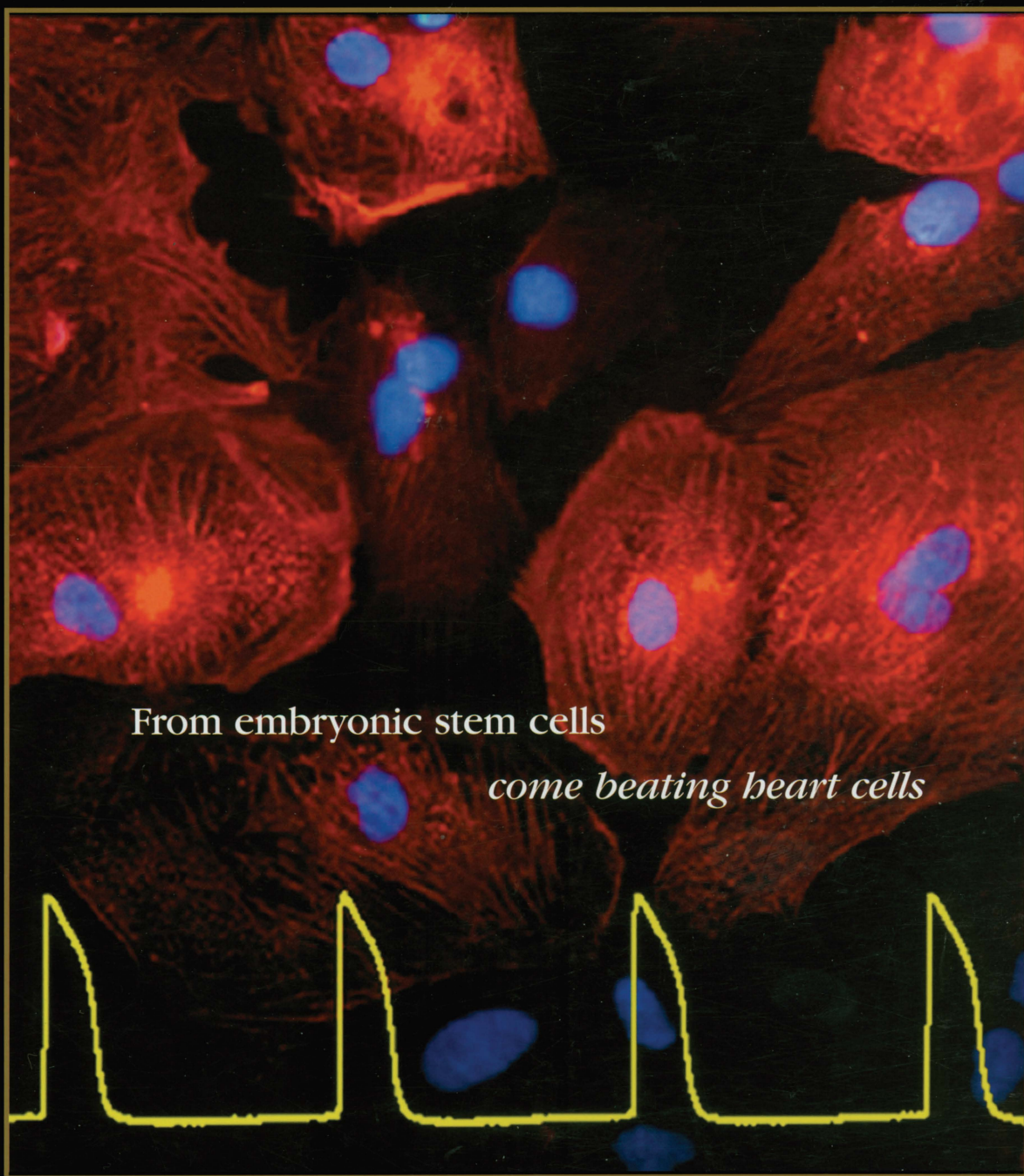


The Magazine for University of Wisconsin Medical School Alumni and Friends

# QUARTERLY



From embryonic stem cells  
*come beating heart cells*



VOLUME 5  
NUMBER 4  
AUTUMN 2003



## QUARTERLY

The Magazine for  
University of Wisconsin Medical School  
Alumni and Friends

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Heart muscle cells derived from  
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yellow tracings represent action  
potentials—electrical activity that  
triggers beating—recorded from  
the cells. Courtesy Youngsook Lee  
and Jia-Qiang He.



## ■ Dean's Message



**Philip Farrell, MD, PhD**  
UW Medical School Dean  
UW-Madison Vice Chancellor  
for Medical Affairs

At just about the same time as you receive this issue of the *Quarterly*, we will be formally welcoming the Class of 2007 into the world of medicine at the annual "White Coat Ceremony." This special event—held in the presence of family members, guests and respected leaders of the University of Wisconsin Medical School community—celebrates the entrance of each new medical student into our profession.

Held at the beginning of medical school, this ritual helps new students become

aware of their responsibilities from the first day of clinical training. Second-year students help each new student don a white coat, the symbol of clinical care. With both the ceremony and the coat, we aim to impress on the new students the importance of the doctor-patient relationship.

Also at the ceremony, students receive their first introduction to their Wisconsin Medical Alumni Association. The alumni association has many long-standing as well as new programs that are designed to keep students engaged and involved in the school during and well after their years with us. At the ceremony, the State Medical Society of Wisconsin also welcomes the new students, urging them to regard the organization as a resource for issues that may affect them as students and clinicians alike. These are the professional organizations upon which students will rely their entire careers.

A keynote address also is presented at the ceremony. This year, on September 28, Jeffrey Glassroth, MD, chair of the UW Department of Medicine, will give the address. Last year, Layton Rikkers, MD, chair of the Department of Surgery, gave the talk.

Dr. Rikkers' message was inspirational. Among other things, he noted that medi-

cine has never been more exciting. He cited the unraveling of the human genome, advances in imaging modalities, the advent of minimally invasive and robotic surgery, the transplantation of artificial organs and bioengineered tissues, and the use of stem cells to treat diseases.

Dr. Rikkers reminded the students that UW faculty members are active in many of these exciting new developments. He speculated that the students may even find the opportunity during medical school to participate in and contribute to some of the ongoing research programs.

You will read about one cutting-edge area—stem cell research—in this issue of the *Quarterly*. As most of you know, Dr. James Thomson, UW Medical School professor of anatomy, opened the door for stem cell research five years ago when he first isolated human embryonic stem cells and grew them in culture. Many of his Medical School collaborators are now actively working to guide the pluripotent cells into other kinds of specialized cells. The ultimate goal is to use the cells to develop new tissues to treat many diseases associated with cells that are aging, dying and dysfunctional.

I believe we cannot yet fully comprehend all the future promise of stem cell research and other cellular

biology advances. If we look back 50 years to when Watson and Crick discovered the DNA double helix, we see that there was much speculation about what the ramifications might be, but nobody had a clear idea of what would evolve. I think we are in the same situation with stem cells today. The end result may be something even bigger than we can imagine.

What we do know for sure is that the UW environment is particularly well suited to supporting stem cell research. Developmental biologists and other basic scientists can almost effortlessly interact with clinicians working at UW Hospital and Clinics to exchange and refine ideas that have direct application to patient care. This ability to translate knowledge so nimbly is innovative; in fact, it is a defining feature of our school. Our plans for the new Interdisciplinary Research Complex only strengthen our commitment to enhancing translational research.



## ■ President's Message



**Christopher Larson, MD '75**  
**WMAA President**

**A**s I finish my first year of a two-year term as your president, I find myself reflecting on the many successes of the Wisconsin Medical Alumni Association (WMAA) and its five-year strategic plan. The increasing involvement of alumni and students is the result of programs that better communicate the association's mission and vision, creating better ways for students and WMAA members to participate in our organization.

Our strategic plan for 2001-2005 has the following goals: stimulating an interest in University of Wisconsin Medical School among

alumni; facilitating communication between alumni and the Medical School; supplying financial support to the Medical School; and promoting free and friendly social and professional relations among alumni, students and faculty.

Our ongoing efforts have resulted in increasing medical student interest in the WMAA. Alumni meetings conducted in social settings have created opportunities for students to register their concerns about the curriculum and Medical School resources. Participation by Medical Student Association officers and class representatives on committees and in board meetings has reached unprecedented levels. Students in each of the four years have been willing to embrace the challenges that the association set for them and have become an integral part of the WMAA.

The Class of 2003 is well-informed about WMAA activities and has put in place its own communication strategy. Our Alumni Office will facilitate, when necessary, use of a newsletter to update new graduates of the class about relevant news and ongoing activities at the university.

Med I students will soon take part in the White Coat Ceremony, in which our alumni message is clearly presented. The WMAA will give each student a gift to

welcome him or her into the profession.

This past year, medical students participated in many WMAA-sponsored activities:

- WMAA board meetings
- Dean's Cup competition
- TGIF social gatherings
- Break-out groups
- Shadowing and host program interactions
- Homecoming celebrations, including a Friday night dinner reception with a university speaker, morning activities and a tailgate party.

While alumni activity is reaching new heights, our model for staying in touch with members via class representatives is evolving. In addition to our Web site and individual mailings, information about your classmates will be shared on a less-formal basis in a newsletter mailed through our Alumni Office. We ask that you help by identifying three or more contacts in your graduating class who can act as a clearing-house for information about your classmates. Your class newsletter will also contain information about current events at the university.

The Events Committee is actively implementing new programs to add to the already successful activities supporting the WMAA strategic plan. For the first time, the WMAA hosted

reunions for the most recent graduating classes, coinciding with a Badger football game. Some classes held Friday night reunion activities that were followed by a Saturday morning tailgate party at Union South and the Badger vs. North Carolina football game. Participants welcomed the opportunity to visit the campus—socializing with other alumni, faculty and students and getting acquainted with what's new at the university.

I look forward to seeing you at future alumni functions. Important upcoming events for you to attend include the February 2004 Winter Event in Milwaukee and the dedication of the Health Sciences Learning Center in spring or summer 2004. Check out the Web site and future newsletters for specific dates and times.

With best regards,  
Chris



*From a groundbreaking discovery  
come many advances*

# Stem cell research thrives at Wisconsin

by Dian Land

**F**IVE YEARS AGO, James Thomson, DVM, PhD, University of Wisconsin Medical School professor of anatomy, turned the scientific world upside down with the discovery that he could isolate and grow human embryonic stem cells—the primordial, self-renewing cells that are capable of becoming any cell type in the body. Thomson had painstakingly harvested the ephemeral cells from surplus embryos that were scheduled

to be discarded at a local *in vitro* fertilization clinic.

Scientists immediately recognized the stunning clinical potential of the cells: They could be used to generate unlimited supplies of the approximately 220 types of specialized human cells and tissues. That could include cardiomyocytes to replace heart muscle damaged by a heart attack, for example, or motor neurons to undo the ravages of amyotrophic lateral sclerosis (ALS), islet cells to produce insulin in diabet-

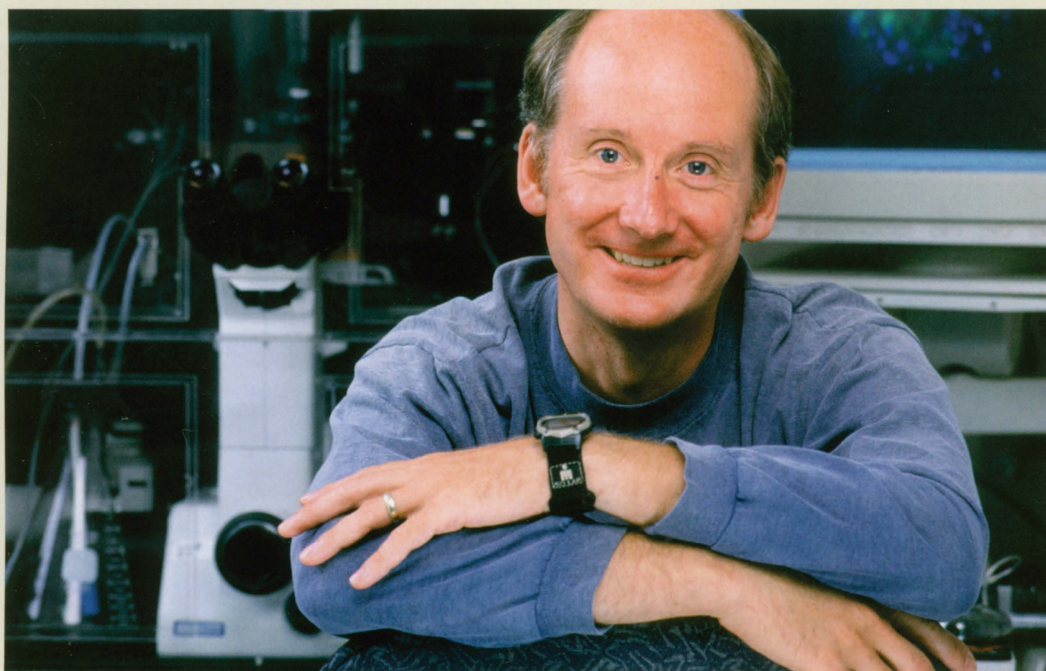
ics or blood cells to make an endless supply of blood for transfusion. Furthermore, biologists were excited about the possibility of using the cells to study the earliest, most critical stages of human development—an opportunity impossible until now.

In the past half-decade since Thomson's landmark achievement, stem cell research has been steadily opening up. "Whenever there's a new scientific field, there's a time lag before it diffuses out widely into the larger research

community," says Thomson, recently named the John D. MacArthur Professor. The diffusion has begun.

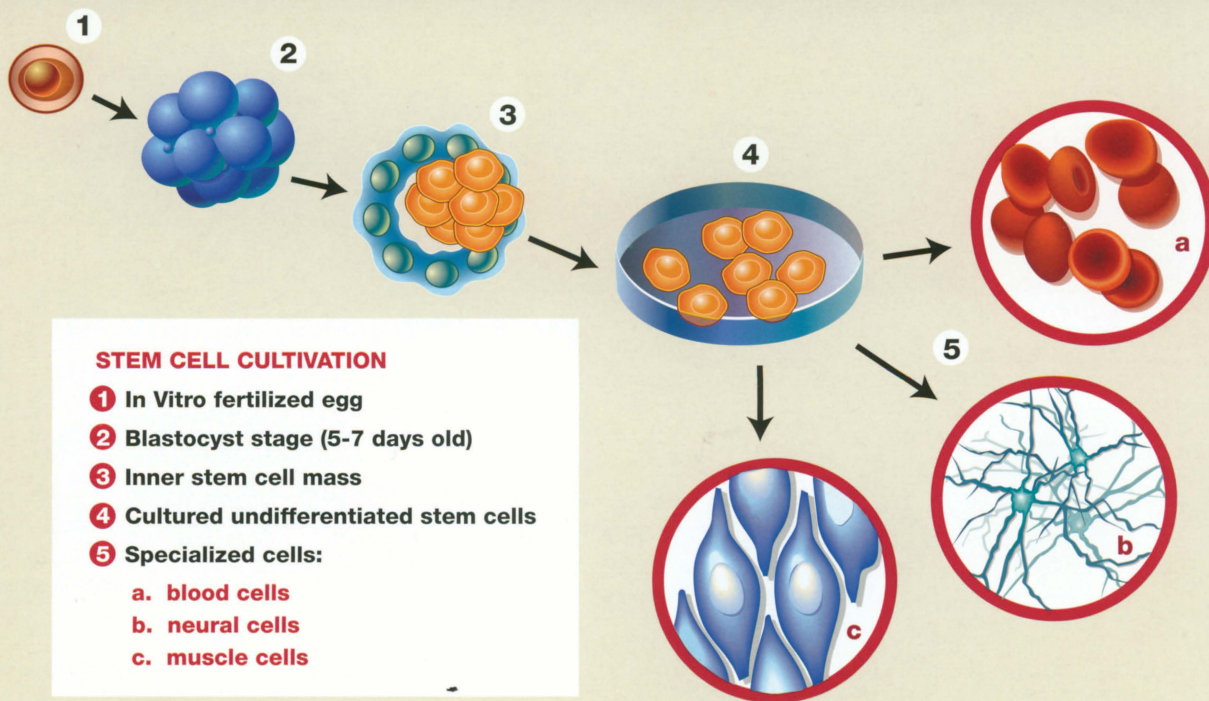
The field is quickly becoming increasingly competitive as leaders at academic centers across the country and around the world, comprehending the unique promise of human embryonic stem (ES) cell research, begin to allocate significant resources to burgeoning research programs. Not surprisingly, Wisconsin stands clearly among the leaders. A growing number of committed young scientists, many of them MD-PhDs based at the Medical School, are busy at work.

The scientists have many critical, fundamental questions to answer before the new technology can be effectively and safely used in treating disease—an eventuality that most believe is between five and 10 years away. What are the exact formulas of growth factors that are needed to guide the undifferentiated ES cells into various types of specialized cells? What is the precise timing of delivering the chemicals? How can the ten-



James Thomson, DVM, PhD





dency for implanted cells to be rejected as immunologic foreigners be overcome? Will the growing cells also produce tumors?

UW-Madison offers a combination of important advantages that may not exist anywhere else. The resources and relationships should greatly facilitate the stem cell scientists' success, says Thomson. One standout is the National Primate Research Center on campus—one of eight such centers in the country. "Most of the knowledge we have about ES cells comes from 20 years of research on mice, but primate ES cells are different," says Thomson, who is based at the center. "Many of our stem cell collaborators on campus are developing primate models." By most accounts, UW's primate center is the strongest and most credible in terms of ES cell research.

