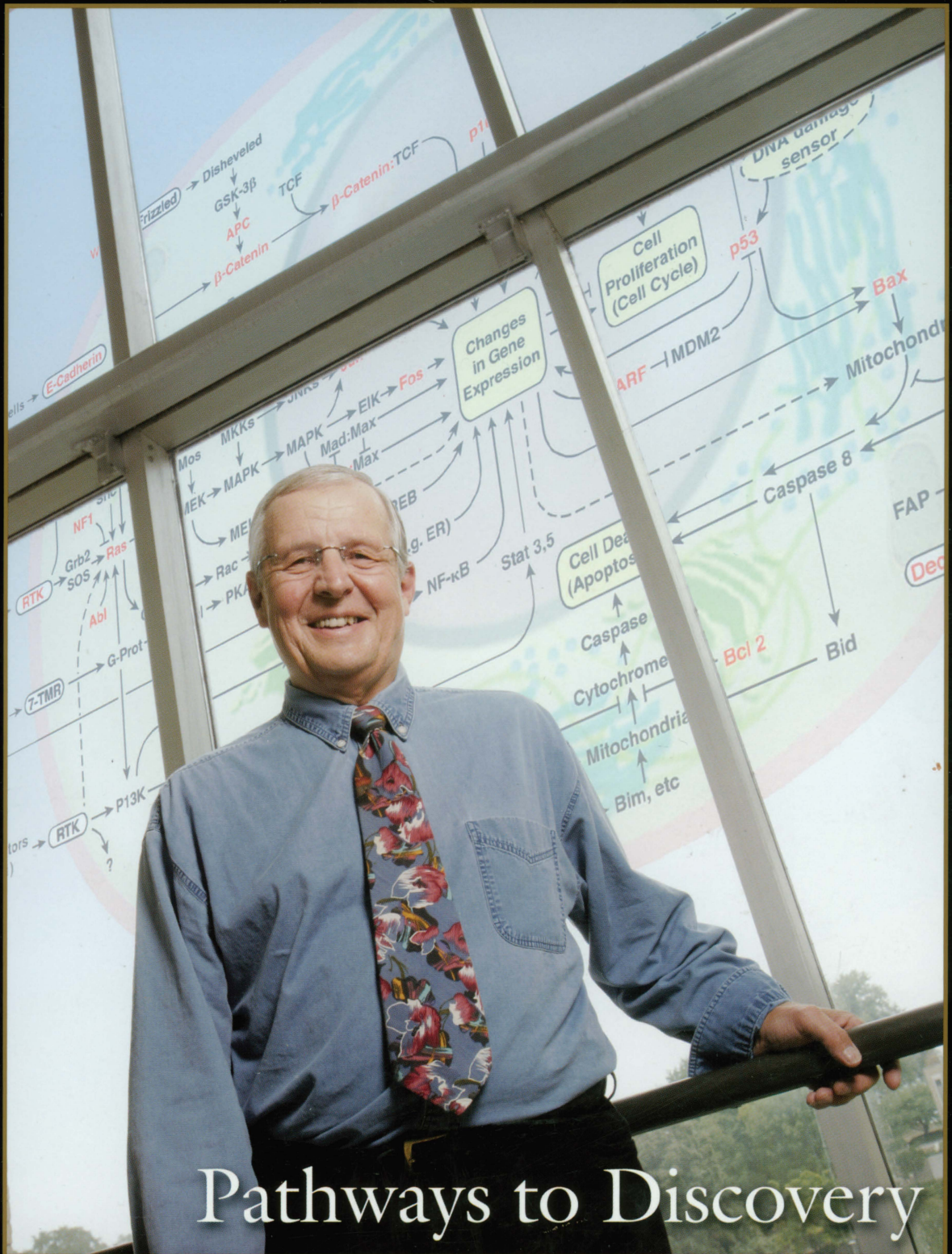


# QUARTERLY

The Magazine for University of Wisconsin Medical School Alumni and Friends



VOLUME 7  
NUMBER 4  
FALL 2005

## Pathways to Discovery

## QUARTERLY

The Magazine for  
University of Wisconsin Medical School  
Alumni and Friends

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### PHOTOGRAPHY

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For editorial information, call (608) 263-9893.

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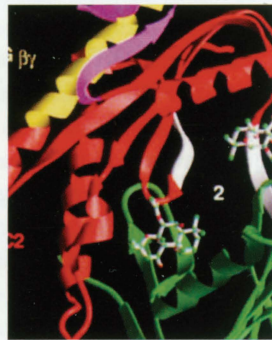
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Philip Farrell, MD, PhD  
UW Medical School Dean  
UW-Madison Vice Chancellor for  
Medical Affairs

As most of you know, this is my last year as dean of the University of Wisconsin Medical School. I expect that my successor will be on board sometime between January and June 2006.

Of all the issues I've worked on during my 11 years as dean, the two I consider most important relate to leadership development—which is essential for significant change—and organizational enhancement. I feel that in regard to these two areas, this year will be particularly successful.

In terms of leadership development, I have concentrated hard on recruitment of department chairs. As you will read in this *Quarterly*, we now have four new department chairs—for ophthalmology and visual sciences, radiology, medicine and pediatrics. I am so pleased to have been able to attract world-class physician-scientists to lead these large clinical departments. Four new top leadership hires in one year is extraordinarily fortunate for us!

I'm also happy to announce that we have a new director of our General Clinical Research Center. You will read more about this in the next *Quarterly*.

Regarding organizational enhancement, we are proud to announce in this issue that we recently broke ground for our new Interdisciplinary Research Complex (IRC). This structure represents the culmination of the HealthStar Initiative that was begun nearly 10 years ago to improve health sciences facilities on the UW-Madison campus. The IRC will allow us to organize research in uniquely interdisciplinary and collaborative ways, grouping scientists so that their work moves quickly to the essential end point of improving people's health.

The research conducted by faculty members in the UW Department of Pharmacology, who will be moving to West Campus when the IRC is completed in early 2008, is a perfect example of this kind of translational work. As you will read on the following pages, outstanding pharmacology faculty members who are basic scientists are integrating in highly productive ways with clinical scientists.

Also pertaining to organizational enhancement, the school expects to have a new name—and an expanded mission—by the end of the calendar year. We will become the University of Wisconsin

School of Medicine and Public Health. As you may know, we have been steadily moving in this direction by broadening our public health initiatives. The creation of our new Master in Public Health degree program is the latest step.

Our goal is to be an integrated school committed to both healthcare and health. This will better enable us to address the American Medical Association's core purpose: "To promote the art and science of medicine and the betterment of public health."

In line with this transition, the school is sponsoring a conference in November titled "The Transformation of Health Care and the Role of the University," at which experts from campus and around the nation will examine this important issue. You will read about the name change and the conference in future issues of the *Quarterly*.

As I think about winding down my deanship, I am pleased to see that I may reach my goal of making my last year the best ever.



*William Nietert, MD '78  
WMAA President*

With deep anguish, we hear of the great sacrifices our servicemen and women are making in the Middle East. Our thoughts and prayers are with them and their extended families. We depend upon them to protect our way of life. The following column is intended not to compare the role of medicine to the role of our military, but rather as an analogy to how the Salvation Army organizes itself to fight poverty.

In some ways we physicians also are at war—with disease. Our mission is to ensure the health and wellness of our patients and communities. Some days, lawyers, insurance companies, government agencies and recently even the Wisconsin Supreme Court seem to be allies of our enemy.

In this war on disease, some of us fight in the infantry (we are in family practice, pediatrics, obstetrics and internal medicine). Others of us are in the air force, providing surgical strikes (surgery and other subspecialties), while still others are in the navy (urology, hematology and oncology). Some work in intelligence (radiology and pathology) and some

launch cruise missiles (radiation oncology). Some are in tactical support (administration), some in basic training and the Pentagon (medical school faculty and research).

One thing I know for sure, we are most effective when we work cooperatively. Likewise, we are least effective when we let jealousy, ego, pride and money interfere with our mission. We often forget that the enemy of our enemy is our friend, even if he or she works for a different division.

Regardless of one's "colors," we should all agree that we need to ensure that there will be an adequate number of replacement troops representing all areas when those of us who are becoming weary warriors retire or are "relieved of duty."

Not only is there an unprecedented increase in the price of waging war, but also the cost of training new recruits and providing them with the proper skills and equipment is increasing dramatically. The cost of boot camp (medical school) is now averaging \$120,000. The average basic private is ending boot camp with an enormous

debt, with the real potential for deflation of pay grade (lower reimbursement).

Now more than ever, we need to support these new recruits and help them enter this war optimistically, enthusiastically and full of energy.

University of Wisconsin Medical School graduates have had a great and proud tradition. Let's help keep it that way. For information on how you can help, contact Karen Peterson, executive director of the Wisconsin Medical Alumni Association, at (608) 263-4913 or [kspeters@wisc.edu](mailto:kspeters@wisc.edu).

PS: Or just send money. We will use it wisely....



Ground Broken for the  
**Interdisciplinary  
Research Complex**

AERIAL PHOTOGRAPHY BY DON KERKHOFF / IMAGEWORKS STUDIO.  
COMPUTER VISUALIZATION BY THE ZIMMERMAN DESIGN GROUP / HOK.



Gold spades in hand, dignitaries kicked off construction of the Interdisciplinary Research Complex with a symbolic groundbreaking.

“With the start of construction on the IRC, we enter a new era of translational research that will greatly help the people of Wisconsin by quickly bringing new discoveries into the patient care that takes place at UW Hospital and Clinics.”

by *Dian Land*

Leaders and supporters of University of Wisconsin Medical School marked the beginning of construction on the Interdisciplinary Research Complex (IRC) with an official groundbreaking ceremony on Monday, August 1, 2005.

Governor Jim Doyle and UW-Madison Chancellor John Wiley joined Medical School Dean Philip Farrell, MD, PhD, Vice Dean Paul DeLuca, PhD, and UW Foundation Vice President for Health Sciences Mark Lefebvre as speakers at the ceremony. Some 100 people attended the event.

“This groundbreaking represents ‘the end of the beginning,’ to quote the great 20th century

leader and orator Winston Churchill,” said Farrell at the ceremony. “With the start of construction on the IRC, we enter a new era of translational research that will greatly help the people of Wisconsin by quickly bringing new discoveries into the patient care setting that is located right next to where we are now standing—the Clinical Science Center at UW Hospital and Clinics.”

The \$134 million IRC will be constructed adjacent to UW Hospital immediately northwest of the recently completed Health Sciences Learning Center in a dynamic area of campus. The School of Pharmacy’s Rennebohm Hall, the Waisman Center and the William S. Middleton Memorial Veterans Hospital also are located nearby, and construction on the new



At the newsworthy ceremony, Dean Philip Farrell thanked the many partners who have made the IRC possible.

American Family Children’s Hospital has begun.

“This is a great day,” said Doyle. “I’d especially like to thank Dean Farrell, who has persevered on this project through some ups and downs, and has really stuck with it. This is a great moment and great tribute to Dean Farrell.”

*(Continued on next page.)*

“We’re convinced that this facility will change the face of how UW Medical School does research. This building will foster a new taxonomy of science, a new way of talking, thinking and collaborating.”



*The IRC will produce novel advances by breaking down intellectual barriers, said Paul DeLuca, who heads the project.*

Doyle said the new building meshes perfectly into his ongoing efforts to ensure that biotechnology, life sciences and stem cell research thrive in Wisconsin, and that the university “remains at the

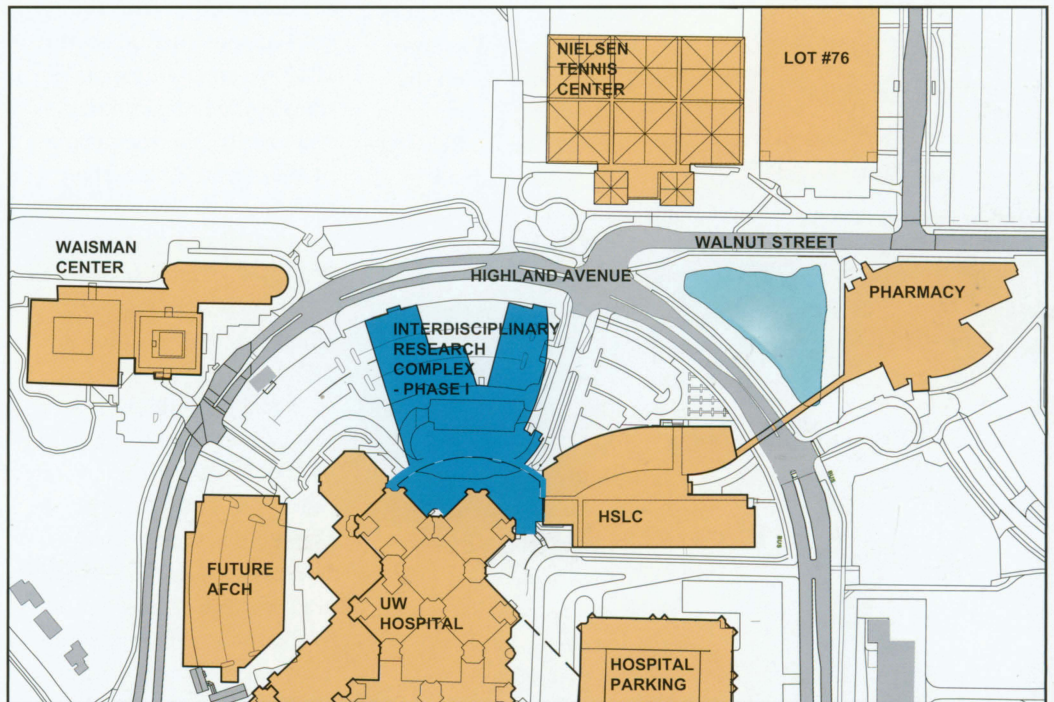
absolute forefront of medical research.”

The state has invested nearly \$1 billion in high-technology facilities over the past 15 years, building on the university’s research institutes and pioneering scientists who are respected around the world, Doyle said.

Scientists in the IRC will concentrate on areas the Medical School has identified as strategically important, including cancer, neurosciences and cardiovascular diseases. The IRC will house major programs in image science, molecular medicine and regenerative medicine.

To be completed in early 2008, the building is part of a carefully thought out master plan that in 15 to 20 years will yield a “reinvented campus,” Wiley said, adding that the west end of campus—with its collection of buildings dedicated to health sciences research, education and patient care—will be the finest in the country.

The IRC will be the first building on campus to be specifically designed to foster interdisciplinary collaborations, Wiley noted. “Trust me, facility design does make a difference when it comes to collaborative programs,” he said.



*The first phase of the IRC will consist of one tower to the east and the beginning of a middle tower next to it (in blue). Future plans call for completion of the second tower and a third tower (not shown) to the west.*

DeLuca, who has been the IRC program director, echoed the idea that physical structures can produce novel ideas by breaking down intellectual barriers and stimulating new working relationships. "We're convinced that this facility will change the face of how UW Medical School does research," he said. "This building will foster a new taxonomy of science, a new way of talking, thinking and collaborating."

DeLuca credited building design architects—Hellmuth, Obata + Kassabaum, Inc. (HOK) of St. Louis, Missouri—with helping to make the school's vision a reality. "They have created steel and glass to express our ideas to break down barriers," he said.

The IRC represents the culmination of the HealthStar Initiative, an ambitious state-university partnership created more than 10 years ago to improve health sciences facilities at UW-Madison. Rennebohm Hall was the first HealthStar building; the Health Sciences Learning Center was the second.

The Medical School has worked closely with the UW Foundation to raise approximately 85 percent of the money needed to complete the first phase of the IRC construction, with only \$23 million in state funds to be used.



*Mark Lefebvre, of UW Foundation, described the construction project. In his comments, he praised the many external and internal partners without whom the project would not be possible.*

"We've been cheered on by extraordinary external partners," Lefebvre said at the groundbreaking. He expressed gratitude to the Rennebohm Foundation, which has contributed \$15 million, General Electric Medical Systems, which has given a benchmark gift, and the National Institutes of Health, which has awarded \$17.6 million to the project.

Lefebvre also praised internal partners such as the UW Hospital and Clinics public authority, the UW Medical Foundation and the Medical School itself.

"At the forefront, the people of Wisconsin have been so generous to us," he concluded.

The IRC will be a three-tower complex to be



*Gov. Jim Doyle visited with many guests at the ceremony after proclaiming in his speech, "This is a great day."*

completed in separate phases. The first phase, which should be completed by early 2008, will consist of a five-story tower atop a three-story base. Future plans call for finishing the second tower and building an additional tower to the west.



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"We've been cheered on by extraordinary external partners. At the forefront, the people of Wisconsin have been so generous to us."

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# Pathways to Discovery

As they search for flaws in cell communication networks, pharmacologists identify targets for new treatments for human disease

by Dian Land

With roots going back nearly 100 years to the "Attic Medical School"—University of Wisconsin Medical School's first home in Science Hall—the Department of Pharmacology has been a small but powerful academic unit that has contributed in significant ways to the school's stature over the years.

