bill Walsh, M.D., is unique in the country and the ideal person to create the artifice that allows his patients to move comfortably through life. To him, art and reconstructive surgery call on the same principles of light, shadow, and proportionality.

Among Walsh's special skills is preparing the surgical site to receive a prosthesis after he has removed a cancer or stabilized a wound. He has an intimate knowledge of how tissue acts and how scars form. He stitches together angles and planes of skin, for example, which will stretch and tighten in just the right way as they heal to allow attachment of a prosthetic nose or ear.

Then he works with the prosthetist to design the nose or ear for that specific person and surgical site, making sure it is tinted correctly and the edges are so thin and perfectly colored that one can't tell where the real skin begins or ends.

Walsh sees one more important similarity between art and facial reconstruction. "You know that indescribable

feeling that a great piece of art can give you?" he asks. "It is the same feeling I get as a surgeon when I see my patient realize that their reconstructed face reflects their true inner beauty."

### Moving parts

To make a reconstructed face move like a normal face is the Holy Grail for surgeons. Our facial movements can convey a myriad of emotions in an instant, and we are wired to react to those movements, however subtle they may be. We can detect a smile from 300 yards and can judge its sincerity quickly as the person approaches. If we are unable to move our face and express our emotions, we have lost an essential human communication tool.

Peter Hilger, M.D., president-elect of the American Board of Otolaryngology, is one of the world's leading plastic surgeons and helps people with facial nerve paralysis regain at least some of the movement in their faces. Signals from the brain connect with our 44 facial muscles through a labyrinthine network of nerves, but we have not yet mapped every nerve branch and where it meets the muscles. This keeps surgeons from reconstructing a face with perfectly lifelike movements.

That easily discernable smile is actually produced by many muscles that simultaneously pull horizontally and vertically, down and obliquely. Yet, depending on where the facial nerve is damaged, Hilger can perform a variety of surgeries that will at least partially restore a patient's ability to show joy.

In one procedure for a person with severe Bell's palsy, for example, he will splice a nerve harvested from elsewhere in the body into the healthy facial nerve on the unaffected side of



PHOTO: SCOTT STREBBE

the person's face. He will then connect it to a muscle on the damaged side of the face, allowing the person to produce a near symmetrical smile. In another, he will attach one of the nerves from the temporalis muscle that we use to chew to the corner of a patient's mouth. A physical therapist will then work with the patient until he or she learns to produce a smile by biting down in a specific way.

"We are social creatures and we need to be in the world," says Hilger. "That means having personal interactions with folks without distracting them by your appearance, or without turning yourself into a recluse. Even if a patient can eat and talk, if you've not given him or her the opportunity to rejoin society, you've missed part of the reconstructive objective."

Reconstructive surgery has come far since the University's Department of Otolaryngology was established 100 years ago, but Hilger is eager to offer even more to his patients. And he

believes that reconstructive surgery is now poised for "quantum leaps of improvement."

Those improvements are partly inspired by international advances in face transplants, which are moving facial reconstruction closer to the ideal marriage of form and function. That marriage can allow people with faces once damaged by disease, trauma, or birth defects to live a normal life.

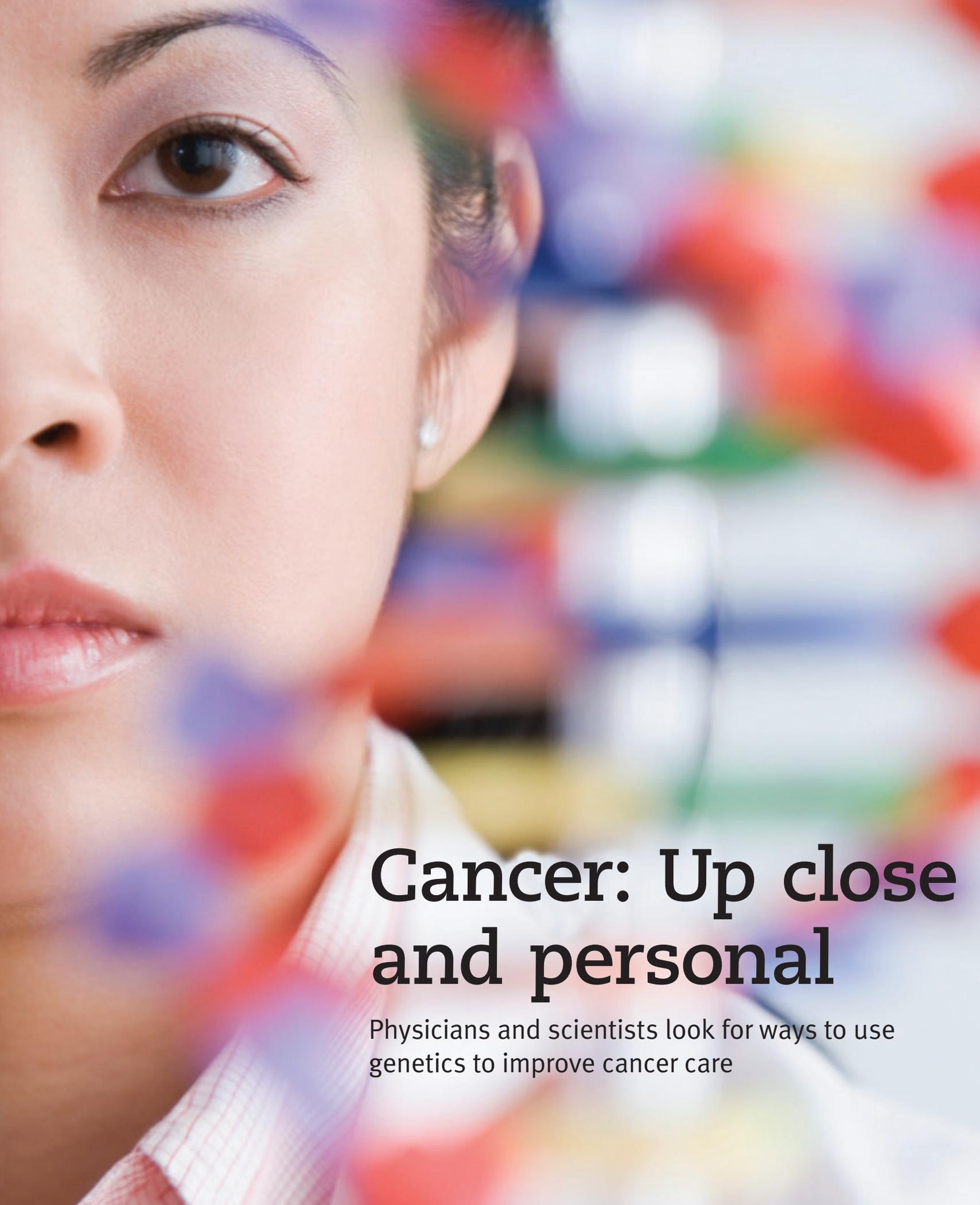
"The work that our reconstructive surgeons do is truly transformative," says Bevan Yueh, M.D., M.P.H., chair of the Department of Otolaryngology. "Their work helps patients regain the confidence to re-engage in society: to walk down a sidewalk, to go to church, and to eat a meal at a restaurant. Imagine how devastating it would be to have those activities taken away from you, and imagine how wonderful it would be to have these simple activities restored." <sup>MB</sup>

By MARTHA COVENTRY, a Minneapolis writer who specializes in medicine, food, and the natural world

Reconstructive surgeon Peter Hilger, M.D. (right), helps people experiencing facial nerve paralysis regain at least some movement in their faces — including the ability to smile.



View slideshows of Walsh's work and Hilger's ties to the use of facial reconstruction in WWII — plus, learn more about the mechanics of smiling and facial reanimation — at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).



# Cancer: Up close and personal

Physicians and scientists look for ways to use genetics to improve cancer care

Few people would describe cancer as an orphan disease—a rare illness that’s ignored by drug companies because producing and marketing medications to treat it likely won’t turn a profit. □ But University of Minnesota cancer geneticist David Largaespada, Ph.D., argues otherwise.

“In truth, all cancer is an orphan disease because even a common cancer like breast cancer is composed of many different subtypes,” he says.

It’s becoming increasingly apparent that cancer has many subtypes and that each person’s body responds differently to a given treatment. Just as no two people are alike, it’s possible that no two tumors are exactly alike, either.

“One person’s pancreatic tumor may be very different than another person’s pancreatic tumor,” says the Masonic Cancer Center’s Brian Van Ness, Ph.D. “Some people’s tumors are very aggressive, and some people’s tumors are not. Some people’s tumors respond to therapy, and some people’s tumors do not.”

But why? Likely, Van Ness says, there are genetic variations in the tumor that will affect the way it progresses—or doesn’t. Genetic variations also influence how a drug is distributed throughout the body and how it’s metabolized, meaning that patients who are given the same amount of a medication may process the drug differently; as a result, different doses would be effective in different people.

“The ultimate goal,” he says, “is to best define the right drug for the right person at the right dose.”