Thomson also credits UW's Organ Transplant Program, where researchers and clinicians study issues that are highly relevant to the future

clinical success of stem cells, particularly host immune responses to transplanted tissues. "UW Hospital's transplant team is one of the most active in the country," Thomson says.

A third resource is the Wisconsin Clinical Biomanufacturing Facility at the Waisman Center on campus. "If we get to the point where we want to introduce stem cells into the clinics, we can rely on this production facility to actually make the cells," he says.

In addition, the university is providing significant support through the recent creation of the Wisconsin Stem Cell Research Program, a formal institutional commitment to expand stem cell research and its impact on medicine, society and individual lives.

One development growing from the new university com-

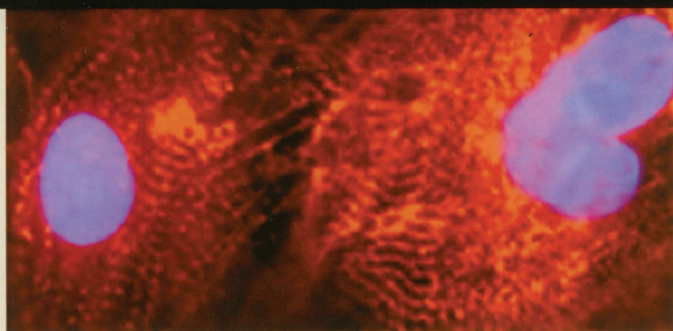
mitment is a cluster hire program in stem cells and regenerative medicine, a broad area that has become a strategic priority for the Medical School. This program uses newly created and funded positions to recruit faculty in disciplines that bridge traditional departmental and college lines. Medical School leaders are actively recruiting top stem cell researchers, who number very few and are highly sought after at this early stage.

Finally, and perhaps most importantly, UW scientists have relatively easy access to Thomson's five cell lines. The cells are maintained at the WiCell Research Institute near campus, one of only a handful of laboratories worldwide permitted to provide the cells to scientists funded by the National Institutes of Health. With a mission that

includes active support of stem cell science at UW-Madison, WiCell has distributed cell lines to some 130 American and international scientists so far, making it the busiest ES cell distributor in the world. The privately funded institute is a subsidiary of the Wisconsin Alumni Research Foundation (WARF), which holds the patent on the stem cells derived by Thomson as well as the process he used to keep the cells alive and replenishing themselves in an undifferentiated state.

With this exceptional combination of resources in place, UW researchers are forging ahead with remarkable advances. One of their biggest challenges is learning the exact requirements for coaxing the clean slate ES cells into different types of specialized cells.





## HEART CELLS

Cells from the laboratory of UW Medical School's Timothy Kamp, MD, PhD, are alive with motion. Kamp and his colleagues recently demonstrated, for the first time, that human ES cells can grow into three distinct types of cardiac muscle cells. The researchers made the discovery by characterizing the electrical properties of the beating cells.

The new development this past summer is the latest in a series of important steps made by UW Medical School scientists in the past few years since Thomson first isolated and cultured ES cells.

"These cells have all the machinery you'd expect in developing human heart cells," says Kamp, associate professor of medicine and physiology and a member of the UW Cardiovascular Research Center. "It's very exciting that we may have a model system to acquire human heart cells."

Kamp and other cardiologists hope that such a system becomes the foundation of future cell-based therapies to

address problems that kill or seriously threaten patients by the millions—congestive heart failure, heart attacks, fatal arrhythmias. Cardiomyocytes, or precursor heart cells, would be inserted into the heart to form healthy new muscle or correct faulty electrical activity.

Beyond new treatment options only recently imaginable, the cells also could provide scientists a unique opportunity to study the properties of human heart cells, which obviously are not available from living donors for research. Current sources of information about the biology of human cardiology—heart cells from different species—provide only limited insights.

Moreover, pharmaceutical companies may find ES-derived human heart cells a boon. "One of the major challenges of drug development is to avoid creating agents that prolong the electrical signal, or action potential, that underlies each heartbeat. This prolongation causes a potentially lethal heart arrhythmia," explains Kamp, adding that the problem has led pharmaceutical companies to with-

draw multiple drugs from the market and end the development of many others. "Since ES-derived cardiac myocytes will have the human-specific complement of proteins responsible for electrical activity in the heart, the cells may be particularly useful as a screening tool to identify agents that may cause these problems, long before the drugs reach patients."

To arrive at the beating cells, Kamp and his team removed human ES cells from the layer of feeder cells that Thomson created to keep his ES cells in their undifferentiated state. Because so little is known about the signals that direct the development of heart cells, the scientists simply let the ES cells grow freely. The differentiating cells soon gathered into clumps, a protruding portion of which—perhaps 200 cells on each clump—developed into outgrowths that spontaneously began to beat.

The researchers found that each outgrowth contained a particular type of cardiomyocyte. By placing a tiny electrode inside each cell, they measured action potentials corresponding to each cell type. The measurements showed that some were ven-

tricular cells—those of the lower chambers of the heart that pump blood throughout the body; some were atrial cells—which form muscle in the upper chambers and serve to prime the ventricle; and some were nodal cells, which regulate heart rhythm.

Kamp says it's not clear why the outgrowths contained only certain cells, but it may be that once one type of cardiomyocyte starts to form, it secretes growth factors that encourage others of the same type to grow in the same location.



Timothy Kamp, MD, PhD



## A growing cadre of stem cell researchers

The beating cells are still immature, he notes, but they likely will develop, under the appropriate conditions, into adult-type cardiomyocytes. "But maybe they don't need to be more mature," he says. "If there's a large area of heart that needs to be regenerated, you may want to insert young cells that can grow and divide."

In terms of playing a more active role in inducing ES cells to become heart cells, Kamp says that his team has tried to set up culture conditions to favor formation of cardiomyocytes, but so far

have found that the process is still relatively random. The team plans to delve further into this issue and many others in the near future, including the major potential obstacles of tumor formation and immune rejection. But patience is required.

"We're not nearly as far along as the neurology stem cell scientists," he says. "But, then, ES cells seem to like to go to neurons more than to heart cells."

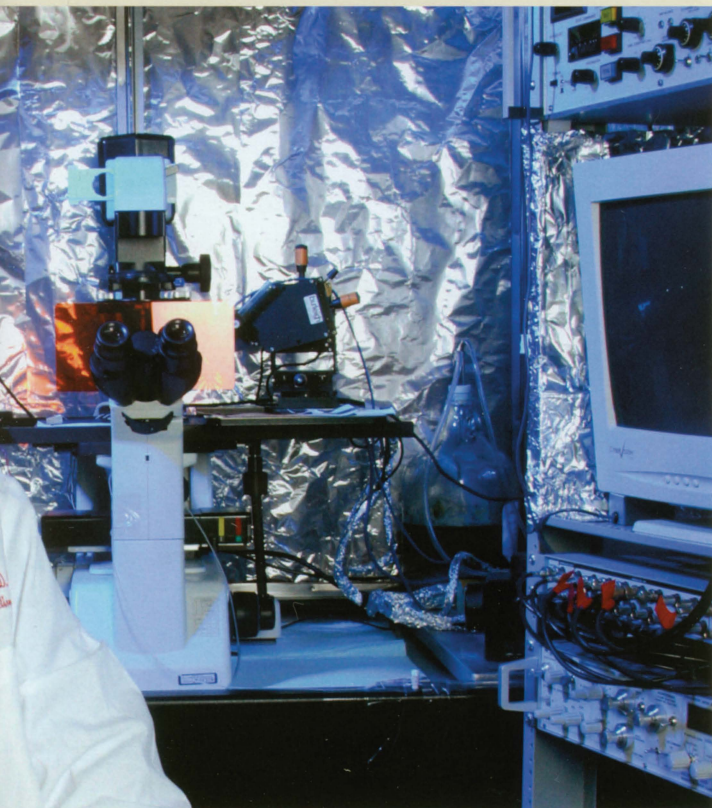


PHOTO: Tom McInvaillie

Several Medical School scientists, listed below, are using human ES cells that were first isolated and cultured by anatomy professor James Thomson, DVM, PhD, and subsequently have been maintained by the WiCell Research Institute in studies aimed at understanding the development of various organ systems. The hope is that the fundamental knowledge will lead to new treatments for diseases ranging from congestive heart failure to diabetes, infertility and ALS.

### Cardiovascular studies

- Timothy Kamp, MD, PhD, associate professor of medicine and physiology
- Youngsook Lee, PhD, assistant professor of anatomy
- Gary Lyons, PhD, associate professor of anatomy
- He Jia-Qiang, assistant scientist, physiology

### Neurology studies

- Su-Chun Zhang, MD, PhD, assistant professor of anatomy and neurology

### Hematology studies

- Aimen Shaaban, MD, assistant professor of surgery
- Igor Slukvin, MD, PhD, instructor, pathology and laboratory medicine
- Dong Chen, MD, PhD, resident, pathology and laboratory medicine

### Pancreas studies

- Jon Odorico, MD, assistant professor of surgery

### Placenta studies

- Ted Golos, PhD, professor of medicine

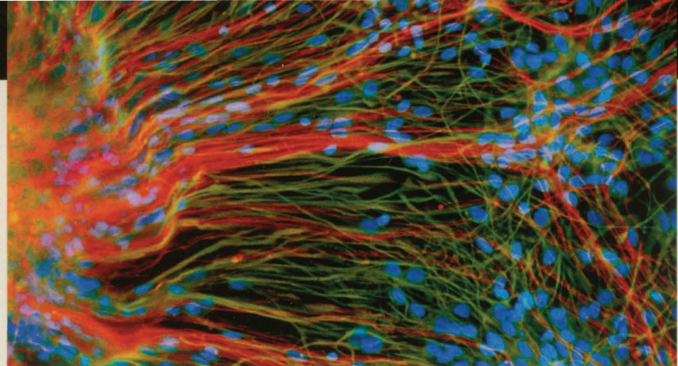
Another group of scientists, based at the Waisman Center's Stem Cell Research Program (SCRIP), uses neural stem cells isolated from fetal and adult tissues to focus solely on neurology studies. The group includes:

- Clive Svendsen, PhD, professor of anatomy
- David Gamm, MD, PhD, assistant professor of ophthalmology and visual sciences
- Masatoshi Suzuki, SCRIP visiting scientist
- Anita Bhattacharyya, PhD, SCRIP assistant scientist

Additional Medical School researchers studying different kinds of specialized stem cells include:

- Ron Kalil, PhD, professor of ophthalmology and visual sciences (nerve cells)
- Lynn Allen-Hoffmann, PhD, professor of pathology and laboratory medicine (epithelial cells)
- Emery Bresnick, PhD, associate professor of pharmacology (blood cells)





## NERVE CELLS

Kamp's work follows on the heels of a similar advance by another UW Medical School faculty member, Su-Chun Zhang, MD, PhD. In 2001, Zhang, an assistant professor of anatomy and neurology based at the Waisman Center, reported that his team was able to guide human ES cells down the developmental pathway to becoming two types of precursor brain cells. Along with another team in Israel, which took a different approach, Zhang's group was the first to claim the accomplishment.

The neurology team had an advantage because much more is known about the development of neural cells than is known about cardiac cells. "Based on the significant amount of information we have gained from studies of mouse ES cells, we developed a chemical cocktail of cytokines and growth factors and gave it to our human ES cells at specific stages," Zhang says.

By guiding the cells through a progression of differentiation stages, the researchers helped the cells transform into early-stage neural cells. To test the capability of the cells to function, the team transplanted them into the brains of growing mice and found that the

precursor cells further differentiated into neurons and astrocytes—members of the second main family of nerve cells called glia. "The cells worked as they should," Zhang says. "It was an important step."

In addition, the work performed by Zhang and his colleagues exhibited an important ancillary result: the complete absence of teratomas, or tumors, in the mice that received the cell transplants. Of concern in any potential stem cell therapy is that tumors may arise from the contamination of precursor cells by undifferentiated cells.

"We put a lot of cells—in one instance half-a-million—in a mouse," says Zhang. "The more cells you put in, the more likely you are to have a tumor. The absence of tumors shows our methods for purifying the precursor cells are pretty good."

But to be clinically useful, precursor cells must be drawn even further down the developmental path into any of the hundreds of specialized nerve cells that populate the brain and spinal cord. These are the finely differentiated cells that ultimately control vision, hearing, speech, movement, balance, cognition and emotions.

Timing is crucial to the success of the biochemical approach that Zhang usually

uses, he stresses. "You don't know what chemicals are playing a role when" in the course of the nine months of gestation in which normal human development occurs, he says. And, as illuminating as they have been, studies of mouse ES cells do not translate perfectly to human development.

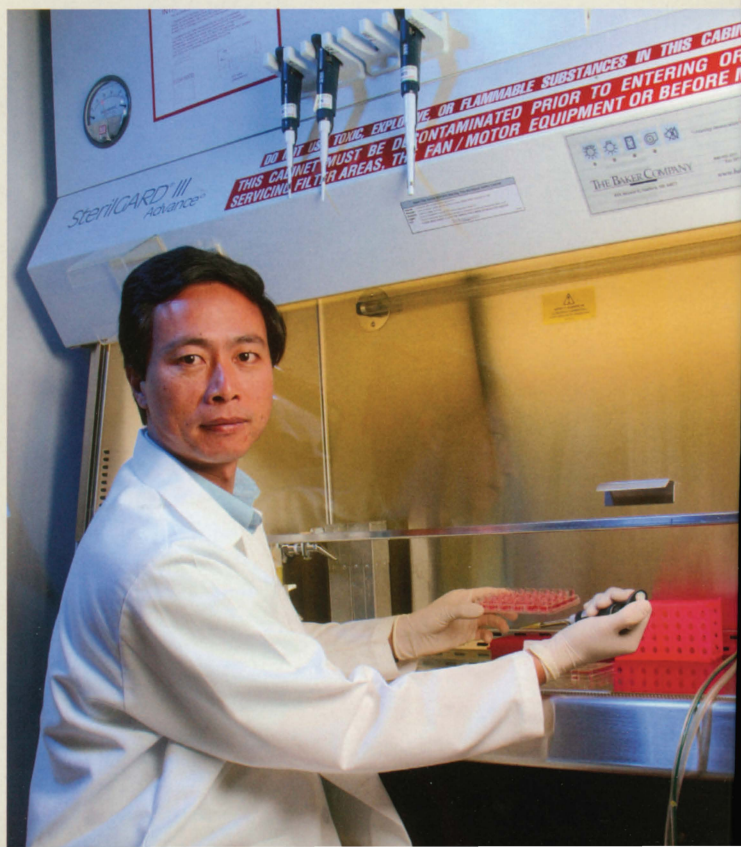
By fine-tuning the chemical ingredients in their cocktail and modifying the timing of delivering it, Zhang and his team have further guided the precursor cells into dopaminergic cells. Because these cells produce dopamine—the neurotransmitter that is lost in Parkinson's disease patients—scientists are hopeful that transplantation of the cells can become a future treatment for these patients and those with other central nerv-

ous system disorders involving dopamine problems.

In a parallel research track, Zhang also has turned his attention to the motor neuron. "This nerve cell type, which controls movement and speech, is involved in brain and spinal cord injuries. It is the nerve cell that ALS attacks," he notes. Using different growth factors, the team has also succeeded in guiding their precursor nerve cell into motor neurons.

Zhang currently is maintaining "decent populations" of both kinds of nerve cells and has begun to analyze their function in animal models. Preliminary results are positive, with some cells continuing to develop following transplantation. "These are just two examples that prove this process works. You can

Su-Chun Zhang, MD, PhD





## A potential alternative to pancreas transplants

apply the same principle, generally, to any other kind of neuron or glial cell," he says. "That's really our main objective."

Although his research is clearly aimed at therapeutic applications, Zhang believes strongly that scientists must first learn more about ES cells themselves, and what the cells can tell them about the earliest stages of human brain development. "This excites me as much as using the cells for therapy, at least for the moment," he says. "Understanding the fundamental issues is key."



### BLOOD CELLS

At approximately the same time that Zhang first obtained precursor neurons from ES cells, another UW Medical School researcher, Dan Kaufman, MD, PhD, then a postdoctoral hematology fellow in Thomson's lab, accomplished a similar feat. He guided ES cells into precursor hematopoietic stem cells (HSC), the blood "master cells," and their immediate descendants, which later developed into more mature, specialized blood cells. It was the first specific cell type ever to be derived from Thomson's human ES cells.

Kaufman benefited from the considerable knowledge available on HSCs. Unlike most other cell types, HSCs continue to exist in humans throughout their lives—not just during embryogenesis or early life—in bone marrow and blood. HSCs constantly renew themselves and replenish the fluctuating amounts of eight types of blood cells that the body recycles, including white blood cells governing immunity, red blood cells carrying oxygen through the body, and platelets essential for clotting.

Hematologists and oncologists have used this lifetime, but limited, supply



PHOTO: Tom McInville

Jon Odorico, MD

University of Wisconsin Medical School transplant surgeon Jon Odorico, MD, is one step closer to finding an alternative to pancreas transplants for people with severe insulin deficiencies relating to diabetes. Odorico hopes that his latest research with mouse embryonic stem (ES) cells will help pave the way for future replacement therapies based on human ES cells.