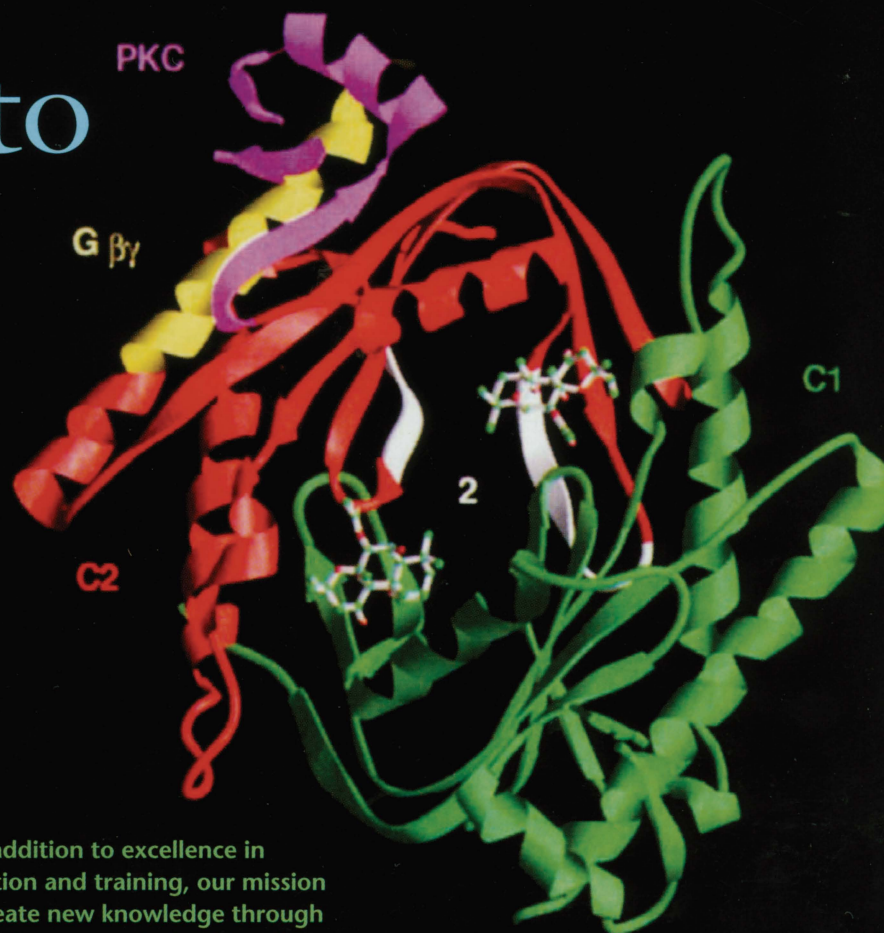
In the realm of educational activities, the department offers its popular, interdisciplinary Molecular and Cellular Pharmacology doctoral degree program. Through this program pharmacology faculty members and their campus partners prepare graduate students for careers in academia, industry and government.

For decades, department faculty members also have taught pharmacology courses that have given medical students their first introductions to the unique combination of basic science and clinical medicine that produces therapeutics—the physician's first line of defense in treating disease.

"In addition to excellence in instruction and training, our mission is to create new knowledge through outstanding research that identifies therapeutic targets," says Arnold Ruoho, PhD, department chair.

Historic research contributions have included advances in hypertension, metabolic diseases such as diabetes and resistance to antibiotics. Today, faculty members focus heavily on cancer, with additional emphases on cardiovascular and neuro-pharmacology. Their goal, generally, is to identify defects in cell communication networks that can be repaired in the drug discovery process.

"UW pharmacology researchers beautifully illustrate the concept of translational research. Such research, which is the driving force behind our Interdisciplinary Research Complex,



Arnold Ruoho and colleagues determined the molecular structure of the catalytic core of the enzyme that makes cyclic AMP, one of the most important second messengers in hormone and neurotransmitter signaling. Understanding the catalytic mechanism of enzymes is essential for drug discovery. James Hurley, of the National Institutes of Health, developed the crystal structure (seen above) in collaboration with Ruoho's Wisconsin team.

moves rapidly from the laboratory to patients," says Philip Farrell, MD, PhD, Medical School dean. "In the end, the work of UW pharmacologists will lead to better drugs to prevent and treat human disease."

Velcade® is the newest hope for patients with the most severe forms of multiple myeloma, a dangerous cancer of the bone marrow. Unfortunately, some patients develop resistance to the drug.

Shigeki Miyamoto, PhD, an associate professor of pharmacology at University of Wisconsin Medical School, may have the solution to this drug resistance quandary. He has found a new cellular communication network critical to cell death and survival. Collaborating with clinicians at the UW Comprehensive Cancer Center (UWCCC), Miyamoto expects that a better understanding of the way the network functions may solve the resistance problem and lead to more effective treatments for **myeloma and other cancers.**

“Dr. Miyamoto’s molecular research, with its clear clinical applications, is an important illustration of the kind of work in which pharmacologists typically are involved,” says Arnold Ruoho, PhD, chair of the Department of Pharmacology and the S. Jonathan Singer Professor of Pharmacology. “Broadly speaking, pharmacologists integrate knowledge from many related fields to offer unique perspectives on the way drugs, hormones, neurotransmitters and

environmental chemicals impinge on human health.”

In the research-rich UW pharmacology department, supported by an outstanding administrative staff led by Karen Wipperfurth, external funding currently averages \$600,000 per capita. Most of the 13 faculty members specialize in some aspect of cellular communication networks (see pages 12-13). Like the system Miyamoto studies, the dozens of networks are responsible for transferring instructions from the environment in which cells reside to their interior control centers.

The tangle of overlapping networks encompass millions of molecules charged with specific duties: recognizing, amplifying and responding to signals. Through a cascade of steps, intercellular signals ultimately influence the expression of proteins, which control all biochemical facets of the cell, including growth, shape, rigidity, movement, function and death.

At the core of these communication networks is the process called signal transduction, the actual converting of extracellular information into cellular responses.

Signal transduction begins when a hormone or neurotransmitter carrying chemical instructions arrives at the cell membrane. The signaling molecule finds

and binds to its particular receptor, which straddles the membrane. Once the physical connection occurs, the receptor often changes shape.

“But these structural changes in the receptor are not sufficient by themselves to produce the appropriate reaction inside the cell,” explains Ruoho, an award-winning expert on receptors. “The information from the hormone or neurotransmitter, which we call a primary messenger, must be altered—or transduced—into other forms that ultimately can change the biochemistry of the cell.”

The job of transducing signals continues with the generation of second messengers. Their main activity is to amplify the incoming information by producing additional signals within the cells.

“Through the action of second messengers, a ‘weak’ signal can switch on specific proteins or enzymes that yield a large signal and robust response inside cells,” Ruoho explains. Examples of second messenger systems include the adenylyl cyclase/cyclic AMP system and the phosphoinositide system.

Many second messengers also transfer information through a powerful process called phosphorylation. “When a protein becomes phosphorylated, it’s often a signal that it’s ready

to activate or inhibit the function of other proteins,” Ruoho says.

Eventually, the information is processed inside the cell, usually in the nucleus, where the command may be to turn a gene off or on, making more or less messenger RNA, which then produces a protein that carries out the instruction. Discoveries on the molecular level are later validated in animal models.

“Our ultimate goal as pharmacologists is to find links in signal transduction cascades where molecular connections break down due to disease or genetic mutation,” says Ruoho. “These defective links are the best targets for therapeutic intervention. Once the targets are identified, the drug discovery process is initiated, often in partnerships between academia and industry, to **develop new medications to correct the defect.**”

George Wilding, MD, UWCCC director, appreciates the fact that the vast majority of the research under way in the department today relates to cancer.

“Under the leadership of Arnold Ruoho, the Department of Pharmacology has become a very strong contributor to the activities of the cancer center,” he says.

Wilding points to several examples, in addition to Miyamoto’s work.

*(Continued on next page.)*

“Dr. Emery Bresnick is an active contributor in the cancer center’s vascular and cellular biology programs and Dr. Ruoho’s cell signaling research is now being applied to cancer initiatives,” he says. “Dr. June Dahl’s work on pain control in cancer patients has set the standard throughout the world.”

Additional pharmacology faculty members—Patricia Keely, PhD; Anna Huttenlocher, MD; Richard Anderson, PhD; and Colin Jefcoate, PhD—comprise a strong core of breast cancer researchers who were part of the UWCCC’s successful application for construction funding from the National Institutes of Health (NIH). The grant will add 30,000 square feet of research space—dedicated entirely to breast cancer—in the Medical School’s new Interdisciplinary Research Complex.

Finally, says Wilding, promising young faculty

members such as Randall Tibbetts, PhD, David Wassarman, PhD, and Scott Kennedy, PhD, have assured the continued growth of the pharmacology department in the area of cancer research.

The researchers are asking hard but compelling questions. What, for example, leads signal transduction mechanisms that ordinarily control cell growth to break down, stimulating unchecked growth and subsequent tumors? What causes signaling pertaining to the control of normal cell movement to go awry, leading to aberrant cell migration and metastasis? What signals initiate angiogenesis—the development of blood vessels required for tumor growth? How does abnormal signaling relating to cell structure produce overly dense cell matrices that can contribute to the increased tissue density that is associated with breast cancer?

In addition to cancer research, pharmacology faculty members collaborate with researchers at the UW Cardiovascular Research Center and the Center for Neuroscience to conduct investigations into disorders relating blood cells and blood vessels, and diseases such as Parkinson’s and Alzheimer’s.

Ruoho has also forged relationships with other campus units and departments. Biotechnology Center director Michael Susman, PhD, for example, holds a joint appointment with the department, as do Anna Huttenlocher, MD, of the pediatrics department, and William Murphy, PhD, of the biomedical engineering department. Faculty connections also exist with the departments of chemistry, ophthalmology and visual sciences, and medicine.

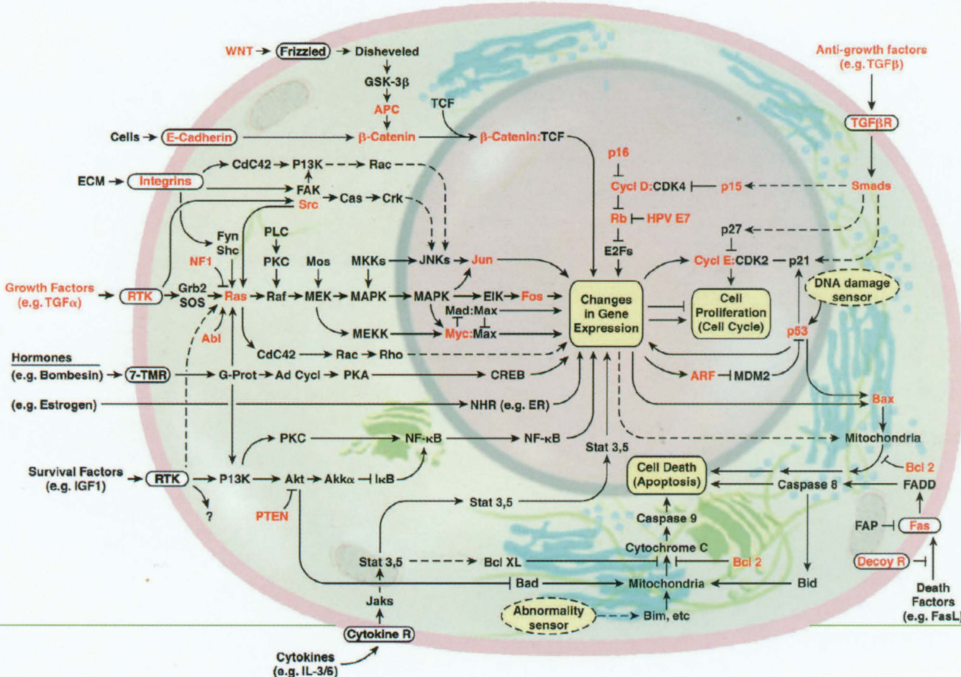
Indeed, Ruoho has made building and broadening the influence of the department

a top priority. Since he took over as chair a decade ago, the number of faculty members has increased from seven to 13.

“Dr. Ruoho has invigorated and renewed the Department of Pharmacology, transforming it to a dynamic group of exciting young investigators,” says Philip Farrell, MD, PhD, Medical School dean. “These young scientists—each of whom has the potential to be a superstar—are working on translational research at the molecular level. I have no doubt that they will contribute in essential ways to improving human health.”

Pharmacology faculty have earned wide recognition: three Hilldale Awards, two WARF named professorships, two Romnes Faculty Fellowships, six Shaw Scientist Awards and three Vilas Associate Awards. They serve or have served on 13 study sections, four scientific advisory boards and editorial boards of 12 leading scientific journals. Pharmacology faculty also have been awarded four patents, and have 28 applications pending.

*Many UW pharmacology department researchers study signal transduction pathways related to cancer, some of which are shown in the diagram at left. The scientists search for defects along the pathways—sources of many human diseases—that may be targets for future drug development.*



Beyond strengthening the department with stellar new hires, Ruoho has made a concerted effort to build the department's graduate degree program.

"My colleagues and I realized that without a doctoral program we wouldn't be able to recruit junior faculty," Ruoho says. "Graduate students are attracted to the cutting-edge research faculty conduct, and faculty require the assistance of graduate students."

Now involving 62 students trained by 39 faculty members in 13 departments campuswide, the Molecular and Cellular Pharmacology Program, supported by a large NIH training grant, is broadly interdisciplinary. This very mixture of many disciplines gives students abundant opportunities—in academia, industry and government—upon graduation, he notes.

Ruoho credits Richard Anderson, PhD, professor of pharmacology, with building the program from scratch. "Richard became inspired to develop the program a decade ago, and thanks to his dedication and that of his faculty advisory team, the program has succeeded beyond my expectations," he says.

The pharmacology department has also carried forward a memorable tradition of medical student teaching (for more, see "My Perspective" on page 47) through to the present, placing special



emphasis in recent years on ensuring that the coursework is as clinically relevant as possible.

Ruoho praises senior lecturer Michael Sievert, PhD, for his dedication to maintaining teaching excellence. Sievert is deeply engaged in the department's two required courses, the four-credit fall semester course and two-credit spring semester pharmacology courses. The department also offers a popular fourth-year elective on pain management.

Ruoho has ambitious plans for the future of the department. To enhance translational research, he would like to establish a clinical pharmacology division that encourages physician-scientists to partner with pharmacology faculty conducting basic research. He also believes that the department can be a leader in a campuswide center for drug discovery.

"Taking a leadership role on these two initiatives would be a natural extension of what we do as a department and a discipline," says Ruoho. "Our goal is to ensure that the basic science discoveries we make in signal transduction pathways will be applied to clinical situations that can truly reduce human suffering."

## A Tradition of Breakthrough Science

Exciting, important research has been a hallmark of the Department of Pharmacology. Emeritus faculty members have made significant contributions to the field over the years.

**Leonard Fahien, MD.** Fahien and colleagues discovered several signaling pathways that regulate insulin release from pancreatic islet cells, information that may help us understand how diabetes develops. He also pioneered studies of enzyme-to-enzyme interactions and the role of multi-enzyme complexes in mitochondria, energy-producing engines existing in all cells. As a former associate dean of the school, Fahien also greatly expanded medical students' opportunities to conduct research and organized the Medical Scholars Program.

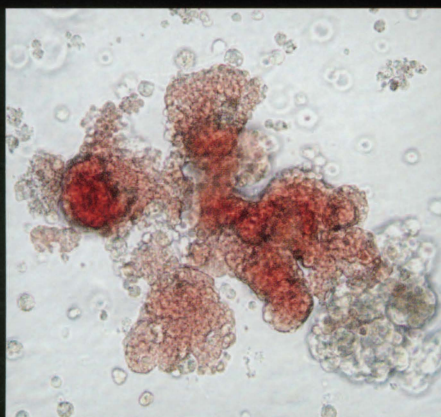
**Theodore Goodfriend, MD,** conducted groundbreaking research that identified an angiotensin receptor, part of the renin-angiotensin system. This cell communication network is responsible for heart and blood vessel function, and blood volume and pressure. Goodfriend's work has led to the development of two classes of anti-hypertensive drugs—ARBs (angiotensin receptor blockers) and ACE (angiotensin converting enzyme) inhibitors. These medications lower blood pressure by dilating blood vessels. Millions of people worldwide take the drugs, which now represent a billion dollar business.

**Lowell Hokin, MD, PhD,** former chair of the department, made seminal contributions to the field of pharmacology beginning in the 1950s. He and Mabel Hokin Neaverson, PhD, discovered that phosphoinositides—lipids, or small molecules, that comprise a portion of the overall milieu of the cell membrane—are intimately involved in transmitting signals within cells when activated by hormones and other molecular stimuli. The phosphoinositides serve as important second messengers. The impact of the work has steadily grown over the years, spawning multiple new scientific fields in biology. The department nominated Hokin twice for a Nobel Prize.

# Faculty research interests

## **RICHARD ANDERSON, PHD**

Anderson studies the phosphoinositide signal transduction pathway, a system that controls, among other things, cell migration. Concentrating on enzymes in the system called phosphoinositide kinases, his team discovered that one of them helps maintain adhesion between cells and also plays a key role in cell migration. When the scientists disabled the enzyme, cells pulled apart and became migratory, a hallmark of tumor cells. Since most cancer cells are of epithelial cell origin, understanding the role of kinases in transforming epithelial cells is especially important to effectively treating metastasis. Recently, Anderson found evidence of the enzymes related to this family of kinases in the cell nucleus, where they've never been seen before.



*Emery Bresnick has identified mechanisms and genes required for hematopoietic stem cells (precursor blood cells such as the ones shown above) to become blood cells of varying kinds.*

## **EMERY BRESNICK, PHD**

Bresnick's team strives to understand how the organization of DNA on chromosomes affects nuclear processes. Examining the structure of specific chromosomal regions and signaling that occurs within them, the scientists have made several novel discoveries. They identified mechanisms and genes required for precursor blood cells—

hematopoietic stem cells—to become blood cells of varying kinds, work that may lead to new methods to treat blood disorders. The team also focuses on receptors such as Notch-4, an important determinant of tumor progression, and neurokinins, which when activated block the assembly of endothelial cells into vascular networks underlying angiogenesis. This work may lead to better treatments for preeclampsia—dangerous hypertension that occurs during pregnancy.

## **JUNE DAHL, PHD**

For more than two decades, Dahl has committed herself to making pain management a priority in all healthcare settings. The efforts have earned her the American Cancer Society Distinguished Service Award. Her early work resulted in the creation of the Wisconsin Cancer Pain Initiative. The organization is dedicated to overcoming barriers that prevent the relief of pain. The Wisconsin program, which provides public, patient and professional education, has stimulated the creation of similar groups in many other states, as well as the American Alliance of Cancer Pain Initiatives. Dahl was instrumental in implementing pain management standards for the Joint Commission on Accreditation of Healthcare Organizations, and has played a pivotal role as a consultant to the World Health Organization.

