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FOR ALUMNI, FRIENDS, FACULTY AND STUDENTS OF THE
UNIVERSITY OF WISCONSIN SCHOOL OF MEDICINE AND PUBLIC HEALTH

Quarterly



SECOND WIMR TOWER RISING p. 8
MEDICAL SCIENTIST TRAINING PROGRAM p. 10
MIDDLETON SOCIETY CELEBRATION p. 28

Simulated Learning

A NEW PROGRAM
RAISES THE BAR



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School of Medicine
and Public Health
UNIVERSITY OF WISCONSIN-MADISON

QUARTERLY

The Magazine for Alumni, Friends,
Faculty and Students of the
University of Wisconsin
School of Medicine and Public Health

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CALENDAR

MARCH 2012

FRIDAY, MARCH 9 • WMAA WINTER EVENT IN MADISON

WMAA Winter Board Meeting

APRIL 2012

APRIL 26 – 28 • ALUMNI WEEKEND

Reunions for Classes of '47, '52, '57, '62, '72 and '77

WMAA Spring Board Meeting

MAY 2012

MAY 18 • GRADUATION DAY

SEPTEMBER 2012

SEPTEMBER 23 • WHITE COAT CEREMONY

OCTOBER 2012

OCTOBER 12 • MIDDLETON SOCIETY CELEBRATION

OCTOBER 26 – 27 • HOMECOMING WEEKEND

WMAA Fall Board Meeting



School of Medicine
and Public Health

UNIVERSITY OF WISCONSIN-MADISON

CONTENTS

QUARTERLY • FALL 2011 • VOLUME 13 • NUMBER 4

4



Simulated Learning

A sophisticated new program raises the bar

8



Second Tower Rising

The school moves full-steam ahead on WIMR II

14 Spotlight

16 Student Life

18 Research Advances

20 Donor News

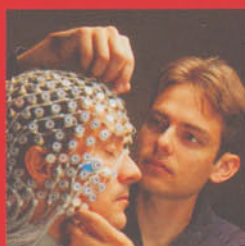
22 Faculty Q & A

24 Residency Life

26 Healer's Journey

28 Alumni Notebook

10



Medical Scientist Training Program

A rigorous multi-stage adventure leads to the MD/PhD

Fall on Campus (above)

Shadows lengthen and leaves fall on the Memorial Union Terrace, signaling the end of another season.

On the Cover

Kjersti Knox (left) and Abby Freedman practice intubation on one of the many physiologically realistic manikins in the new Simulation Program.

ROBERT N. GOLDEN, MD



The power of academic medicine lies in the fact that its three primary missions—clinical care, research and education—are synergistic. Strength in one area contributes to a greater level of excellence in the others. When we develop new resources for one mission, it benefits all.

In this issue of the *Quarterly*, we highlight our Medical Scientist Training Program, or MD/PhD program. This training ground for the next generation of physician-scientists plays a vital role in the advancement of the discovery process. It is particularly important because graduates are able to integrate the world of clinical medicine with the world of basic and translational discovery.

We are so proud that our peers (and, indeed, competitors), on behalf of the National Institutes of Health, reviewed the progress we have made over the past five years and gave the program glowing marks, recommending that we receive another full cycle of funding. This will allow the School of Medicine and Public Health to continue to produce the next generation of academic leaders, and through their leadership, continue to build bridges between research, education and patient care.

We are especially pleased to share the news that Dr. Anna Huttenlocher, an outstanding physician-scientist on our faculty, has accepted our offer to succeed Dr. Deane Mosher as the next leader of the program. Anna personifies the proverbial “triple threat”—an outstanding pediatrician who is a nationally renowned scientist and deeply respected educator and educational leader. We also want to acknowledge the many years of outstanding service Deane has provided. He has set the foundation upon which Anna will build the future success of this highly regarded educational program.