"Patients with Type I diabetes need a replacement of islet cells or whole pancreas transplants," he says. "But there's a critical shortage of cadaver donors, the main source for the transplants. ES cells could be a source for replacing the patient's own damaged islet cells."

Odorico's recent mouse research provides a potential model for developing a renew-

able source of insulin-producing cells that control blood sugar. His team watched mouse ES cells differentiate into a variety of cells with specific functions. Of most interest to them were those cells involved in the formation of the pancreas, including its clusters of hormone-producing islet cells.

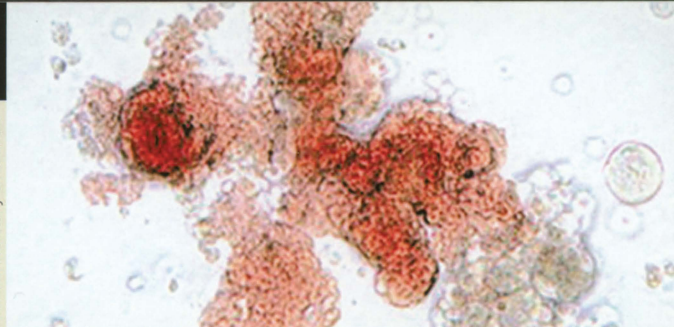
The researchers found that the mouse cells, cultured in serum with no added growth factors, differentiated into pancreatic precursor cells and islet cells producing four types of hormones, including insulin and glucagon.

A further benefit of the study is that it offers a much-needed model for studying normal pancreatic development. Odorico's team found that the cultured cells, just like those in the body, began to show features of early embryonic pancreas cells, such as the expression of specialized early transcription factors important for the formation of the pancreas. They also showed similar patterns of islet hormones, expressed genes that help regulate islet cells and ultimately generated insulin-producing cells.

"If human embryonic stem cells can be shown to differentiate to islets in this way with this culture system, then we can use this system to compare mouse and human pancreas developmental pathways for the first time," says Odorico.

- Emily Carlson





of HSCs to treat leukemias and myelomas as well as blood disorders such as severe sickle cell anemia and beta thalassemia.

During the experiments, Kaufman exposed ES cells in tissue culture to bone marrow and other cells, as well as to

growth factors, which emitted chemical signals that encouraged the ES cells to specialize into cells that appeared identical to those produced by human adult bone-marrow cells. The cells continued specializing into white blood cells, red blood cells and platelets.

The work suggests the exciting possibility of creating blood cells in the laboratory for transfusion and transplants. "There is generally a shortage of blood," says Kaufman, now at the Stem Cell Institute at the University of Minnesota. "If technology matures, it may one day be possible to augment the blood supply by producing, on demand, properly matched, disease-free transfusions."

But the work remains basic science for now, says Kaufman, with clinical applications still years away.

■ ■ ■

**F**OR HIS PART, Thomson, who above all views himself as a developmental biologist, plans to stay focused on the stem cells themselves.

A major portion of the effort will involve improving methods of keeping ES cells

## Using stem cells to protect nerve circuits

**R**esearchers at the Waisman Center's Stem Cell Research Program (SCRCP) concentrate solely on the brain but they do not limit themselves only to embryonic stem cells, the powerful cells that transform into each of the specialized cell lineages found in the human body. The SCRCP scientists also use fetal and adult neural stem cells to understand brain development and diseases affecting the brain.

"Cells that are further along the developmental pathway possess one big advantage over most embryonic stem cells. They do not produce teratomas, or tumors," explains Clive Svendsen, PhD, UW Medical School professor of neurology and director of the program. Svendsen and others believe that this feature makes somewhat-differentiated neural cells especially promising for clinical application. The cells are already programmed for brain development alone.

Svendsen came to Wisconsin in 2001, bringing several lines of fetal neural cells he had worked with for many years at Cambridge University in his native United Kingdom. He hopes that the cells he continues to cultivate can be used in innovative ways in the very near future to treat Parkinson's disease as well as amyotrophic lateral sclerosis (ALS).

The Wisconsin team is attempting to direct its neural stem cells to further develop into dopamine cells, which play a vital role in Parkinson's disease, by inserting into the cells genes they've identified as important to dopamine development. Parkinson's disease occurs when dopamine neurons begin to die. The disease breaks down communication between the brain and muscles, leading to uncontrollable shaking.

The dopamine-developing tactic is proving challenging, and given the mixed success physicians have had in transplanting dopamine cells into Parkinson's patients, Svendsen has redirected his

team to focus on GDNF, a protein that stimulates the growth of dopamine neurons and keeps them functioning properly. He theorizes that protecting existing circuitry in the brain may be a more successful approach than growing new specialized nerve cells.

In a preliminary study last year, Svendsen and colleagues in England showed that following delivery of GDNF directly into a specific region of the brains of five people with advanced Parkinson's for 18 months, the patients' motor skills increased dramatically and their brains were able to retain dopamine once again.

Bouyed by the clinical improvements and a remarkable lack of toxic side effects in the study patients, Svendsen is now looking to his stem cells as a potential supplier of GDNF. "We used a virus to deliver the protein to the stem cells in culture, and now the engineered cells are pumping GDNF," he says. "We've also learned how to switch the pumping on and off with doxycycline, a common antibiotic."



growing undifferentiated in a steady state. "We're actively trying to figure out what exactly the fibroblasts in the feeder cells we use to support ES are doing," he says.

Thomson's team is also hard at work on the issue of immune reactions to implanted cells. One approach involves a technique to modify genes, called homologous recombination, which masks ES cells in such a way that the immune

system does not recognize them as foreign. If successful, this approach could obviate the need for administering powerful, debilitating immune-suppressing drugs over the course of a patient's life. The researchers also are using homologous recombination to genetically mark cells, which will allow them to identify specific cells in a mixed population.

"Generally, we're trying to

understand what is special about these pluripotent cells—how they choose to become themselves versus something else," he says. The result, he hopes, may at last be a model of early development. "Obviously we can't study embryo growth in humans, but human ES cells can teach us how tissues and organs form at the earliest stages of development." The knowledge can also provide a clearer understanding

of development that goes awry, which can lead to infertility, miscarriages and birth defects.

The next several years will continue to be heady times for stem cell research, Thomson predicts. "The coming five to 10 years will be very productive, very good for the field," he says. "It will be an exciting time."

*- Terry Devitt contributed to this story*

Q

With animal studies currently under way, Svendsen has attracted the attention of the U. S. Department of Defense, which runs a large Parkinson's disease program. The National Institutes of Health also has awarded him a \$2 million grant for imaging investigations. Svendsen believes that a clinical trial in humans with Parkinson's could occur as soon as two years from now.

He also is cautiously optimistic that the neural protection approach he and his team are taking can be used for ALS. With this disease, motor neurons running between the spinal cord and muscles die when the glial cells that sheath and protect them from toxins deteriorate. The disease produces widespread muscle atrophy that eventually leads to paraplegia and death.

Like dopamine cells, motor neurons also are very sensitive to GDNF, Svendsen has found. In studies of an animal model of ALS, his team has found that GDNF



Clive Svendsen, PhD (left), with a research assistant.

migrates to sick glial cells and replaces them with protective fresh cells.

SCRIP member Soshana Behrstock, PhD, heads the GDNF and Parkinson's experiments, while doctoral candidate Sandra Klein works with GDNF for ALS.

ALS and Parkinson's fit neatly into Svendsen's approach, as both are neurodegenerative diseases involving small populations of large projective neurons.

He has access to unlimited supplies of stem-cell derived GDNF, a process that has been patented. "As soon as I'm convinced that we have positive clinical effects in our animal models, I will apply to do clinical trials in humans," Svendsen says. "I expect we could have an immediate impact on patients."

*- Dian Land*

PHOTO: Jeff Miller/UW-Madison University Communications



# UW Medical School's immersion in urban medicine

by Aaron R. Conklin

**I**t's different in the big city. The buildings are taller, for one; the streets more packed with cars and people, all speeding to their destinations. The cultural mosaic is complex, the scene crowded with thousands of people making thousands of choices each day.

Healthcare in the big city is different, too. Economic, linguistic and socio-cultural barriers loom larger. Resources, both financial and human, can be scarce, stretched in the service of providing care to an ever-increasing number of patients. Practicing medicine in an environment like this is—to put it mildly—a unique challenge. That is why, for the last three decades, University of Wisconsin Medical School has provided interested students the oppor-

tunity to immerse themselves in urban medicine experiences at the Milwaukee Clinical Campus.

The idea of a clinical campus in Milwaukee began in the early 1970s as a simple preceptor relationship between UW Medical School and a single site: Mount Sinai Medical Center in downtown Milwaukee. In the ensuing years, like the city around it, the campus has evolved to encompass much more. Today, the campus includes 13 clinics and more than 25 community-based delivery sites. Residency programs in internal medicine, obstetrics-gynecology and family medicine are available to students, as are fellowship programs in cardiology, electrophysiology, gastroenterology and geriatrics. The recently created Center for Urban Popu-

lation Health adds a research component to the campus's colorful tapestry.

In 2001, clinicians at Milwaukee Clinical Campus clinics treated more than 112,000 patients, most of whom were Medicaid or Medicare recipients. At the campus' clinics, the mix of patients is neatly split: 38 percent are white, 36 percent African-American, with the remainder comprising a mixture of Hispanic- and Asian-Americans. More than 2,000 UW Medical School students and 535 residents have trained and treated patients at the Milwaukee Clinical Campus since its inception.

In the mid-1980s, Mount Sinai Medical Center merged with other Milwaukee hospitals to become Aurora Sinai Hospital, which is owned and operated by UW Medical School's primary partner in the Milwaukee Clinical Campus, Aurora Healthcare Systems, a locally based healthcare management organization and a major player in the healthcare delivery landscape. This partnership—between the largest medical school and the largest HMO in the state—is unique in the world of academic medicine.

According to Jeffrey

Stearns, MD, associate dean of the Milwaukee Clinical Campus and vice president of academic affairs for Aurora Healthcare Systems, this unusual pairing places the campus at what he calls “a challenging interface” between the worlds of academic medicine and the integrated healthcare delivery system.

“That interface provides increasingly important opportunities to train residents and students, because it more clearly mirrors the experience most of our graduates are going to face when they begin practicing medicine,” Stearns says.

Stearns is in a particularly good position to comment. Over the course of his 29-year career, he's practiced medicine in a wide variety of settings, including family medicine in rural New Jersey and in a community of 2,000 in the Finger Lakes region of New York. He jump-started a healthcare clinic in a Rockford, Illinois, shopping mall and has spent 15 years in academic medicine. His experiences have convinced him that providing a diversity of training to the modern medical student is critical.

“Our students experience excellent clinical training



Jeffrey Stearns, MD



Nick Turkal, MD





A colorful mural clearly marks the location of the Walker's Point Clinic on the Milwaukee Clinical Campus. The fourth-floor clinic, located in the heart of an industrial district, draws an ethnically diverse patient population.

appropriate to the Madison academic community," Stearns says. "But it's not the same as delivering care in an urban environment like Milwaukee. For instance, the book approach to treating diabetes says one thing, but the community reality dictates something very different. This is a much more complex challenge."

Nick Turkal, MD, senior clinical vice president of Aurora Healthcare and senior associate dean of the Milwaukee Clinical Campus, agrees that Milwaukee is a different ballgame.

"Access issues are very different here," Turkal says. "It may surprise people to realize that transportation is

a major issue for our patients. Our physicians deal with many issues that may have fallen under the auspices of social work in the past, but now they're part of medicine."

Many of the Milwaukee clinics incorporate nurse practitioners, case managers and interpreters to better deliver quality care and health education to their multicultural clientele.

UW Medical School students who come to the big city see it first-hand. Each year, third-year students can choose to spend eight weeks in a primary-care rotation on the campus. Those lured by that brief taste of urban medicine can return for a full 12-month stint in their fourth year.

In his 14 years as an administrator on the campus, Turkal has watched interest in urban medicine wax and wane. But it's clear to him that exposing UW medical students to healthcare in an urban setting is critical to meeting the increasing demand for quality providers. Just under 140 of all the doctors currently practicing in the Milwaukee area completed their residency training through an Aurora-sponsored program. "Once someone enters a residency, their likelihood of staying here is high," says Turkal.

One doctor who chose to stay is Janice Litza, MD '98, UW Medical School assistant professor of medicine and medical director of the Mil-

waukee Clinical Campus's Clarke Square Family Health Center (*see sidebar*). The center is a major health entry point for the neighborhood's largely Hispanic residents. Litza has been with the center for the last five years. In that time, she's discovered a lifetime's worth of information about treating patients in an urban setting.

"So much of what we do is about time and resources," explains Litza. "There are so many people who want and need to be seen by physicians. At the same time, there's an additional educational component. You have to put in the extra time to make sure your patients have understood your diagnosis and what it means to them."



## Walker's Point Clinic

In fact, literacy can be a major obstacle in Litza's ability to communicate with her patients. As a result, she's dubbed herself "the Book Lady," running literacy programs in the clinic and dedicating herself to overcoming what she views as a medical problem. "I can give my patients 20,000 handouts in their own language, but it's worthless if they can't read them," she says.

Stories like Litza's make it clear that the clinical campus model is working, drawing medical students who learn in the urban setting and then become a part of it.

The future, however, is decidedly cloudier. Like many physician-training programs, the Milwaukee Clinical Campus must contend with losses in Medicaid reimbursement and state dollars to fund graduate medical education, as well as economic pressures created by modern healthcare systems.

"It's the elephant in the middle of the room," says Stearns. "The pressure to generate revenue is bumping up against the opportunity to generate educational opportunities for learners. So many of our doctors are saying, 'I don't have time to teach students. I have to see 30 patients a day.' Resourcing education is a challenge that can't be taken for granted."



Dr. Bidwell greets a young patient.

The colorful mural catches your attention first, the stark white dove flying toward a gigantic eagle head, a rainbow spectrum of colors emanating from the span of its wings like a modern graffiti artist's homage to the spirit of a '70s international war protest. For the motorists speeding down the overpasses on East I-94, the colorful pastiche doesn't say "healthcare" so much as "urban-ethnic chic."

But healthcare is exactly what the Milwaukee Clinical Campus' Walker's Point Clinic is all about. The clinic is located in the heart of an industrial district, a neighborhood that is ethnically diverse. Steve Ohly, NP, RN, the clinic's manager of community health services, estimates that more than 75 percent of the clientele is Latino. The mix of patients runs the gamut from the uninsured and the undocumented to those struggling with mental health and substance abuse issues to those suffering from chronic diseases unattended for too long.

Ohly began his association with the Milwaukee Clinical Campus as the coordinator of a small family practice residency clinic in a homeless shelter. Nine years ago, the clinic moved to a larger site to accommodate the neighborhood's growing healthcare needs. During that time, Ohly worked with others to open up another clinic—Clarke Square—in a grocery store, becoming its first manager. Clarke Square, he says, is a primary-care clinic that has urgent-care capability, while Walker's Point is more of an easily accessible healthcare clearinghouse.

"On any given day, at least half of the people we see are here for the very first time," says Ohly, who worked among the poor in other large cities for years before coming home and hooking up with the clinical campus. "They're new to town, homeless or simply disconnected. We put a lot of energy into finding them a more permanent healthcare home."

The clinic recently moved to a new space that better suits the community's needs. For instance, diabetes is one of the most common diagnoses staffers at the clinic make, so the facility now sports an exercise floor, where patients and community members can help manage their blood sugar by exercising or taking Tai Chi, yoga and aerobics classes.

Ohly doesn't care for the term "urban medicine." What he and his 10 co-workers prefer to call it is poverty medicine. "What we mean by that is providing care to people who don't have resources. It's the art of taking \$20,000 and creatively using that to provide \$150,000 worth of medicine."

The clinic doesn't bill for its services; it enjoys the services of only one physician—half-time. That would be medical director Jacob Bidwell, MD '99, an assistant professor of family medicine and



former Madison resident whose dedication to poverty medicine relates partly to a friend and mentor, a social activist who died of cancer at age 25. Bidwell splits his time, spending mornings at St. Luke's Family Practice Residency and afternoons at Walker's Point. He's the clinic's first on-site medical director, an affable man who became a generalist so he could practice where he was needed most. It is, as he puts it, "a spot where most physicians don't want to practice."

"For the patients here to get the same type of quality care that you and I might get, we have to work harder," Bidwell explains, noting that he must often assist his patients in navigating the complicated social-service and healthcare terrain. It's a task he undertakes willingly, and the rewards often surprise him.

"The patients are so appreciative, it's almost heartbreaking," Bidwell says. "It almost becomes my job to convince them that they deserve good medical care."

Bidwell relies on residents to help him manage the average 35 patients who come through the clinic's doors each day. Residents at the clinic learn quickly to stretch resources, parceling out samples and inventing creative solutions. Some become frustrated by what

he calls a "cost-appropriate" approach, while others are inspired by the challenge of practicing medicine on the front line.

Count fourth-year medical student Miguel Gamez among the latter. Gamez enrolled at UW Medical School because of the institution's dedication to the Wisconsin Idea—a concept he believes the Milwaukee Clinical Campus embodies. He recently began a year-long rotation at the clinic, seeing patients at Walker's Point two days a week. He also spent last year completing a family practice and obstetrics rotation in Milwaukee. Gamez grew up just blocks from Walker's

Point, and he's found that the community has welcomed his return. "They've been receptive to having someone who looks and talks like they do as their doctor," says Gamez.