## **ANNA HUTTENLOCHER, MD**

Abnormal cell migration can cause immune cells to trigger inflammation and tumor cells to metastasize. Huttenlocher studies the signaling mechanisms that regulate cell migration. She and her team focus on receptors such as integrins, adhesion molecules that promote stable interactions—and attachments—between cells and their environment, the extracellular matrix (ECM). The researchers have demonstrated that integrin plays a key role in cell migration speed and cell invasiveness. They also have found that the protease calpain

regulates interactions between integrin and the ECM. Huttenlocher expects that the results of her research will lead to the development of drugs for treatment of her pediatric patients with chronic inflammatory disorders.

## **COLIN JEFCOATE, PHD**

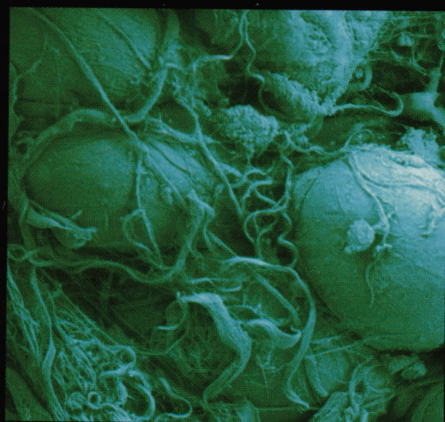
Jefcoate studies polycyclic aromatic hydrocarbons (PAHs), chemicals found in cigarette smoke, char-grilled meat and auto fumes. When exposed to enzymes called P450 cytochromes, PAHs initiate cancer, promote the formation of fat cells and alter metabolism. Jefcoate discovered a novel version of P450, CYP1B1, that makes many tissues exposed to PAHs especially susceptible to cancer. Humans deficient in this protein also have eye problems that cause glaucoma. Studying the role of CYP1B1 and PAHs in the development of various cancers, the researchers have shown that the protein must be present at the cancer's point of origin. Blocking the protein prevents PAH-induced polyps from progressing to tumors.

## **PATRICIA KEELY, PHD**

Since "dense" breast tissue is associated with a greater risk of breast cancer, Keely studies the collagen in breast connective tissue. Knowing that dense collagen activates signal pathways that disrupt normal breast epithelial cell behavior, she wants to understand what biochemical and genetic changes lead to this behavior. Identifying targets for the development of anti-tumor therapies is her goal. In imaging studies, her group also has found evidence for a collagen "signature" that is present even before a tumor is palpable. Keely and colleagues are investigating whether the signature can be developed as a tool for the early diagnosis of breast cancer.

## **SCOTT KENNEDY, PHD**

Kennedy's research seeks a better understanding of small RNAs, molecules that silence, or inhibit, RNA and thereby



Patricia Keely has gained important new insights into the dense breast tissue that leads to increased risk of breast cancer. In the image above, wavy collagen filaments surround round breast epithelial cells.

function to prevent protein expression. This ubiquitous process, called RNA interference (RNAi), may begin when RNA is over-expressed or damaged. Such abnormalities can lead to the production of aberrant protein, which can be associated with many diseases. Kennedy's goal is to take advantage of this normally occurring RNAi process and adapt it for use as a therapy—to down-regulate expression of defective protein. Kennedy's team uses genetic screens to identify and characterize various elements of the RNAi machinery.

### JONATHAN LEVENSON, PHD

Levenson is interested in the molecular basis of memory formation and retention, studies that may have major implications for Alzheimer's and other diseases associated with aging. He focuses on mechanisms of gene regulation and how they may influence neuronal physiology, and, hence, normal and abnormal cognitive function. Levenson has found specific genes that are important in long-term memory formation, and is continuing to study signaling pathways that activate transcription factors driving expression of these and related genes. He also is interested in molecular systems that regulate the organization of DNA on

chromosomes, which may be important to learning and memory.

### SHIGEKI MIYAMOTO, PHD

Many cancers result from genetic damage, a cell's inability to repair it and the damaged cell's inappropriate survival. Miyamoto's team studies nuclear factor kappa B (NF- $\kappa$ B), a cell-survival protein activated by various forms of DNA damage. Until it receives signals to repair DNA damage inside the nucleus, NF- $\kappa$ B is maintained inactive outside the nucleus by inhibitor proteins. Looking for triggers that activate NF- $\kappa$ B, the researchers found an unexpected communication network between damaged DNA in the nucleus and the external NF- $\kappa$ B. They also found a novel inactivation mechanism that inhibits NF- $\kappa$ B. Especially relevant to multiple myeloma and other cancers, the work may identify new drug targets to block NF- $\kappa$ B-activity.

### ARNOLD RUOHO, PHD

Ruoho's research focuses on dynamic molecular signal transduction events that occur at the cell surface in response to hormones and neurotransmitters. He is an expert in the use of photo-activatable drug molecules as probes for G-protein-coupled receptors and neurotransmitter transporters essential to the normal functioning of neuronal, cardiac and visual systems. Ruoho and James Hurley, PhD, of the National Institutes of Health, produced the first crystal structure of the catalytic core of the enzyme adenylyl cyclase, which generates the powerful second messenger, cyclic AMP. The achievement earned them the Golden Crystal Award. Ruoho's current work has expanded to include the definition of the biochemical and cellular properties of sigma receptors, which may be targets for drugs to treat cancers such as melanoma.

### RANDAL TIBBETTS, PHD

Genetic instability is a hallmark of the cellular transformation that produces virtually all cancerous tumors. The instability can stem from gene mutations and breaks, and radiation and chemical

damage. Tibbetts studies genomic surveillance, trying to understand mechanisms in the nucleus that are responsible for recognizing, stopping and repairing DNA damage that can lead to instability. His team focuses on a family of surveillance proteins that includes ATM (ataxia telangiectasia-mutated) and ATR (ATM-Rad3-related). Tibbetts and his team hope to shed light on the exact way the proteins contribute to DNA damage signaling pathways.

### DAVID WASSARMAN, PHD

Wassarman seeks to understand how signaling pathways impact transcription factors that control whether genes will be activated or repressed. Transcription is the process that reads DNA and transcribes it into its complementary RNA sequence, ultimately leading to DNA translation to protein. Using fruit flies, Wassarman's team concentrates on transcription factors such as TFIIID, and has found that mutations in a certain sub-unit of TFIIID can reduce a cancer-causing gene's signaling ability. The researchers also are studying gene function associated with ATM, and its relationship to the neurodegenerative disorder called ataxia telangiectasia. The eventual goal is to develop drugs to prevent the disorder.

### BERNARD WEISBLUM, MD

Weisblum has done seminal work over the years on the way antibiotics function at the molecular level to alter gene and protein expression, and how the growing, alarming problem of antibiotic resistance develops. Examining signal transduction pathways in bacteria, Weisblum and collaborators have concentrated on resistance to vancomycin, an antibiotic of last resort, and erythromycin. The scientists have created methods to screen new antibiotics. Weisblum is also hoping to develop a completely new line of antibacterial agents that could reduce resistance by disrupting formation of bacterial membranes and walls.





Coming Soon

# The Definitive History

OF UNIVERSITY OF WISCONSIN MEDICAL SCHOOL



University of Wisconsin Medical School will mark its centennial in 2007. As you will read in coming issues of the *Quarterly*, the school plans many celebrations, particularly during the 2006-2007 academic year.

One important way to mark the occasion will be an official history of the school. University Historian John Jenkins, PhD, is in the process of researching and writing that history. It is a process he is very familiar with: As part of the University History Project for more than 20 years, he has authored or co-authored six histories pertaining to various aspects of UW-Madison and the Medical School.

We recently talked with Jenkins and exchanged e-mails with him to learn more about his history, his approach to writing history, the sources he is using for the current project and some unexpected discoveries he has made. The questions and answers follow.

**Q: What is the University History Project and how long have you been working on it?**

The University History Project is a special project of the College of Letters and Science (L&S). In 1982, UW-Madison Chancellor Irving Shain and L&S Dean E. David Cronon, PhD, set it up to begin gathering data in anticipation of the third volume of UW's official history. (Merle Curti and Vernon Carstensen wrote Volumes I and II in the late 1940s as part of the UW centennial celebration.)

Barry Teicher and I, both recent PhD recipients, were hired to do this job, which we did. In 1989, Teicher transferred to the UW Archives as University Oral Historian and Cronon retired from the deanship to join me on a decade-long collaboration resulting in two additional volumes of the general campus history, published as part of the UW sesquicentennial celebration. Subsequently, as the University Historian, I have been engaged in writing histories of L&S and the Medical School.

**Q: What books have you authored or co-authored in your years with the project?**

UW studies include: (1) a history of Summer Session (with Teicher); (2) a history of student housing (with Teicher); (3) a history of the

College of Agricultural and Life Sciences; (4) a history of the Medical School's Department of Radiology; (5) Volume III of the general UW history, 1925-1945 (with Cronon); and (6) Volume IV of the general UW history, 1945-1971 (with Cronon).

**Q: Your bachelor's degree is in philosophy and your doctoral degree is in education history. How has that background helped you in your work?**

As an undergraduate, I was primarily interested in the history of philosophy, which, at least when I was involved, focused on large systems of thought—about the nature of life, knowledge and meaning—as propounded by a succession of individual philosophers. I was fascinated by the challenge of trying to interpret or understand “the world” according to the varying perspectives of the people I was studying.

One of the key lessons I took away from this was that it is helpful to comprehend people's thoughts and intentions before judging them and what they do. (This was the Vietnam era, and there was lots of judging going on.) And for that, I required information.

Thus, in graduate school, I turned to the study of the history of education, where philosophical perspectives and favored policies have tended historically to be linked

explicitly in a “logical” sort of way. So I concentrated on individual people (usually educational reformers), their actions and their stated reasons for the way they acted, as opposed to focusing on broader, more nebulous (to me) social “forces” and the like as important determinants.

**Q: How would you describe your general approach to writing history? And how does it differ from that of others?**

It's been my good fortune to spend most of this career studying in great detail a single agency—UW-Madison and, to some extent, the UW System—at a time when institutional history has largely been out of vogue in a profession that emphasizes broader, more global issues and concerns. Instead, I have tried whenever possible to tell factually based and (sometimes) interesting stories about life at the University of Wisconsin. This mission—perhaps somewhat intellectually limiting to some—was thoroughly congenial to Dave Cronon and me, and we were glad to leave it to others to posit larger meanings and explanations.

Even in the case of a single institution's history, on the other hand, the possible types of stories to tell are nearly unlimited. As it turned out, personal interests on

the authors' part and the nature of available data encouraged the writing of accounts about the history of institutional policies, services and governance mechanisms. Therefore, we have tended to produce “top-down” histories, as opposed to the more currently popular, ideologically driven, “bottom-up” variety. Besides, we've always lacked the resources to do a competent job on the latter.

On a more technical level, the challenge of writing institutional history is compounded by the nature of universities, which involves numerous areas of great expertise. Obviously I cannot master each field, so what do I do? Our answer has been to seek out data that was produced as close in time and space to the events under discussion as possible. Thus, for example, a memo written by a dean on the day he decided something is far superior for my purposes to a recollection of that day several years later. This is common sense, of course, but the pitfalls are much greater in doing this sort of history than in some others.

**Q: Your history books aren't just collections of facts. They tell stories. How do you do that?**

For most of us, time is linear—and therefore so is history. Thanks to the computer, it is easy to

organize data from numerous sources chronologically, and the result, if one reads through our printouts, is almost a self-written story. Start at the start and work through to the end. In this sense, the job of writing—like that of sculpting in stone—becomes to chip away the superfluous until all that is left is the imbedded story. Nothing to it!

**Q: As you write the Medical School history, who do you see as your reader?**

An academic physicist and a Harley-Davidson upholsterer read my latest book and both found it interesting and informative. I'm shooting to please both of them again.

**Q: What are your sources of information for the Medical School book?**

As much as possible, the Medical School history will be based on data that existed at the time events under discussion were taking place. These materials include minutes from UW System Board of Regents and faculty meetings, documents, correspondence and official reports. In-house Medical School periodicals are sometimes helpful, as are publications of the Wisconsin Medical Society. Prior to the 1960s, the *Daily Cardinal* and the UW alumni magazine were good.

**Q: How are you organizing the information?**

The chapters are organized chronologically, largely by administrative eras, which sometimes involve more than one dean. I tried arranging the book by categories—such as administration, research, instruction, clinical, etc.—but too many redundancies resulted and the “richness” of the overall picture was clouded.

**Q: You strive to keep yourself, your biases, out of the histories you write. How do you do that?**

In conducting research I try to identify sets of data where information about the Medical School “funnel” through. For example, until recent years, correspondence between the dean and the main campus administrator (first the president, now the chancellor) tended to include discussions of key issues for the school. Similarly, Board of Regents minutes are likely to contain references to major decisions and developments. We then make computerized notes on these collections only with reference to the Medical School and without designating (to any great extent) what is and is not important. Eventually we pull all of these notes together, tagging them by date. We then study the result to determine what, in fact, people were concerned about

and doing at any given time. This works very well, and as much as possible it leaves my personal interests out of the mix.

**Q: How will your book be different from past histories of the Medical School?**

My volume will attempt to identify and make intelligible the major events and issues with reference to the school as a whole. Time, limited resources and, yes, personal preferences force this arrangement. Thus, it will not be a history of the several departments, an exhaustive review of research contributions or a full survey of public service accomplishments, although much of that is included as by-products of the overarching themes. This is perhaps unfortunate but unavoidable. On the other hand, the history I am preparing will help set the context for detailed studies in these areas.

**Q: Would you like to describe how the Medical School has been perceived over the years by university administration?**

Successive university leaders have interpreted the Medical School variously. Sometimes they have ignored the school, other times they have tried to impose reforms on it. I intend to include

enough information so that the reader can judge the significance of all this.

**Q: Can you give us an example or two of things you have discovered that were unexpected?**

Most significantly—and I should have guessed it—the Medical School emerged out of the scientific heart of the University and constitutes an increasingly significant factor in this regard. This is relatively easy to study and comprehend, and it is of major importance.

More surprising to discover was the importance of personality factors in determining the success or failure of Medical School deans over the years. In one case, a strong persona masked profound difficulties besetting the school that took years to resolve.

In more recent history, at least two school leaders failed to achieve the fundamental objectives for which they were hired, largely because they alienated their colleagues on a personal level. Occasionally, by the way, when events were driven by outside forces, neither the dean's personality nor his ideas had much influence one way or the other.



## Two Wisconsin Medical Schools Form Research Alliance

The state's two medical schools and their respective research foundations have formed an alliance to foster collaborative research and facilitate the transfer of technology to produce products and services that benefit patients.

The alliance agreement between the University of Wisconsin Medical School (UWMS), the Wisconsin Alumni Research Foundation (WARF), the Medical College of Wisconsin (MCW) and the MCW Research Foundation (MCWRF) will also promote entrepreneurship among faculty, post-doctoral fellows and students, and it will help to create new technology-driven companies in the state of Wisconsin.

By agreeing to share information about research opportunities in Wisconsin and throughout the United States, the two medical schools will promote research collaborations involving investigators at the two institutions.

"This alliance agreement will foster model collaborations like those already under way in proteomics and biopreparedness," says Paul M. DeLuca, PhD, UW Medical School vice dean and

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"This agreement reflects the recognition that the two institutions can accomplish more by working together than they can as two separate institutions."

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associate dean for research and graduate studies.

William R. Hendee, PhD, president of the MCWRF and dean of the MCW Graduate School of Biomedical Sciences, adds, "This agreement reflects the recognition that the two institutions can accomplish more by working together than they can as two separate institutions. It also acknowledges that the transfer of technologies to prevent disease and improve the care of patients is enhanced by collaboration between the two institutions."

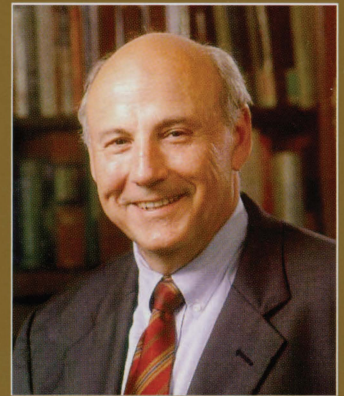
The agreement was co-signed by the school's respective technology transfer offices. MCWRF and WARF will work closely to increase their visibility and exposure to technology licensing and business opportunities in Wisconsin and throughout the United States, including opportunities to contribute

to the formation of new knowledge-based companies.

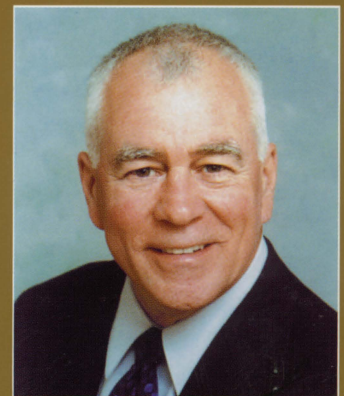
"We are very pleased with this new alliance," says Carl E. Gulbrandsen, WARF's managing director. "We look forward to proactively sharing information, expertise and industry contacts related to technology transfer."

His MCWRF counterpart, Joseph Hill, calls the new alliance "a way to identify technologies that may be combined and licensed to companies in the pharmaceutical, medical device, biotechnology and informatics fields for further development and use in the commercial market."

The two medical schools bring a combined total of more than \$260 million (UWMS is \$166 million; MCW is \$94 million) of extramural research funding from the National Institutes of Health (NIH) and more than 2,300 faculty (MCW has 1,100; UWMS has 1,200) to foster collaborative programs and encourage academic entrepreneurship. Collectively, this would place the new alliance eighth among the nation's 125 medical schools in NIH funding.



*Paul DeLuca, PhD*



*William Hendee, PhD*

## New Leaders for Four Departments



*William Busse, MD '66*



*Thomas Grist, MD*



*Paul Kaufman, MD*



*Ellen Wald, MD*

University of Wisconsin Medical School recently appointed William Busse, MD '66, to be chair of the Department of Medicine, Thomas Grist, MD, to be chair of the Department of Radiology, Paul Kaufman, MD, to be chair of the Department of Ophthalmology and Visual Sciences, and Ellen Wald, MD, to be chair of the Department of Pediatrics.