Alumni and donors enjoyed the chance to meet several current MD/PhD students at this year’s Middleton Society Celebration. Students who were receiving our Bardeen Award were also in the spotlight, as were student representatives of the TRIUMPH Program and MEDiC Clinics. It was an opportunity for alumni and our strongest supporters to meet a few of our most promising physicians-in-training, and for our students to express their appreciation in person for the support they have received. Your ongoing support is critical to their future success and the school’s continuing advancement.

Great science and great research training require great facilities. For this reason, we are pushing forward with the construction of the second tower of the Wisconsin Institutes for Medical Research (WIMR II). We have already seen exciting innovations and discoveries emerge from WIMR I, which serves as the home for the UW-Madison Carbone Cancer Center and a few additional cutting-edge research programs.

Like the first tower, the second will have many special design features. It will offer “science without walls,” a multi-disciplinary approach to discovery that brings together basic scientists, clinical investigators and population health researchers under the same roof. The building is notable for its absence of physical walls separating one team of investigators from another.

Most importantly, unlike most new research buildings being constructed in this country today, WIMR is literally connected to both our main teaching facility, the Health Sciences Learning Center, and our primary teaching hospital, UW Hospital and Clinics. In this way, patients and their families, doctors and nurses, scientists, students and post-doctoral fellows come together as partners, in the common pursuit of new advances in the prevention, diagnosis and treatment of illness. WIMR II will represent the ideal environment for the integration of patient care, education and research.

It is hard to capture the beauty and power of these new resources and the outstanding people and programs they support. I want to personally invite all of you to visit our growing health sciences complex. I would be happy to provide a tour and offer you a glimpse into the wonderful future of academic medicine at your SMPH.

Robert N. Golden, MD

*Dean, University of Wisconsin
School of Medicine and Public Health
Vice Chancellor for Medical Affairs
UW-Madison*

DONN FUHRMANN, MD '76

I really love living and practicing medicine in a small town. I knew when I left for college in 1968 that I wanted to return home to New London, Wisconsin, and practice medicine there someday. I always tell people that I am the most qualified person to live in New London because I traveled to 46 countries on six continents before I graduated from medical school! But I always loved coming home—back to Wisconsin, back to New London and back to my roots.

My best memories of medical school are the two elective study-abroad trips I took. Associate Dean of Students Dr. Betty Bamforth referred me to Associate Dean Dr. Tom Meyer ('73), who helped me set up a travel-study program in England and Scotland observing family medicine and studying the National Health Service. I spent 10 weeks with 10 different general practitioners, starting in London, traveling up to several smaller towns and ending in a fishing village in northern Scotland.

House calls were common and I was impressed by the continuity of care I saw. Healthcare thrives on robust relationships, and the patients I observed really trusted and listened to their family doctors. Each GP had a panel of about 2,500 patients and was responsible for the health and wellness of every patient. I established friendships, learned a lot of medicine and witnessed a variety of patient/doctor relationships. It was a fun, interesting summer.

My second travel-study trip was to Australia. Once again, Dr. Meyer knew someone and set me up to study pediatrics in Adelaide for two months. I left in January and studied hard once I arrived. I stayed in a room at the hospital and spent a lot of time reading Nelson's pediatric textbook in the library. I worked at the hospital and did clinical rotations with other medical students. I remember everyone (including me) wearing knee-high socks and shorts along with shirts, ties and short white jackets.

My most notable memory of Australia was that everyone used albuterol for asthma treatments, both in-patient and out-patient. The professor of pediatrics I was shadowing

wouldn't allow his residents to use aminophylline or theophylline, which is what we were still using in the United States. He said they were too dangerous with too many side effects. I made many friends, watched kangaroos in the Outback (like we watch deer in Wisconsin) and traveled a good deal. I saw Alice Springs and various Aborigine settlements. Generally, I found pediatric medicine in Australia to be very similar to what we have in the U.S. But the customs, foods, beverages and people are all a little different in other parts of the world.