Having also spent seven years in a small town in Mexico, Gamez is in a unique position to understand the differences—and the similarities—between big-town and small-town medicine. "Affordability is a major concern in both settings," he says. "But when it takes three hours to get to a major medical facility, you're more likely to rely on folk medicine, and seek a doctor only when you've had a serious accident. In the Hispanic

community, diseases like diabetes and hypertension often go untreated. The concepts of health and disease are very different."

Gamez hopes someday to work in Milwaukee permanently, or barring that, practice in a larger urban setting. He knows all too well that the need for urban physicians will always be acute.

"The entryway to services for too many people in the urban setting is through the emergency room," notes Gamez. "That isn't efficient, and it doesn't provide the best long-term care."

- A.R.C.



Jacob Bidwell, MD '99, medical director of the Walker's Point Clinic.



# Clarke Square Family Health Center

From the outside, it looks like your average Pick 'N' Save, the type of big-box grocery store that caters to urban residents in large cities cross the country. Inside, however, is a very different story. Down the hallway, past the produce, there's a healthcare clinic.

Located in Milwaukee's most ethnically diverse ZIP code, at the intersection of West National Avenue and 18th Street, the Milwaukee Clinical Campus' Clarke Square Family Health Center takes advantage of its location, trying to be all things to all people. In addition to a full-service grocery store, the building also houses a bank, a child-care facility and a pharmacy.

In the clinic itself, two physician-faculty members, two nurse practitioners and two registered nurses handle the patient load, aided by a social worker, medical assis-



The Clarke Square Family Health Center features the "Wall of Education," a bank of television screens offering passersby visual information on clinic services and a variety of health topics.

tants and interpreters. Most staffers are bilingual, the better to communicate with the Hispanic and Asian-Hmong clientele.

"We're seeing people who have never tried to get their healthcare under control before," says Diane Sisler, RN, manager of Clarke

Square Family Health Center. "We serve multiple economic backgrounds and ethnicities, and we're jumping all the time."

The clinic's signature feature is what staffers call the "Wall of Education," a bank of three 20-inch television screens located a few paces away from a combination deli-food court. On the screens, looping multilingual DVDs offer clients and passersby visual information on clinic services, educational topics and a set of vignettes on literacy, infant care and the importance of immunizations.

Clarke Square began its life as an urgent-care clinic, but has since evolved to focus on primary care. Family

counseling and obstetrics are also offered.

Building trust among community members is a constant challenge, whether the patients in question are registered U.S. citizens or not. "For legal citizens, it's a question of overcoming the fear factor," explains UW Medical School graduate Janice Litza, MD '98, the clinic's medical director, whose family is originally from Puerto Rico. "When citizenship is an issue, people tend to wait, or avoid coming in at all. The key is making that first contact. Once one person comes in, others in their family or community will follow."

- A.R.C.



Building trust among community members is a constant challenge, says Janice Litza, MD '98 (left), medical director of the health center.



# The Center for Urban Population Health

If Clarke Square and Walker's Point represent the trenches where day-to-day urban healthcare is delivered, then the Center for Urban Population Health is the Milwaukee Clinical Campus war room, the place where information collected in those trenches is compiled, analyzed and synthesized into educational initiatives and healthcare policy.

For most of the clinical campus' 29 years, a research component was missing in action. That changed in 2001, when a three-way partnership between the Medical School, the University of Wisconsin-Milwaukee and Aurora Healthcare Systems produced the center. Medical School officials hope the center will be a mechanism to help provide better healthcare access to urban residents.

The center's mission is to address health from a broader, community perspective rather than a disorder-oriented approach, and the questions with which the center wrestles are often socially charged. "Typically, we understand that there are disparities in health among certain ethnic groups," says Ron Cisler, PhD, the center's director. "We know, for instance, that African-Americans are five times as likely to die of a firearms injury. We see the data, and we know it's true, but we don't really know why."



Ron Cisler, PhD, director of the Center for Urban Population Health (CUPH), and other Medical School officials hope that the center will be a mechanism to help provide better healthcare access to urban residents. The CUPH staff is shown below.

The pursuit of that "why" is the goal of the center. Cisler, a UW-Milwaukee graduate with an impressive resume of clinical trials and national health advisory board experience, has only been aboard since March, but he's already begun to move his 12-member staff in some new directions, including the development of a city-wide committee charged with developing an urban-based health curriculum for UW Medical School and UW-Milwaukee students.

The common thread comes back to education. Cisler is convinced that the

battle for better urban population health will be won not only in the clinics, but in classrooms and through community programs. The effort is dependent on strong partnerships with state and local health departments. So far, Cisler is encouraged.

"We know that an urban environment poses a lot of challenges for individuals," says Cisler, clicking off items on a list that includes housing, lead poisoning, communicable diseases, obesity and adolescent pregnancy. "What we're really trying to do is create an integrated system that helps us under-

stand these challenges and how to address them."

For example, at the clinical campus' Wisconsin Avenue clinic, Tito Izard, MD '96, a UW Medical School assistant professor of family medicine, is collecting data from patients who come into community clinics with nutritional issues. Izard and Cisler hope to use the data to create a profile that will help physicians both identify patients with poor eating habits and teach them about healthy alternatives. They also hope to develop a behavioral risk factor survey that will help them compare patient populations.

- A.R.C.





*From clinic to community*

# Reducing fall-related injuries in Wisconsin's

*A \$2.2 million federal grant will help UW Medical School's Jane Mahoney, MD, and her colleagues find ways to reduce the incidence of falls among older adults in Wisconsin.*



*by M. Van Eyck*

Louise Eldren\* now uses her cane when she gives visitors a tour of her paintings, which hang in her Madison apartment. "I'm just more hesitant now," she says, referring to the fall she suffered last October. "Falls change the way you think about yourself," she adds. "Suddenly you're just not as secure."

Eldren, who is in her eighties, was not immediately injured from the fall. But when she began to complain of back pain a few weeks later, her exercise instructor referred her to the Geriatric Falls Clinic at University of Wisconsin Hospital and Clinics. Since then she has worked with the clinic's medical director, Robert Przybelski, MD, a UW Medical School assistant professor of medicine, and Terry Shea, PT, a specialist in dizziness and balance disorders, to identify effective treatments and ways to avoid another spill.

According to Jane Mahoney, MD, UW Medical School assistant professor of medicine, engaging older adults and healthcare providers in falls prevention and care is particularly important

in Wisconsin. Here, falls are the number one cause of unintentional death and injury among older adults, and the death rate from falls among older adults is almost twice the national average. While the reasons for the increased mortality are still unclear, Mahoney says, "we do know that if we decrease falls we can also decrease injuries and fall-related mortality." The key, she explains, is to identify "the types of things that may help keep people active and safe at home."

This is the aim of Wisconsin's Bureau of Emergency Medical Services and Injury Prevention, a branch of the state Division of Public Health, which recently received a \$2.2 million grant from the Centers for Disease Control and Prevention to find ways to reduce the incidence of falls among older adults in Wisconsin. In a nationwide competition, Wisconsin was the only state awarded this grant, in part, suggests Mahoney, because of UW's "rich history of working with the state" when it comes to falls prevention.

Mahoney, a former medical director of the UW Geriatric Falls Clinic, will serve as the principal investi-



# older adults

gator. Shea, who works at both the falls clinic and the UW Health Department of Rehabilitation Medicine, will serve as co-principal investigator. The grant will be managed by the state Department of Health and Family Services and its partners, along with the Medical School and local agencies.

Preventing falls should reduce medical expenses dramatically; indeed, falls are the top cause of injury-related hospitalizations for seniors in the Madison area. And hospitalization, notes Mahoney, is often just “one part” of the much larger cost. Downstream treatments such as a subsequent stay in a nursing home or newly introduced medical needs, like home nursing care and outpatient physical therapy, are not unusual with fall-related injuries.

The cascade of subsequent troubles that often follows a fall can make them traumatic, pivotal events for older adults. Even when fall-related injuries do not prompt a visit to the emergency room, explains Mahoney, “they can still be enough to cause persistent pain or lead individuals to cut back on activities—things that they used to do.” Sometimes, just the

fear of another fall can be the most harmful consequence, as older adults may then reduce their social and physical activity. “In the long run, being less active really has been shown to hasten the declines that may be seen with old age,” she continues. “That ‘use it or lose it’ adage really holds true.”

Under the grant, Mahoney and Shea will conduct a three-year randomized trial among 420 high-risk older adults in Dane County. Individuals are considered “high-risk” if they have had two or more falls in the previous year, one fall that resulted in injury or one fall that resulted in gait and balance problems.

“While older adults, in general, are at higher risk for falls, healthy older adults should not fall,” Mahoney notes. “The risk really increases as older adults begin to develop other diseases, such as arthritis and stroke, that impair balance and make it harder for people to right themselves once balance is lost.”

By testing several interventions, the researchers hope to determine the degree to which the effective prevention of falls needs to be individualized. Half of the

study’s participants will receive general informational booklets focusing on modifying the home to improve safety, altering unsafe behavior and improving diet.

The rest of the participants will receive more individualized counseling from a physical therapist trained to assess a participant’s physical ability, medical factors, medications and any environmental factors, such as steps or small rugs, that increase the risk of a fall. To improve an individual’s strength and functioning, the therapist may then recommend physical therapy or suggest that the participant discuss adjusting high-risk medications with his or her primary care physician.

Following participants for one year, researchers will monitor not only the incidence of falls among both groups, but also the usefulness of each approach in improving participants’ gait, balance confidence and health-related quality of life—in short, the factors that can prevent a future fall.

It is this effort that heartens Louise Eldren. “I know that everything that’s wrong with me is age-related,” she says, “but some doctors just say, ‘Well, you’re in your



Jane Mahoney, MD, PG

eighties, what do you expect?” The belief that older adults can maintain—even improve—their strength and balance confidence is new to Eldren. “I don’t know if it’ll work,” she shrugs, “but I’m trying!”

For Mahoney, one of the most exciting aspects of the study is the opportunity to educate more healthcare providers about the best ways to improve falls prevention and care. This is also the first of her studies to reach beyond the clinic and into the homes of older adults. She says, “I wanted to take what I learned in the falls clinic and put it into a community model.”

*\* The patient’s name has been changed.*



## Students learn and serve in firsthand experience with homelessness



UW Medical School student Jackie Geissler (left) listened as a homeless resident at Interfaith House on Chicago's west side described her struggles with substance abuse and family life.

by Brian Haraban

After a long fall semester, Jackie Geissler, a second-year student at University of Wisconsin Medical School, never thought she would kick off spring break 2003 by listening to a panel of speakers. Her attention never wavered, though, as she listened to one speaker who talked of his journey from cooking gourmet meals as an executive chef to bat-

tling alcohol abuse, and another who discussed the future of his 15 children—eight of whom have followed in his footsteps and are dealing drugs.

Clearly, this was not a typical spring break. But this was how Geissler, along with 11 other interdisciplinary UW-Madison health professions students, spent her first weekend off in months last spring—in service and study on Chicago's west side.

The students participated in “Determinants of Health: A Conversation through Homelessness,” the first alternative spring break program for UW health-oriented graduate and professional students organized by the Interdisciplinary Partnership for Healthy Communities (IPHC), a new medical student organization formerly named the Healthy Communities Project.

The program gave partic-

ipants first-hand opportunities to interact with people who experience homelessness daily and to ask questions about their health behaviors and health outcomes. Activities included interviewing care providers at Cook County Hospital, discussing the community's role in health with directors of the Westside Health Authority—a community-based organization using community assets to improve



the neighborhood's capacity for health and well-being—and socializing and serving meals with residents of Interfaith House—a medical recuperation facility for homeless people. By the trip's end, the Wisconsin students had spent 72 hours in service and more than 200 hours in interviews and conversations.

"It was very meaningful and powerful to learn things firsthand from those who know the issues best, whether they were homeless, community leaders or local residents," says Mathew Aschbrenner, a second-year UW Medical School student.

The importance of understanding the determinants

of health is often understated in medical school, IPHC members believe. As a result, IPHC tries to bridge the gap between the reality of managing one's personal health and the classroom medical experience. In addition to giving students an opportunity to explore the socio-cultural side of medicine in real life, IPHC offers participants a safe space for exploring interprofessional boundaries.

"I think it's important to realize how our careers overlap and are intimately intertwined to fully be able to provide the best care for our patients," reflects Kathryn Radigan, a third-year med-



**Healthy Communities' inaugural spring break group** (all second-year UW Medical School students unless otherwise indicated). Front row (from left): Yulia Semeniuk (nursing administration), Sarah Gerl, Katie Radigan (third-year medical student), Joanna Beros, Jackie Geissler, Stacy Sawtelle. Back row (from left): Kathryn Flynn (population health), Katie Nixdorf, Michael Stadler, Brian Harahan, Mathew Aschbrenner, Angela Solberg (physical therapy).

**UW Medical School students Mathew Aschbrenner and Stacy Sawtelle busily made salads for the residents at Interfaith House during their alternate break trip last spring.**



ical student. "Working in an interdisciplinary setting is our future."

Radigan's sentiments echoed an increasingly loud call for interdisciplinary education in the health professions. Indeed, a primary recommendation in the most recent Institute of Medicine report, *Health Professions Education: A Bridge to Quality* (2003), called for health professional students to learn how "to coordinate, collaborate and communicate with one another in order to optimize care for a patient or group of patients."

As its mission states, IPHC strives to further that goal by developing "interdisciplinary professional leaders who possess the skills to effectively address the social issues integral to healthy communities." By partnering students with communities directly, last spring's alternative break program experi-

entially introduced participants to those skills.

"I was able to get so much more out of meeting the people we did and hearing their stories than I ever could have out of a book," notes Michael Stadler, a second-year medical student.

The alternative break trip was supported in part by UW Medical School's associate dean for rural and community health, Byron Crouse, MD. Sharon Younkin, PhD, Community Service Learning Programs manager, is IPHC's advisor.

For additional information about IPHC, please visit <http://www.fammed.wisc.edu/iphc/> or contact Brian Harahan at [bjharahan@wisc.edu](mailto:bjharahan@wisc.edu).

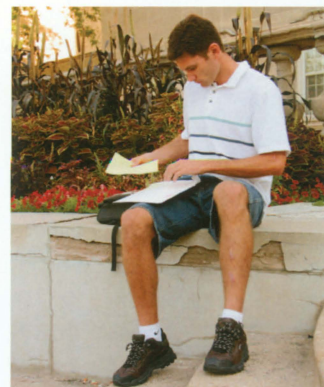
*Brian Harahan, MD/PhD candidate, Class of 2011, is IPHC's founder and coordinator.*



## *The Class of 2007 matriculates*



Members of the Class of 2007 filed into the Medical Sciences Center for orientation in late August.



Information packets helped clarify many details.



Refreshments kept the new students energized.



Members of the Class of '07 bring skills and talents that should yield great success.

*by Dian Land*

A mere few weeks after they arrived at University of Wisconsin Medical School, the 152 members of the Class of 2007 are now immersed in gross anatomy laboratories, biomolecular chemistry classes and their initial preparations for clinical, patient-centered medicine. The students have begun what may be the toughest, yet perhaps most rewarding, educational experience of their lives.

The transition into their new world was made smoother during several days of orientation and socializing in mid-August, when the students got their first formal and informal introductions to the Medical School.

Following a Sunday evening get-together hosted by members of the Class of 2006, the new medical students received a welcome and informational talks from school deans, select faculty members and upper-class students. The class met its





First stop: the registration table.



Mailboxes will be one of many means of communication.

mentor, Carl Weston, MD, who will be going through the four years of schooling with them, making himself available to answer questions about courses, careers and any other issues of concern.

Talks also were presented on ways to succeed as medical students, financial and other resources that are available and perspectives on professionalism. In the gross anatomy labs, the students had their first introductions to the cadavers with which they will be working the entire semester. The orien-

tation was capped by the traditional picnic for Med 1s and Med 2s.

The students will be supremely challenged by their education at UW Medical School, but members of the Class of 2007 bring skills, talents and qualities that should help them succeed as medical students and physicians alike.

#### Profile of the class

The Class of 2007 is diverse, ranging in age from 21 to 40. Well over half of the class members are women—86, which is a record

number for the school. Students attended undergraduate colleges and universities all over the country, from Alaska to New Hampshire and, of course, the upper Midwest. Many attended University of Wisconsin-Madison. They've worked at an array of jobs: Peace Corps volunteers, pediatric nurse, ski resort reservation agent, visitor assistant for the National Park Service, YMCA camp counselor and student associate for the U.S. speaker of the House of Representatives.

The Class of 2007 is very bright. Among them are people whose academic achievements earned them designations such as magna cum laude and Phi Beta Kappa. Many have won major scholarships and have been given distinguished



Class mentor, Carl Weston, MD (left), introduced himself.



Students relaxed as school luminaries, in portraits and sculptures, looked on.



The first days of introductions will soon lead to a closely knit class.



## ■ Student Life



The next four years will be tough but rewarding.



Lasting friendships will be made.

awards. Their average science grade point average as undergraduates was 3.69 on a 4-point scale. Their scores on the Medical College Admissions Tests (MCAT) were strong. The average biological science score of the class was 10.6 on a scale in which 1 is lowest and 15 is highest. The national average was 8.4. The UW students scored an average of 10.2 on the MCAT phys-

ical science test and 10.0 on the verbal reasoning tests.