"With these outstanding new appointments, we clearly will strengthen and reenergize the top leadership of UW Medical School," says Philip Farrell, MD, PhD, dean of the school. "The new chairs will enhance patient care, research and educational programs in four of the school's largest and most dynamic clinical departments."

UW Medical School consists of 15 clinical departments, 11 basic science departments and 19 centers and institutes.

The new appointees were selected following national searches for the best candidates.

"All of these people are world-class physician-scientists with international reputations for excellence who have made—and are making—very significant contributions to their fields," Farrell says. "They are well-rounded, approachable individuals who also are strongly supported by their faculty as highly respected educators and clinicians."

The new chairs will bolster disciplines that have been identified by the school as strategic priority areas. Farrell predicts exciting advances as the new leaders strive to achieve ambitious visions in care, teaching and research.

**BUSSE** has built an expansive research program that concentrates on the cellular and molecular mechanisms of asthma, virus-induced asthma and severe asthma. He has headed the asthma and clinical immunology section in the UW Department of Medicine since 1978. He was director of the UW General Clinical Research Center, the NIH-funded specialized clinical research unit within UW Hospital and Clinics.

Among other things, Busse heads a six-year \$55.8 million U.S. Department of Health and Human Services project, the largest ever at UW Medical School, that addresses the poorly understood asthma “epidemic” affecting inner-city youth. The project aims for a better understanding of the biological and environmental mechanisms that put inner-city children at much higher risk for severe asthma than youngsters who live outside urban areas.

A graduate of UW Medical School, Busse completed his internship in medicine at University of Cincinnati and a residency and research fellowship in medicine at UW Hospital and Clinics. The Charles E. Reed Professor of Medicine, Busse assumed the medicine department’s top leadership position in August.

**GRIST** has been involved in the development of magnetic resonance imaging (MRI) technology for 20 years as a biomedical engineer and physician. The holder of 12 patents for MRI inventions, he is internationally recognized for the development and clinical application of MRI techniques used to evaluate cardiac and vascular disorders.

He also is venturing into new image science arenas, such as molecular imaging—the detection of biologic processes at the cellular and molecular levels. He hopes to use this approach to guide, for example, the delivery of stem cells used in the treatment of heart disease, assess subsequent gene expression in stem cells, track the transition of stem cells to functional tissue and quantify clinically important proteins.

Grist is a graduate of the Medical College of Wisconsin (MCW). He completed an MRI research fellowship at MCW, an internship in medicine at UW Medical School’s Milwaukee Clinical Campus, and a diagnostic radiology residency at Duke University, where he was chief resident. He joined the UW Medical School faculty in 1991 and is now the Robert Turell Professor in Imaging Science. He took on the new leadership role last spring.

**KAUFMAN**, who became chair last October, has developed one of the country’s top glaucoma and presbyopia research laboratories in his 30-year career at UW. Glaucoma is the second leading cause of blindness in the United States, and presbyopia, the loss of near focus that occurs in all people over age 45, is the most common of all ocular afflictions.

To better understand glaucoma, which is associated with increased eye pressure, Kaufman studies the aqueous humor, the clear fluid contained in the small compartment between the cornea and the lens. To learn more about presbyopia, which is an inability to adjust to seeing things near and distant, he studies muscles and other structures near the eye lens.

Kaufman earned his medical degree from New York University School of Medicine, did an internship in medicine at Bellevue Hospital in New York and completed an ophthalmology residency at Washington University. Prior to joining the UW faculty in 1975, Kaufman served as a National Institutes of Health research fellow in Uppsala, Sweden. He is the Peter A. Duehr Professor of Ophthalmology and Visual Sciences.

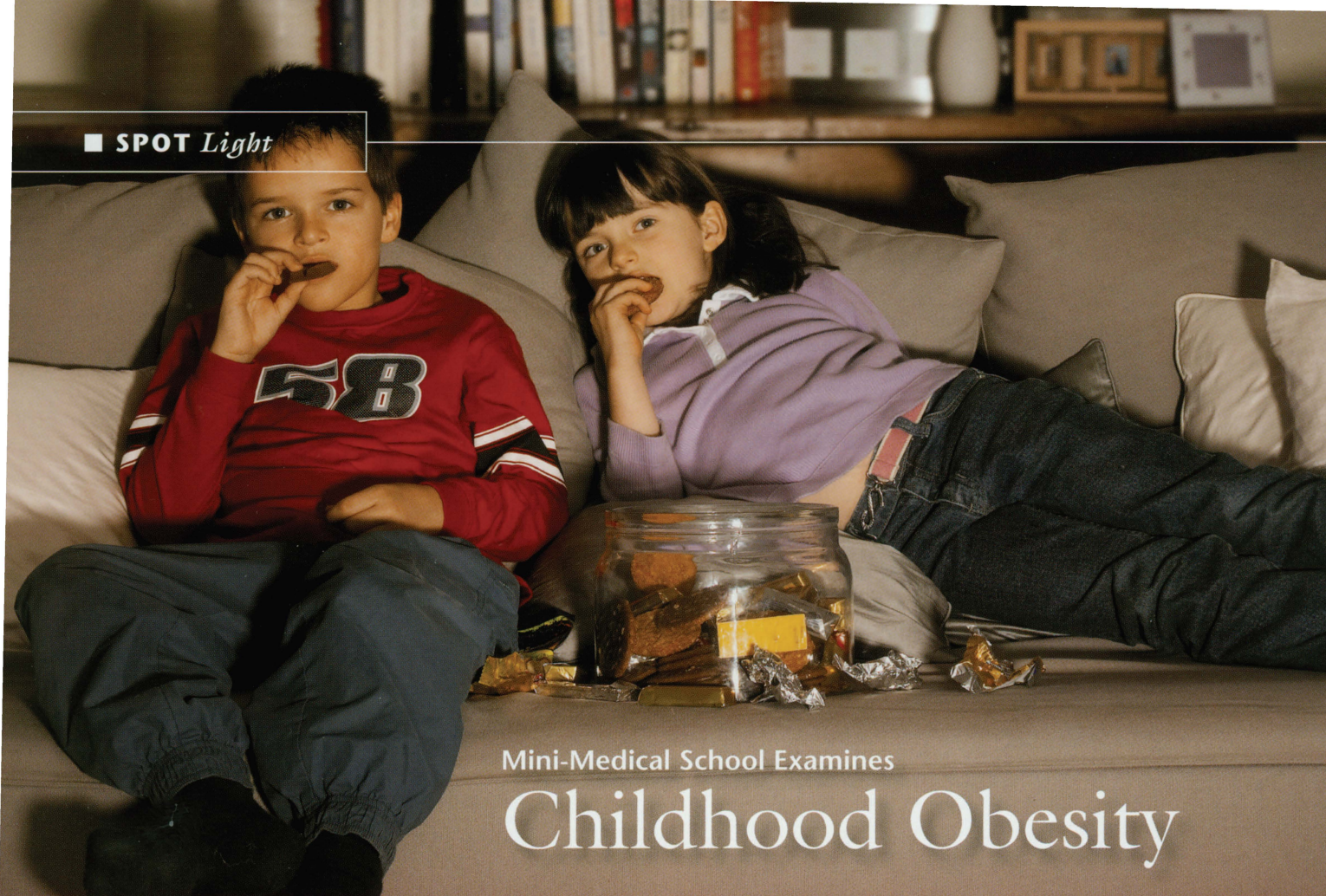
**WALD**, who will become the chair of pediatrics and medical director of the American Family Children’s Hospital in January 2006, is chief of allergy, immunology and infectious diseases at Children’s Hospital of Pittsburgh and professor of pediatrics and otolaryngology at the University of Pittsburgh School of Medicine.

Wald is a nationally recognized expert on the diagnosis and treatment of pediatric infectious diseases. Her research interests include sinusitis, otitis media, group A streptococcal infections, urinary tract infections and bacterial meningitis.

She is chair of the section of infectious diseases of the American Academy of Pediatrics (AAP) and a member of the sub-board of infectious diseases of the American Board of Pediatrics.

In 1997, Wald received the Pediatrician of the Year award from the Pennsylvania Chapter of the AAP.

Wald earned her medical degree from SUNY Downstate Medical Center in Brooklyn, New York. She completed her residency in pediatrics at Kings County Hospital in Brooklyn and her fellowship in infectious disease at the University of Maryland Hospital.



Mini-Medical School Examines

# Childhood Obesity

by Corissa Jansen

Finding solutions to pediatric obesity and its far-reaching repercussions for society was the focus of this year's Mini-Medical School, a series of public informational sessions offered by the University of Wisconsin Medical School this summer.

The program, which ran on four consecutive Tuesday evenings, featured physicians and public health officials who tackled a different aspect of the childhood obesity epidemic at each free session. The turnout was excellent.

The problem doesn't simply affect overweight kids today, experts say. The long-term effects on society can be staggering, if those overweight children grow up to become obese adults.

"It's a complex problem and it needs comprehensive solutions," said Madison mayor Dave Cieslewicz, who participated in the final session, "Creating a Healthy Environment for Kids."

Changing community norms and habits—like switching the foods available in school vending machines or letting children off the bus 400 yards away from school in good weather—is a beginning.

Such changes can extend to athletics, said Patrick Remington, MD '81, MPH, UW Medical School professor of population health sciences. In studies of high school sports in Wisconsin, participation rates are generally high in the freshman year, he said. But those rates drop significantly in subsequent years as the competitive nature of high school sports takes hold.

"Why not reward schools for participation and not for winning the state championship?" asked Remington, also director of the Wisconsin Health Policy Institute.

Cities can also build coalitions with community groups and businesses. One way that's happening in Madison is through the "Fit City Madison" initiative, started two years ago to improve

nutrition and increase physical activity among all residents.

Statewide efforts also are under way, as the Wisconsin Department of Health and Family Services works with the Centers for Disease Control and Prevention to encourage people to balance caloric intake with "caloric expenditure."

According to Murray Katcher, MD '75, PhD, chief medical officer for the Wisconsin Department of Health and Family Services, efforts involve spreading resource materials and organizing local activities aimed at improving physical activity and nutrition.

One example is a campaign to promote urban gardening.

"What we're trying to do is share ideas and change the general message," Katcher said.

UW Mini-Medical School was funded by an educational grant from Pfizer, Inc.

## White Honored as Royal Society Fellow

by Paroma Basu

Cell biologist John White, PhD, University of Wisconsin Medical School professor of anatomy, has been elected to the Fellowship of the Royal Society, the highest scientific accolade granted in the United Kingdom. White's UW anatomy department colleague Rainer Guillery, PhD, also is a member of the elite society.

Established 345 years ago, the Royal Society is the oldest independent science academy in the world. Each year it elects new fellows on the basis of distinctive achievements in natural science, mathematics, engineering and medicine. Past fellows include Isaac Newton, Charles Darwin and Albert Einstein.

"It's rather nice to be remembered by my countrymen," says the British-born White, who has earned acclaim for dual contributions to the fields of microscopy and cellular genetics. White also heads the UW Laboratory for Optical and Computational Instrumentation, which is developing powerful laser-scanning microscopes to enable scientists to explore the dynamic environment within cells.



John White, PhD

As an undergraduate, White studied physics at Brunel University and in 1969 began doctoral research at Cambridge University. He studied the nervous system of the worm *C. elegans*, and simultaneously developed imaging techniques to graphically reconstruct the *C. elegans* nervous system.

After earning his doctorate, White remained at Cambridge and worked at the Laboratory of Molecular Biology. Notably, he was a member of the Cambridge team that developed the first confocal microscope, enabling biologists to observe the inner workings of living cells. The microscope has since become a standard tool in biomedical research.

In 1993, White joined UW-Madison, a recognized leader in *C. elegans*.

Royal Society Fellows retain their status for life and are entitled to use the abbreviation FRS after their names.

## Wolff Appointed Head of Cardiovascular Medicine

by Renae Buchheim

Cardiologist Matthew Wolff, MD, has been appointed head of the Division of Cardiovascular Medicine and Tuchman Professor of Medicine in the UW Department of Medicine. With the appointment, the Medical School has earmarked \$1.1 million in funding to develop a cardiac regenerative medicine program, explore new stem cell therapies and expand regional initiatives for research and education.

Wolff will focus heavily on fund raising for the \$134 million Interdisciplinary Research Complex, a portion of which will be allocated to cardiovascular medicine. He also intends to build on the division's clinical and research programs that have achieved national recognition.

"We have the good fortune of having one of the nation's preeminent cardiovascular stem cell investigators—Timothy Kamp, MD, PhD—on our faculty," says Wolff. "His program and our growing clinical program in end-stage heart disease form a solid foundation for cardiovascular regenerative medicine."

WU's heart and vascular program unites academic and research components with outstanding clinical care, Wolff adds. "Collaboration between those initiatives benefits so many people far beyond Wisconsin," he says.



Matthew Wolff, MD

Wolff received his medical degree from Johns Hopkins University School of Medicine. He joined the UW Medical School faculty in 1993, and currently serves as director of the Oscar Rennebohm Cardiovascular Research Laboratories, the Interventional Cardiology Fellowship Program, and UW Hospital's Adult Cardiac Catheterization Laboratories.

He has been the principal investigator on several multi-center clinical trials in interventional cardiology and is currently a member of the American College of Cardiology's (ACC) Committee on Cardiac Catheterization and Interventional Cardiology.

Wolff will co-chair the 2006 Scientific Sessions of the ACC. He is a past recipient of a National Institutes of Health (NIH) Clinical Investigator Development Award and has received multiple research grants from the NIH and the American Heart Association.

# Doctors Show Support for City Smoking Ban



by Gloria Meyer

Approximately 100 University of Wisconsin Medical School doctors and 50 others attended a news conference August 16, 2005, to focus on new research from other communities that have banned indoor smoking.

At the conference, sponsored by the UW Center for Tobacco Research and Intervention (UW-CTRI), speakers emphasized the known dangers from secondhand smoke, including lung cancer, asthma and heart disease. They spoke out in support of the city smoking ban that went into effect July 1. Several groups are calling for the ban's repeal.

UW Health physicians Joan Schiller, MD, a lung cancer specialist, Tracey Weigel, MD, a cancer surgeon, and Minesh Mehta, MD, a radiation oncologist, provided insight into the association between lung cancer and secondhand smoke. Weigel cited a case of a 28-year-old waitress who died from exposure to secondhand smoke.

Patrick McBride, MD '80, MPH, spoke on heart disease and heart attacks caused by exposure to secondhand smoke, pointing to a Helena, Montana, case showing a 40 percent decrease in hospital admissions for heart attacks during a smoking ban.

Darrell Link, MD, a Beaver Dam, Wisconsin,

physician with lung cancer from secondhand smoke, spoke of his struggle with a disease he said he, by all rights, should not have. He never smoked, nor did any of his family.

UW-CTRI director Michael Fiore, MD, MPH, addressed the importance of clean indoor air and pointed out that an exemption in the smoking ban for bars that can show they've suffered from the ban unfairly penalizes those establishments that have worked hard to provide clean indoor air for patrons.

Fiore also referred to a Kentucky study showing a 50 percent decrease in nicotine found in hair, and a similar decrease in colds and sinus infections after just three

months of a smoking ban in Lexington.

The physicians' intent at the news conference was to return the discussion to health, the precise reason the Madison ordinance was enacted.

"The health hazards from secondhand smoke far outweigh any other considerations," Fiore said.

The press conference was covered by two television stations, and drew front-page news and editorials plus radio coverage. The media also covered a rally at the Capitol involving people working to repeal the smoking ban.

## Awards Given to Six New Investigators



The Medical Education and Research Committee (MERC) of the Wisconsin Partnership Fund for a Healthy Future recently granted awards to six newly appointed University of Wisconsin Medical School assistant professors.

The "New Investigator Program" was created to identify new faculty with ideas that advance biomedical sciences; facilitate the application of science to the prevention, diagnosis and treatment of disease; and, in collaboration with communities, promote the application of translational research.

A brief description of each project follows.

**Alexandra Adams, MD, PhD,** Department of Family Medicine. *Healthy Children, Strong Families—Supporting Caregivers in Improving Lifestyles.* This project builds on a study of childhood obesity in three Wisconsin Native American tribes by evaluating metabolic and behavioral changes in the adult primary caregivers of American Indian children. By engaging the parents in behavior changes that will benefit themselves as well as their children, this study will allow researchers to determine whether a family-based intervention is an effective method for changing behavior in adult caregivers. Endocrinology fellow

Deb Wubben, MD, MPH, also be working on the project.

**Christina Hull, PhD,** Department of Biomolecular Chemistry and Medical Microbiology & Immunology. *Investigating Fungal Infection: Analysis of Spores from the Human Fungal Pathogen *Cryptococcus neoformans*.* Often fungal growth and development result in the production of spores that can disperse into the environment, be inhaled by humans and germinate in the lungs. *C. neoformans* is a yeast-like fungus that usually causes only minor respiratory disease but can also disseminate to the central nervous system and produce a fatal form of meningitis. The goal of this project is to understand the properties of fungal spores that allow them to infect humans and cause disease.

**Scott Kennedy, PhD,** Department of Pharmacology. *Molecular Analysis of the Putative Mammalian siRNase ERI-1.* RNA interference takes advantage of a naturally occurring process to degrade RNA, the intermediary translator between the DNA of genes and the protein molecules they encode. By degrading RNA, genes can be "turned off." Initial successes utilizing RNA interference to target cancer genes have generated excitement that this technology may eventually be used to treat human disease. The project will increase knowledge of RNA interference and how the process is regulated. It may identify drug targets that eventually will allow physicians to use RNA interference as a therapy in a wide spectrum of diseases.

**Luigi Puglielli, MD, PhD,** Department of Medicine. *Sterol Carrier Protein-2 Is a Novel Link Between Aging and Alzheimer's Disease.* This project seeks to identify new molecular links between aging, Alzheimer's disease and cholesterol metabolism. Sterol carrier

protein-2 is a small protein that is highly expressed in the brain, can function as a cholesterol carrier and is activated in an age-dependent fashion. Since intracellular cholesterol metabolism and distribution can regulate the rate of amyloid-peptide generation, the first molecular step in the development of Alzheimer's disease, understanding more about sterol carrier protein-2 may shed new light on the pathogenesis of Alzheimer's disease.