That mantra also describes a recent and widespread research focus on “personalizing” medicine. When the

Human Genome Project was completed in 2003 after more than a decade of analysis and \$1.5 billion, many scientists had hoped for a wealth of new knowledge detailing which genes were responsible for which diseases.

What they got was a wealth of complex scientific data that needed to be decoded. After all, the human genome consists of about 3 billion chemical base pairs that make up our DNA and contains more than 20,000 genes.

And today many scientists believe that disease may not be the result of a single genetic flaw but instead is likely the product of multiple genes interacting—along with influences from a person’s environment.

Yes, it’s complicated, agrees Largaespada, the Masonic Cancer Center’s associate director for basic science. But it’s a researcher’s reality.

“We used to think about the magic bullet that would cure cancer, and then everyone realized that, well, each type of cancer is different; the biology is different,” he says. “That complexity doesn’t mean we should give up—it just [explains] why it’s taken a long time and why it’s hard.”

Researchers are seeing signs of progress as new therapies show dramatic successes in certain patient subgroups, Largaespada adds, affirming that personalizing cancer care is indeed worth the effort. Now scientists just



ABOVE David Largaespada, Ph.D., and his lab team are identifying more and more genes linked to different types of cancer.

RIGHT Brian Van Ness, Ph.D., talks to cancer patient support groups about which aspects of drug development are important to them, which informs his research.



need to find out *why* that's happening so they can help target those treatments to the patients who will benefit most from them.

### Matching cancer genes to therapies

Largaespada's lab, for instance, is using a tool called "Sleeping Beauty"—essentially a piece of DNA that researchers can make "jump" from one section in the chromosomes of cells to another—to identify genes linked to cancer.

Working with genetically modified mice that model human cancers, Largaespada and his team have identified dozens of new cancer genes with the aid of Sleeping Beauty. So far his lab has reported on finding 77 genes tied to colorectal cancer—only seven of which were previously known—and 17 genes tied to liver cancer.

"Now we have a lot of unpublished data on new cancer genes for the [gastrointestinal] tract and liver [and] also for brain tumors, sarcomas, and several other types of cancer," Largaespada says. "It has really exploded in the lab. We used to be a lab that worked just on leukemia, and because we've developed this technology, it's allowed us to study all of these different types of cancer."

Identifying these cancer-causing genes and pathways is a big step, and these discoveries signal great progress. But now Largaespada is focused on what those alterations mean. Will the genetic profile of a given tumor determine how it responds to different therapies? Or does it affect a cancer's likelihood of spreading or recurring?

Ultimately, Largaespada hopes that understanding these alterations might help physicians match a certain drug or combination of drugs to a patient whose tumor has a specific genetic makeup. His lab team is now testing whether Sleeping Beauty–induced genetically defined tumors in tissue cultures respond to a host of existing drugs and medications in clinical trials as well as a few preclinical compounds. The most promising drug combinations will be tested in mouse models.

"The interesting thing, I think, is that the cure for some cancers is probably already out there," he says. "We just have to figure out what tumor and what patient to give it to and in what combinations. The chemists have done a fantastic job [of] coming up with more and more chemicals, and we need to apply these in a logical way."

### A different theme

A popular approach to drug therapy, especially chemotherapy for cancer, says Van Ness, head of the Institute of Human Genetics' Division of Medical Genomics, has been to give patients the maximum tolerated dose of a medication to treat their disease. But wouldn't it be better if the standard approach instead was to give patients the smallest possible effective dose so as to produce minimal side effects?

The concept gets "a lot of head nodding," Van Ness says. "It makes sense."



Read about technology advances that allow access to a myriad of genetic data at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

And Van Ness does see a lot of head nodding when he speaks to patient support groups about his research, which is focused on how genetics influences responses to drugs for multiple myeloma, and what aspects of drug development and testing are most important to patients.

Personalized medicine may seem like a futuristic concept, but on some fronts, Van Ness says, the research is already there. The genes labeled BRCA1 and BRCA2 have been clearly linked to breast and ovarian cancer, for example, and researchers have discovered tumor-specific factors that cause some tumors to grow faster than others.

### **Optimizing transplant success**

Other cancer breakthroughs may be just around the corner.

With colleagues Jeffrey Miller, M.D., and Sarah Cooley, M.D., University oncologist Daniel Weisdorf, M.D., is leading a clinical trial that's showing how a relatively simple genetic screening process can lead to lower relapse rates after blood and marrow transplants in people who have acute myeloid leukemia (AML). The trial is being conducted as part of a \$13.3 million grant Miller received recently from the National Cancer Institute.

For nearly the past two decades, a person needing a blood and marrow transplant has been paired with the donor who had the best tissue match based on the human leukocyte antigen (HLA) and a few other criteria. But since HLA typing was recognized as being important to transplant success in the 1990s, Weisdorf says, there haven't really been further advances in donor selection.

## **NEW THERAPIES ON THE FAST TRACK**

A LEADING-EDGE clinical trial that started at the University of Minnesota in September aims to improve breast cancer survival rates — and it will garner answers in a much shorter than usual timeframe.

Called I-SPY2, the study will compare the effectiveness of several potential new breast cancer medications at once and almost immediately evaluate whether they're working.

A typical clinical trial examines one drug at a time and often involves five years of enrolling patients and collecting data — and then another five years for analysis and follow-up to determine whether that treatment was effective, says Masonic Cancer Center oncologist Tufia Haddad, M.D.

But this trial is designed to move much faster.

"The testing is going to be done right up front, in real time, in women with advanced but potentially curable breast cancer," says Haddad, who directs the University's part of the 17-site clinical trial. "We'll be able to monitor the tumor response to treatment and determine drug effectiveness within six months."

The study also involves genetic analyses of breast tumor tissue, which will help physician-researchers determine which drugs are most beneficial for different patient subgroups.

"Ultimately, the goal is to identify targets from the tissue — whether it's genes, proteins, or patterns in the tumor — that predict whether or not this drug will work in this particular tumor for this particular woman," Haddad says.

Masonic Cancer Center director Douglas Yee, M.D., leads the national committee in charge of selecting promising drugs for the collaborative study.

"We all hope that this trial will be faster, smarter, and better in bringing new discoveries to breast cancer treatment," he says.

PHOTO: RICHARD ANDERSON



Tufia Haddad, M.D., describes the I-SPY2 study to patient Mary Kittelson.



Daniel Weisdorf, M.D., is leading a clinical trial that uses a relatively simple genetic analysis to help reduce relapse rates for people who have acute myeloid leukemia.

Transplanted blood and marrow are critical to carrying out an immune attack on any cancer cells remaining after chemotherapy and radiation. As Weisdorf and his group looked into the factors that were important in that attack, they found that AML patients whose blood and marrow donors had certain patterns of genes that regulate natural killer cells—specialized blood cells that target and destroy cancerous or virus-infected cells—had the best posttransplant outcomes.

“Using donors who had these specific sets of genes, which control some of the function of natural killer cells, could lead to about 10 to 15 percent less risk of relapse of the leukemia after the transplant,” Weisdorf says. “For the standard-risk population, that cut the relapse rate in half. And even for those who had more advanced disease, it still reduced their risk of relapse.”

These results were specific to AML patients, Weisdorf adds. There was not

even a hint of the same improvement for people who had acute lymphoblastic leukemia.

This fall the University is launching another phase of this clinical trial, serving as the lead center in the national study.

Weisdorf believes that, with a relatively simple and quick analysis of blood samples from a few potential HLA-matched donors, University researchers could help clinicians choose the best blood and marrow donors for their patients, thereby decreasing the risk of relapse.

It’s simply being smarter about donor selection, he says. And it’s a clinically relevant way to bring genetics to patients’ bedsides.

“We’re not changing the way the patients are treated,” he says. “They’re going to have their transplant like they always did, but maybe with a better donor.” <sup>MB</sup>

By NICOLE ENDRES, associate editor of the *Medical Bulletin*

## INJECTING NEW IDEAS INTO BRAIN TUMOR THERAPY

COULD A PERSONALIZED vaccine help treat people who have brain tumors? This fall scientist John Ohlfest, Ph.D., and pediatric neuro-oncologist Christopher Moertel, M.D., are launching a clinical trial to find out.

The therapy is used as part of a treatment regimen for medulloblastoma, ependymoma, and glioblastoma. (Most vaccines work to prevent disease, but this vaccine is designed to treat existing disease.)

While a patient undergoes surgery to remove as much of the brain tumor as possible, Ohlfest makes remaining cancer cells more sensitive to an immune system attack. He creates a vaccine made with dendritic

cells (a type of cell that directs the body’s immune responses against specific targets) from the patient’s blood and a lab-cultivated brain tumor antigen.

The combination is designed to coax a patient’s own immune system into attacking and killing any remaining cancer.

The therapy builds on another therapy that was tested in dogs with brain tumors—most notably Batman, profiled in the spring 2009 issue of the *Medical Bulletin*—just two years ago.