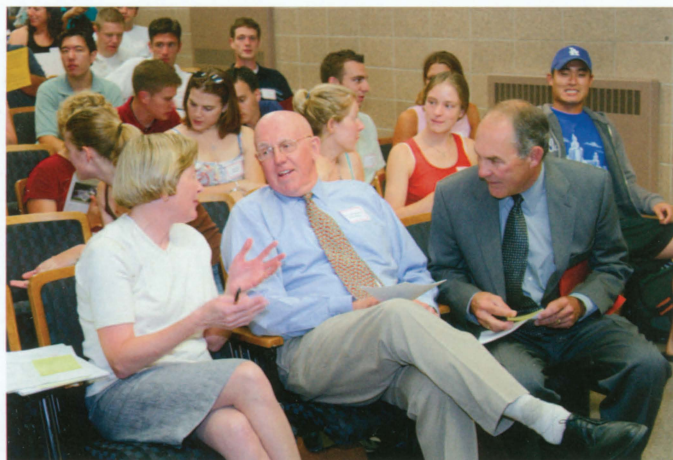
Like so many preceding UW Medical School classes, the Class of 2007 is socially conscious and involved. The students have volunteered for organizations such as the American Ethnic Coordinating Office, Child Life pediatric care, Red Cross, Big Brother/Sister, Special Olympics, Women in Science and Christmas for Kids.

They have served as hockey coach for health-impaired children, Spanish interpreter, soccer referee, burn unit volunteer and homeless outreach volunteer.

The students also know how to relax and have fun. They enjoy playing musical instruments, working with stained glass and participating in equestrian activities. Many have traveled extensively, from the Dominican

Republic to Southeast Asia, from Central and South America to Nepal. And they love sports, including running, sailing, wind surfing, rowing and more.

"These are outstanding young adults," says Lucy Wall, UW Medical School assistant dean for admissions. "I expect they will thrive during their four years with us."



Dean Philip Farrell, MD, PhD, (right) and Carolyn Bell, MD, associate dean for curriculum, compared notes with class mentor Weston.



Edward Bersu, PhD, interim associate dean for students, covered ways to succeed as a medical student.



## Students help provide low-cost physicals for high school athletes

by Aaron R. Conklin

The Wisconsin Inter-scholastic Athletic Association guidelines are clear: To practice or participate in a sport, a student-athlete must first complete a physical examination. It's a simple requirement, designed to ensure the safety of the student-athlete and minimize liability to the school.

Unfortunately, not all student-athletes participating in high school sports can afford to meet the requirement. According to a study conducted by the Urban Institute, nearly 100,000 Wisconsin children don't have health insurance. For

others, the insurance they do have isn't enough to completely cover the cost of a physical.

To help these student-athletes become eligible to participate in the sports they love, the UW Health Sports Medicine Center teamed up with UW Medical School students and others in mid-August to offer a free sports physicals clinic. Along with the students and sports medicine doctors, UW Children's Hospital pediatric residents, UW athletic trainers, public health nurses and Spanish translators set up shop at the Madison Community Health Center to provide the service to more than 35 Dane County high-school athletes.

"Sports have become such an important part of social opportunity in school," says David Upton, a second-year medical student and member of MEDIC, the student organization that operates free medical clinics in the community. "Not having the opportunity to participate can be a serious handicap for young kids."

The staff at UW Health Sports Medicine Center has been offering free sports physicals for several years, but this year marks the first time the clinic was open to all Dane County residents.

For the medical students, it's an excellent way to get in-the-field experience working with trained physicians

—and help the community at the same time.

"Spending so much time in the classroom during the first two years of medical school, it is easy to lose sight of the big picture of why you're going into health-care," says Upton, a Madison native who hopes to pursue a career in pediatrics. "This is a great way to remain connected to the community, and it gives us a better handle on how great the need for something like this is."

The program fills a large void, adds Joe Greene, supervisor of athletic training services for UW Health Sports Medicine. "There's a much greater need for this than people realize."

## Tuition holds steady for 2003-2004

by Aaron R. Conklin

Tuition at University of Wisconsin Medical School is among the highest in the nation's public medical schools. Recognizing this fact, the University of Wisconsin System Board of Regents recently exempted the Medical School from tuition increases applied to students attending UW campuses.

The Regents approved a 2003-04 budget at their July 2003 meeting that shows the drastic effects of \$110 million cuts in state funding. The Regents raised tuition for

undergraduates on the UW-Madison campus by \$350 per semester.

Over the past two years, Medical School student leaders, alumni and administrators have mounted a persistent information campaign to educate members of the UW-Madison community, UW System and the Board of Regents about the comparatively high cost of tuition at UW Medical School.

"Dr. Chris Larson, president of the Wisconsin Medical Alumni Association, deserves special credit for his hard work in communicating his organization's concerns

about tuition," says Senior Associate Dean Susan Skochelak, MD, MPH. "Third-year medical student Brian Arndt, president of the Medical Student Association, and the *ad hoc* student group on tuition also played a critical role."

As reported in the fall 2002 *Quarterly*, the cost of one year of tuition and fees at the Medical School in 2001-02 was \$21,725. This figure put the school fourth that year and the following year among public institutions that are members of the Association of American Medical Colleges.

Since 1991, tuition has increased 110 percent. The estimated cost of living expenses, books and other supplies for first-year medical students was \$11,900. The average debt load of UW Medical School students upon graduation in 2002 was \$101,000.

"We are pleased that tuition will remain at the 2002-03 level, but we continue to work diligently to identify new scholarship funds to assist current and future medical students with their financial portfolios," says Skochelak.





Throughout medical school, Tina Sauerhammer, MD '03, cultivated her diverse interests.

## Recent UW graduate competes for Miss America crown Miss Wisconsin, MD

by M. Van Eyck

Three days after she was crowned Miss Wisconsin on June 21, 2003, Tina Sauerhammer, MD, who graduated from University of Wisconsin Medical School in May, was calling friends from Green Bay and asking them for help moving out of her Madison apartment the following week. "My lease was up the following weekend," she laughs. "I

didn't know how I was going to get back there and get it all done."

Sauerhammer's past achievements left little doubt that she would get it all done. Having enrolled at University of Wisconsin-Green Bay at age 14, she became its youngest graduate four years later. Then, while attending UW Medical School, she became involved in Wisconsin's pageants, serving as Miss Green Bay during her second year

and Miss Madison Area in her fourth. This summer, at age 22, she became what administrators believe is the school's youngest graduate. Now, Sauerhammer is the first medical doctor to hold the Miss Wisconsin title and will be the second MD to compete for the Miss America title in Atlantic City in late September.

Explaining how she managed to compete in pageants while meeting the many demands of medical school, she says, "My mindset was to do my best in school, but my priority was to continue on with a normal life." With the encouragement of her father, a Wisconsin native, and her South Korean mother, Sauerhammer strove to cultivate her diverse interests.

She continued to play cello, which she performed in the recent pageant, and worked at Urban Outfitters on State Street in Madison, indulging her penchant for the retail scene. She also spent as much time as possible with her family, in part because her father was ill with Wegener's disease throughout most of her medical school career. He died last year of kidney failure.

Watching her father undergo dialysis and wait in vain for a kidney transplant, says Sauerhammer, motivated her to compete for the Miss Wisconsin title. "I saw the effects on him, but also on

my family in general. Now, as Miss Wisconsin," she continues, "I have voice about something I feel strongly about."

Sauerhammer will spend this year promoting her cause, Gift of Life Donation (GOLD), which aims to raise awareness about organ and tissue donation. She hopes to quell the fears of some who worry that donors receive deficient medical care so their organs can be harvested.

"As a medical doctor," she states, "I can go out into communities and schools and educate people about the untruths of many of these myths." Her rotation with UW Medical School's organ transplant team—which she describes as "the most amazing experience ever"—uniquely prepared her for this role.

Sauerhammer says that having an influence on people is what she loves about medicine. While her tenure as Miss Wisconsin will delay her residency for a year, she hopes to enter the UW Department of Surgery in fall 2004 to prepare for a career in pediatric surgery.

"I always knew I wanted to work with children," she reflects, "but when I did the surgery rotation, I realized I wanted to work with my hands. I wanted to have that direct impact on people."



*He helped his patients speak and listened when they spoke*

## Otolaryngologist James H. Brandenburg, MD '56



In addition to working with more than 70 residents over the course of his career, Brandenburg (right) was a pioneer in the early surgical treatment of severe laryngeal injuries and diseases.

by Lauren Dettloff

For the past four decades, James H. Brandenburg, MD '56, has taught more than 70 doctors countless lessons. The most important lesson was one he himself learned while he was a student at University of Wisconsin Medical School. He sought to instill the lesson into the hearts and minds of all his residents. "Listen to your patient," advised Brandenburg, now a professor emeritus in the otolaryngology division of the UW Department of Surgery. "Especially now—

when technology and equipment are rapidly improving—it's so important to still take time to look at and listen to each patient."

Brandenburg originally aspired to be an attorney, due to his admiration for a favorite uncle, Lucius Chase, who was chief counsel for the Kohler Company. It was this same uncle, however, who encouraged him to pursue a career in medicine instead, recognizing young Brandenburg's aptitude in the sciences. He first became interested in otolaryngology during his sophomore year

of medical school when he performed a series of dissections on the human larynx as a special project in a postgraduate anatomy course. This interest in ENT was further confirmed that same year after spending six weeks in the otolaryngology service at Walter Reed General Hospital in Washington, DC, fulfilling his Army ROTC summer camp training requirement.

After earning his medical degree in 1956, Brandenburg undertook his internship at William Beaumont General Hospital in El Paso, Texas,

before moving to San Antonio, where he completed his residency in otolaryngology in 1961 at Brooke General Hospital. Following his residency, he spent two years on the teaching staff at Walter Reed and the Armed Forces Institute of Pathology (AFIP). His assignment was to develop an otolaryngology basic science teaching course for all branches of the military, to be given to all military residents in otolaryngology training programs. This same course continues to be offered as an AFIP postgraduate course. Brandenburg's experience in a military teaching hospital led him to a career in academic medicine.

In 1964, Maxine Bennett, MD, then otolaryngology chair at UW Medical School, recruited Brandenburg to return to Wisconsin and direct the residency program. In 1968, he was selected to head the division, a term that lasted 27 years.

As the field of otolaryngology expanded, Brandenburg's medical career also diversified. His greatest focus and expertise involved the larynx. He was a pioneer in the early surgical treatment of severe laryngeal injuries and diseases. As a surgical oncologist for treating laryngeal cancer, he developed surgical procedures for



## ■ Alumni Profile

restoring or improving the voices of patients who had lost them due to injury or disease. In 1978, he introduced a new method of voice restoration for laryngeal cancer patients. The common practice at the time was to remove the voice boxes of the patients, leaving them unable to speak.

"For 10 years I had been trying to devise a simple version of the operation that would restore a voice," Brandenburg says. Finally, he did just that. His innovative method involved building a new voice box out of the upper windpipe—a strategy that proved to be highly successful. "The first patient was very frightened after the operation. I told him to put his finger over the hole in

his throat and to count to 10 out loud," he recalls. When the patient did it, he was amazed that he could talk. Since then, Brandenburg has performed the operation 70 times with no long-term complications.

Brandenburg also pioneered a now popular method of strengthening weak voices. In 1988, he harvested fat from the abdomen of a patient and injected it into a paralyzed vocal cord. "People had used Teflon before, but it caused complications," he says. He and his colleagues have performed this procedure more than 100 times with excellent voice improvement and no complications.

Brandenburg initiated the use of laser for the treatment of vocal cord cancers at UW

Hospital and Clinics. Laser surgery for these cancers has proven to be very successful—with a more than 90 percent cure rate—and has preserved a functional voice. "This same-day laser surgery is very cost effective and certainly an excellent alternative to six weeks of radiation treatments," he says.

During his years in Madison, Brandenburg continued to be active in the United States Army Reserves and the 44th General Hospital. He served two terms as hospital commander and became an Army flight surgeon, and a consultant to the Federal Aviation Administration (FAA). Having become a private pilot in 1958, he logged more than 3,000 hours in his own plane. These flying experiences proved particularly helpful in his role as an aviation medical examiner for the FAA.

"Otolaryngology is very important to aviation medicine, because the atmospheric pressure changes affect sinuses and the middle ears," Brandenburg explains. "The balance mechanism of the inner ear plays a crucial role in orientation in an aviation environment. Misinformation from the balance mechanism can lead to spatial disorientation, which is the leading cause of fatal aircraft accidents."

Brandenburg's commitment to the Army reserves involved serving five months at Landstuhl Regional

Medical Center in Germany during Desert Storm in 1991. His unit was the largest to be activated in Wisconsin. The day the air strikes began, the unit was ready to receive casualties that were air-evacuated from the desert. He was one of two surgeons at the hospital to be awarded the Army Commendation Medal. After returning from Germany, he retired from the reserves.

Brandenburg's academic career included 57 publications; more than 200 presentations at regional, national and international medical conferences; and 20 instructional medical movies and video tapes. He was a member of 21 professional organizations and societies.

In reviewing his career, Brandenburg says the most rewarding aspect of his tenure at University of Wisconsin was having the unique privilege of working closely with young resident physicians and observing with pride their development into highly skilled professionals.

"The best part of practicing academic medicine was the constant interaction with the residents," he says. "They were a continual challenge and always kept me on my toes."



During his years at UW Medical School, Brandenburg was deeply involved in the Army Reserves and the 44th General Hospital. He was a flight surgeon and consultant to the Federal Aviation Administration.



# A gala tribute to the "Chief"



From left: Wayne Kirkham, MD '72; Sally L. Kirkham, PhD; Nancy Brandenburg and James H. Brandenburg, MD '56. Kirkham organized last spring's gala tribute for Brandenburg.

After a career spanning 38 years, James H. Brandenburg, MD '56, retired this past December as professor of otolaryngology at University of Wisconsin Medical School. For the many residents who worked with him, a simple goodbye to the man known simply as the "Chief" would not suffice.

On a beautiful weekend in early May, many of Brandenburg's former residents and their spouses gathered for a black-tie gala event at the Pyle Center in Madison. The evening was filled with the live voices of first-class Broadway entertainers. In terms of

a celebration, what could be better than professional singers at an otolaryngology party.

To Wayne R. Kirkham, MD '72, (UW residency '73-'77), the creator and organizer of the evening, the connection was obvious. "As otolaryngologists, we treat the professional voice," Kirkham says. "I thought it would be an appropriate way to honor the man who taught us to be otolaryngologists."

Kirkham, who practices in Dallas, contacted two of his patients, Patty Goble and Richard Poole, the current stars of the Broadway show *Phantom of the Opera*. "Not

only do they have tremendous voices," Kirkham says, "but they happen to be friends of mine and could bring the necessary emotion for such an occasion." Featuring songs from such shows as *Chicago*, *Phantom of the Opera* and *Showboat*, Goble and Poole entertained the crowd of nearly 100 people.

Even more important than the performance was the attendance of so many of Brandenburg's former residents. Many had not been back to Madison for years, and the event provided an opportunity to mingle with former colleagues and friends. The residents spanned four decades. "To witness the camaraderie of the former residents—that was really special," says Brandenburg.

None of Brandenburg's numerous accomplishments compare with what he achieved on a personal level with his residents. "When I looked around the room and saw so many doctors, I could not help but think of the thousands of patients they have treated," he adds.

Brandenburg was presented a handsome portrait of

himself, sporting a white lab coat and big smile. The portrait will hang in the new otolaryngology clinic at UW Hospital and Clinics. "The evening was a very emotionally charged experience for me," he says. Given the spirit at the event, it was clear that the Chief was not the only one feeling that way.

—Stewart Kirkham



The current stars of the Broadway show *Phantom of the Opera* entertained the crowd of nearly 100 people.



Nearly half of all the residents Brandenburg had trained attended the tribute.



## Medical historian brings unique perspectives



A boot-wearing Anderson favors research that gets him into the field.

by Kris Whitman  
and Lisa Brunette

One of the world's most prominent experts on the historical role of race in science and medicine recently joined the University of Wisconsin Medical School faculty. Warwick Anderson, MD, PhD, has become chair of the school's Department of Medical History and Bioethics. An Australian, Anderson came to Madison from the University of California at San Francisco, where he was an associate professor and director of the History

of the Health Sciences Program in the Department of Anthropology, History and Social Medicine.

"I worked as a physician until a few years ago, so I'm committed to making sure that history continues to inform clinicians' understanding of their practice and profession," says Anderson. The history of medicine, he adds, also plays a role in helping all of us understand disease, suffering and healthcare in the world, giving us a richer appreciation for how disease patterns and our responses to them have emerged, and

how things might have developed otherwise.

Lured to the upper Midwest by UW-Madison's "rich intellectual community and cross-disciplinary intellectual engagement"—but not its climate—Anderson focuses his research on the history of medicine, public health and science in the Asia-Pacific region during the late 19th and 20th centuries. He concentrates on ways in which Western biomedical science helps explain human and environmental differences.

In his most recent book, *The Cultivation of Whiteness: Science, Health and Racial Destiny in Australia*, Anderson provides a history of the country's medical and scientific ideas about race and place. A highly complimentary book review calls the work "the first extensive (and entertaining) historical survey of ideas about the peopling of Australia."