**Stacey Schultz-Cherry, PhD,** Department of Medical Microbiology & Immunology *Novel Therapies Against Influenza Infection.* Two limitations of the existing flu vaccine are that the vaccine does not work effectively in high-risk groups, such as the elderly, and the virus changes every year, requiring the development of new vaccines annually. Blocking viral replication with novel antiviral peptides that attack all strains of influenza virus may be a way to address those limitations. The goals of this project are to understand how antiviral peptides regulate viral growth, and how these peptides may be used in preventing and treating influenza infection in young and aged animal models.

**Xin Sun, PhD,** Department of Medical Genetics. *Molecular Mechanism of Lung Organogenesis, Tumorigenesis and Asthma.* The long-term goal of this research is to establish the genetic bases for devastating lung diseases such as Respiratory Distress Syndrome, lung cancer and asthma. Researchers on this project expect to use a combination of advanced genomic and genetic approaches to uncover gene function related to the development of the lung and diseases that affect it.

# Rooting Medical Research in Communities

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“For sustained change to occur, it’s important to work with communities to enhance their capacity to conduct research themselves.”

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by Masarah Van Eyck

“Up here, there’s an old saying that medical researchers are a lot like mosquitoes,” says Ruth Etzel, MD ’80, PhD, from her office in Anchorage, Alaska. “They come in the summer, take your blood, and then go away and you never hear from them again.”

But this reputation was all the more reason for Etzel to move to and settle down in Alaska for several years. In 2001, she left Washington, D.C., to become the research director at the Southcentral Foundation at the Alaska Native Medical Center.

There, at the Alaska Native-owned and -managed facility, she has worked with others to establish the first longitudinal cohort study in the United States for Alaska Native and American Indian people. The long-term study will parallel and complement the Framingham study, a now-famous longitudinal cohort started in the 1950s, which primarily focused on Americans of European descent.

For Etzel, a commissioned officer in the U.S. Public Health Service for the past 20 years, time in Alaska has given her an opportunity to implement research methods that she has come to trust in her previous two decades of work in public health. She built that trust in Africa, the Middle East and Asia, where she investigated everything from acute pesticide poisonings to air pollution disasters.

Etzel learned to be a medical sleuth as an Epidemic Intelligence Service (EIS) officer at the Centers for Disease Control and Prevention (CDC). She quickly became the “go-to” person at the CDC for solving tough epidemiologic mysteries, helping to uncover the causes of epidemic asthma in Barcelona, sudden deaths in Sierra Leone, thallium poisoning in Guyana, and, most recently, acute pulmonary hemorrhage among infants in Cleveland, Ohio.

“So much of what I did was ‘fly-by’ research for years,” says Etzel. “Then you begin to realize that, long-term, that is not the

answer. Well, you *do* help people when you fly in to help solve an emergency health problem. But for sustained change to occur, it’s important to work with communities to enhance their capacity to conduct research themselves.”

Etzel has always been a trailblazer. She founded the Division of Epidemiology and Risk Assessment in the Office of Public Health and Science in Washington, D.C., and also founded and served as chief of the Air Pollution and Respiratory Health Branch at the CDC.

Clearly, she understands and values the work of federal agencies. But after 16 years in the powerful and sometimes prohibitively bureaucratic center of things, she was ready to spend more time at the grass-roots level—and to work closely with communities, which is where, she believes, real public health changes are possible.

And so, instead of moving in with preconceived notions about Alaska Native health issues, she and a handful of local researchers began by simply asking people from the 226 Alaska Native tribes one



*With the Chugach Mountains in the distance, Ruth Etzel stood outside the Alaska Native Medical Center in Anchorage.*



As a first-year medical student (shown above with her gross anatomy tank mates), Ruth Etzel (right) already was interested in the role of midwives and other global public health issues.

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Etzel has received numerous research awards, including a Commendation Medal from the U.S. Public Health Service for her epidemiologic work on the health effects of oil well fires during the first Gulf War.

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question: What is it that you really want to know about your health?

What the researchers heard most was: Why do some people live to the ripe old age of 85 while other people die in their 50s?

“In other words,” Etzel says, “Alaska Native people wanted to understand what keeps people healthy.”

This is especially relevant, Etzel believes, as the diet and physical activity levels of Alaska Native people change. The shift away from traditional foods like whale and seal, for example, can radically alter health—not to mention jobs that have evolved from hunting by dogsled and fishing to traveling by car and sitting in offices all day.

“It’s a particularly important question for Native communities in which elders are so highly valued,” Etzel says. “Keeping elders healthy is an extremely important priority in Alaska Native culture.”

Native participants from many areas of Alaska take part in the longitudinal study. Participants answer questions about environment, diet, lifestyle, traditional medicine

and spirituality on computers that use images and words to communicate questions and collect data. “We’ve tried to make this study one that someone of any age or educational background will feel comfortable doing,” Etzel says.

This kind of self-driven questionnaire, where white-coated researchers are largely absent, can help take the guinea pig-like feel out of the process, she adds.

“All the epidemiologic methods I’ve learned through the years I now teach and share with young Alaska Native people, who are preparing to assume responsibility for future studies, in which Alaska Native people will take the lead in determining the focus and methods of their own research,” Etzel says. “And

that’s really the way sustained change is going to occur.”

Etzel’s willingness to embrace challenges in order to enact change is nothing new. A native of Menomonee Falls, Wisconsin, she says she always had “a desire to explore the world.” She first left home to attend college at St. Olaf College in Minnesota (“because when you’re 18, even a neighboring state can seem pretty exotic”) and has been venturing further and further ever since.

As an undergraduate, Etzel had become fascinated by the role of midwives in developing countries. A subsequent research trip to Liberia, organized through a University of Minnesota program—Student Project for Amity Among Nations—gave her the opportunity to study and observe traditional African midwives delivering hundreds of healthy babies, often in dark and unsanitary conditions.

“I learned that people with skill—but without formal medical training—do a huge amount to enhance public health around the world,” she says. “In rural Alaska, for example, community health aides serve as first-line providers of medical care for people in villages where the only access to a doctor is by plane.”

Etzel credits UW Medical School faculty for inspiring her during her medical student days.

“There were a lot of people who nudged me toward a public health career,” she recalls.

At the top of this list, she says, was Ned Wallace, MD, a UW professor of international health. He arranged for Etzel, who as a first-year student expressed her interest in international issues, to spend a summer in Geneva, Switzerland. There, she did rotations in obstetrics-gynecology and internal medicine at the Hôpital Cantonal and did an independent study project at the World Health Organization.

Back in Madison, Etzel was soon packing for another trip—this time to Alaska, thanks to Judy Ladinsky, MD, who strove to introduce medical students to Alaska Native and American Indian health issues.

“Dr. Ladinsky insisted that I would have a whole different experience working with the Native people of our country,” Etzel says. “The rich Native culture has a strong influence on how people live and what their health is like.”

And so Etzel spent six months in her fourth year of medical school working with Alaska Native people in Bethel, a village on the Yukon-Kuskokwim delta she describes as “a very traditional Alaska Native community.” There, she also worked with a pediatrician who helped

instigate this most recent opportunity at Southcentral Foundation. By the time Etzel moved to Anchorage in 2001, she knew Alaska well—she had filled in for the pediatrician during the month of January for several years while he prepared to compete in the Iditarod sled dog race.

Finally, Etzel cites UW-Medical School faculty members Dennis Maki, MD ’67, and Jeff Davis, MD ’74, as largely responsible for turning her toward epidemiology and the medical detective work it entails.

“They regaled us with stories about being Epidemic Intelligence Service officers at the CDC,” she remembers. “They talked about the fascinating investigations they had done, and just hearing about their work got me so excited.”

Sure, then, that she would pursue these interests further, Etzel moved to Chapel Hill, North Carolina, where she earned a doctorate in epidemiology from the School of Public Health at the University of North Carolina after completing her residency in pediatrics and a two-year fellowship as a Robert Wood Johnson Clinical Scholar.

“The only reason I left Madison was because the university didn’t have a school of public health,” she says, noting that the Medical School’s plans to become an integrated school of medicine

and public health in the near future have allayed this concern.

Etzel is internationally recognized for her environmental health research. As the founding editor of the seminal *Pediatric Environmental Health* (“the Green Book,” as it is widely known, now in its second edition), she lectures and writes prolifically. She has published dozens of articles on environmental health, covering issues such as tobacco exposure in children, mercury exposure from latex paint, and the relationship between environmental factors and asthma.

And though her research has taken her from Sierra Leone to China, and Guyana to Uzbekistan, it was during the first Gulf War, when Etzel was deployed to Kuwait City, that she first worked directly with the military. For six weeks in 1991, she was the only U.S. Public Health Service officer on site. She was responsible for gathering data to discern the health implications of the over 550 oil well fires on the health of people in Kuwait.

“It was the first time I wore a uniform,” she says, “and that helped me to better understand how the public health service should fit in with the other uniformed services. I provided something they didn’t really have much expertise in, and they were thrilled to have

me there. It taught me how much the military can do working hand in hand with the public health service.”

Etzel has received numerous research awards, including a Commendation Medal from the U.S. Public Health Service for her epidemiologic work during the Gulf War. She also received the prestigious Arthur S. Flemming Award in 1991, an honor bestowed on rising stars in federal service.

For now, Etzel says she is happy in Alaska. “I came [to Anchorage] to work closely with Alaska Native people, to find out what health issues are most important to them, and train Native researchers to undertake future health research,” she says.

But that means, somewhat ironically, that she’s working her way out of a job.

“If you institutionalize yourself, that’s not the answer,” she says. “I’m hoping to train an Alaska Native person to assume the job of research director in a few years.”

Leaving Alaska won’t mean the end of Etzel’s work, however. On the contrary, she says she looks forward to continuing her work with a number of national and international health organizations—but this time from closer to home.



## Christopher Stillwell Heads the Medical School's New Career Advising Program

Christopher Stillwell recently joined the University of Wisconsin Medical School student services office as director of the new Career Advising Program. The program will assist medical students in making career choices and providing resources for successfully implementing those decisions.

The Liaison Committee on Medical Education has identified medical student career counseling as one of the important priorities that all medical schools must better address, says Patrick McBride, MD '80, MPH, the Medical School's associate dean for students.

"With Chris' expertise, we expect to develop a comprehensive career program for medical students, from pre-admission through residency," McBride says. "We want students to know what they really want for their careers, and to help them achieve their goals."

Stillwell previously worked as a career advisor at the University of Iowa's Career Center, where he focused on students interested in the biological sciences and health professions. He regularly gave presentations on various elements of career advising at the undergraduate, graduate

and professional levels. Before working at the University of Iowa, Stillwell worked for several years as an assistant program coordinator in the UW Department of Family Medicine.

A UW-Madison graduate and former Wisconsin Band trumpet section leader, Stillwell has made his Wisconsin game plan clear.

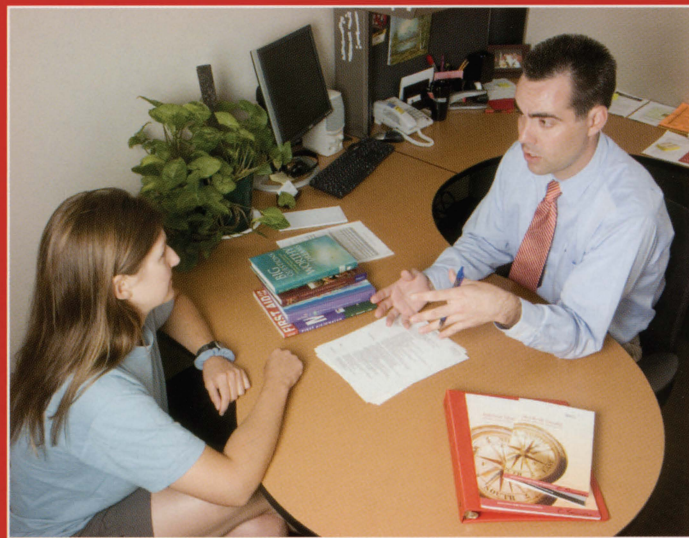
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"With Chris' expertise, we expect to develop a comprehensive career program for medical students, from pre-admission through residency."

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"Initially, we will focus on preparing fourth-year medical students for success in matching to a residency program," he says. In the coming months, the office will offer a seminar series on topics including developing a curriculum vitae, writing compelling personal statements and conducting an effective residency interview.

As the program grows, Stillwell adds, it also will offer information and resources regarding career-specialty exploration and decision-making skills targeted to all medical students.



*Christopher Stillwell met recently with a medical student to discuss career advising issues.*

Stillwell meets with students one-on-one to discuss career advising issues, including self-assessment of medical specialty interests and personal values, information-gathering strategies for residency selection, and decision-making advising.

"First- and second-year students will benefit from a variety of self- and career-exploration interventions, including formalized assessments and connections to alumni and campus resources for shadowing and informational interviews," Stillwell says.

Beyond direct service to students, the Career Advising Program will serve as a central

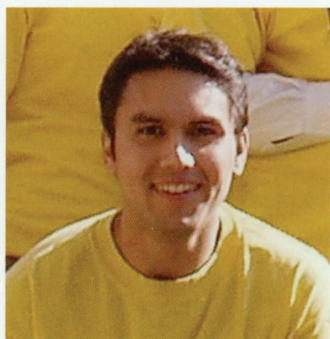
information hub for Web-based career education and specialty information through a "virtual career center" Web site, which currently is in development. Another major initiative will be to coordinate and centralize mentoring resources for medical students.

Both McBride and Stillwell believe the career advising program will further contribute to UW graduates' high level of success in—and satisfaction with—their residency training experiences and medical careers.



## An "Organized" Thought: Working Together is Ideal

*Working together at the local level, a team of students and physicians assembled at the State Capitol before running in the 2005 Crazylegs Classic. After crossing the finish line, many race participants visited the Dane County Medical Society "Ask-a-Doctor" Booth.*



**"Organized medicine is one of many tools available to fight for positive change."**

*by John Vasudevan, Med 3*

**Y**ou're a medical student, eh? So, what kind of doctor are you going to be?" If I had a dollar for every time someone asked me that...well, I'd still have a big tuition bill, but I would certainly have a nice stash of lunch money. Medical school is an inspiring and confusing experience all rolled up in one, and for every new concept I learn, there is a patient who enjoys

my "deer-in-the-headlights" expression.

The greatest lesson I have learned is that becoming a complete physician takes more than ideas—it takes ideals. Ideas help us discover how to best treat our patients, but ideals remind us why we are serving others in the first place. I am proud to be part of a medical school community that understands this difference. Although physicians and students achieve their ideals in many ways, my experience

in organized medicine has shown me the importance of working together to improve healthcare.

When I mention the term "organized medicine" to a colleague, the words do not always ring a bell. Organized medicine refers to medical societies from the local to national levels that seek to protect the interests of both physicians and patients, increase access to medical services and promote public health. The Dane County Medical Society (DCMS),

**“The greatest lesson I have learned is that becoming a complete physician takes more than ideas—it takes ideals. Ideas help us discover how to best treat our patients, but ideals remind us why we are serving others in the first place.”**

Wisconsin Medical Society (WMS) and American Medical Association (AMA) are examples.

My experience has included active participation on the DCMS Board of Trustees and the WMS Membership Committee. I also am a student regional delegate to the AMA House of Delegates and vice chair of the AMA-Medical Student Section Community Service Committee.

In one sense, that long list of affiliations means dressing up, wearing nametags, attending meetings, eating (hopefully free) food and shaking hands. Beyond those formalities, however, I am impressed by the open sharing of ideas, cooperative crafting of policy and dedication of members to their ideals.

I have witnessed efforts by these groups to support Madison’s smoking ban in bars and restaurants, fund free clinics to provide care for the uninsured, and advocate



*Working together at the national level: UW medical students (left to right) John Vasudevan, Lasya Gaur, Jose Pacheco and Nestor Rodriguez heard the debates and cast their votes on various healthcare issues at the AMA-Medical Student Section interim meeting in Honolulu, Hawaii, in December 2003.*

for laws that maintain Wisconsin’s status as one of only six states in the nation not in a medical liability crisis.

The tricky part of membership in an organized medicine group is walking the fine line between protecting the interests of physicians while understanding that improving our healthcare environment cannot occur without also addressing the interests of business, law and politics. We as physicians (or physicians-to-be) must stand up for ourselves; however, unless we also stand up for our patients, organized medicine would be nothing more than a “doctor’s union.” I am

pleased to report that these medical societies are fighting diligently for both.

This last April, I was proud to help organize a project that turned one ideal of organized medicine into action. The ideal, which I am very committed to, involves preventive healthcare. Obesity—and its numerous associated health problems—continues to increase in our country, and treating it would save years of life for our patients and countless dollars for our healthcare system. The best way to treat obesity is to prevent it from occurring in the first place, and the first step in implementing public

health change is to increase awareness.

With the help of DCMS physicians and UW medical students, I set out to increase this awareness. Together, we assembled a team to run in the Crazylegs Classic, an annual run/walk in Madison that draws over 13,000 participants, primarily from the local and university communities. Each team member received a fashionable bright-yellow T-shirt imprinted with the names of UWMS, DCMS and the AMA and featuring the message: “More Activity + Better Diet = Less Obesity.”

At the end of the race, we arranged for an “Ask-

a-Doctor” booth to allow race participants to ask volunteer physicians general health questions. The booth also provided resources on exercise, diet and obesity, as well as advocacy materials supporting legislation for a statewide cigarette tax increase to fund dwindling Medicaid coverage.

The response was phenomenal: there were 85 people on our team, hundreds stopped by our booth, and UW medical student Dan Sutton won the entire race! When interviewed by the *Wisconsin State Journal*, Dan spoke about our project and message, and his words reached a paper distribution of 200,000 people.