The Phase I clinical trial is open to both adults and children who have these specific types of brain tumors. Another Phase I trial,

which Ohlfest expects to open this winter, will use a similar therapy to treat a type of tumor called diffuse intrinsic pontine glioma.

Ohlfest is excited that the research has moved ahead so quickly. He credits a great lab team, connected colleagues, and funding from numerous sources, including the Children’s Cancer Research Fund and the Masonic Cancer Center’s Cancer Experimental Therapeutics Initiative, for the progress.

“We worked very hard to accelerate this therapy into the clinic,” he says. “It’s a great accomplishment for our University.”

# Staying power

Longtime health sciences leader Frank Cerra, M.D., reflects on his 30-year career at the University



No one told senior vice president for health sciences and Medical School dean Frank Cerra, M.D., that the average tenure for a medical school leader in this country is only three and a half years. But then there's been nothing average about Cerra since the day in 1981 when he arrived at the University of Minnesota as a tenured faculty member in the Department of Surgery.

He first served as Medical School dean in 1995, when then-University President Nils Hasselmo appointed him to the role in the midst of a tumultuous period for the health sciences. Those 15 years of administrative service end with the calendar year, as Cerra reaches 30 years of experience on campus. His plan: to return to his academic home in the Department of Surgery. Following are his reflections on what has changed—and remained the same—for the University's health sciences and Medical School.

**MEDICAL BULLETIN:** What drew you to the Medical School's Department of Surgery?

**FRANK CERRA:** The University recruited me for two reasons: One, I was one of the original surgical "intensivists"; and, two, I was conducting groundbreaking research on the metabolism of injury from trauma—bullets, knives, big surgery—those kinds of things. My research resulted in a lot important work on metabolism and the role of nutrients in response to injury—and it led to a number of publications and patents.

## FRANK B. CERRA, M.D.

- Senior vice president for health sciences, University of Minnesota
- Dean, Medical School
- Leader of the Academic Health Center, a \$1.2 billion enterprise
- Named senior vice president in 1996 and is the first to hold the dual position of senior vice president and dean of the Medical School, roles the University combined in July 2009

### Professional background

- B.A. in biology from State University of New York at Binghamton
- M.D. from Northwestern University School of Medicine
- Arrived at the University of Minnesota in 1981 as director of surgical critical care
- Holds six patents
- Codeveloped the bioartificial liver, a device similar to a kidney dialysis machine



Find a video, slideshow, and web-only sidebar about the 40-year history of the U's Academic Health Center at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

The University was a great place to be. It was innovative. It was creative. I had residents in the laboratory for two to three years, and I always had post-docs. I was able to start one of the first surgical critical care residencies in the country. It populated many surgical ICUs around the country. That was in 1986–87.

**MB:** How did you move from research into administration?

**FC:** As I worked in the ICU, I was asked to do more and more management. For example, putting in an electronic medical record became my project. Here's just a simple thing: Between the time a doctor ordered a blood test and it got back to the patient's bedside, 15 people handled the blood sample, and it was recorded on one of about 15 sheets of paper at the bedside. Well, it's hard enough to take care of a patient without putting up with that, so I helped to automate the ICU. Then I become involved in setting up what is now LifeLink III, the medical helicopter system.

Eventually, the dean of the Medical School, Shelley Chou, asked me to become chair of surgery. I started in October 1994. The next May, after Dr. Chou left the University, I became dean of the Medical School.

In 1996, when Bill Brody left the University, I was asked to take on his role as provost of the Academic Health Center. It was a very tumultuous time. The Medical School was facing a big deficit; the hospital was facing a big deficit; we were looking at selling the hospital. People were leaving right and left—mostly clinical faculty in the Medical School. When Nils Hasselmo called me to offer the position, I thought about it awhile, and said, “Yep, I think

I'd like to take a hand at that.” I thought, “This is a critical patient, and I'm a critical care doc. This might be an opportunity to do something really good for the future of providers.”

**MB:** How have students changed since you first arrived on campus?

**FC:** Student populations are very different. When I first started out in this business, it was more of, “What's in it for me?” That was the consideration. The students were smart, yes, but we didn't see the same set of professional values we see today. At that time, you didn't talk about values in health professional education—with the exception of nursing. Nursing has always done that.

Today's students are committed to health in a very different way—and once they commit, they really do. The



University medical historian Jennifer Gunn, Ph.D., and Cerra examine the contents of a time capsule that was embedded in Jackson Hall in 1911.



PHOTO: UNIVERSITY ARCHIVES



Throughout his tenure as senior vice president for health sciences, Cerra participated in several groundbreaking events, including those for the McGuire Translational Research Facility and the Winston and Maxine Wallin Medical Biosciences Building.

Cerra, shown here in 1988, conducted laboratory research on nutrition and intensive care.

difference is they're not interested in 80-hour work weeks. They want their time off. They want to develop their families. Way back when, that's not what you did.

**MB:** What about the average faculty? How are they different today?

**FC:** It's tough to talk about the *average* faculty, but I'll give it a try. The average faculty member then was interested in his or her RO1 [NIH] grant. How is my career going to progress, am I going to get tenure? I'm willing to teach, but I really just want to give my lecture and move on. I'm not really interested in student mentorship; my role is in the research lab. I'll go to the clinic when I'm able to, but not necessarily when I'm supposed to.

Of course, I'm over-exaggerating to make a point. But there's been almost a 180-degree turn. When you talk to faculty members today, they're much more committed to clinical practice

and to teaching in the clinical setting. And for that matter, basic scientists' commitment to teaching is very different; their grant portfolios are much more interdisciplinary now.

As we've all come to realize, you can't possibly know everything there is to know in one area. You need to collaborate with people from other schools and other disciplines.

**MB:** What one piece of advice do you have for your successor?

**FC:** Never quit thinking big. Vision is what drives progress, in my opinion. That must be a critical component of the new leadership. The ability to create and capture a vision, incorporate other people's visions into it, create followers, and what's more important, make it happen. It's all about leadership and interpersonal relationships and making sure that what you're doing is to satisfy the faculty's needs and not your own. MB



Cerra, with a group on campus in 2004, says the key to the Academic Health Center's vitality is being responsive to the communities it serves.

# Running in the same circles

Two “future doctors” share many connections, including a passion to serve



As an undergraduate biochemistry major at the University of Minnesota, Caroline Lochungvu knew she wanted to study in Bangkok. Since the U didn't have a study abroad program there, she simply designed her own and set off for Thailand.

Premedical student Thuy Nguyen-Tran wanted to learn more and help educate others about the medical challenges faced by immigrants and refugees. Not finding an on-campus group devoted to exploring such subjects, she created a nonprofit organization, Circle of Giving, to do precisely that.

Where other people are stymied by roadblocks, these first-year medical students simply forge ahead.

Both were members of the Minnesota's Future Doctors first cohort in 2007. The University of Minnesota Medical School program is designed to prepare college-age Minnesotans from under-represented communities for medical school admission. Participants —

minority, immigrant, rural, and financially disadvantaged students — are selected from the freshman classes of universities and community colleges around the state.

The goal is to train future doctors who better reflect Minnesota's diversity. And by most measures, the program — which accepts roughly 50 students into each annual cohort — is a success: Of the 13 Future Doctors participants who applied to medical school in 2009, 12 were accepted (the 13th will reapply next year). Fifty-nine program participants have secured research internships this year at the University and at Hennepin County Medical Center.

Both Lochungvu and Nguyen-Tran also are Dean's Scholarship recipients. Created in 2004, the Dean's Scholars Society aims to keep top medical students in Minnesota by providing full-tuition scholarships. Nguyen-Tran and Lochungvu express deep gratitude for the program: “It's such an honor,” Lochungvu says.

## K. Caroline Lochungvu: Global citizen

The old bumper sticker “Think Globally, Act Locally” might have been written with Kahoua Caroline Lochungvu—Caroline, as her friends call her—in mind.

Lochungvu was born in France to Hmong parents who’d fled Laos during the secret war between the United States and Vietnam. The family moved from France to Minnesota when she was a toddler. “My parents tell me that when I was little I would wear a white jacket and call myself ‘doctor,’” she says.

As a self-described “nerdy” St. Paul Central High School student, Lochungvu gravitated toward biology and chemistry. “Science felt like more of an equal playing field [than English did],” she says.

A longtime interest in Thailand prompted Lochungvu to seek a study-abroad program in Bangkok. Problem was, the U didn’t have a study abroad program in Bangkok. So Lochungvu and a friend, also a student, decided to create their own. In the fall of 2009, the two young women set out to spend a semester studying at Chulalongkorn University.

The exceedingly modest Lochungvu insists she made no headway with the language: “We could say, ‘No spice,’” she laughs. “Their food is really spicy.” But the two made lots of Thai friends who introduced them to the city, and Lochungvu’s appetite for international exploration was whetted.

Lochungvu sought the advice of Patricia Walker, M.D., director of the University’s Global Health Pathway, who encouraged her to choose the University of Minnesota for medical

school—in part because of its opportunities in international medicine.