The book includes a detailed examination of experimentation done in the 1920s and 1930s on Aboriginal people in Australia's central deserts. The unethical studies were aimed at discovering the "racial origin" of these people. Prompted by Anderson's book, Adelaide University, whose researchers carried out most of the experiments, issued a public apology in

2002 for that research.

The *Cultivation of Whiteness* manuscript won the Basic Book award—a prestigious international scientific prize—in 2001.

Favoring research that gets him into the field or "bush," Anderson quotes a British historian who suggested that "every historian needs a sturdy pair of boots." A boot-wearing Anderson is now at work on a book exploring the exchanges and transactions that occur between scientists and their subjects, using kuru research in the highlands of New Guinea, the United States and Australia as a case study. A significant disease in the history of biomedical science, kuru is a fatal central nervous system disorder. It contributed to today's understanding of prions, which cause Creutzfeldt-Jakob disease and scrapie. Anderson's National Science Foundation grant-funded project includes a month living among New Guinea's Fore people, studying the history of this disease that once afflicted them.

Anderson holds a doctoral degree in the history of medicine and a master's degree in the history and sociology of science from the University of Pennsylvania. He received his medical degree equivalent in 1983 and his bachelor's degree in neuro-physiology in 1980



## Health sciences libraries director looks to new combined library

from the University of Melbourne. Anderson also has taught at Harvard University and was the founding director of the Centre for the Study of Health and Society at the University of Melbourne.

"I'm thrilled that Warwick Anderson has joined us," says Philip Farrell, MD, PhD, UW Medical School dean. "He brings a combination of perspectives on health and society, ethics, history, population health and public health. During the search, we recognized that our group of medical historians is now considered not just the best in the United States, but arguably, the best in the world—particularly around public health. Warwick Anderson brings a vision of synergism to the department."

Anderson notes, "As chair of the medical history and bioethics department, I am committed equally to maintaining and enhancing our strengths in ethics and in medical history." His own research provides a good example of how ethics and history can work together.



**Terrance M. Burton, MLIS**

*By Jon Sender*

**T**errance M. Burton, MLIS, the new director of the University of Wisconsin-Madison Health Sciences Libraries, is eagerly looking forward to the completion of the Health Sciences Learning Center, the centerpiece of which will be the library.

Burton will oversee the merging of the three existing health sciences libraries into one in the new building under construction on Highland Avenue adjacent to UW Hospital and Clinics. The new library will house the complete collections and staff of the Middleton Health Sciences, Power Pharmaceutical and Weston Clinical Science Center libraries. The move and

merger are tentatively planned for June 2004.

"The health sciences libraries are currently offering a number of unique and very technologically advanced services. However, the new combined library will be the heart of the multidisciplinary educational facility," Burton says. "We see the resources of the library—not just its collection and technology, but also our committed staff of librarians—as being part of a patient's healthcare team. All of us have to be lifelong learners; the library team can facilitate lifelong learning in imaginative and innovative ways."

Burton plans to create a virtual reference system in which clinicians and patients electronically send questions to and receive quick responses from a librarian who would provide information specific to the questioners' requirements.

"The Health Sciences Libraries are an indispensable resource for the schools of medicine, nursing and pharmacy," says Susan E. Skochelak, MD, MPH, senior associate dean for academic affairs at UW Medical School. "In the new health sciences libraries, we plan to create an information delivery system that will serve

students, faculty, clinicians and patients throughout the state."

Burton is a 1974 graduate of Carroll College of Waukesha, Wisconsin, and a 1980 recipient of a Master of Fine Arts degree from the University of Georgia. He received a Master of Library and Information Science degree from the University of Wisconsin-Milwaukee in 1988. Before arriving at UW in 2002, Burton was the director of the Health Sciences Library at West Virginia University (WVU). While at WVU, Burton led efforts to upgrade the facilities and expand access to biomedical resources in the library and for WVU users and healthcare practitioners throughout the state.

Burton is the past chair of the Dental Libraries section of the Medical Library Association and of the Mid-Atlantic Chapter/Medical Library Association. He is also a member of the American Dental Educators Association, the American Medical Informatics Association, the Association of Academic Health Sciences Library Directors and the Integrated Advanced Information Management System Consortium.



## Fiore receives innovators award



Michael Fiore, MD, MPH

by Gloria Meyer

Michael Fiore, MD, MPH, University of Wisconsin Medical School professor of medicine and director of the UW Center for Tobacco Research and Intervention, recently was given the prestigious Innovators Award from the Robert Wood Johnson Foundation. One of only five recipients in the nation, Fiore was chosen for his national leadership in promoting tobacco cessation. Tobacco use is known to be the number one cause of preventable disease and death in the United States.

The award, akin to the MacArthur Fellows Program, recognizes past achievement and provides the recipient a

stipend of \$300,000 for up to three years of future work combating substance abuse on a national level.

Fiore is a national leader in treating tobacco dependence. He has helped physicians across America understand that tobacco dependence is a chronic disease. He spearheaded a campaign to establish smoking status as a vital sign in patients' charts and to develop real-world strategies for treatment that doctors can incorporate into their daily practices.

Fiore was the co-author of the 1989 U.S. Surgeon General Report summarizing 25 years of progress on addressing tobacco use and treatment needs. In 2000, Fiore chaired the panel that produced the U.S. Public Health Service *Clinical Practice Guideline: Treating Tobacco Use and Dependence*, considered healthcare providers' gold standard for tobacco use treatment.

The UW Center for Tobacco Research and Intervention (CTRI) Fiore directs conducts groundbreaking research and provides direct services to smokers and healthcare providers in the state, including the Wisconsin Tobacco Quit Line.

In the 10 years of its existence, CTRI has brought \$21 million into the state in grants and other funding. In addition, thousands of smokers have quit, thanks to the Tobacco Quit Line, CTRI clinical trials or the center's smoking cessation clinic.

"As a pediatrician and lung specialist, I've seen the devastating effects of smoking on individuals and on populations, including the unfortunate, unfair impact of second-hand smoke exposure," says Medical School Dean Philip Farrell, MD, PhD. "Dr. Fiore has made a significant contribution to reducing the widespread damage caused by tobacco use."

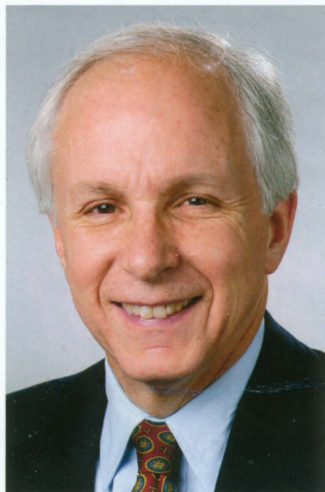
Fiore will use the award to promote the recommendations of the National Action Plan for Tobacco Cessation, which he recently helped develop as chair of the Subcommittee on Cessation of the Interagency Committee on Smoking and Health. Tommy Thompson, secretary of the U.S. Department of Health and Human Services, appointed Fiore chair of the subcommittee in 2002. The plan calls for the establishment of a federally funded national tobacco

quit line, an ongoing media campaign to help Americans quit, evidence-based counseling and medications for tobacco cessation, research on the effectiveness of tobacco treatment programs and training and education for clinicians. A Smokers Health Fund, established through a \$2 per pack excise tax increase, would pay for the initiative.

Innovators Combating Substance Abuse is a national program of the Robert Wood Johnson Foundation that recognizes and rewards those who have made substantial, innovative contributions of national significance in the field of substance abuse. The program addresses problems related to alcohol, tobacco and illicit drugs through education, advocacy, treatment and policy research and reform at the national, state and local levels.



## Fost appointed to new organization to protect research subjects



Norman Fost, MD, MPH

by Lisa Brunette

Norman Fost, MD, MPH, who founded and continues to oversee one of the nation's oldest programs in medical ethics,

has been appointed to the board of the newly established Partnership for Human Research Protection (PHRP).

The PHRP was the creation of two of the nation's most respected voices for quality in healthcare: the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the National Committee for Quality Assurance (NCQA). As one of 10 members of the national board, Fost will oversee a new PHRP accreditation program aimed at protecting research subjects, enhancing public trust in medical research activities and managing conflicts of interest.

Fost is professor of pediatrics at University of Wis-

consin Medical School and head of the UW Program in Medical Ethics.

"Norm Fost is justifiably recognized as one of the most knowledgeable and thoughtful experts nationally in the field of research ethics and regulation," says Philip Farrell, MD, PhD, dean of UW Medical School. "His very careful attention to conducting research that respects human dignity and ethical guidelines will serve the partnership well."

Fost, who is also a practicing pediatrician and head of the child-protection team at UW Children's Hospital, helped establish the first medical-ethics program at a U.S. medical school when he came to UW-Madison in

1973. A former chair of the bioethics committee of the American Academy of Pediatrics, he is widely published on issues ranging from the ethics of genetic screening, treatment of handicapped infants and ways to improve the manner in which informed consent is obtained from participants in research studies.

The PHRP provides a national set of standards and a voluntary accreditation process designed to keep volunteer research subjects informed and protected. Its governing board represents the interests of many stakeholders in the provision of effective and ethical research.



### Step up to the challenge



As Americans continue to try to find new and creative ways to address the problems of obesity and inactivity, pedometers have become a popular option for those looking to add a little exercise to their daily regimen. The small devices, which can be clipped on a belt and set to electronically track every step taken, gained national attention when U.S. Secretary of Health and Human Services Tommy Thompson donned a pedometer and challenged his staff to walk 10,000 steps during the course of a week.

Wisconsin, of course, has tried to follow the lead of its former governor. David Kindig, MD, PhD (left), and Patrick Remington, MD '81, MPH (right), of the Medical School's Department of Population Health Sciences, equipped Wisconsin Health and Family Services Secretary Helene Nelson (center) with her own pedometer and invited her to step up to the challenge. Nelson attended a recent forum of the department's advisory board.



## Shaw awards support two Medical School researchers



**James L. Keck, PhD**

*by Kris Whitman*

**T**wo University of Wisconsin Medical School researchers recently received \$200,000 in grants from the Greater Milwaukee Foundation's Shaw Scientist Award program. One of the researchers will explore how cells integrate the processes that sense DNA damage

and repair it, and a second will investigate how mammalian cells respond to genetic damage.

James L. Keck, PhD, assistant professor of biomolecular chemistry, is exploring how cells integrate a range of processes that sense DNA damage and trigger repairs to maintain cell health. By using the critically important RecQ enzyme family for his research, he also hopes to explore the molecular origins of RecQ-related human diseases that cause premature aging, cancer and other serious conditions.

Randal S. Tibbetts, PhD, assistant professor of pharmacology, is attempting to understand how mammalian cells respond to genetic damage, with emphasis on ATM/ATR, a family of



**Randal S. Tibbetts, PhD**

tumor suppressor genes. His laboratory also is exploring the process of neurodegeneration in ataxia-telangiectasia (A-T), an inherited genetic disease that results from mutations in ATM. By identifying defective pathways in A-T, his group hopes to learn more about other neurodegenerative conditions, such as Parkinson's

disease and Alzheimer's disease, which may share common roots with A-T.

The researchers were selected from among eight finalists nominated by UW-Madison and UW-Milwaukee for the annual award. The foundation created the Shaw Scientist Award in 1982 to carry out the terms of a bequest from Dorothy Shaw, widow of James D. Shaw, a prominent Milwaukee attorney. Through her will, Dorothy Shaw endowed a \$4.2 million fund directed to advance research in the fields of biochemistry, biological science and cancer research at UW-Madison and UW-Milwaukee. The Shaw Award has provided more than \$8 million to 46 scientists.



The Health Sciences Learning Center is now completely enclosed and the air conditioning system has been partially turned on. Drywalling and painting have been completed throughout floors one and two, with work in progress on floors three and four. Workers have begun installing built-in cabinetry as well as ceilings and light fixtures. Landscaping is under way, with work already completed on the south side of the building. The ground level parking lot will be completed this fall.



# American Family Insurance gift launches new children's hospital

by Michael Felber

**B**olstered by a \$10 million gift from Madison-based American Family Insurance, University of Wisconsin Hospital and Clinics recently announced plans to construct a new \$55 million, 80-bed University of Wisconsin Children's Hospital.

"Thanks to this very large naming gift from American Family, we will be able to marry a first-class clinical facility for children to a world-class research university—and that is something that cannot be found anywhere in Wisconsin," says Donna Sollenberger, president and CEO of UW Hospital and Clinics.

According to UW Medical School Dean Philip Farrell, MD, PhD, a new children's hospital will enhance the university's ability to attract top-notch faculty. "In addition to benefiting our young patients and their families, the presence of a children's hospital of this magnitude clearly gives the university recruitment leverage for the highest caliber of faculty who want to conduct research in a first-class clinical facility," he says.

To be named American Family Children's Hospital at University of Wisconsin Hospital and Clinics, the

six-story, 135,000 square foot facility is slated for groundbreaking in late fall 2004 and completion in early 2007. The new hospital will be connected to the west side of UW Hospital and Clinics, but it will have an entirely distinct architectural design built around the needs of children and their families today.

The need for a new children's hospital in south-central Wisconsin cannot be overstated, says Aaron Friedman, MD, medical director of UW Children's Hospital. "The quality of our physician specialists, nurses and staff is incredibly well regarded by our patients and families," says Friedman, UW Medical School professor of pediatrics. "Moreover, several of our pediatrics fac-

ulty members are nationally known for their clinical research, especially in the areas of childhood cancer, cystic fibrosis, juvenile diabetes and asthma."

Friedman notes, however, that the quality of the physical facility is inadequate. "Our existing pediatric inpatient rooms are simply too small—they do not have space for a parent's bed. We also need facilities for parents and families to eat, shower and simply feel more at home with their child."

Rooms in the new hospital will be, on average, double the size of existing rooms. Other areas now seriously cramped—classroom space and Child Life play areas—also will be expanded considerably. Depending on fundraising efforts, the

potential exists to add outpatient operating rooms, outpatient rehabilitation facilities and more.

Funding plans call for a \$25 million UW Hospital and Clinics contribution to be matched by \$30 million in private philanthropy—\$10 million of which will come from the American Family gift. A public fundraising campaign, administered by the University of Wisconsin Foundation, will be launched later this year to raise the balance of the private funding.

UW Children's Hospital is a complete 62-bed medical and surgical center currently located within UW Hospital and Clinics. The hospital admits approximately 2,600 inpatients and has 107,000 outpatient visits annually.



**UW Medical School Dean Philip Farrell, MD, PhD; American Family Insurance President and COO David Anderson; UW Hospital and Clinics President and CEO Donna Sollenberger; American Family Insurance Chair and CEO Harvey Pierce; UW Children's Hospital Surgeon-in-Chief Dennis Lund, MD, and Medical Director Aaron Friedman, MD.**



# UW researchers to test new nicotine-crippling vaccine

by Gloria Meyer

Researchers at the Center for Tobacco Research and Intervention (CTRI) have begun a clinical trial to test a new vaccine that may reduce the powerful effects of nicotine on the body.

CTRI is one of three

centers nationally selected to test the new vaccine, called NicVAX.

The vaccine uses a novel approach to nicotine addiction, explains Douglas Jorenby, PhD, CTRI director of clinical services. The vaccine recognizes nicotine antigens and responds by

producing antibodies. The antibodies then attach to the nicotine molecule, causing it to increase in size, and thereby preventing it from crossing the blood-brain barrier.

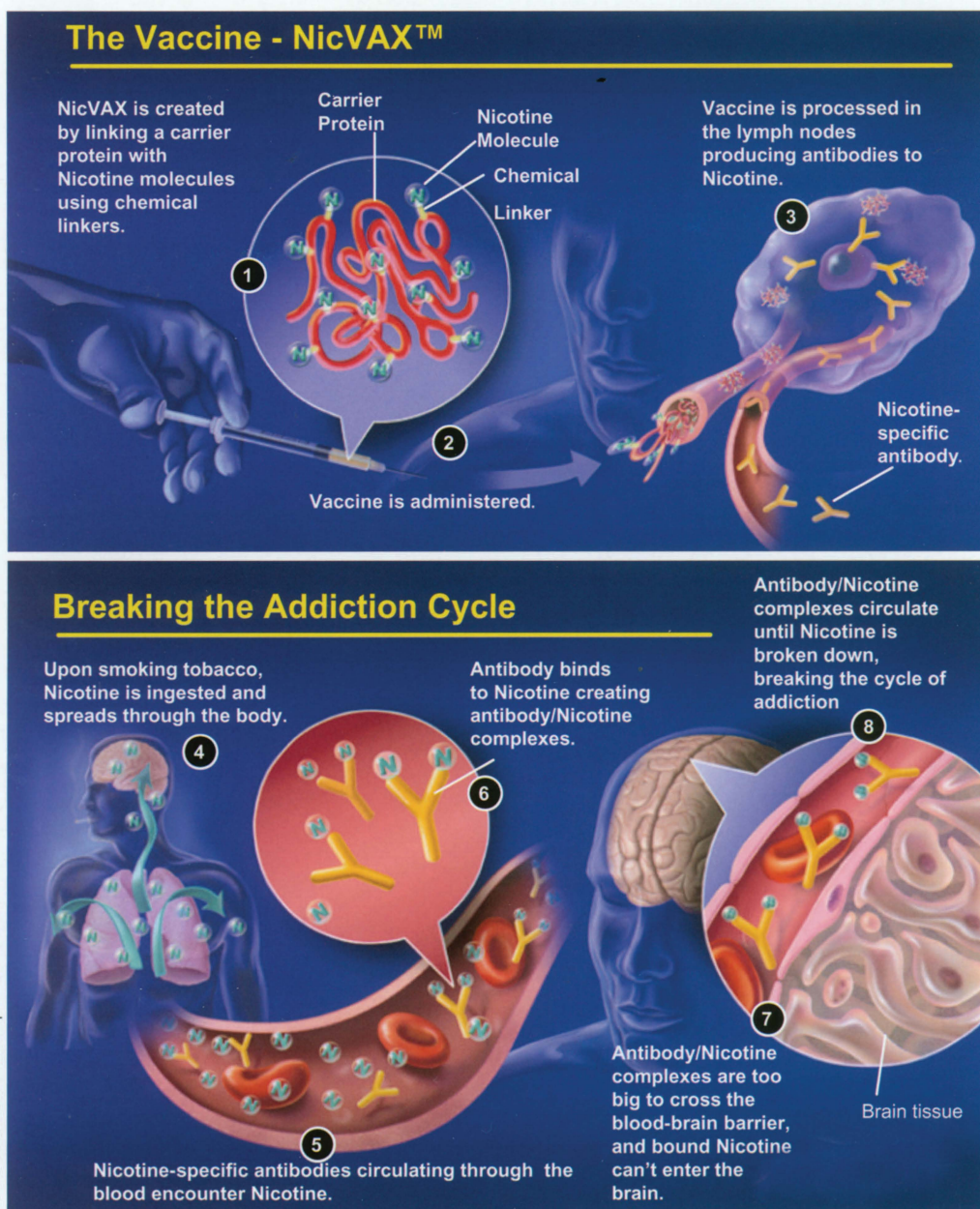
Nicotine must enter the brain to produce its highly addictive effect. Some 500,000 Wisconsin residents try to

break the addiction every year. Most try to quit "cold turkey," but only one in 20 succeeds. The new vaccine may be the answer.