This project required coordination of medical students, physicians, race organizers, UW Medical School, the American Heart Association, a local T-shirt company, the Dane County and Wisconsin medical societies and the AMA, which supported us with a Policy Promotion Grant. Whatever their motivations, this incredible group of students and physicians worked together to promote our common public health ideals.

What is the next step for organized medicine? As for me, I hope to find solutions that will increase access to quality healthcare in a country as resourceful

as ours. Sure, it is a lofty goal that may take years of study and experience, but it is nevertheless a worthy goal. In the meantime, I hope to continue to advocate locally for public health issues, perhaps by expanding the Crazylegs project in future years.

What I enjoy about organized medicine is that while some ideals stay the same, many are constantly changing. I have yet to attend a meeting where I did not learn about a new issue (or hear a cogent argument to that issue) that affects healthcare in America.

If you, the reader, are active in organized medicine,

thank you for fostering a community that respects ideas, even ones coming from a new guy like me. If organized medicine is not your thing, you can still help indirectly by sharing your ideas and working together with members who are active in medical societies.

We all must find our own ways to remove the barriers facing many of our patients, be it through community service, research, teaching or advocacy. Organized medicine is not the only answer, but it is one of many tools available to us in the medical field to fight for a positive change.

**“We all must find our own ways to remove the barriers facing many of our patients, be it through community service, research, teaching or advocacy.”**



*Working together at the state level: Med 3s (from left) Sarah Pierce, Tony Machi, Luke Crozier, Ryan Kipp, Andy Kim, Nate Schreiber, John Vasudevan and Steph Solberg were invited to join physicians in shaping state healthcare policy at the Wisconsin Medical Society annual meeting in April 2004.*

# Something Unique



## for Everyone

Nearly 60 student organizations set up information tables at the fair, which was sponsored by the Medical Student Association and the WMAA.

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“Participating in these organizations helps students broaden their medical education in important ways.”

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by *Dian Land*

University of Wisconsin Medical School second-year students representing nearly 60 organizations recently set up tables in the Health Sciences Learning Center atrium, where they displayed posters and laid out literature—as well as enticing candy—so that newly matriculated first-year students could easily learn about the extracurricular activities each group sponsors.

The annual Student Organizations Fair is the first of many activities sponsored

by the Medical Student Association (MSA) each year to help make the medical student experience as valuable as possible. The Wisconsin Medical Alumni Association (WMAA) supplies ice cream for all who want it.

“Participating in these organizations helps students broaden their medical education,” says Med 2 Jaime Hook, MSA president. “Students get to know others with similar interests. The organizations are an opportunity for students to take a leadership role.”

Each group has something unique to offer, Hook says.

With MEDIC, for example, students can learn about setting up and running clinics for Madison’s underserved populations. Medical students volunteer alongside physicians, residents and allied health professions students throughout the year.

Students involved in Doctors Ought to Care (DOC) visit local schools and teach children about organ systems and diseases that affect them. Participants in MoMS (Mothers and Maternity Support/Dando

*(Continued on page 34.)*

## Student Organizations Fair



*Through the organizations, students get to know others with similar interests.*



*Students involved in DOC visit local schools and teach kids about organ systems and diseases.*

### The following is a list of all the active medical student organizations.

- |  |   |   |
|--|---|---|
| Advocacy and Intervention for Medical Students (AIMS)            | Family Medicine Interest Group (FMIG)                           | Medical Students for Life                           |
| Advocates for Women and Others in Abusive Relationships (AWARE)  | Gays, Bisexuals, Lesbians and Allies in Medicine (GBLAM)        | Medical Students for Minority Concerns (MSMC)       |
| American Medical Association - Medical Student Section (AMA-MSS) | Geriatric Interest Group (GIG)                                  | Medical Student Training Program (MSTP)             |
| American Medical Students Association (AMSA)                     | Global Health Interest Group (GHIG)                             | Student Executive Committee                         |
| Anesthesiology Interest Group (AIG)                              | Health Professional Mentoring Program (HPMP)                    | Mothers and Maternity Support/Dando a Luz (MoMS)    |
| Arrhythmias  | Integrative Medicine Interest Group (IntMIG)                    | OB/Gyn Interest Group (OBGynIG)                     |
| Asian Pacific American Medical Student Association (APAMSA)      | Interdisciplinary Partnership for Healthy Communities (IPHC)    | Organization of Student Representatives (OSR)       |
| Benign Tuners  | Internal Medicine Interest Group (IMIG)                         | Pediatric Interest Group (PIG)                      |
| Child Abuse Prevention Project                                   | International Foundation of Medical Student Association (IFMSA) | Physicians for a National Health Program (PNHP)     |
| Christian Medical Association (CMA)                              | International Health Exchange (IHE)                             | Physicians for Social Responsibility                |
| Codà Blue  | Karaoke Interest Group (KIG)                                    | Radiology Interest Group (RIG)                      |
| Complementary Alternative Medicine                               | LOCUS   | Running Club  |
| Cross Cultural Healthcare Interest Group                         | Mentorship Achievement Program (MAP)                            | Rural Health Interest Group (RHIG)                  |
| Doctoring in Diverse Communities (DIDC)                          | MEDIC   | Student Physicians for Social Responsibility (SPSR) |
| Doctors Ought to Care (DOC)                                      | Medical Spanish Learning Group (MSLG)                           | Surgery Interest Group (SIG)                        |
| Dr. Mom  | Medical Student Association (MSA)                               | Women in Medicine (WIM)                             |
| Emergency Medicine Interest Group (EMIG)                         | Medical Students for the Arts (MSFA)                            | Wilderness Medical Society (WMS)                    |
| Ethics Committee   | Medical Students for Choice (MSFC)                              |   |



*Participation in organizations gives students a chance to take on leadership roles.*



*Student interest groups are usually focused on a specific area of medicine.*

a Luz) accompany pregnant women to obstetrics-gynecology appointments and are on hand for the birth of the babies, offering support to young women who may be vulnerable.

Some of the organizations, such as the Arrhythmias and the Karaoke Interest Group (KIG), serve purely as a means to relax. “If you like playing in a rock band, and you don’t want that aspect of your life to shrivel up while you are in medical school, the Arrhythmias are a great way to stay sharp,” Hook says.

The various interest groups are usually focused on a specific area of medicine

(such as the Internal Medicine Interest Group and Rural Health Interest Group), and they sponsor talks and other activities for students who want to learn more about that particular area.

At last year’s student organizations fair, Hook signed up for MSA because she’s interested in student government and administration. She’s also a member of both the Medical Student Section of the American Medical Association and the Wisconsin Medical Society (WMS) board of directors. As the sole UW student representative, she

attends the four WMS board meetings annually.

Now that the Student Organizations Fair has passed, Hook and her MSA colleagues are meeting weekly, busy at work on organizing the Dean’s Cup competition and preparing for Homecoming. Then it will be on to other business pertaining to student life.

“Our main purpose is to act as student representatives to the university and the Medical School administration, so we focus a lot of our energy on curriculum and tuition concerns,” Hook says. “We also work with the WMAA to

provide funding for student organizations and social events.”

With Sharon Younkin, PhD, as faculty advisor, the MSA consists of 11 members. Each serves on at least one of the 12 MSA committees—dealing with finance, social activities, Dean’s Cup-Malpractice Ball, elections, community service, equipment sale, clothing sale, tuition, orientation, curriculum, communications, facilities and interhouse relations.

# Building the WMAA Endowment to Better Support Students

by *Dian Land*

From the very beginning of each academic year—when the Wisconsin Medical Alumni Association (WMAA) sponsors the student organizations fair and the White Coat ceremony for new students—through to the winding down of each school year—when fourth-year students celebrate graduation—the WMAA is busy with student activities.

Historically, the WMAA has always sponsored activities to support UW Medical School students, but in recent years it has made students a top priority. The association currently allocates approximately \$50,000 each year—in the form of interest from its endowment—to student activities, and it is hoping to increase the level.

Making students aware of the WMAA early in their four years at the medical school is one important reason for reaching out to them more visibly, says Karen Peterson, WMAA executive director.

“The success of the WMAA depends on its members, and students represent our future membership,” she says. “We want to be a presence in students’ lives and create a sense of community for them as early as possible.”

To make that first connection, the alumni association gives each new student a gift bag filled with

medical instruments and a coffee mug. “We invite them to come to our offices to pick up the gifts, and also to meet us and see where we’re located. This is usually when students first learn about our famous candy bowl.”

One of the WMAA staff members—Bonnie Howard, Barbara Lukes or Mary Redlin—is usually on hand; and Peterson’s door is always open to students.

Above all, however, the WMAA has intensified its contact with students in order to make the rigorous medical school experience more enjoyable. “We want our students to be as happy and healthy as possible,” Peterson says. “We try to bring a little balance to their lives.”

Many of the WMAA activities are geared to helping students socialize and relax. The events range from the month-long Dean’s Cup competition with law school students, the Homecoming tailgate and the Halloween Open House in the fall, to the Black Bag Ball and Alumni Weekend in the spring.

“With the Dean’s Cup, for example, we underwrite the costs of producing T-shirts—which are sold to raise money for charity—and we buy food for the picnic at the end of the competition and host the passing-of-the-cup ceremony,” Peterson says,

adding that the costs are usually \$1,500.

Smaller social activities—including TGIFs, ice skating and gymnastics parties and a corn-maze ride—are interspersed among the larger events. Many of these social activities are co-sponsored with the Medical Student Association (MSA).

Indeed, Peterson works closely with leaders of the MSA and other student organizations. “The WMAA donates \$7,000 each year to the MSA, and we financially support other groups that ask for help throughout the year,” she says.

One new activity this past year has been to sponsor student musicians involved in Medical Students for the Arts. The musicians play tunes in the Health Sciences Learning Center atrium during the noon hour, while students enjoy the music along with cookies or truffles supplied by the WMAA.

For the most part, the WMAA stays out of students’ academic world, with the exception of two programs that relate to future careers, says Peterson. The Student-Alumni Partnership Program (SAPP) identifies local alumni who are eager to share information about their specialties, either with individual students or with groups of them attending lunch-time presentations.



*Students are a top priority for the WMAA, Peterson says.*

And through the Alumni Host Program, alumni open their homes to students traveling across the country for residency interviews.

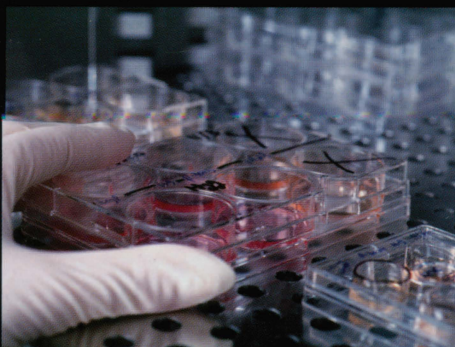
Thanks to the generosity of many alumni, the WMAA also has been able to increase the number of scholarships it awards to students from two in 2004 to three in 2005. And the WMAA administers the Samuel Perlson Low Interest Loan Fund. But scholarships and loans are different from WMAA events and programs that benefit students as a group, notes Peterson.

She urges alumni to consider making donations earmarked specifically for student activities. For more information, contact her at (608) 263-4913 or [kspeters@wisc.edu](mailto:kspeters@wisc.edu).

## New Research Awards

### DEEPER INSIGHTS INTO STEM CELLS

JEFF MILLER/UW-MADISON  
UNIVERSITY COMMUNICATIONS



An interdisciplinary team led by James Thomson, PhD, UW Medical School anatomy professor, has received a \$1.25 million grant from the W.M. Keck Foundation for stem cell research.

The project focuses on embryonic stem cell “pluripotency,” the capacity of the cells to proliferate in an undifferentiated

state indefinitely while retaining their ability to develop into any of the cell types in the human body.

The grant will help create an infrastructure that will broadly support genetic analysis and research on human embryonic stem cell differentiation.

In 1998, Thomson earned worldwide recognition for deriving and cultivating the first sustained undifferentiated human embryonic stem cells. UW-Madison, through Thomson’s work, possesses five of the embryonic stem cell lines approved for federal funding, and those cell lines will be used in the project. In addition, the maskless DNA array synthesizer, invented at UW-Madison, will manufacture the gene chips used to explore the complex molecular phenomena involved in the study.

This project combines expertise in engineering, bioinformatics and stem cell biology.

The researchers hope to show how determining the biological mechanisms involved in embryonic stem cell pluripotency will make it possible to understand how to reprogram adult stem cells to a pluripotent state.

The reversibility of the differentiated state in adult stem cells represents a true paradigm shift for developmental biologists. It was previously thought that differentiated adult stem cells could not go “backward.”

Reprogrammed adult cells could be used to generate, for instance, tissues for transplantation genetically matched for an individual and thus not rejected by the immune system.

### QUALITY OF LIFE AND BREAST CANCER

Can the quality of a woman’s life prior to a diagnosis of breast cancer predict her quality of life after the diagnosis? Does the impact on quality of life of non-cancer-related health events in breast cancer survivors depend on their quality of life prior to diagnosis? In the face of similar non-cancer-related health issues, do long-term breast cancer survivors have a quality of life similar to that of women without breast cancer? Is poor quality of life a risk factor for breast cancer?

Amy Trentham-Dietz, PhD, assistant professor of population health sciences, will use a \$250,000 grant from the Susan G. Komen Breast Cancer Foundation to learn the answers to these questions.

Researchers will link data from a cohort of older Wisconsin women with data collected by Wisconsin’s statewide tumor registry. From 1988 to 1990, over 2,700 women between the ages of 43 and 86 were surveyed, and have been recontacted for more information up to six times. Participants have completed interviews and been given physical examinations to evaluate quality of life, breast cancer risk factors and other health indicators.

Trentham-Dietz estimates that almost 200 of the women will have experienced a breast cancer diagnosis before 2005, approximately half of them before the first 1988-90 examinations, and half since. Statistical analysis will allow the researchers to make quality of life comparisons between breast cancer survivors—before



and after diagnosis—and women without a personal history of breast cancer.

Understanding the complex interplay between mental and physical health of breast cancer survivors may allow clinicians to improve the length and quality of such women’s lives.

## Publications

### STEM CELL SCIENTISTS MAKE PROGRESS TOWARD ALS TREATMENT

Unveiling a delivery method that may one day help surgeons treat amyotrophic lateral sclerosis (ALS), UW Medical School researchers directed certain types of neural stem cells to secrete a neuron-protecting protein before injecting them into the spinal cords of ALS-afflicted rats. ALS causes motor neurons, which reside in the spinal cord, to progressively decay and die.

Instead of using human embryonic stem cells, the scientists worked with more specialized neural stem cells—neural progenitor cells—that arise from primitive stem cells during the first few weeks

of human brain development. Unlike embryonic stem cells, they can develop only into neural tissue and are incapable of living forever.

Once inside the brain or spinal cord, neural progenitor cells grow into neuron-supporting stem cells called astrocytes. Some researchers believe that ALS causes astrocytes to malfunction, which in turn causes motor neurons to degenerate and die.

Based at the Waisman Center, the Wisconsin scientists—Clive Svendsen, PhD, professor of anatomy, and graduate student Sandra Klein—found that the injected neural progenitor cells

developed into astrocyte-like cells and simultaneously secreted glial cell-line derived neurotrophic factor (GDNF), a naturally occurring protein that preserves motor neurons during development. The twofold approach has a better chance of protecting healthy neurons that haven't already succumbed to ALS, Svendsen says.

It is crucial now to see whether greater numbers of GDNF-bearing progenitor cells can actually prolong the life of an ALS-ridden rat, says Svendsen. If so, he aims to plan a human safety trial with a small group of patients.

The study appeared in *Human Gene Therapy* (Vol 16; 2005:509-521).

## Patents

### NEW SYSTEM ADVANCES STUDY OF SKIN TUMORS

Expanding on an artificial skin technology she has developed in the past five years, Lynn Allen-Hoffmann, PhD, professor of pathology and laboratory sciences, has created a recently patented system that will let researchers observe human skin tumors as they grow.

The system, called NTM—for normal tissue microenvironment—will also allow scientists to monitor the effect of new chemotherapies on skin tumors and adjacent “normal” tissue at the same time, critical information for the testing of a new drug. The system will be useful for analyzing treatments for skin cancers such as basal cell and squamous cell carcinoma, as well as certain head and neck cancers.

NTM uses Allen-Hoffmann's patented artificial skin technology—called NIKS (Near-diploid Immortalized Keratinocyte Skin)—as a platform upon which a few human tumor cells can be placed for observation.

The tumor cells are genetically marked so that they express easily-detected green fluorescent protein. The cancer cells are also distinguishable from the “normal” skin cells, which are derived from a female, in that they come from a male.

Allen-Hoffmann created Stratatech Corporation, a Madison-based biotechnology company, to further develop NIKS. Stratatech scientists are focusing on developing the artificial skin as a treatment for burns and other forms of wound healing.

## Activity and Funding

### RESEARCH PRODUCTIVITY

FY '05	Q1	Q2	Q3	Q4
Publications	360	345	431	384
Invention Disclosures	31	18	26	25
Awarded Patents	2	5	5	5

### RESEARCH FUNDING (\$ MILLIONS)

Category	FY '05	FY '04	Change
Federal	\$166.1	\$183.3	-9%
Clinical Trials	\$16.0	\$16.3	-2%
Industry	\$4.1	\$3.3	24%
Other Non-federal	\$17.1	\$14.6	17%
Gifts	\$16.0	\$16.2	-1%
<b>TOTAL</b>	<b>\$219.0</b>	<b>\$233.7</b>	<b>-6%</b>

Photo banner above and below courtesy of stem cell researcher Sandra Klein.