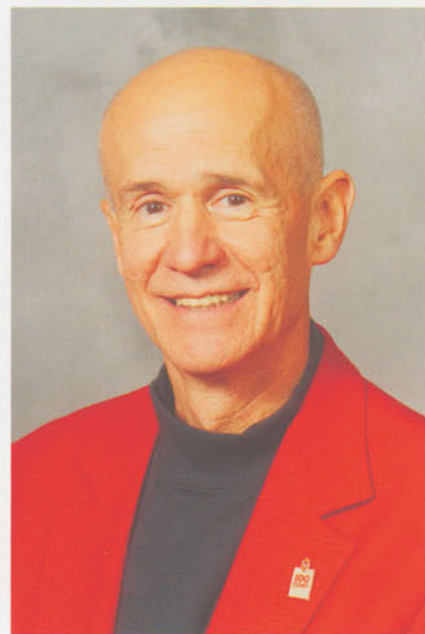
I got a chance to visit several additional places on my way home to the U.S. because I had an unlimited around-the-world plane ticket good for six months. I traveled through the Far East and Middle East, stopping in Japan, Taiwan, India, Thailand, Syria and Greece. I stayed with some alumni and classmates, such as Thep Himathongkam ('69) in Bangkok and Samir Abdo ('76) in Aleppo, Syria. I'm told there are some 20 alums living overseas these days.

I always kept a diary and took many pictures. It's interesting to reflect on all those memories and experiences today. I learned so much. I'm glad our School of Medicine and Public Health has developed a strong global health program, with many opportunities for experiences abroad. I expect today's medical students will find them as memorable as I did.

Observing how medicine is practiced in other countries can open your mind. It can prepare you to care for all kinds of patients. In this day and age, health issues are crossing national borders more than ever, and in our small Wisconsin practices we are seeing patients from all over the world. Visiting foreign places also can remind you how similar we all are. In the end, medicine is about people and relationships, no matter where you are.

Donn Fuhrmann, MD '76

President, Wisconsin Medical Alumni Association





Sim Baby is in for the removal of a neck cyst, but suddenly goes into cardiac arrest, requiring residents to perform chest compressions and administer IV medications.

Simulated Learning

A SOPHISTICATED NEW PROGRAM RAISES THE BAR

"Sim Baby" is having a very bad day on the operating table. The tiny manikin wails like a baby, and its tiny belly rises and falls beneath the mint green hospital gown. A pulse-oxygen clip on a finger sends off a steady red blinking light.

Yesterday, Sim Baby played a small patient who was in for a neck cyst removal but then suddenly went into cardiac arrest.

Today, she is a 1-year-old child with Down Syndrome who is having tubes placed into her ears. But as soon as the anesthesiology residents place the mask on the baby, the simple procedure becomes complicated.

At a control monitor in another room behind a one-way window, Lianne Stephenson, MD '03, an assistant professor of anesthesiology at the University of Wisconsin School of Medicine and Public Health (SMPH), points the mouse and clicks. Suddenly Sim Baby is seizing on the table.

"Is that a seizure? That sure looks like a seizure," says senior resident Ashley Jensen, MD, as she discusses whether to stop the procedure. But the seizure ends, and all is

good, until Stephenson clicks the "severe brady" button, to simulate bradycardia, the slowing heart rate that may accompany inhaled anesthesia or undiagnosed heart problems associated with Down Syndrome.

The residents debate and then administer atropine, and Sim Baby recovers, only to suddenly start retracting its chest, signaling that its larynx is in spasm. The residents struggle to intubate the baby, and are successful, despite the fact that Stephenson has programmed the airway to constrict.

Later, in the debriefing room, they talk through their actions, whether they were transparent in communicating their thoughts with each other during the exercise and what other choices they could have explored. Stephenson, a fellowship-trained pediatric anesthesiologist at American Family Children's Hospital, and the residents trade tips, anesthesiology war stories and advice about how to be more prepared next time.

"What I like best about simulation is that medicine is normally so busy, we rarely get time to sit down and talk through these

judgment calls," Stephenson says. "We can also practice identifying and treating conditions such as malignant hyperthermia, which an anesthesiologist might never encounter but should be prepared for."