Lochungvu is leaning toward primary care—pediatrics or family medicine—and envisions a career based in the Twin Cities that includes international work. Her experience as a hospice volunteer, currently as a companion to an 85-year-old cancer patient, has intensified her interest in clinical medicine.

### Seeking equity for others

One thing is certain: Wherever Lochungvu practices, her career will be rooted in a commitment to fighting what she calls “systematic, institutional inequity”—an interest fostered by her mother, a medical interpreter. “[She] really influenced me because she would come home talking about situations at work,” says Lochungvu, recalling her mother’s stories about hardships faced by patients with language, financial, and other barriers to quality care.

Lochungvu also credits her Future Doctors circle with reinforcing that ethic. “Jo Peterson [the director] really emphasizes that,” she says. “I first heard the term ‘health disparity’ from Jo, and I was able to see what my mom had been telling me over the years.”

Connecting the dots between the anecdotes her mother shared and what she’s learned at the University has injected a sense of mission into Lochungvu’s studies. “It causes you to be more passionate about medicine. That passion is what’s really going to push you through.”



### K. CAROLINE LOCHUNGVU

HOMETOWN: Roseville, Minnesota

DEGREE: Biochemistry, University of Minnesota

EARLY CALLING: “My parents tell me that when I was little I would wear a white jacket and call myself ‘doctor.’”

PHOTO: SCOTT STREBLE



## THUY NGUYEN-TRAN

**HOMETOWN:** Richfield, Minnesota  
**DEGREE:** Biochemistry and physiology, University of Minnesota  
**IN HER SPARE TIME:** Teaches traditional Vietnamese dance, wants to start a rock band (she's a drummer)

PHOTO: KELLY MACWILLIAMS  
FOR REACH MAGAZINE



Watch slideshows about what inspires these future doctors' successes and read more about medical student diversity at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

## Thuy Nguyen-Tran: Paying it forward

Thuy Nguyen-Tran's studies keep her plenty busy, but she's been able to find time for other typical—and not-so-typical—twentysomething pursuits: spending time with family, rock drumming ... starting a nonprofit.

As an undergraduate and Minnesota's Future Doctors participant, Nguyen-Tran—along with several of her friends, including Lochungvu—decided it was time to start paying it forward.

"We were feeling really thankful and wanted to give back to the community that has given so much to us," says Nguyen-Tran. "We tried to figure out ways that we could help empower students who want to address health disparities because that's a passion we all share. A lot of us come from underserved backgrounds ourselves, so we see how inequity can affect health outcomes."

Their student group, aimed at fostering dialogue and inspiring volunteerism, soon took shape as the nonprofit Circle of Giving, with Nguyen-Tran at the helm. "I checked out some books, read up on the IRS website, [worked on] bylaws, completed the application—and then that motivated me to take some nonprofit management courses."

Circle of Giving, now in its second year, offers twice-yearly weeklong seminars on such topics as health disparities awareness and immigrant and refugee health issues.

The oldest of four children whose parents came to the Twin Cities from Vietnam via California, Nguyen-Tran says her upbringing was informed by bedtime stories focused on altruism and by her family's volunteer work

each summer at a Vietnamese culture camp in Northfield, Minnesota.

Nguyen-Tran continues to promote Vietnamese culture by teaching a traditional dance class with her younger sister, a premed student at the University. (Also a fan of rock and roll, Nguyen-Tran received a drum kit as a graduation gift and hopes to assemble a Minnesota's Future Doctors band.)

### Science meets social justice

Integrating science and social justice advocacy comes naturally to Nguyen-Tran. She recently conducted a research project exploring why the cervical cancer rate among Vietnamese American women is five times higher than the norm.

She found that several cultural and language barriers prevent Vietnamese American women from fully benefiting from Pap tests and the HPV vaccine. She followed up by interviewing the study participants, and then organized two educational workshops to help address those barriers.

Like Lochungvu, Nguyen-Tran is attracted to pediatrics and is considering pursuing a master's degree in public health as well. She pictures herself in community-based health, preferably working in a neighborhood clinic in the Twin Cities. "A lot of [Minnesota's Future Doctors] have that primary care mentality," she says.

"It's an amazing program," she says. "I honestly don't know where I'd be without it." 

By SUSAN MAAS, a freelance writer and editor who lives in Minneapolis

## Alumni honored for achievement

THE UNIVERSITY OF MINNESOTA Medical Alumni Society has selected four exceptional physicians to receive two of its awards in 2010. Please join us in congratulating and thanking these deserving doctors for their work in the service of the medical profession. New this year, the Minnesota Medical Foundation is recognizing alumni for philanthropic support of the Medical School as well. All awardees were honored at an alumni celebration banquet on October 15.

### THE HAROLD S. DIEHL AWARD

This lifetime achievement award is granted to individuals who have made outstanding contributions to the Medical School, the University, and the community. It was established in honor of the Medical School's fifth dean, Harold Sheely Diehl, M.D.



**JAMES H. MOLLER, M.D.**

A member of the resident alumni Class of 1961, Moller is a pioneer in pediatric cardiology. Children around the world with heart conditions have benefited from his research, the knowledge and guidance he gave his many trainees, and his exemplary leadership.

Moller, a University of Minnesota faculty member since 1965, has led long-term studies of children born with heart defects, and his findings have contributed to notably improved care and survival rates today. Now, as many of these children are living well into adulthood, Moller codirects a University clinic that eases the transition for patients from pediatric to adult cardiology care.



**ROBERT F. PREMER, M.D.**

Described by his peers as a seminal thinker and superb educator, Premer spent his entire career as chief of orthopaedic surgery at the Minneapolis Veterans Affairs Medical Center, one of six sites that are part of the University of Minnesota's orthopaedic surgery residency program.

Premer, a member of the Medical School Class of 1950, instilled in his trainees an enthusiasm for knowledge of orthopaedics and the world in general. Many of his former students hold prominent positions in orthopaedic surgery throughout the country today.

### THE DISTINGUISHED ALUMNI AWARD

This award recognizes Medical School alumni who have made outstanding contributions to their local, regional, or national communities through medical practice, teaching, research, or other humanitarian activities.



**BONITA FALKNER, M.D.**

A member of the Medical School Class of 1967, Falkner is a nationally and internationally recognized thought leader in childhood hypertension. She has explored the field through basic research, prevention strategies, and clinical trials of treatment. Her sophisticated investigations have greatly advanced the understanding of blood pressure regulation and hypertension risk factors in children and minority populations — and have had significant clinical implications. Colleagues describe Falkner, a professor of medicine and pediatrics at Thomas Jefferson University's Jefferson Medical College in Philadelphia, as a visionary leader and an outstanding mentor with a calm and systematic approach to complex issues.

Her sophisticated investigations have greatly advanced the understanding of blood pressure regulation and hypertension risk factors in children and minority populations — and have had significant clinical implications. Colleagues describe Falkner, a professor of medicine and pediatrics at Thomas Jefferson University's Jefferson Medical College in Philadelphia, as a visionary leader and an outstanding mentor with a calm and systematic approach to complex issues.



**ROBERT L. SADOFF, M.D.**

A 1959 graduate of the Medical School, Sadoff is known as one of the principal architects of contemporary forensic psychiatry. In addition to earning his medical degree, Sadoff received a master of science in psychiatry and attended law school. He currently is a clinical professor of forensic psychiatry at the University of Pennsylvania School of Medicine as well as director of the school's forensic psychiatry fellowship program, which he founded in 2009. Colleagues say that his interest in the intersection of forensic psychiatry, legal medicine, and ethics, along with his intelligence and warmth, makes him a practitioner to emulate.

He currently is a clinical professor of forensic psychiatry at the University of Pennsylvania School of Medicine as well as director of the school's forensic psychiatry fellowship program, which he founded in 2009. Colleagues say that his interest in the intersection of forensic psychiatry, legal medicine, and ethics, along with his intelligence and warmth, makes him a practitioner to emulate.

**HONORS** continued on page 26

## Honors CONTINUED

### ALUMNI PHILANTHROPY AND SERVICE AWARD

New in 2010, this Minnesota Medical Foundation award recognizes Medical School graduates who have made significant contributions to their fields of medical practice as well as significant contributions to the Medical School through philanthropy.



#### **JAMES H. HOUSE, M.D.**

A member of the Class of 1963, House is an inspiring teacher, enthusiastic alumnus, and generous philanthropist. He has established himself as a leader in orthopaedic surgery, particularly for his expertise in hand surgery. In addition, House and his wife, Janelle, have made significant gifts to the Medical School, much of it through the Dr. James and

Janelle House Scholarship for medical students and the James House Hand Surgery Education Fund. Beyond his personal philanthropic support, House is a passionate champion of student scholarships, inspiring and encouraging many other Medical School alumni to become donors.