# *Honoring the Middleton Society*

September 9, 2005



## & Celebrating the IRC

by Dian Land

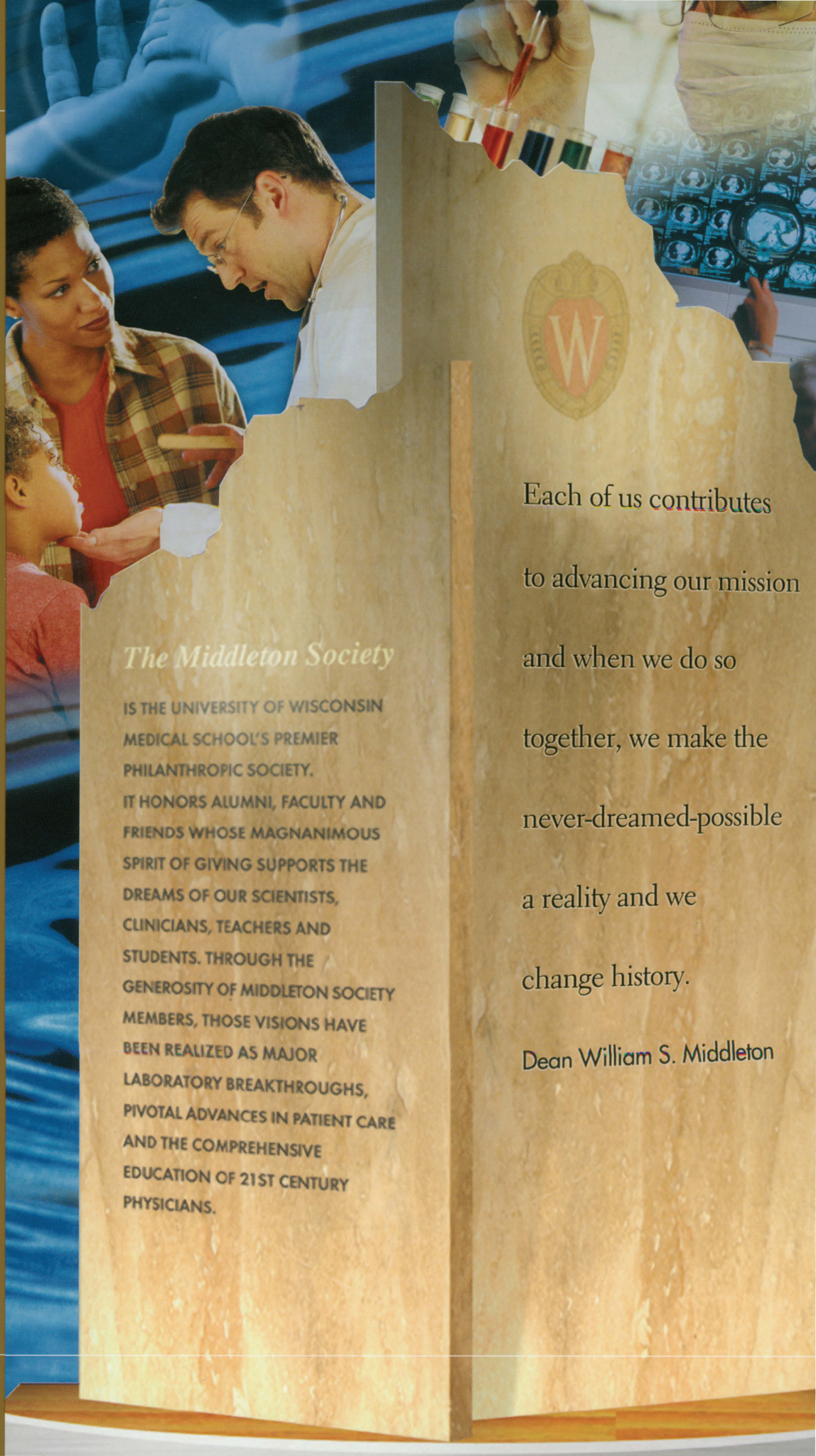
On September 9, 2005, the Wisconsin Medical Alumni Association and the University of Wisconsin Medical School hosted an elegant evening honoring members of the Middleton Society—the school's premier philanthropic group—and other HealthStar partners.

Approximately 200 people attended the event, which also celebrated the recent groundbreaking for the Medical School's Interdisciplinary Research Complex (IRC), a building that is part of the ambitious HealthStar campaign that also includes the Health Sciences Learning Center.

For Middleton Society member Nathan Hilrich, '51, the evening offered an opportunity to experience the new Medical School once again and renew old memories with classmates, some of whom, such as Alfred Herlitzka, of Mason City, Iowa, he hadn't seen in years.

*(Continued page 40.)*

*Clockwise from top right: Guests Mary Taylor, the Herb Sandmires ('53), Mrs. J. D. Kalber and Ben Taylor made a toast. Friends gathered around and caught up. Guests pursued the program, which included a culinary tour featuring international delicacies. The Belzer Award went to Paul DeLuca, seen with wife Florence. Ralph Hawley listened intently. The HealthStar Initiative, creatively represented in ice, was featured at the evening celebration.*



Each of us contributes  
to advancing our mission  
and when we do so  
together, we make the  
never-dreamed-possible  
a reality and we  
change history.

Dean William S. Middleton

### *The Middleton Society*

IS THE UNIVERSITY OF WISCONSIN  
MEDICAL SCHOOL'S PREMIER  
PHILANTHROPIC SOCIETY.  
IT HONORS ALUMNI, FACULTY AND  
FRIENDS WHOSE MAGNANIMOUS  
SPIRIT OF GIVING SUPPORTS THE  
DREAMS OF OUR SCIENTISTS,  
CLINICIANS, TEACHERS AND  
STUDENTS. THROUGH THE  
GENEROSITY OF MIDDLETON SOCIETY  
MEMBERS, THOSE VISIONS HAVE  
BEEN REALIZED AS MAJOR  
LABORATORY BREAKTHROUGHS,  
PIVOTAL ADVANCES IN PATIENT CARE  
AND THE COMPREHENSIVE  
EDUCATION OF 21ST CENTURY  
PHYSICIANS.

# Middleton Society Celebration



*Guillermo De Venecia and wife and friends learned more about the five HealthStar projects that were on display at the evening celebration.*



*Nate Hilrich (right) said the evening offered an opportunity to experience the new Medical School and visit with old classmates.*



*Richard Anderson ('47), left, recently donated another Audubon print to the Medical School. Next to him stood students Sarah Endrizzi and Jaime Hook. Alice and Dean Philip Farrell were extremely pleased.*

"All the new construction is unbelievable," Hilrich says. "I think they did a wonderful job in constructing these new facilities and in staffing them. UW Medical School students of the future will definitely benefit."

Class representative for the past three years, Hilrich says the tight-knit Class of '51 has won the Brown Derby Award, given to the class that has the most contributors each year, many times.

"I feel loyalty to the school is very important—monetarily as well," Hilrich says.

The HealthStar Initiative, created a decade ago to improve health science facilities on the UW-Madison campus, has resulted in the construction of the School of Pharmacy's Rennebohm Hall, the West Campus Cogeneration Plant, Parking Lot 76 and the Health Sciences Learning Center, including the Ebling Library.

To mark the completion of those five projects and the fact that work has begun on the IRC, the evening event featured a series of displays describing each milestone. At each display, guests helped themselves to international delicacies set up at nearby food stations—taking a culinary tour along with the HealthStar journey.

"The HealthStar Initiative has brought UW Medical School into a new era," Dean Philip Farrell, MD, PhD, told the celebrants. "With the completion of the IRC, which we expect to occur in 2008, facilities will finally match the quality of our students and faculty."

Farrell thanked members of the prestigious Middleton Society and others who have been so generous in their support of the HealthStar projects, and noted that many opportunities to contribute remain. Consisting almost entirely of UW Medical School alumni, Middleton Society members donate a minimum of \$10,000 to the school, benefiting every aspect of its tri-part mission of research, education and patient care.

The Dean then honored Medical School vice dean Paul DeLuca, PhD, IRC project director who also is associate dean for research and graduate studies, by giving him the Folkert Belzer Award. Created to memorialize the great UW transplant surgeon, the Belzer Award is a lifetime achievement award that recognizes the select few who have made outstanding contributions to the Medical School over time.

The evening program also included talks by two Medical School leaders who work closely together, embodying the interdisciplinary, translational research concepts that will be the heart of the IRC. Rick Moss, PhD, is director of the Cardiovascular Research Center and chair of the Department of Physiology; cardiologist Matt Wolff, MD, is the chief of the Division of Cardiovascular Medicine.



Created in the 1970s, bronze medallions were given to members of the first 50th anniversary class—1927—and others respected by the WMAA.

## Continued Progress and Impending Change: 1977-1987



To commemorate the coming 50th anniversary of the Wisconsin Medical Alumni Association (WMAA), former WMAA director Ralph Hawley is writing a decade-by-decade history of the association. This is his account of the period between 1977 and 1987.

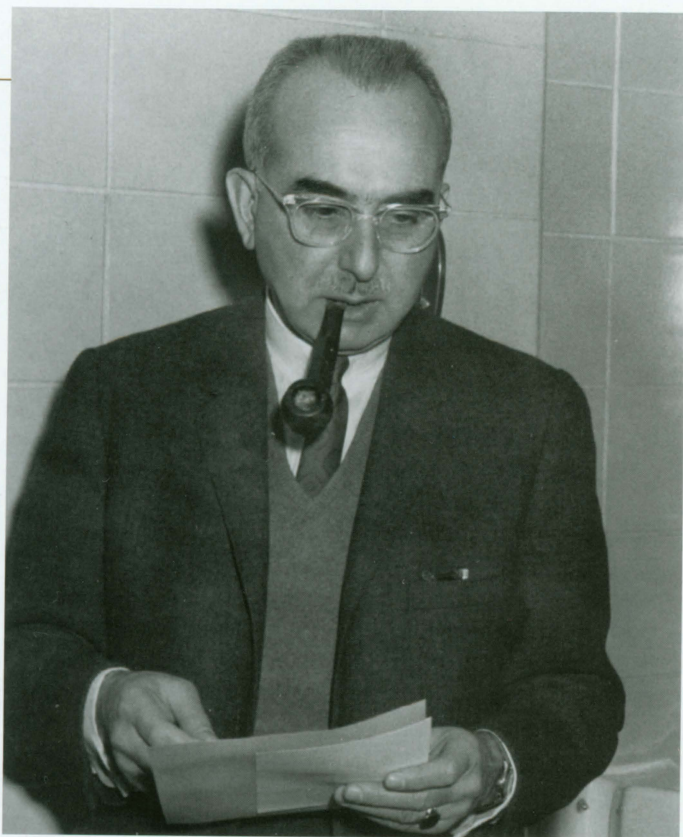
by *Ralph Hawley*

As the Wisconsin Medical Alumni Association (WMAA) began its third decade, profound changes in the administrative milieu of the medical center were occurring. The experiment of having a strong vice chancellor for the health sciences at the university was deemed a failure. Robert E. Cooke, MD, served in that role from 1973 until his unlamented resignation in 1976, and the position was then restructured with severely curtailed powers.

The brief tenure of most of the school's deans in that period continued. When Peter

Eichman, MD, resigned in 1971, Henry Pitot, MD, PhD, followed as acting dean until the appointment of Lawrence Crowley, MD, in 1973. After a most promising initial period of service, Dr. Crowley resigned in 1977 because the severity of Wisconsin winters exacerbated his wife's joint disease. Following a brief interregnum, Arnold Brown, MD, was appointed dean in 1978.

Despite the unsettled times that preceded our third decade, the period from 1977 to 1987 was productive for the WMAA. Many new programs were initiated and existing programs were expanded.



Mischa Lustok, MD '50, was *Quarterly* editor from 1961 to '86. A student creative writing contest was named for him when he retired.

### Recognizing excellence

Faculty Teaching Awards, for example, were initiated. These included one for a stellar basic scientist and one for an exceptional clinician at four of the school's main clinical teaching sites: the Madison campus, Mt. Sinai Hospital in Milwaukee, LaCrosse and Marshfield. Distinguished Service Awards for alumni were also established, as were honorary WMAA life memberships to honor medical center employees who had been unusually helpful to alumni and students.

Another major commitment to recognize excellence was undertaken: support for an annual Alumni Professorship in Medical

Education. The recipients would receive \$10,000 to support their educational programs for each of three years. Specific criteria and a selection process were well defined. When fully operational, the award would require an annual outlay of \$30,000 in unrestricted alumni funds. Enid Gilbert, MD, professor of pathology and pediatrics, was the first Alumni Professor.

In 1977, members of the first 50th anniversary class—the Class of 1927—were recognized on Alumni Day, when they were presented unique, personalized bronze medallions. Such a medallion and certificate of commendation were also presented to Dr. Crowley on

his resignation. During his short tenure, his candor and integrity had endeared him to the medical alumni board.

The WMAA also encouraged the giving of school- and association-related gifts to students. At graduation time, parents of graduates received letters suggesting that the Bohrod print, *The Medical School History* or a WMAA life membership would be excellent gifts for their graduates. Alumni ties, mugs, scarves and jewelry were also developed for sale to alumni.

In this process, students were also encouraged to give back to their school and alumni association. Senior classes began to give gifts to the WMAA for student financial aid.

The WMAA also subsidized the publication by the UW Press of 500 copies of *History of Cancer Research at Wisconsin* by Harold Rusch, MD '33. A modest profit was realized from the sale of the books.

In the area of more routine administrative matters, a job description for class representatives was developed, as was a president's handbook. WMAA membership was extended to PhDs and former house staff. And the dean was convinced to add an alumnus to the school's admissions committee.

Regarding facilities, the Service Memorial Institute (SMI) auditorium was

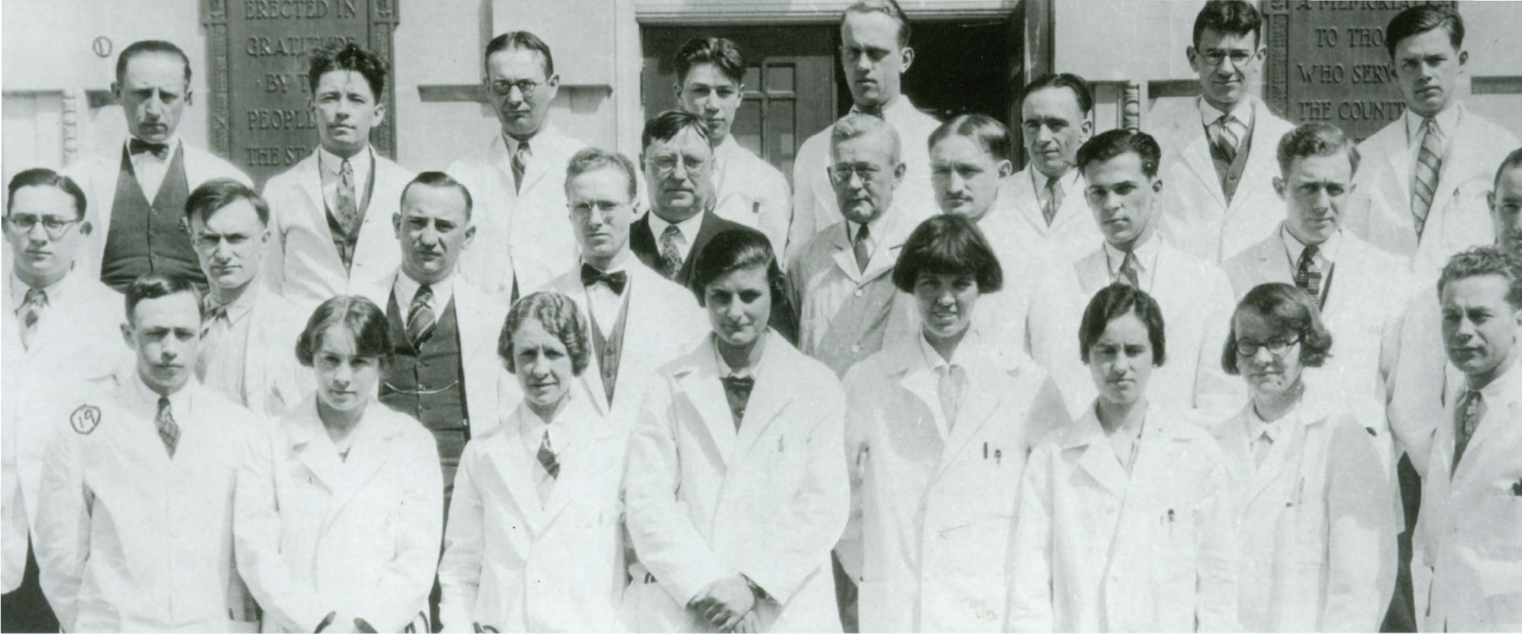
thoroughly renovated and upgraded at a cost of \$225,000 in alumni funds. It was designated Medical Alumni Hall and remained the primary large lecture hall at the school until the move in 2004 to the Health Sciences Learning Center.

### More support for students

During its third decade, the WMAA contributed greatly to providing a stable environment for students. One impetus for this came in 1976 from a joint AMA-AAMC accreditation team report that had been highly critical of what students reported to be a hostile environment. The WMAA moved quickly to respond.

In a short time, student officers were reporting to their fellow students the many benefits they were receiving from the association: TGIFs, picnics, class parties, refreshments during orientation and national board exams, unrestricted budgetary support to the Medical Student Association, copies of the *Quarterly*, a piano for the student lounge, dinners, homecoming brunch and more!

The students also had been critical of the lack of communication with faculty, shortcomings in counseling and problems in minority affairs. In meetings with the student leadership, WMAA board members indicated that they wished to be maximally



Members of the Class of 1927, shown above as students, were recognized by the WMAA in 1977 as the first 50-year anniversary class.

helpful without meddling in school affairs. After the 1981 accreditation visit, the site visitors found student morale to be good, due in no small part to alumni programs.

During the presidency of Burt Zimmermann, MD '43, a new alumni service for students was begun. In this service, alumni representing major disciplines met with junior students to answer their questions about the nature of each discipline.

A Live-In-and-Learn Program was also begun and subsequently expanded. Alumni volunteers accepted medical students for a one-week period in which they observed the grassroots practice of clinical medicine. Initially the program was offered between the first and second years of medical school, but later it was modified to accommodate students for shorter periods, such as a weekend or holiday period, and without the live-in component.

In 1982, a Host Program was initiated. Alumni in every

state of the union volunteered to host students who were looking at prospective residency programs. Within a brief period, over 500 alumni volunteered to participate.