"The idea of enlisting the body's own immune response to protect against nicotine is conceptually radical as a tobacco control approach," says Jorenby. "This is not nicotine replacement therapy, which is what most currently available smoking cessation medications are all about."

Two small studies on humans in the past two years answered safety issues of the new vaccine. The UW study, funded by the National Institute on Drug Abuse (NIDA) and Nabi Biopharmaceuticals, the company that makes the vaccine, will recruit a total of 63 people in the Madison area, Minnesota and Nebraska to study the effectiveness of NicVAX. Smokers who volunteer and qualify for the study do not have to quit smoking to participate.

In studies of rats, antibodies stimulated by NicVAX reduced the amount of nicotine that reached the rodents' brains by 65 percent. The vaccine itself does not reach the brain, so it is unlikely to produce neurological side effects, according to NIDA reports. The antibodies also reduced the effects of nicotine on the heart and on blood pressure.





## New center will enhance cancer communications research



by Emily Carlson

The National Cancer Institute (NCI) has funded a \$10 million Center of Excellence in Cancer Communications Research at University of Wisconsin-Madison that will strive to improve the quality of life for cancer patients and their families, particularly those from underserved populations.

Researchers from several UW-Madison schools and colleges, including the Medical School, the College of Engineering, the College of Agricultural and Life Sciences, the College of Letters and Science, the School of Human Ecology, the School of Nursing and the School of Journalism and Mass Communication,

will work together to enhance an interactive cancer-communication system.

Much of the work will focus on the Comprehensive Health Enhancement Support System, or CHESS, a computer-based health resource designed to educate and equip people facing a health crisis.

"People often react to cancer as just a random and paralyzing catastrophe," says David Gustafson, PhD, professor of industrial engineering and population health sciences, who led the team that developed CHESS at the UW Center for Health Systems Research and Analysis. "But cancer is a host of different diseases to be prevented, treated or managed. Interactive, computer-based communication

puts control in the hands of patients and their families. It helps them know what's going on and what to do about it or gives them tools to make decisions and plan how to deal with the disease."

Medical School faculty who are integrally involved in the new center of excellence include James Stewart, MD, professor of oncology; Joan Schiller, MD, professor of medicine; James Cleary, MD, associate professor of oncology; and Tara Breslin, MD, assistant professor of surgery.

Center researchers will conduct three main projects.

- Investigators will systematically add services such as information, social support and skills training to CHESS and measure changes in breast-cancer patient outcomes.
- They will address the efficacy of patients' use of CHESS by evaluating patients who use both CHESS and a human cancer mentor versus those who rely only on Internet-based information.
- They will evaluate whether CHESS improves palliative care, as well as examine the effects of sharing patient information with clinicians.

During the five years of the grant, investigators will enhance CHESS with new functions tailored to individual needs and with new modules focusing, for example, on managing distress, relating as couples or helping caregivers assist patients facing end-of-life grief. The researchers' efforts also will target:

- developing cost-effective communication systems for underserved populations;
- studying the effect on patient and caretaker quality of life when clinicians receive electronic patient health-status information;
- measuring the cost and effectiveness of integrating a computer-based system with NCI's telephone information service; and
- building an interdisciplinary structure that supports discourse, understanding and modeling of cancer-communication technologies.

For more information on CHESS, go to <http://chess.chsra.wisc.edu/Chess/> or call (800) 361-5481.



# Learning communities aimed at inspiring students

by Kris Whitman

As reported in the summer 2003 *Quarterly*, noteworthy University of Wisconsin Medical School figures will be honored by having their names linked to the five learning communities that will be a key feature of the new Health Sciences Learning Center.

The learning communities will provide a physical space for student interaction and a formalized group to which students will belong. Thirty first-year students will combine with 30 second-year students to form each learning community, a meshing that will enhance coaching from year to year.

The learning communities' namesakes—all luminaries in UW Medical School's history—are Charles R. Bardeen, MD; William S. Middleton, MD; brothers Adolf Gundersen, MD, and Gunnar Gundersen, MD; Betty Bamforth, MD; and Alice McPherson, MD '51. Bardeen was introduced in the summer issue, and here, two more historical figures are introduced. Watch coming issues of *Quarterly* for profiles of the final three.

## Alice McPherson, MD '51



Although it's quite the norm today for women to become physicians, it was far from true when Alice McPherson began her training at UW Medical School. The 1951 graduate, now a world-renown ophthalmologist, recalls the era just after World War II.

"There was intense competition for training positions in medicine, and many of the men couldn't get appointments. They said it was not fair for women to take up training spaces, since women would quit in a few years," says McPherson. "I thought about this at our 50th reunion two years ago. Only three members of the Class of '51 are still practicing, and I'm one of them."

Grateful that her UW Medical School mentors were progressive for their time, McPherson says, "The UW's Dr. Frederick A. Davis and Dr. Peter Duehr... saw no reason why women shouldn't be ophthalmologists if they had the aptitude. They accepted women for what they did and gave women equal opportunities with men."

In Texas, McPherson found the right social climate to pursue her career. "In the West, I think men were used to pioneer women who carried their share, be it on the ranch or in the field," she says.

In the 50 plus years since graduation, McPherson has not slowed down. She is a professor of ophthalmology at Baylor College of Medicine in Houston, one of the world's premier medical centers. In addition to treating patients, training vitreoretinal fellows in surgery and supervising a teaching program, she leads the Retina Research Foundation that she founded in 1969. She has raised \$20 million for programs in research and education and created a \$35 million endowment fund for future scholarships.

For the past 37 years, McPherson has carried on an active fellowship program in advanced vitreoretinal surgery. Past fellows have gone throughout the world to establish their own training programs.

McPherson gained worldwide acclaim in 1965 when she pioneered laser, cryopexy and buckle surgery. In the 1970s, she helped develop the use of vitrectomy procedures and edited *New and Controversial Aspects of Vitreoretinal Surgery*. She is an international leader and has spoken on new ways to treat diabetic retinopathy and retinopathy of prematurity. Her research focuses on the interplay between the retina and vitreous tissue.

Prior to the 1960s, the cure rate for retinal detachment was about 50 percent. By the 1960s, with the use of the indirect ophthalmoscope and new technologies, the cure rate gradually increased to almost 95 percent. "As soon as the word got out, retina became the most desired sub-specialty in ophthalmology," she says.

In 1988, McPherson received an Outstanding Medical Alumni Citation from UW-Madison; and in 1997, she came back to Wisconsin to accept an honorary degree. In 2000, she spoke at the Medical School's recognition ceremony. She is an active member of the UW Foundation board of directors.



While McPherson developed her practice at Baylor College of Medicine over the past four decades, she has maintained her admiration for UW Medical School and its ophthalmology department. "It is one of the top three institutions in the world," she says.

"Receiving NIH research grants illustrates the university's superiority. To qualify for and receive research grants, an institution has to be a leader in the field and on the cutting edge."

McPherson has no plans for retirement. "I like the work, and I haven't

developed another hobby outside of medicine—the Retina Research Foundation *is* my hobby," she says. She looks forward to many visits to Wisconsin, where she believes there is something of a renaissance in action.

## William S. Middleton, MD



Following the death of William Shainline Middleton, MD—the namesake of the Veterans Hospital in Madison—a UW Medical School memorial committee characterized the man and his career with a fitting tribute: "...His influence will be felt for generations to come. He had an admirable, full, happy, and useful life that covered a span of an active medical career twice or thrice that of most physicians. A more meticulous man with greater gentleness one has not met. William Shainline Middleton has passed on, but he will live forever in the lives he has touched. He was inspiration personified, and for us of the Wisconsin Medical School and its Alumni, an era has passed."

Middleton earned his medical degree in his home state at the University of Pennsylvania School of Medicine in

1911. After an internship at Philadelphia General Hospital, he joined the UW Medical School faculty in 1912, progressing from clinical instructor to assistant professor and professor—then to dean in 1935. Middleton spent 63 years on the Wisconsin faculty, including 20 years as dean.

He served as a captain with the American and British Expeditionary Forces in France during World War I, receiving the Victory Medal and several other honors. During World War II, he was a highly decorated colonel and chief medical consultant for the European Theater of Operations from 1942 to 1945. During the Korean War, he was a special advisor to the Army surgeon general.

Highly decorated in his academic life, as well, Middleton won the Alumni Award of Merit from the University of Pennsylvania in 1945 and the UW Alumni Award for Distinguished Teaching in 1969 and 1972. He received honorary degrees from several universities and contributed more than 300 scholarly papers related to internal medicine, medical education and medical history.

Middleton's determined spirit extended beyond the world of medicine. He was highly competitive in tennis and handball, and for years—until he was 81—he swam in Lake Mendota early each summer morning. Once a year, he walked around the same lake.

In 1955, Middleton left the Medical School to head the Veterans Administration in Washington, DC, where he served until 1963. Middleton helped develop the VA's hospital and clinic research programs, and his work led to improved access for veterans to rehabilitation services and mental health and hypertension treatment.

President John F. Kennedy wrote to Middleton: "On your retirement from federal service, I am impressed by the example your life provides of the completely selfless dedication of an individual to the needs of mankind. You have provided vision, imagination and leadership that moulded and energized the medical program of the VA. Your pioneering ideas and tireless efforts to improve patient care, medical education for the staff, and advanced research have carried these programs to a pinnacle of effectiveness."

In 1976, a year after Middleton's death at age 85, the U.S. Senate renamed Madison's veterans hospital the William S. Middleton Memorial Veterans Hospital—a rare honor considering that, at the time, only six veterans hospitals were named for individuals. The Senate Veterans Committee report called Middleton "one of the greatest teachers of medicine this country has ever developed."



## Henningsen and Bland win Max Fox Award



Dean Philip Farrell (right) presented the Max Fox Award to Dr. Henningsen.

by Dian Land

For nearly 80 years, physicians in small and large towns across Wisconsin have welcomed fourth year students from University of Wisconsin Medical School into their offices, clinics and hospitals for intensive, eight-week experiences in a busy medical practice. The experience is the central feature of the Preceptorship Program.

The Max Fox Award honors volunteer doctors in the program every year for exceptional dedication, commitment and service. The 2002 Max Fox Award was recently given to both John Henningsen, MD, of Marshfield Clinic in Rice Lake, and Phillips Bland,

MD '47, of Vernon Memorial Hospital in Westby.

Bland received the award for the second time; he first earned it in 1977. The Medical School commended him last summer for his dedication to the program, recognizing him as once being its youngest preceptor years ago—and now its oldest. The praise was delivered in a letter sent to Bland and read aloud during the “Dr. Bland Day” celebration organized by the town of Westby and attended by some 500 people. Following last summer’s celebration, Bland recommended that the spotlight be turned on Henningsen.

An event to celebrate Henningsen’s receiving of the award was held on June

12, 2003, at the Turtleback Golf and Country Club in Rice Lake. Many of Henningsen’s family, friends and close colleagues attended. Medical School Dean Philip Farrell, MD, PhD, and Associate Dean Byron Crouse, MD, discussed the importance of the preceptorship program. They commended Henningsen for his longtime commitment to the program and his service to the Medical School. Henningsen was given a framed certificate and a commemorative UW captain’s chair.

A family practitioner, Henningsen coordinates the preceptor program in the greater Rice Lake area, including experiences at Marshfield Clinic–Indianhead

Center, Marshfield Clinic–Lakewoods Family Center and Lakeview Medical Center. He has been a preceptor for more than 30 years. In addition to working directly with six to eight medical students each year, he is responsible for connecting students with other physicians to provide a variety of opportunities for direct patient care.

Charles Bardeen, MD, first dean of UW Medical School, created the preceptorship program in 1926. His vision was that Wisconsin physicians would join in taking responsibility for training coming generations of practitioners by allowing students to work in close association with them.



Henningsen and his family,—including David Henningsen, MD '91 (second from left)—celebrated.





Last summer, some 500 people in the town of Westby, Wisconsin, honored Phillips Bland, MD '47, at "Dr. Bland Day." This summer, the Medical School honored him with a second Max Fox Award.

The first of its kind at the time, the program was deemed highly innovative. Preceptorships were soon established by many other medical schools, dramatically changing American medical education.

UW Medical School has proudly preserved the program as an integral part of the curriculum. The primary goal is to improve student proficiency through increased responsibility for the care of patients under the supervision of a highly skilled community

clinician. Students almost always describe the program as invaluable.

The Max Fox Award was created in 1969 by a gift from Herman H. Shapiro, MD '32, to honor his preceptor, the late Max Fox, MD. Fox was a preceptor in Milwaukee for

more than 25 years. During his 46 years of practicing medicine, he greatly influenced the careers of some 4,000 physicians. By all accounts, it was Fox's love of teaching that made him such an effective preceptor.

## Max Fox awardees

Each year the Max Fox Award honors one or more of the Wisconsin physicians whose service as a medical student preceptor has played such an important role in the University of Wisconsin Medical School Preceptorship Program. The following physicians have been given the awards.

1970 Merritt Jones, MD	1977 Phillips Bland, MD '47	1985 Eugene E. Eckstam, MD	1991 Thomas F. Nikolai, MD
1971 Peter Midelfort, MD	1977 Herbert M. Snodgrass, MD, PG	1985 Herbert Sandmire, MD '53	1992 Eugene Krohn, MD '59
1972 Leslie Kindschi, MD	1978 Henry S. Ashe, MD	1985 Roger Bender, MD	1994 Thomas C. Jackson, MD '67
1973 Paul Mason, MD	1978 Roy B. Larsen, MD	1987 Donald A. Jeffries, MD '47	1996 D. Joe Freeman, MD '52
1973 Einar Daniels, MD	1979 Thomas J. Rice, MD '45	1987 James W. Merritt, MD	1997 Donald C. Burandt, MD '59
1973 Warner S. Bump, MD	1979 Robert Gilbert, MD	1988 James D. Michael, MD	1998 Lynn Eggman, MD '62
1974 Maurice L. Whalen, MD	1981 Donald Griffith, MD	1989 Sigurd E. Sivertson, MD '47	2000 A. A. Koeller, MD '61
1974 Bruce C. Prentice, MD	1981 Ben Lawton, MD	1990 Robert T. Obma, MD '65	2002 Phillips Bland, MD '47
1975 George E. Magnin, MD '46	1982 Thomas M. Haug, MD	1990 Richard L. Hartzell, MD	2002 John Henningsen, MD
1975 Robert M. Sent, MD	1982 William T. Russell, MD '46	1991 Bernard J. Haza, MD '50	
1977 Mischa Lustok, MD	1984 William L. Deardorff, MD		



## Class Notes

Compiled by Kathleen Freimuth

### 1943

**Howard A. Engle**, associate professor emeritus of pediatrics at the University of Miami School of Medicine and past recipient of the Wisconsin Medical Alumni Association's Ralph Hawley Distinguished Service Award for commitment to medical practice, teaching, research, and humanity, lives in Miami Beach, FL. There he continues to serve his community, working as medical consultant for the Miami-Dade County Public Schools, Office of Exceptional Student Education and Psychological Services.

### 1950

Practicing general surgery for 42 years with Kaiser-Permenente in Portland, OR, **Lawrence Duckler** retired in 1996. He reports that in celebration of his 80th birthday, his son-in-law and grandson took him to the Gettysburg Battlefield in Pennsylvania—a memorable birthday indeed! He currently resides in Portland, OR.