#### **ARNOLD S. LEONARD, M.D., Ph.D.**

A graduate of the Class of 1955 and a leader in pediatric surgery, Leonard is credited with pioneering several medical procedures — including a revolutionary technique for correcting a condition called pectus excavatum in children. He also has invented multiple medical devices, including the Leonard Long Intestinal Tube and the Leonard Double Lumen

Central Catheter, the most frequently used catheter in cancer patients today. Through the Arnold S. Leonard Cancer Research Fund, he has raised more than \$4 million for cancer research at the University, including his own contributions and proceeds from fundraising events he has organized.



#### **RICHARD L. LINDSTROM, M.D.**

An internationally recognized leader in ophthalmology and a member of the Class of 1972, Lindstrom holds more than 35 patents and has developed solutions, lenses, and instruments that are used in clinical practices globally. Along with his wife, Jacalyn, Lindstrom also has given more than \$2.2 million to the Medical School. He endowed the Richard

L. Lindstrom Anterior Segment Research Fellowship and designated a portion of his estate to establish the Richard L. Lindstrom, M.D., Research Chair in Ophthalmology. In addition, the Lindstroms made the leadership gift that created the Dean's Scholars Program, which provides full scholarships to Minnesota's top Medical School applicants. 

## Pioneering Medical U's outstanding ac

THOUGH HE HAD LONG wanted to become a physician, John E. Larkin, M.D., admits that he spent most of high school focused on football rather than academics.

But when Larkin entered the University of Minnesota in 1949, a General College faculty member recognized and fostered his potential. Larkin thrived, earning his bachelor's degree in science education in 1953.

After a tour in the Army and additional study abroad, Larkin enrolled in the University's Medical School, serving as class president in his third year, and earned his M.D. in 1960. He completed his residency in orthopaedic surgery at Harvard Medical School, where he was chief resident during his last year of training, in 1966.

## Mentor program's

MEDICAL SCHOOL alumnus Martin Stillman, M.D., J.D. (Medical School Class of 1997), has found many ways to give back to the University of Minnesota but says the Connections Physician-Student Mentoring Program offers a unique way to help students.

"Serving as a mentor keeps you in touch with today's students and the Medical School on a personal level," says Stillman, president of the Medical Alumni Society. "And when I'm helping my mentee, I'm always learning."

An internist at Hennepin County Medical Center, an assistant professor of medicine at the University, and an attorney, Stillman has been a mentor

# School alumnus receives achievement award

Larkin returned to St. Paul, his hometown, to a solo practice and ran a weekly clinic at the University's hospital as a volunteer. He performed the first total knee replacement and total hip replacement surgeries in Minnesota, in 1967, as well as the state's first arthroscopy, in 1971. His friend and colleague Lynn L. Ault, M.D., joined him in practice in 1971. They practiced together until they retired in 1998.

To honor Larkin's achievements, the University on May 26 bestowed upon him its prestigious Outstanding Achievement Award. This award is given to graduates or former students of the University who have attained unusual distinction in their fields or in public service and have demonstrated outstanding achievement and leadership

on a community, state, national, or international level.

"I am both humbled and so honored to be the recipient of such recognition from my own university, which gave me the tools to pursue an incredibly rich and fulfilling life," Larkin says.

Larkin's achievements aren't limited to the medical field. He has spent a lifetime studying and collecting American art from the 18th through 20th centuries and has written numerous articles on the topic for curatorial journals and museum publications.

He is also an acclaimed horticulturist whose garden has been cited in several publications for its aesthetic beauty, innovative design, and rare plantings. MIB



PHOTO: COURTESY OF JOHN E. LARKIN

John E. Larkin, M.D., performed the first total knee replacement and total hip replacement surgeries in Minnesota, in 1967.

# positive influence flows both ways

since 2003 for medical students and for participants in the University of Minnesota's Joint Degree Program in Law, Health, & the Life Sciences.

Stillman chose to become a mentor because he had great mentors himself—including his father, a physician, and fellow alumni society board member Gene Ollila, M.D., whose passionate volunteerism has inspired him.

He says that his Medical School adviser, Val Ulstad, M.D., M.P.H., P.H.A., also played a significant role in his training and supported his philosophy on the importance of a work-life balance. "She had a very wise and thoughtful approach to acknowledging the impor-

tance of all aspects of one's life during medical school," he says. "I continue to believe in this approach, and sharing this with students is important for me as a mentor. With a receptive mentee, I will try to do more than suggest what rotation to take when."

Through the Connections program, offered jointly by the Medical School, Medical Alumni Society, Minnesota Medical Foundation, and the Twin Cities Medical Society, more than 100 medical students are paired with physician mentors every year. All Twin Cities physicians—University of Minnesota alumni or not—are eligible to participate.

This year's student-mentor pairs will have the chance to meet at the 2010 Connections program kickoff breakfast on November 16 at the University's McNamara Alumni Center. MIB

*Interested physicians and students may register or learn more at [www.mmf.umn.edu/goto/mentor](http://www.mmf.umn.edu/goto/mentor) or contact Katrina Roth at 612-625-0336 or [k.roth@mmf.umn.edu](mailto:k.roth@mmf.umn.edu).*

## Alumni Spotlight | Janis Amatuzio, M.D.

### Adding compassion to forensic pathology

FOR THREE DECADES, medical examiner Janis Amatuzio, M.D., made her hard job even harder—voluntarily—because she believed it was the right thing to do.

“My father inspired me to look at forensic medicine with a compassionate heart,” says Amatuzio, a member of the University of Minnesota Medical School Class of 1977. “For me, that became talking to the families after the death of a loved one.”

At first, she says, it was almost unbearable. The grief she encountered was just too much. Sooner or later, she’d hear a sigh on the line. That’s when she’d tell the families how she cared for their loved one and reassure them that she’d do everything she could using all of science’s tools to figure out what happened through the autopsy and death investigation.

“They had to know what happened so that they could grieve,” Amatuzio says. “And then heal. And then get back to meaningful living.”

After the results of her tests came back, she’d send each family a letter detailing what she had found and encouraging them to contact her with questions.

“In some ways, I crossed a line that hadn’t been stepped over before,” she says.

Now, 31 years after she entered the field, Amatuzio is moving on. She stepped down from her position as the longtime coroner and forensic pathologist for Anoka County and 11 other counties in Minnesota and Wisconsin in February.

She’s enjoying spending time with her dogs, horses, and husband—“not in that order,” she says with a laugh—

writing her third and fourth books, and simply reflecting on life.

“When you do forensic pathology and you’re a medical examiner, you realize that it’s important to take control of your life, to recognize your dreams and desires, and make them happen,” she says. “Because life can go by in the blink of an eye.”

#### An intimate exam

Amatuzio grew up around medicine. Her father, an internist, and her mother, a nurse, met over a hospital bed in the University hospital’s pediatrics ward. Though Amatuzio says she wanted to be a “cowboy,” both parents—particularly her mother, Verda—encouraged her to follow in her father’s footsteps.

Eventually, she did. She attended the University’s Medical School like her father had (the late Donald Amatuzio, M.D., graduated in 1944) and completed a one-year internship in internal medicine before she found pathology.

Amatuzio’s father believed that pathology was the basis of all medicine, she says, and encouraged her to explore it. But he didn’t expect his daughter—a warm, caring, self-described “people person”—to fall in love with such a hard science.

When she entered the male-dominated field in 1979, Amatuzio was taught to think of an autopsy purely as an intellectual exercise—to look at the body like a block of wood.

For medical examiner Janis Amatuzio, M.D., adding compassion to forensic pathology meant talking to families after the death of their loved one.

PHOTO: SCOTT STREBLE



**When you do forensic pathology ... you realize that it's important to take control of your life, to recognize your dreams and desires, and make them happen.**

— Janis Amatuzio, M.D.

“I was never able to look at an autopsy that way,” she says. “It was always personal. The autopsy is the most intimate examination a person could ever have.”

### A special privilege

At the end of her career as a coroner and president of Midwest Forensic Pathology, P.A., Amatuzio felt she had accomplished what she wanted to achieve professionally. She brought together the counties for which she worked to form a National Association of Medical Examiners—accredited office and convinced Anoka County to build a new, state-of-the-art death investigation and autopsy facility.

More important, she added compassion to forensic medicine. Amatuzio says she always has felt privileged to be a part of such intimate times in families’ lives. And she now feels it’s time to pass along her wisdom to future generations.

She already has published two books (right). Today she’s working on her third and fourth, which aim to take a deeper look at the meaning of life and the ways

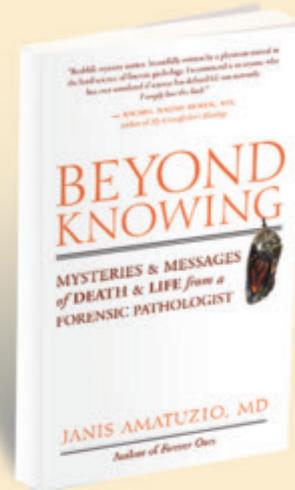
we use our energy, through the lens of forensic medicine. She hopes her third book will be published by late 2011.