### Relations with the UW Foundation

For 30 years I had cordial relations with the University of Wisconsin Foundation staff. They invested our life membership funds, as well as many gift funds and bequests. I also had been successful in having the foundation invest research and development funds earned by the clinical practice plan (CPP) partnerships, in addition to CPP dollars contributed to the Dean's Fund. It was our long-time practice to call upon foundation senior vice president, Timothy Reilly, to meet with alumni or other prospective donors who wished to make major gifts and bequests.

Pressures were mounting from many directions to have the foundation do all of the fundraising with medical

alumni. The leadership of the association, particularly the directors of the Annual Fund Campaign, felt that WMAA fund-raising efforts should be complementary to the efforts of the foundation.

Past presidents Bernard Kampschroer and John Brennan, both of the Class of 1967, had invested much time and effort in the Annual Fund Campaign—as had several other board members—and both believed that there was great merit in having alumni asking other alumni for contributions.

### Stepping down

In 1986, Dr. Mischa Lustok wrote a lengthy letter to me stating his intent to resign as editor of the *Quarterly* after 25 years. He and I, he said, had a non-cancelable, life-long covenant committing us to the Medical School and the WMAA. He called our personal friendship “a cherished treasure.” I had the letter printed in the *Quarterly* as an open letter

in lieu of his customary editorial.

The *Quarterly* editorial board designated that the annual medical student and resident creative writing contest, with its \$200 prize for best submission, be named in his honor.

Mischa's resignation and a number of other factors were instrumental in causing me to evaluate my current and future status. I had derived great satisfaction in working with scores of alumni and students and in bringing to fruition many program developments. But I did not wish to be a full-time executive director. The excitement and sense of accomplishment I derived from working with many deans and faculty committees and solving countless problems for over 30 years had a value beyond price.

As I saw the Medical School administration becoming an increasingly alien environment, I determined that it was time to leave. I informed



Both Kathie Budzak, '69 (center), and Dorothy Betlach, '46 (right), served tirelessly as WMAA presidents. Both also served on the Quarterly editorial board for years. Archie Budzak joined them in a conversation.

the Alumni Association leadership of my intention to resign. This was in 1986. When my wife's terminal illness was diagnosed, I held my departure in abeyance until my family situation was clarified. Thus, my tenure extended into the WMAA's fourth decade.

### Stand-out leaders

The decade saw a wide mixture of characteristics of the 10 presidents who served. Our first two women presidents took office as well as several recent graduates. The classes represented in this decade ranged from George Behnke of the Class of 1942 to Kathryn Budzak of the Class of 1969. Several were activists while others maintained the status quo.

#### 1977 Bernard Kampschroer '67

As senior class president, Bernie wrote outspoken columns for the *Quarterly*, presenting student positions on medical education issues and student services. As

president, he zealously championed measures to increase student financial aid. We still enjoy an annual round of golf when he returns to Wisconsin from his Florida home.

#### 1978 William Hein '54

Bill favored measures to take more positive steps to motivate family physicians to join the WMAA. Members of the new department were experiencing some difficulty in gaining acceptance from their colleagues in other disciplines.

#### 1979 Dorothy Betlach '46

As a class representative, Dorothy had an unmatched record in communicating with classmates. She also spent countless hours assisting the often overburdened alumni staff during peak periods. She was a longtime member of the *Quarterly* editorial board and, as WMAA president, she established a solid record of accomplishment.

#### 1980 John Brennan '46

Through the efforts of his classmate, Bernie Kampschroer, John's dormant interest in the WMAA was awakened and he devoted much time and effort to heading the Annual Fund Campaign and to increasing student financial aid.

#### 1981 Burton Zimmermann '43

Burt was a member of one of the accelerated war-time classes. With the dedicated assistance of his wife, Mavis, he made successful efforts to improve the Alumni Day Program, particularly its appeal to spouses.

#### 1982 Wilbert Wiviott '57

Will was proud of his three degrees from University of Wisconsin—as his license plate attested. He made successful efforts to improve communication with the Medical School administration.

#### 1983 Kathryn Budzak '69

Since her first service on the alumni board of directors, Kathie has displayed

an ever increasing record of accomplishment. Her tenure was marked by numerous efforts to increase student involvement, including successful efforts in the area of women in medicine.

#### 1984 George Behnke '42

George had been president of the Wisconsin Medical Society and with his wife, Leah, was a widely respected and well-known ambassador of goodwill. The association thrived during his tenure.

#### 1985 George Kindschi '68

George and Beth Kindschi were an effective team who each contributed significantly to WMAA activities. Beth headed a program to implement measures to increase infant car seat safety. As president, George maximized interaction between student leaders and the board of directors.

#### 1986 Walter "Dick" Schwartz '55

Dick was tireless in ensuring that there was an alumni presence in student and school functions as well as in all alumni meetings. His interest in the Wisconsin Medical Alumni Association has never flagged.

As our third decade ended, major changes in the WMAA structure and its relationship to the Medical School administration were imminent. The next installment of this chronicle will describe those changes.

# Class Notes compiled by Kathleen Freimuth

## 1965



**Thomas Cesario** (above) is dean of the School of Medicine at the University of California-Irvine. He and his wife, Mary, have four children and three grandchildren.

**Louis Fischer** reports that he has transitioned from his full-time, hospital-based diagnostic radiology career to a part-time office practice. He enjoys radiology, but also has begun to enjoy the relaxed pace and additional time for family, friends and travel. He and his wife, Mary, have three children and three grandchildren.

**Larry Malewiski** retired from active family practice to teach medical students part-time at Midwestern University in Glendale, Ariz. He leads bible studies three to four times a week at a retirement center. He and his wife, Martha, have two daughters and one grandson.

Living in Encino, Calif., with his wife Arleen, **Joel Teplinsky** is semi-retired as medical director of the Wound Care Center at UCLA's Department of Plastic Surgery. He recently completed a term as president of the International College of Surgeons, U.S. Section. The couple recently celebrated their 40th wedding anniversary.



**Harvey Wichman** (above), past president of the Wisconsin Medical Alumni Association (WMAA), continues to practice as an orthopedic specialist full-time in Milwaukee. He is active in skiing and fishing and, he reports, continues to have a love-hate relationship with his golf clubs. He and his wife, Donna, hope to join the WMAA in June 2006 for a trip down the Rhine River with visits to its many castles. The couple has five children and seven grandchildren.

## 1971

**Scott Mubarak** recently completed his term as president of the Pediatric Orthopedic Society of North America—the largest orthopedic association in the world designed to provide quality education for pediatric orthopedists and to promote alliance organizations to do the same. He currently is director of pediatric orthopedics at Children's Hospital in San Diego, Calif., and is clinical professor in the Department of Orthopedics at University of California Medical Center, also in San Diego. He has authored over 140 articles and chapters in orthopedic journals and texts and co-authored the medical text *Compartment Syndromes and Volkmann's Contracture*.

## 1973

**Richard Kozarek**, head of gastroenterology and director of the Gastrointestinal Institute at Virginia Mason Medical Center in Seattle, Wash., has received the Rudolph Schindler Award by the American Society for Gastrointestinal Endoscopy. The award honors his lifetime achievement in endoscopic research. Over the last three decades, he has remained a pioneer in therapeutic endoscopic retrograde cholangiopancreatography (ERCP) and has developed new techniques in therapeutic endoscopy that currently benefit patients worldwide. Additionally, he is on the governing board of the World Congress of Gastroenterology and is a frequent speaker at conferences, traveling to more than 32 countries over the last 18 years. John and James Kozarek, his two brothers, also attended UW Medical School, as members of the Class of '75 and the Class of '83, respectively.

## 1975

**Nancy Herrell** practices neonatology at Newborn Care Physicians of Southeast Wisconsin, located in Milwaukee. She and **Daniel Herrell**, her husband and medical school classmate, have five children and one grandchild. Nancy enjoys knitting, reading and travel.

Pediatric allergist and immunologist **Robert Lemanske, Jr.** (above), is a professor of pediatrics and medicine at University of Wisconsin Medical School. He has two children, Lauren and Peter, and enjoys jogging and cooking.



He notes that he has changed his name from "Bob" to "Rob," and invites inquiries the next time any of his classmates see him.

**Mary Shane** practices psychiatry and psychoanalysis for adults and children in the Los Angeles area. She and her husband Morton, also a physician, share both career and avocation: They have co-authored a medical text as well as have won gold medals in Tango and Rumba competitions. Besides competitive dance, her activities include playing the piano and flute and involvement in political activism. The couple has three children and four grandchildren.

**Robert Sonntag** has practiced geriatrics at Park Nicollet Clinic in St. Louis Park, Minn., for 26 years. He and his wife, Katherine, live in Long Lake, Minn., and have three children: Matt, Becky and Megan.

**Frederick Zwartverwer** is a pediatrician at Merle West Medical Center in Klamath Falls, Ore. He enjoys golfing, skiing and participating in church activities. He is a member of the House of Delegates—an arm of the Oregon Medical Association (OMA) that has the power to change or develop policy to guide the OMA. He and his wife, Merlaine, have two children, Luke and Kara, and one grandchild, Madeline.

## 1977

**Susan Delphine Delaney** of Plano, Texas, received the National Health Information Award for her book, *Rx for Quilters: Stitcher Friendly Advice for Every Body*. While at UW Medical School, she took an elective course on writing for patients—a course that has served her well in the art of book writing. In addition to her private psychiatric practice in Plano, she spends 12 hours a week helping mentally ill homeless people in Dallas.

## 1980

**Pat Kulpa** of Gig Harbor, Wash., received his Master of Business Administration degree from the University of Washington, Tacoma, in June 2005.

## 1989

**Felix Ankel** is an emergency medicine residency director at Regions Hospital in St. Paul, Minn. He was recently promoted to associate professor of emergency medicine at the University of Minnesota, Twin Cities.

## 1990

**Kelli Heindel** is a family practitioner at ThedaCare Physicians in Appleton, Wis. She and her husband, Martin, have one child, named Gabe. She enjoys canoeing and kayaking, as well as photography and fishing.

## 1994

**Sara Christiansen** has opened Seaside Internal Medicine, a private practice located on Carolina Beach in North Carolina. She resides in Wilmington, N.C.

## 1999

Two years ago, **Chris Clancy** completed his residency training in adult psychiatry and was named chief resident in consultation-liaison psychiatry at the Harvard Longwood Campus in Cambridge, Mass. Just this year, he finished a fellowship in child and adolescent psychiatry at Massachusetts General Hospital in Boston and McLean Hospital in Belmont, Mass. He happily reports that he will soon be practicing psychiatry with fellow UW classmate **Jon Calder** at Crownpoint Reservation, Navajo Nation, in Crownpoint, N.M. And his good fortune continues: he is soon to be married and will reside in Santa Fe, N.M., with his new spouse, Meredith Pelton.

## In Memoriam

**Warren W. Fieber '55**  
August 2, 2005  
Mesa, Arizona

**E. Crosby Glenn '37**  
May 19, 2005  
Raleigh, North Carolina

**Eugene Grether '43**  
January 3, 2005  
Alexandria, Virginia

**Franklin W. Kapke '41**  
June 28, 2005  
Venice, Florida

**Jack H. Petajan '59**  
June 22, 2005  
Salt Lake City, Utah

**Raymond Ponath '45**  
May 8, 2005  
La Mesa, California

**Burton K. Smith '51**  
August 1, 2005  
Wausau, Wisconsin

## CME Conferences—Late Fall and Early Winter

### NOVEMBER 1

Endovascular/Stroke Conference:  
Bridgewood Resort Hotel, Neenah,  
Wisconsin

### NOVEMBER 5-12

Update: Pearls & Pitfalls in Primary Care:  
Caribbean Cruise

### NOVEMBER 20

20th Physician's Office Laboratory  
Symposium: Baltimore

### DECEMBER 3

Advanced Skills in Airway Management  
for the Clinician: UW Hospital & Clinics,  
Madison

### DECEMBER 8-10

Update in Infectious Diseases: Monona  
Terrace, Madison

### DECEMBER 16

Update in Asthma Treatment: Clock  
Tower Resort & Conference Center,  
Rockford, Illinois

### DECEMBER 28-30

20th Annual Clinical Cardiology  
Symposium: Florida

### JANUARY 5-6

Geriatrics 2006: The Frozen Tundra  
Conference: Lambeau Field Atrium,  
Green Bay, Wisconsin

### JANUARY 14-17

New Therapeutics: Telemark Lodge &  
Conference Center, Cable, Wisconsin

### JANUARY 28

New Developments in Cardiology:  
Milwaukee

## Pharmacology Memories Stand Out as Remarkable



Christopher Larson, MD '75  
Editorial Board Chair

How does one begin to recall, after 32 years, the classroom setting, the material, the faculty and the student experience of a subject as broad as medical pharmacology? This issue of the *Quarterly*, with its cover story on the Department of Pharmacology, gave me an opportunity to reminisce with fellow alumni and faculty.

I began by reflecting on the typical Med 2 class assembled in Service Memorial Institute (SMI) room 227 for any given lecture when I was a student in the early 1970s. Attendance was generally good, and the material well presented. The course called Medical Pharmacology, however, was special.

The subject was presented as an integral science, bridging introductory disciplines— anatomy, histology, physiology, microbiology and biochemistry—and clinical medicine. We would learn that therapeutics serve as a cornerstone in the practice of clinical medicine. We would also learn that drug side effects would be an important part of our understanding of medical pharmacology.

During those years, a change in the philosophy of how medicine should be taught to second-year students was occurring around the country. The volume of material important to the subject of pharmacology as part of a teaching block was growing.

UW pharmacology had been in the spotlight as a department since the mid-1960s, when Dr. Jack Strominger, past chair, completed work on cell wall synthesis and the mechanism of penicillin action as an antibiotic. Dr. Lowell Hokin would take over as chair in 1968 and introduce an expanded pharmacology curriculum for the Medical School, one that would increase the number of lectures from less than 20 to more than 40.

Dr. Hokin believed strongly that responsibility for teaching pharmacology belonged to the department and its faculty. He resisted a curriculum change that then

was growing in popularity, one that emphasized an organ systems approach and tract teaching rather than the time-honored teaching of pharmacology as a discipline linking basic science with clinical medicine. The department was now growing rapidly in size and scientific contributions; under Dr. Hokin's leadership, it would earn a national reputation. I'm told the department has continued to thrive over the past decade under the current leadership of Dr. Arnold Ruoho.

But the change in curriculum did take place and much of it happened during the early 1970s. Dr. June Dahl, I recall, took on the lion's share of the lecture load. I spoke with her recently about those times. She remembers the difficulties faced by department faculty over the added effort needed to coordinate material that would now be presented not just by the closely knit pharmacology faculty, but also by members of other departments who added to the organ-system side of the material.

Dr. Hokin explained that the course was particularly vulnerable to omissions of important material, or to duplications in portions of lectures, since teaching was now scattered among faculty, many of whom were from other departments.

To help assimilate the pharmacology core material with the systems tract approach, many faculty members chose to attend one another's lectures. I understand, through conversations with Drs. Dahl and Hokin as well as Dr. Ted Goodfriend, Dr. Bernie Wiesblum and Dr. June E. Osborn, that this auditing of each other's lectures was necessary to give direction to the course and its content.

The result was a very much enlivened classroom and a unique opportunity to learn from experts, who discussed material among themselves for the benefit of course development. This gave an added dimension to "classroom learning," attracting faculty who wanted to be in the lecture hall and who loved teaching.

Dr. Hokin reminded me that a chance comment or a "pearl" of knowledge from a lecture could become a lifelong memory; something carried into practice and throughout life.

The lecture room in SMI 227 was generally filled nearly to capacity in those days, for all lectures on all subjects. But students' level of interest in pharmacology, and the amount we learned from the teaching that was in transition at the time, stand out as remarkable. It was an era that has become a fond memory for many of us.

# Calendar of Events

## OCTOBER 2005

### October 21-22

#### HOMECOMING WEEKEND

Reunions for the classes of 1965, 1975, 1980, 1990, 1995, 2000

### Friday, October 21

10-11:30 a.m.

Quarterly editorial board meeting

2-4 p.m.

WMAA Board of Directors fall meeting

5-6:30 p.m.

Reception and tours of the Health Sciences Learning Center

6:30 p.m.

WMAA Presidents Dinner in the Health Sciences Learning Center

### Saturday, October 22

Noon

WMAA tailgate party, Union South

2:30 p.m.

Wisconsin vs. Purdue

## NOVEMBER 2005

### Friday, November 4

#### ALPHA OMEGA ALPHA BANQUET

## MAY 2006

### May 4-6

#### ALUMNI WEEKEND

## JUNE 2006

### June 9-19

#### MEDICAL SCHOOL/WMAA ANNIVERSARY CRUISE

on the Rhine River (For more information, visit [uwalumni.com/medicalcruise](http://uwalumni.com/medicalcruise).)

For additional information about these events, please visit the WMAA Web site at [www.med.wisc.edu/alumni/](http://www.med.wisc.edu/alumni/).

## We want to hear from you

Please send us information about your honors received, appointments, career advancements, publications, volunteer work and other activities of interest. We'll include your news in the Alumni Notebook section of the *Quarterly* as space allows. Please include names, dates and location. *Photographs are encouraged.*

Name \_\_\_\_\_ Year \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

E-mail Address \_\_\_\_\_

Recent Activities \_\_\_\_\_

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### Have you moved?

Please send us your new address.  
Mail to: Wisconsin Medical Alumni Association  
Health Sciences Learning Center  
750 Highland Ave.  
Madison, WI 53705

### Rather connect by computer?

Please send your information to us at:  
[www.med.wisc.edu/Alumni/stayconnected.asp](http://www.med.wisc.edu/Alumni/stayconnected.asp)

## ■ Observations



PHOTO: Jeff Miller/UW-Madison University Communications

With the first faint signs of fall beginning to appear, students relaxed on Observatory Hill on a warm afternoon.

**Wisconsin Medical Alumni Association**  
Health Sciences Learning Center  
750 Highland Avenue  
Madison, WI 53705

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