### 1953

Currently a zealous fly fisherman and fly tyer, **Donald E. Koepke** retired from cardiothoracic surgery with an extensive list of medical accomplishments: former chief of surgery at Milwaukee Hospital, chief of cardiothoracic surgery at St. Joseph's Hospital in Milwaukee, recipient of the Golden Trumpet Award at St. Joseph's, member of the boards of general surgery and cardiothoracic surgery, and a clinical faculty

member at the Medical College of Wisconsin. He and his wife, Nancy, live in Naples, FL. They have four children and six grandchildren.

### 1958

**Theodore J. Eckberg** of Sherman Oaks, CA, continues to practice part-time in otolaryngology, and teaches one day a week at the University of Southern California Medical School as clinical professor of otolaryngology-head and neck surgery. He is also chairman of the State Developmental Disabilities Area Board for Los Angeles County. He and his wife, Jackie, have four children and five grandchildren.

### 1967

After 30 gratifying years of surgical practice, **Steven F. Wolfe** of Lafayette, CA, retired in January 2003. He now directs his energies toward family, increased travel, community involvement and personal enrichment.

### 1968

**J. Craig Nelson** lives in Sausalito, CA, with his wife, Frances, and their three daughters. In June 2003, he moved from Yale University to the University of California at San Francisco, where he holds the Leon J. Epstein, MD, Chair in Geriatric Psychiatry.

### 1970



**Kay A. Heggstad** and **Paul A. Wertsch** would like their friends and their 1970 classmates to know that they are still married and still living in Madison, WI. For the last three years she has worked as a medical director for Hospice Care, Inc., an 18-bed inpatient unit. She recently became certified as a diplomate of the American Board of Hospice and Palliative Medicine. He has been very active for many years in the Wisconsin Medical Society and was inaugurated as president in April 2003. He currently has a family practice at Wildwood Family Clinic in Madison. Both are members of PFLAG: Parents, Families and Friends of Lesbians and Gays. They have two children and one granddaughter.

### 1977

**Richard S. Jerde**, who is affiliated with Tacoma Radiological Associates, Multicare Medical Center, and Franciscan Health System—all in Tacoma, WA—has been inducted as a fellow in the American College of Radiology (ACR). This fellowship is one of the highest honors conferred by the ACR, based on a member's service to organized medicine; sig-

nificant accomplishments in scientific research in the fields of radiology, radiation oncology or medical physics; exemplary performance as a teacher; and an outstanding reputation among colleagues and the local community.

### Michael E. Nesemann

has transferred from Singapore to Warsaw as a regional medical officer in the Foreign Service. Currently his responsibilities cover seven northern and central European countries as well as the consulate in Krakow.

### 1978

### Vicki J. Gutgesell

of Oakland, CA, retired from medical practice in 1997 to unearth what she considers her dream job: puppy socializer for Guide Dogs for the Blind. She also does volunteer work for the Oakland Zoo and Habitat for Humanity.

### Douglas Kappelman

reports that life has been an ongoing family adventure. He, wife Yvonne, and their five children live in San Angelo, TX, where he practices ophthalmology. Rewarding in itself, the practice also allows him time to pursue other commitments. He and Yvonne home-school their children. In the summer, they live on a ranch near Yellowstone and spend most of the time working the ranch or riding horses.



1987

**Beth A. Bartos** resides in Lake Placid, NY, where she practices family medicine. She and her husband, Bob, enjoy Nordic skiing in the Adirondack backcountry, Alpine skiing, canoeing, camping and rock climbing. They have a daughter, Samantha, 7, and a son, Jack, 5.

**Lori Nelson Heinrich** lives in Mequon, WI, where she practices dermatology one day a week. Her husband, John, currently is an orthopedic surgeon for the Milwaukee Bucks. They have four children: Joe, Max, Jack and Rachel. In her spare time, she runs, gardens, reads and plays the piano.

**David C. Rohde** lives in DePere, WI, where he immerses himself in Packermania, of course! He is a radiation oncologist and partner with Oncology Alliance—a Milwaukee-based medical group—and serves as medical director for the Green Bay practice. He and his partner, Greg, enjoy running, kayaking and spending time with their three Labrador retrievers: Casey, Ranger and Drake.

**Ellen M. Ryan** and her husband, Michael Tanaka, live in Aurora, CO, where she works in a small community psychiatry clinic reviewing psychiatric claims for Social Security Disability. She continues to do a lot of hiking, but states that either she "is getting older or the peaks are getting higher... must be the latter!"

1994

The University of Cincinnati (UC) Department of Surgery has named **Amy B. Reed** program director of the Vascular Surgery Fellowship program—one of approximately 20 accredited two-year vascular surgery training programs in the country. She has been with the UC Department of Surgery since July 2002, when she was named assistant professor of surgery within the Division of Vascular Surgery. In accepting this position, Amy becomes the only female in the country to lead a vascular surgery training program. She is married to Michael Reed, MD, a cardiothoracic surgeon in the UC Department of Surgery.

1996

Never thinking that she would move back to a small town after living in Madison, WI, and Asheville, NC, **Randi K. Berg** has relocated with her husband and three children—Aidan, Anna-Elisabeth and Kaj—to her hometown in Decorah, IA. She is working as a family physician within the Mayo Health System, providing full-spectrum care, including obstetrics, and is involved with the health system's outpatient eating disorders clinic. She and her husband are home-schooling their children and finding it to be one of the most rewarding experiences they have ever had.

After completing a transitional internship, followed by a pathology residency at Madigan Army Medical Center in Tacoma, WA, **Anne L. Champeaux** accepted a position at Madigan as a staff

pathologist and medical director of Autopsy Services and Microbiology and Molecular Diagnostics. She also currently heads the renal pathology service there. She is married to David Schachter, MD, an interventional cardiologist and lieutenant colonel in the U.S. Army. They have one son, Noah.

After completing a residency in family practice at St. Luke's Medical Center in Milwaukee, **Paul Heinzelmann** joined Andean Health and Development, a non-profit organization working toward building a primary healthcare system in rural Ecuador, including a telemedicine system to connect specialists to remote hospital sites using the Internet. To prepare himself for this current role, he studied tropical medicine at Johns Hopkins School of Public Health and received a diploma in tropical medicine and hygiene from the Royal College of Physicians of London. He works part time in an urgent care clinic in Providence, RI—the city he calls home.

**Kenneth H. Katz** of

Manitowoc, WI, currently is in private practice with his father, doing general dermatology, cosmetic and laser surgery, and Mohs micrographic skin cancer surgery. Before moving back to his home state, he completed a dermatology residency at Pennsylvania State University and a Mohs micrographic surgery fellowship at University of Massachusetts. He is married with five boys and enjoys competitive weightlifting and downhill skiing.

After finishing his radiology residency at William Beaumont Hospital in Royal Oak, MI, and a fellowship in body and breast imaging at Memorial Sloan-Kettering Cancer Center in New York City, **Rudolph Y. Lin** and his wife, Kim, moved back to Wisconsin to reside in Appleton, where he practices in a 26-member radiology group in the Fox Cities and is serving as medical director of the St. Elizabeth Hospital Breast Center in Appleton. He and Kim have three children: Haley, 8, Abbey, 4, and Chase, 3.



After 30 years in family practice in Cross Lake, MN, Phillip S. Johnson, MD '68, did volunteer work in Honduras last winter. He and his wife, Lola, helped residents of a remote village near La Mosquitia, Honduras.



## Class representatives



**William L. Semler**

**Class:** 1949

**Type of practice:** Retired in 1995 from practice; from teaching at the Medical College of Wisconsin in June 2003. Former medical director of Road America in Elkhart Lake, Wisconsin.

**Hobbies/interests:** Grandchildren, golf, snow shoeing, water sports, travel, sports cars, stained glass, jewelry.

**Other news:** Presently I'm attending meetings of the Milwaukee GYN Society and the State Society of OB/GYN every summer.

**Awards:** Multiple awards from St. Michael's Hospital, where I was chief of staff, from the Sports Car Club of America and a dozen golf trophies from Ozaukee Country Club.

**Message to classmates:** Please let the WMAA know where you are and what you're doing.

**Plans for a reunion:** Our 55th class reunion will be in Madison on Thursday, May 6, 2004, held in conjunction with Alumni Weekend. A reception and dinner are planned for our class on May 6th followed by a weekend of alumni activities. I hope to see you there!



**Maureen Mullins**

**Class:** 1979

**Type of practice:** OB/GYN, currently limited to gynecology. I did my OB/GYN residency at UW and stayed in Madison, initially in private practice. Three mergers later, I work for the UW again.

**Fondest memory while in Medical School:** Class camaraderie in the lecture halls and at "get togethers." Field Day, skits, "Mash House" and other parties.

**Hobbies/interests:** Extensive flower gardening. I've been turning my yard into a mini Olbrich Gardens. Reading, walking our 125-pound yellow lab, golfing and traveling, when time allows.

**Other news:** Our wonderful 18-year-old son (only child) is off to college and it seems only yesterday we brought him home as a newborn! It's been great fun parenting!

**Faculty member remembered the most and why:** John Harting (he taught us neuro-

anatomy now called neurosciences). I married him in the 3rd year of my OB/GYN residency at UW, and we just celebrated our 21st wedding anniversary. I continue to give him pointers on how to teach medical students (which he still loves to do) and he keeps winning teaching awards.

**Message to classmates:** Please let the medical alumni association know where you are and what you're doing, and fill out questionnaires that should be coming soon so we can put out class newsletters and "informationals."

**Plans for a reunion:** Our 25th class reunion will be in Madison on Saturday, May 8, 2004. Cocktails and dinner are planned for us that evening, with a weekend of medical alumni activities available. We are open to any and all suggestions you might have—and hope to see you there.

### IN MEMORIAM

**John Allen '51**  
Madison, Wisconsin

**Ralph Dorn '57**  
May 5, 2003  
Milwaukee, Wisconsin

**Hanno Mayer '46**  
June 24, 2003  
Milwaukee, Wisconsin

**Anthony Mazarek '67**  
West Allis, Wisconsin



PHOTO: Jeff Miller/UW-Madison University Communications





## Russ Lewis writes

### On women in medicine

Reading and hearing Vijay Singh's comment last May about Annika Sorenstam playing golf in a men's tournament brings back vivid memories of a conversation with two friends in September 1937, when the University of Wisconsin Medical School admitted 100 students to the Class of 1941. Four of the 100 were women.

At the time, 50 of us received four-year appointments and 50 got two-year appointments. After completing two years, that group would have to transfer to another school in order to complete medical training. Remember, when the Medical School started in 1907 it was just a two-year school. But it was widely accepted that this posed little problem, because the quality of Wisconsin students was so good that they were readily accepted at other schools. My friend Tom Rice tells me that his Class of 1945 was the first not to have two-year appointments.

Singh's objection was that Sorenstam's playing deprived a man of the opportunity to earn a living in his chosen profession. My friends in 1937 told me that, along the same lines, the four women in our class were depriving some fellow of a chance to be a doctor. They were not opposed to women physicians. They just believed that at least three of our female classmates would get married and raise a family—and never practice.

They were partly wrong and partly right. One of the women joined the Army after completing her internship. She made the Army her career and never married. Another practiced full-time internal medicine, emphasizing diabetes for many years, and she never got married. The third married a doctor and worked with him in his small clinic part-time while she raised a family. When the children left, she then worked full time.

My Ellen proved their prediction. Less than two weeks after completing her internship, she was married. While she worked mornings as the student health officer at LaCrosse State Teachers College for 10 years, she had five children. The family then moved to Winnetka, Illionis, where she devoted

full time to raising the kids. When Ellen saw them off, she could not get a license to practice without taking a year's refresher course, which she could not afford. So she worked for G.D. Searle Pharmaceutical Company in their licensing department until she retired.

It's interesting how many opportunities we old retired physicians seem to have to get together and dissect what goes on in medicine today. We always precede that subject by congratulating ourselves for having practiced medicine in the "Golden Years."

When the influx of women entering the profession occurred in recent years, we thought it was great. Our impression was that, at the time, too many doctors were over emphasizing the technological advances while losing that caring touch. We believed that the ladies would bring that back.

In recent years we retirees have become disappointed to hear about the shortage of American graduates. As you might expect, we recall that in our time, doctors worked 24 hours a day, seven days a week. We did not believe part-time was possible. Today, thanks to technology and changes in practice style, working part-time is popular,

and we feel many women opt for this type of practice.

At Alumni Weekend last May, I had the opportunity to attend the noon luncheon honoring the 50-year graduates of the Medical School. One bravely put that matter of the physician shortage to Dean Farrell. As usual, he handled it well. He agreed that these days, women help fill the shortage, even though they might work part-time. He said that the school expects to help solve the shortage problem when the new Health Sciences Learning Center is completed. The dean hopes that the school can then admit 175 medical students every year, instead of the 150 it now admits.

It makes sense. Hopefully it will help, so that we old-timers can find better things to worry about.



## Student sign up at organizations fair

With significant help from the Wisconsin Medical Alumni Association (WMAA), representatives of a variety of medical student organizations recently displayed posters and distributed flyers at the annual information fair. First- and second-year UW Medical School students welcomed ice cream supplied by the WMAA on the warm August afternoon as they explored an array of activities, programs and organizations. The students can choose to participate in any that attract their interest. Many of the organizations are community-oriented, some have been formed specifically to help students and others concentrate on professional activities. A list of current organizations appears below.



- AIMS Committee
- Advocacy for Women in Abusive Relationships (AWARE)
- AMA/Wisconsin State Medical Society
- Arrhythmias
- Child Abuse Prevention Project (CAPP)
- Christian Medical Association
- Complimentary Alternative Medicine (CAM)
- Cross Cultural Health Care Interest Group (CCIG)

- Doctors Ought to Care (DOC)
- Emergency Medicine Interest Group (EMIG)
- Ethics Committee
- Family Medicine Interest Group (FMIG)
- Gays, Bisexuals, Lesbians & Allies in Medicine
- Geriatric Interest Group (GIG)
- International Health Exchange (IHE)
- International Medicine Interest Group (IMIG)

- MEDIC
- Medical Spanish Learning Group (MSLG)
- Medical Student Association (MSA)
- Medical Students for the Arts (MFA)
- Medical Students for Choice (MSFC)
- Medical Students for Life
- Medical Students for Minority Concerns (MSMC)
- Mothers and Maternal Support (MoMS)
- Dando a Luz

- OB/GYN Interest Group (OBIG)
- Pediatric Interest Group (PIG)
- Physicians as Health Activists (PAHA)
- Physicians for Social Responsibility (PSR)
- Public Health Interest Group (PHIG)
- Surgery Interest Group (SIG)
- Wilderness Medical Society (WMS)
- Women in Medicine (WIM)



## *Don't be left behind* **Get your CME credits easily online**



by Rhonda Dix

**A**dvan­ce your career, make your job easier and earn more money by taking continuing medical education online courses from the University of Wisconsin Medical School Office of Continuing Medical Education (CME). Because of these and other benefits, registrations for the online programs have increased by more than 300 percent over the past year. We urge you to get online to keep up with the latest in medicine.

We offer more than 40 programs for AMA category 1 credit. And the number grows by two or three programs each month. Many of the programs are free, and specialty areas are varied. The most popular programs today are: Tobacco Use, Alzheimer's Disease, Hypertension, Dyslipidemias Update and Fetal Alcohol—Women's and Children's Treatments. The complete listing can be found at <http://cme.uwisc.org/>

Participants report that they are very pleased with CME online at Wisconsin. "The information provided was presented in a clear, organized manner, making it user-friendly while providing useful tips that can be readily applied," said one. "Very nicely done; well arranged and pertinent data; I enjoyed it and will use it in my practice," said another.

The programs can be taken any time, day or night, from any computer that has an Internet connection. Registration is easy and enrollees can start the programs immediately after signing up. No waiting for approval. Another convenience is that upon completion, a credit letter can be printed from your computer. No wonder this method of learning and getting CME credits is catching on.

According to "Evaluation of Online Learning (EOL)," University of Pittsburgh Medical Center (Rao, G., 2000), "Online CME is becoming increasingly popular. In theory, it is less expensive, more accessible and more convenient than many forms of traditional continuing medical education. In addition, unlike lectures, online learning and self-assessment is inherently interactive."

Also available for your CME credits are upcoming conferences, current home study programs, visiting fellowships and physician independent learning programs. More details can be found on the CME homepage at [www.cme.wisc.edu](http://www.cme.wisc.edu). To obtain additional online information, you may also email [cme@med.wisc.edu](mailto:cme@med.wisc.edu) or call Gwen Mueller at (608) 263-2850.

### **Continuing Medical Education Conferences**

**Current Trends in the Diagnosis and Treatment of Vascular Disease**  
October 3, Madison

**Prolotherapy**  
October 1-4, Madison

**Diabetes 2003**  
October 4, Madison

**Headache Symposium**  
October 10, Madison

**Advances in Multidisciplinary Cancer Care**  
October 10, Madison

**Fall 2003 Psychiatric Update**  
October 10-11, Madison

**Peripheral Vascular Disease**  
October 11, Milwaukee

**Mammography**  
October 16-17, Madison

**2003 Uehling Lectures: Urology Futures**  
October 17-18, Madison

**The Challenges of Palliative Care**  
October 20-22, Madison

**Nuclear Cardiology**  
October 24-25, Madison

**Athletes in Motion**  
November 1, Madison

**Primary Care Conference**  
November 20-21, Madison

**Infectious Diseases**  
December 4-6, Madison

**Airway Management Workshop**  
December 6, Madison

For more information, visit the UW CME Web site at: <http://www.cme.wisc.edu/> or call (608) 263-2850.



## ■ Observations



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