“Forensics is a marvelous reflection of life,” Amatuzio says. “I really think that our fascination with forensics is a metaphor for the evolution of our way of thinking. At this time when it’s desperately needed, when many things seem not to be working, we are starting to ask the tougher questions: Who are we? What happens? And how? We have begun to think again.”

Forensic pathologists, Amatuzio explains, look for patterns of injury and patterns of disease. When she looks more deeply at life, she begins to see patterns of thought that create health or disease and happiness or despair, she says.

“I have learned more from forensics than I could ever, ever imagine,” she says. “It changes the way I look at life, and it makes me really appreciate each day.” 

By Nicole Endres, associate editor of the *Medical Bulletin*



IMAGES: COURTESY OF NEW WORLD LIBRARY



Find an excerpt from Amatuzio’s book *Forever Ours* at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

# Scholarship Winner | Anya Gybina, Ph.D.

## Following a nontraditional path

WHEN SECOND-YEAR University of Minnesota, Duluth medical student Anya Gybina, Ph.D., joined the Dr. Nancy English Memorial 5K Walk/Run on July 31, she was running in the footsteps of someone a lot like her.

Gybina is the first medical student to receive the Nancy I. English, M.D., Scholarship, which was designated for a woman medical student on the Duluth campus by English's daughters, Hilary and Emily Crook; husband, Thomas Crook; and father, Blake English. Nancy English, a member of the Medical School Class of 1992, died suddenly in August 2008.

English's family asked the school to select a scholarship recipient like Nancy — a woman who chose medicine as a second career, who is dedicated to community service, and who is eager to make a difference in her patients' lives.

Gybina, a 30-year-old mother who left an academic career in biochemistry for medicine, perfectly matched the description.

**It helps to have a vision, and Nancy's life helped me with that vision.**

— Anya Gybina, Ph.D.

### Balancing work and life

Gybina did not know Nancy English personally, but she says she was captivated by a description of English she read in the scholarship announcement.

English was a nontraditional student who began medical school at age 37. She had a master's degree in social work and had a career in that field until she decided to enter medical school on the Duluth campus in 1988. After earning her M.D., English completed the Duluth Family Medicine Residency Program and later practiced at P.S. Rudie, an independent clinic now affiliated with St. Luke's Hospital. She served as chief of staff elect at St. Luke's from 2006 to 2007 and as chief of staff there beginning in January 2008.

Despite the challenges of her new career, even when medical school required her to move to the Twin Cities area, English's family says she always made time to attend school functions, recitals, and sporting events with her children and husband.

Gybina was impressed that English had the courage to follow her heart and take a chance on changing careers — particularly as a mother. After earning her Ph.D. in biochemistry from the University of Minnesota, Gybina made a similar choice, leaving a new postdoctoral fellowship to start medical school.

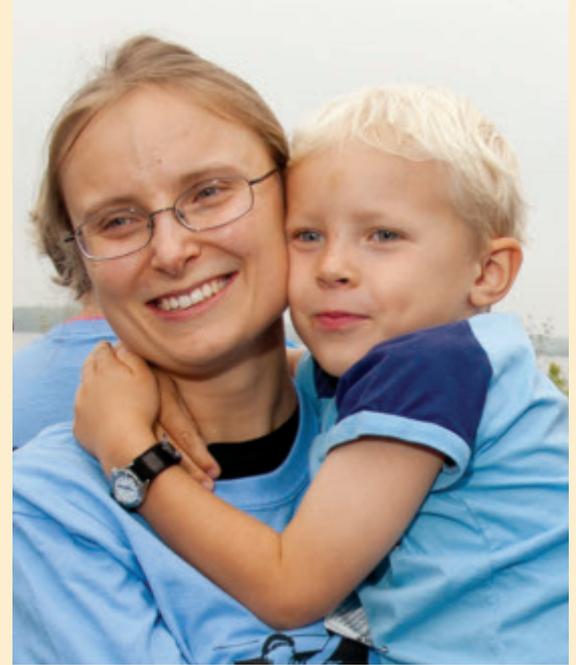


PHOTO: JEFF FREY

Anya Gybina, Ph.D., here with her son, Alex Gybin-Leege, left a career in biochemistry to pursue medicine.

“Being a mother, too, and having taken a similar chance by leaving a nascent career in academic research to pursue medical school, I felt very drawn to Dr. English's story and life,” Gybina says. “Not knowing exactly what awaited me in school and how I would measure up in my journey through medicine and motherhood, I wanted to know more about this inspiring woman who had done it so admirably.”

In talking with friends in Duluth, Gybina quickly found some of the many people whose lives English had touched. She learned how well regarded English was in the community as a doctor, citizen, and mother.

“I found a terrific role model ... and felt more confident to make that same journey,” says Gybina, who plans to practice rural family medicine. “It gives me the freedom to live in a smaller community and be really connected with that community,” she says of rural medicine, noting that ties to the community and to the land also remind her of her native Russia, where her family lived before moving to Duluth when she was 10.

“It helps to have a vision,” Gybina says, “and Nancy’s life helped me with that vision.”

## In their mother’s memory

Outside of work, Nancy English sewed, sang in two choirs, and played the piano, flute, and guitar. Cooking and running were also her passions.

After English died suddenly of cardiac arrest in August 2008 at age 57, Hilary and Emily, then 28 and 24, sought ways to memorialize their mom. In November 2008, they hosted the first annual walk/run in her memory.

They also established the Nancy I. English Foundation to help other nontraditional women students continue their education, and they endowed the Medical School scholarship that Gybina received.

So when Gybina took part in the Dr. Nancy English Memorial 5K Walk/Run last summer with her husband, Ryan Leege, and young son, Alex Gybin-Leege, she felt a special gratitude to English.

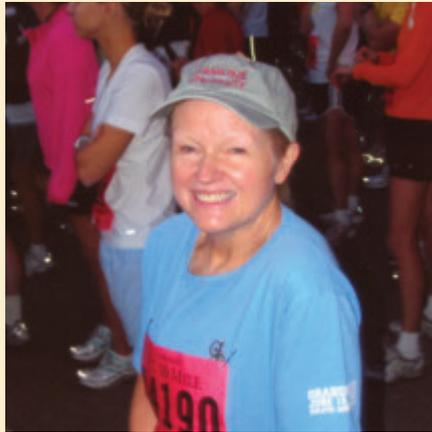


PHOTO: COURTESY OF HILARY CROOK

The family of Nancy English, M.D., established a scholarship for nontraditional women students in her memory.

“Receiving this scholarship was not only an honor, it gave me faith that I could do this successfully,” Gybina says. “I feel a lot more connected to this person who was like me. My biggest wish is that I had known Nancy English and talked to her face-to-face.” 

By MICHELLE JUNTUNEN, the Minnesota Medical Foundation’s director of medical advancement for the University of Minnesota, Duluth

*To make a gift to the Nancy I. English Scholarship, visit [www.mmf.umn.edu/giveto/english](http://www.mmf.umn.edu/giveto/english). To learn more about establishing another scholarship for medical students, contact Teri McIntyre at the Minnesota Medical Foundation, 612-625-5976, 800-922-1663, or [t.mcintyre@mmf.umn.edu](mailto:t.mcintyre@mmf.umn.edu).*

## Leadership changes for Duluth Family Medicine Residency Program

After 26 years as a teacher and steward of the Duluth Family Medicine Residency Program, Thomas W. Day, M.D., has stepped down as program director and is now practicing family medicine with the SuperiorHealth Medical Group in Duluth.

Day, who graduated with the Medical School Class of 1974, began his association with the program in 1976 as a second-year resident and was the program’s first chief resident. He joined the program’s faculty in 1983 as associate director and in 1987 was named the fourth program director, a position he held until leaving the program earlier this year.

Under Day’s direction, the Duluth Family Medicine Residency Program gained national recognition for graduating residents with the skills, perspective, and confidence to practice in smaller communities.

As one of the largest family medicine residencies in Greater Minnesota, the Duluth program has graduated 291 family medicine physicians, with 175 practicing in Minnesota — many in rural communities from Warroad to Luverne.

For accreditation purposes, the Duluth Family Medicine Residency Program reports to the University of Minnesota Medical School. Roger Waage, M.D., Medical School Class of 1976, now leads the program. 



Watch a slideshow and video about English and Gybina at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

# In Memoriam

**JOHN F. ARNESEN, M.D.**, Class of 1942, Owatonna, Minnesota, died April 6 at age 93. Dr. Arnesen practiced internal medicine in Owatonna and was the only internist in the city for many years. He was preceded in death by his wife, Betty Lou. He is survived by 3 children, 7 grandchildren, and 1 great-grandchild.

**COSTAS ASSIMACOPOULOS, M.D.**, Class of 1960, Sioux Falls, South Dakota, died April 2 at age 76. Dr. Assimacopoulos was a surgeon at the University of California, Davis; Creighton University; and University of South Dakota Medical School. He is survived by his wife, Lynn; 3 children; and 4 grandchildren.

**J. BRADLEY AUST Jr., M.D., Ph.D.**, Class of 1957, San Antonio, Texas, died March 17 at age 83. Dr. Aust served as the first chair of the Department of Surgery at the University of Texas Medical School in San Antonio. He is survived by his wife, Connie; 6 children; 12 grandchildren; and 4 great-grandchildren.

**HARLEY C. CARLSON, M.D., Ph.D.**, Class of 1951, Rochester, Minnesota, died May 7 at age 86. Dr. Carlson practiced general medicine in Sidney, Montana, and worked at Mayo Clinic for 40 years. He is survived by his wife, Joyce; 5 children; and 11 grandchildren.

**HENRY DAHLMAN, M.D.**, Class of 1980, Minneapolis, died March 11 at age 66. Dr. Dahلمان worked for Hennepin County Medical Center's Family Practice Program. He is survived by his wife, Andrea Starin, and 1 child.

**JANE E. DEEB, M.D.**, Class of 1973, West St. Paul, Minnesota, died December 27, 2009, at age 62. Dr. Deeb founded the Dakota Pediatric Clinic with her husband, Robert, and practiced pediatric medicine in Dakota County. She is survived by her husband, 2 children, and 1 grandchild.

**CHARLES T. EGINTON, M.D.**, Class of 1938, Detroit Lakes, Minnesota, died February 25 at age 96. Dr. Eginton practiced surgery in St. Paul and at the Fargo Veterans Hospital, where he served as chief of staff and chief of surgery. He is survived by his

wife, Sally; 5 children; 10 grandchildren; and 1 great-grandchild.

**WILLIAM L. ELLINGSON, M.D.**, Class of 1954, Provo, Utah, died November 5, 2009, at age 80. Dr. Ellingson practiced radiology in Utah, Nevada, and California. He was preceded in death by 1 child. He is survived by his wife, Joy; 8 children; 17 grandchildren; and 1 great-grandchild.

**VIRGIL T. FALLON, M.D.**, Class of 1952, Minneapolis, died June 7 at age 83. A radiation oncologist, Dr. Fallon practiced at Abbott Northwestern Hospital and was instrumental in founding the Willmar Cancer Center. He is survived by many family members and friends.

**MARGARET S. FILANTE, M.D.**, Class of 1950, Philadelphia, Pennsylvania, died February 21 at age 85. Dr. Filante specialized in physical medicine and rehabilitation at the Medical School. She was preceded in death by her husband, William. She is survived by 3 children, 5 grandchildren, and 3 great-grandchildren.

**ABE L. FOX Jr., M.D.**, Class of 1963, Bismarck, North Dakota, died February 25 at age 72. Dr. Fox spent much of his career at Pathology Consultants in Bismarck. He led many studies and taught at the University of North Dakota and University of Minnesota. He is survived by his wife, Shirley; 2 children; and 4 grandchildren.

**MARTIN Z. FRUCHTMAN, M.D.**, Class of 1956, Laguna Woods, California, died December 19, 2009, at age 78. Dr. Fruchtmann was an internist and allergist in Waukesha, Wisconsin. He is survived by his wife, Dolores; 4 children; and 8 grandchildren.

**CHARLES W. HANSON III, Ph.D.**, Class of 1973, New London, Missouri, died November 7, 2009, at age 76. Dr. Hanson received his Ph.D. in microbiology at the Medical School. He is survived by his wife, Deborah; 5 children; 7 grandchildren; and 3 great-grandchildren.

**DAVID F. HARDER, M.D.**, Class of 1967, Park Rapids, Minnesota, died May 18 at age 70. Dr. Harder worked as a urologist at Affiliated Community Medical Centers in Willmar and at the Dakota Clinic in Park Rapids. He is survived by his wife, Pamela, and 2 children.

**ERIC N. HENNING, M.D.**, Class of 1984, Arlington, Washington, died February 27 at age 60. Dr. Henning practiced emergency medicine at Northwest Emergency Physicians in Washington and Cascade Valley Hospital in Arlington. He is survived by many family members and friends.

**WILLIAM H. HOULTON, M.D.**, Class of 1951, Roseville, Minnesota, died July 28 at age 87. Dr. Houlton practiced anesthesiology in St. Paul. He was preceded in death by his wife, Loyce. He is survived by 4 children and 4 grandchildren.

**RICHARD J. JOHNSON, M.D.**, Class of 1944, St. Paul, Minnesota, died November 9, 2009, at age 90. Dr. Johnson practiced orthopaedic surgery in St. Paul at Bethesda, Mounds Park, Gillette Children's, and Veterans Administration hospitals. He was preceded in death by his wife, Lois. He is survived by 2 children and 2 grandchildren.

**BYRON R. KINKADE, M.D.**, Class of 1944, Ada, Minnesota, died May 5 at age 89. Dr. Kinkade had a private practice in Ada. He was preceded in death by 1 son. He is survived by his wife, Mary; 4 children; 16 grandchildren; and 2 great-grandchildren.

**LESTER L. LANSKY, M.D., M.S.**, Class of 1965, Minneapolis, died May 11 at age 77. Dr. Lansky was chief of pediatric neurology at Kansas University Medical Center, professor of neurology at the University of Illinois at Chicago Medical Center, and a consultant at the Brainerd Regional Health Center. He was preceded in death by his wife, Shirley Lansky, M.D. He is survived by 4 children and 4 grandchildren.

**GORDON E. LEE, M.D.**, Class of 1952, Glenwood, Minnesota, died May 18 at age 85.

## Alumni Connections

Dr. Lee spent his entire career as a family practitioner in Glenwood. He is survived by his wife, Amy; 4 children; and 5 grandchildren.

**CHARLES E. LINDEMANN, M.D.**, Class of 1946, Bloomington, Minnesota, died May 29 at age 86. Dr. Lindemann practiced internal medicine at Southwest Internists, P.A., in Minneapolis and was chief of staff at the former St. Mary's Hospital. He was preceded in death by his wife, Genevieve, and 1 child. He is survived by his second wife, Shirley; 6 children; 5 stepchildren; and 22 grandchildren.

**M. C. F. LINDERT, M.D.**, Class of 1938, Cedar Grove, Wisconsin, died May 9 at age 97. Dr. Lindert cofounded the Clinic of Internal Medicine in Wauwatosa, Wisconsin, and was a professor of medicine at Marquette University Medical School. Dr. Lindert was preceded in death by his first wife, Patricia. He is survived by his second wife, Lynn Laun; 4 children; 3 stepchildren; 9 grandchildren; and 4 great-grandchildren.

**THOMAS KENT NORRIE, M.D.**, Class of 1965, Fort Collins, Colorado, died July 26 at age 72. An anesthesiologist, Dr. Norrie practiced at Poudre Valley Hospital in Fort Collins. He is survived by his wife, Katherine; 4 children; and 11 grandchildren.

**ROBERT W. OLSON, M.D.**, Class of 1955, Bloomington, Minnesota, died November 30, 2009, at age 80. Dr. Olson was a general practitioner in south Minneapolis. He is survived by his wife, Margie; 4 children; and 2 grandchildren.

**JULIEN V. PETIT, M.D.**, Class of 1940, Edina, Minnesota, died November 8, 2009, at age 93. Dr. Petit was a private practice physician at Fairview hospitals and served as chief of staff at Fairview Riverside (now University of Minnesota Medical Center, Fairview). He was preceded in death by his first wife, Evelyn, and 1 child. He is survived by his second wife, Charlotte Snowberg; 2 children; 4 stepchildren; 6 grandchildren; and 2 great-grandchildren.

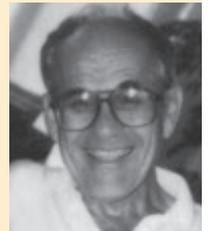
**EMILY H. GATES, M.D.**, Class of 1939, Jacksonville, Florida, died March 15 at age 96. Dr. Gates practiced pediatrics in Stockton, California, and was director of maternal and child health for the state of Florida. She was instrumental in developing

the first day care licensing standards and initiated newborn screening for metabolic diseases in Florida. Dr. Gates is survived by many family members in California and by the family of her friend Marion Scarborough.



**ROBERT E. LITMAN, M.D.**, Class of 1943, Manhattan Beach, California, died February 14 at age 88. A psychiatrist, Dr. Litman cofounded the first comprehensive suicide prevention center in the United States, at Los Angeles County Hospital in 1958.

There he guided the development of suicide prevention services, including the nation's first 24-hour suicide crisis hotline and a new way to evaluate people at highest risk of suicide. He is survived by his wife, Connie; 5 children; and 2 grandchildren.



**FRANK S. PRESTON Jr., M.D.**, Class of 1953, Minneapolis, died March 20 at age 81. Dr. Preston practiced at the former St. Mary's Hospital in Minneapolis. He specialized in internal medicine and pulmonary disease, played a key role in starting the hospital's pulmonary function laboratory, and served as chief of medical staff. Dr. Preston is survived by his wife, Laura Faye; 9 children; and 6 grandchildren.

**RAY V. ROSE, M.D.**, Class of 1946, Pasco, Washington, died June 2 at age 89. Dr. Rose was a surgeon. He is survived by his wife, Elsa; 5 children; and 10 grandchildren.

**ELIZABETH A. SCHMIDT, M.D.**, Class of 1979, St. Cloud, Minnesota, died January 22 at age 63. A gynecologist, Dr. Schmidt practiced in Minneapolis and later moved to St. Cloud to work at CentraCare Obstetrics & Women's Clinic. She is survived by her former husband, Bill, and 1 child.

**DALE F. SHEETS, M.D.**, Class of 1955, Champlin, Minnesota, died November 19, 2009, at age 79. He is survived by his wife, Barbara; 4 children; 5 grandchildren; and 1 great-grandchild.

**RUTH E. SMATHERS, M.D.**, Class of 1945, Grand Ledge, Michigan, died March 21 at age 89. Dr. Smathers practiced medicine in Southfield, Michigan. She was preceded in death by her husband, Ward Smathers, M.D. She is survived by 5 children, 4 grandchildren, and 3 great-grandchildren.

**PAUL W. VANDER KOOI, M.D.**, Class of 1965, Orange City, Iowa, died January 2 at age 70. Dr. Vander Kooi practiced general medicine and anesthesiology at the Orange City Medical Clinic. He is survived by his wife, Marilyn; 2 children; and 4 grandchildren.

**MICHAEL A. WAINSTOCK, M.D.**, Class of 1940, Commerce Township, Michigan, died July 31 at age 94. He was preceded in death by his wife, Lee, and is survived by two children.

**MARK P. WHEELER, M.D.**, Class of 1975, North Mankato, Minnesota, died June 23 at age 60. Dr. Wheeler practiced medicine at the Mankato Clinic. He is survived by his wife, Margo, and 2 children.

**JAN M. WICKSTROM, M.D.**, Class of 1979, Mahtomedi, Minnesota, died June 12 at age 59. Dr. Wickstrom was a family physician. She is survived by many family members.

# A revolutionary decision

Ten years after Molly Nash became the first Fanconi anemia patient to survive following a controversial transplant, the ethical debate continues

In most ways, 16-year-old Molly Nash is a typical teenager. She argues with her parents. She bickers with her younger brother and sister (but admits to loving

them, too). And she is a budding actress, recently portraying Chip the teacup in *Beauty and the Beast*.

The science that came together 10 years ago to give Molly these opportunities was revolutionary, controversial, and for her family, intensely personal.

“You never thought beyond milestones. Can we make it a month, six months, the first year?” recalls Molly’s mom, Lisa Nash. “Ten years ago we never would have imagined that we would ever reach this mark.”

At birth, Molly was diagnosed with Fanconi anemia (FA), a usually fatal genetic disease. Her only hope was a blood and marrow transplant. But survival rates for those without a matched sibling donor were a dismal 16 percent. And Molly had no siblings.

University of Minnesota pediatric hematologist/oncologist and umbilical cord blood transplant pioneer John E. Wagner, M.D., wanted better numbers. He worked with in vitro fertilization and preimplantation genetic diagnosis (PGD) experts to create better odds.

Ultimately, the Nashes would become the first to use PGD to have a child who was guaranteed to be free of FA and an exact blood match for a sibling.

“We knew this was going to be a hotly contested ethical issue. But we also knew that it was Molly’s best chance,” Wagner says.

## In the spotlight

To start the process, Lisa Nash’s eggs were extracted and fertilized. Genetics specialists tested the resulting embryos to be sure they were disease-free and a match, and the selected embryos were implanted.

It doesn’t always work immediately — it took the Nashes five tries before a successful pregnancy. Adam was born on August 29, 2000, and Molly received his cord blood on what her family calls her “second birthday,” September 26, 2000.

“We recycled Adam’s cord blood — he didn’t need it anymore — and gave Molly life,” Lisa Nash says.

There were critics — vocal critics — who accused Wagner of playing God and manufacturing designer babies. Others took issue with selecting embryos for a



John E. Wagner, M.D., gave Molly Nash the pioneering umbilical cord blood transplant she needed to beat Fanconi anemia 10 years ago.

trait such as blood match that was not of benefit for the resulting child. Through the firestorm of worldwide publicity, however, the overriding response was supportive.

The Nashes found the international attention overwhelming. “We weren’t doing it for the world’s approval or disapproval,” Lisa says. “We were flat out doing it for our family, so we could have a family.”

But it wasn’t a decision that the Nashes or their doctors took lightly. Wagner consulted with Jeffrey Kahn, Ph.D., M.P.H., director of the University’s Center for Bioethics.

“We made a conscious effort to be public and discuss this in a transparent way,” Kahn says.

### A lesson in living

Ten years later, the ethical debate continues. Many embryos are created to get one perfect genetic match for patients in need of a transplant. Alternatively, before preimplantation genetic screening was an option, some families chose to abort healthy but non-matched fetuses, Kahn says.

From a scientific perspective, much has changed. “This technology is now being used for many different diseases, and many places offer it,” Wagner says. “While the debates continue, we use these technologies for good.”

And the FA survival rates are vastly improved — about 90 percent for transplants involving unrelated donors and 100 percent when the donor is a matched sibling.

Meanwhile, Molly Nash, who will always be a “first,” goes about her typical life.

“Molly’s taught us to live life,” Lisa Nash says. “To this day we live life to the fullest because we still have no idea how long we will have her on this earth, so we make every second special.” 

By SARA E. MARTIN, a writer and editor in the University of Minnesota’s Academic Health Center

### Finding hope

LAURIE STRONGIN’S uneventful pregnancy belied the reality of her first-born’s medical condition. Born in 1995, Henry had Fanconi anemia, and Laurie and her husband, Allen Goldberg, quickly learned that a matched sibling blood and marrow donor was his only hope.

In 1996, while Laurie was pregnant with their second child — healthy but not a genetic match — the couple learned about the possibility of using preimplantation genetic diagnosis (PGD) and in vitro fertilization (IVF), guaranteeing a healthy child and a match. The decision to proceed was easy; their family again would grow, and Henry could get his blood and marrow transplant (BMT) at the University of Minnesota, a leader in using BMT to treat Fanconi anemia.

“I decided early on that I wanted to keep a journal about the entire experience so that when it did work, I could share information,” Strongin says. “That was my way of giving back in exchange for being first.”

Earlier this year, Strongin turned her journal into the book *Saving Henry*, which chronicles — from a medical perspective, and perhaps more important, from the perspective of a normal, superhero-loving kid — Henry’s life and early death.

For the Strongin-Goldberg family, IVF and PGD failed on numerous occasions, and University pediatric hematologist/

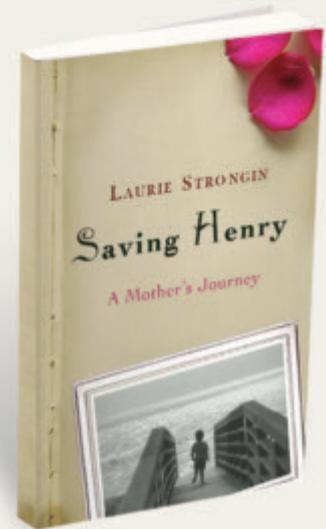


IMAGE: COURTESY OF HYPERION

oncologist John E. Wagner, M.D., determined that Henry was too sick; they had to proceed with an unrelated donor. Because of the procedure, Henry and his family gained another 2½ years together.

*Saving Henry* recounts the family’s journey and celebrates Henry’s life. “The book started off as a therapeutic outlet,” Strongin says, “but then it became a story of hope and what it’s like on the medical frontlines.”



Hear a podcast and read a book excerpt about this family’s journey to medicine’s outer limits at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).



Class of 2000 alumni Julie Anderson, M.D., Peter Lund, M.D., Shannon Parkos, M.D., and Eric Haug, M.D., share a smile.

# Reunion Weekend: Sharing and making memories

EXCITEMENT RUNS high in September at the University of Minnesota with the return of students and events of all types. On September 23, 24, and 25, Medical School alumni joined the fun when members of eight classes reconnected at the Medical Alumni Society's Reunion Weekend.

Over the three busy days, alumni caught up with former classmates, learned about promising research under way at the University, participated in a medical education forum, and toured

the new University of Minnesota Amplatz Children's Hospital.

New this year was a special Hippocrates Café, part of an ongoing series of events that explore health care topics using professional actors and musicians. Many alumni concluded their visit by watching the Gophers play Northern Illinois at TCF Bank Stadium.

To reconnect with your Medical School classmates online through the Medical Alumni Society's Facebook and LinkedIn pages, visit [www.mmf.umn.edu/alumni](http://www.mmf.umn.edu/alumni).

## REUNION WEEKEND 2010

Participating classes: 1950, 1955, 1960, 1970, 1980, 1985, 1990, and 2000



View a slideshow and video from the 2010 alumni reunion, with highlights from Hippocrates Café, at [www.mmf.umn.edu/mb/extras](http://www.mmf.umn.edu/mb/extras).

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