Since Sim Baby is made of vinyl, no actual patients are harmed in the learning process. As Richard Page, MD, chair of medicine at the SMPH, likes to say, "The beauty of simulation is that you can have the post mortem without the mortem."

Welcome to the new, \$6 million UW Health Simulation Program, which celebrated its grand opening November 1, 2011. The gleaming new 6,500-square-foot facility located on the first floor of UW Hospital and Clinics has been in the works for two years. The program is modeled on those at Stanford University, Mayo Clinic and the University of Pittsburgh, but may be in a class by itself when it comes to flexibility. Each of the six rooms can be set up in varying configurations of beds occupied by a variety of high-tech manikins.

—Continued on next page

Perhaps the strongest advocate for the program is C. Craig Kent, MD, chair of the Department of Surgery at the SMPH, who made building a simulation program a priority when he arrived in 2008 from New York Presbyterian Hospital and the Weil Cornell Medical School.

"There are many arguments in favor, but most important is that simulation is at the forefront of improving quality of care," Kent

says. Given metrics that guide ratings of a hospital's quality, the old days of "see one, do one, teach one" learning on the job are long gone.

As a vascular surgeon, Kent has seen how a simulation program can improve effectiveness.

"When I put in a carotid artery stent, there may be 18 steps in the process," he says. "It helps if you practice that four or five

times before the first time you perform the procedure on a patient. The value of that is incalculable."

Actually, Kent has conducted research that showed the value of simulation for residents who had never before participated in a catheter intervention. Those who practiced first in a simulated learning experience received higher grades from their mentors, and performed better on measurable surgical statistics, according to a 2006 study Kent published in the *Annals of Surgery*.


Simulation is part of the future of surgery, Kent says, explaining that very soon, not only will residents have to prove their skills on simulators before they can be board certified, veteran surgeons will also have to perform well on simulations to be re-certified.

The same is already true in anesthesiology, where specialists must engage in simulation drills to be re-certified. Robert Pearce, MD, chair of the Department of Anesthesiology at the SMPH, says there are currently 27 programs in the United States that provide training that satisfies the Maintenance of Certification in Anesthesiology (MOCA) requirements, and he expects the SMPH to join that group.

"Anesthesiologists have driven advances in simulation because of the strong focus of our specialty on patient safety," he says. Pearce likens simulation training in rare medical events to the way airlines train pilots by programming info from "black boxes" retrieved from crashes so that the new pilots can learn from the disasters of the past.

"It is useful for training in events that don't happen often, but that you want to practice so you can respond quickly, the same way the pilots responded in the 'Miracle on the Hudson' airplane crash," Pearce says.

George Keeler, MBA, the UW simulation program manager, agrees, adding that simulation is one area in medical education in which mistakes are encouraged, so people can learn from them. For example, one simulation includes a scenario in which the patient is given the wrong type of blood



From the computer, anesthesiologist Lianne Stephenson simulates all kinds of unexpected problems to which residents must rapidly respond.

from the blood bank and team members are judged on how quickly they realize the error and respond.

Inter-disciplinary teamwork simulations are key, Keeler says, because research suggests that 70 percent of healthcare errors are due to miscommunication.

The program is a joint project of UW Hospital, the SMPH and the UW Medical Foundation. The William S. Middleton Veteran's Hospital, the Madison Fire Department and others have also supported the program and will be active participants.

Jon C. Gould, MD '96, spent several years planning the program and served as its first medical director before he left the SMPH this summer to become chief of general surgery at the Medical College of Wisconsin. Gould says he became convinced of the benefits of simulation after he returned from fellowship training in laparoscopic surgery and wanted to share what he had learned with new residents. Gould was so committed to building the UW Simulation Program that he organized his classmates from the Class of 1996 to donate to it. (People interested in the clinical simulation program can learn more at med.wisc.edu/simulation.)

Supporters of the simulation program can be found throughout the SMPH faculty.

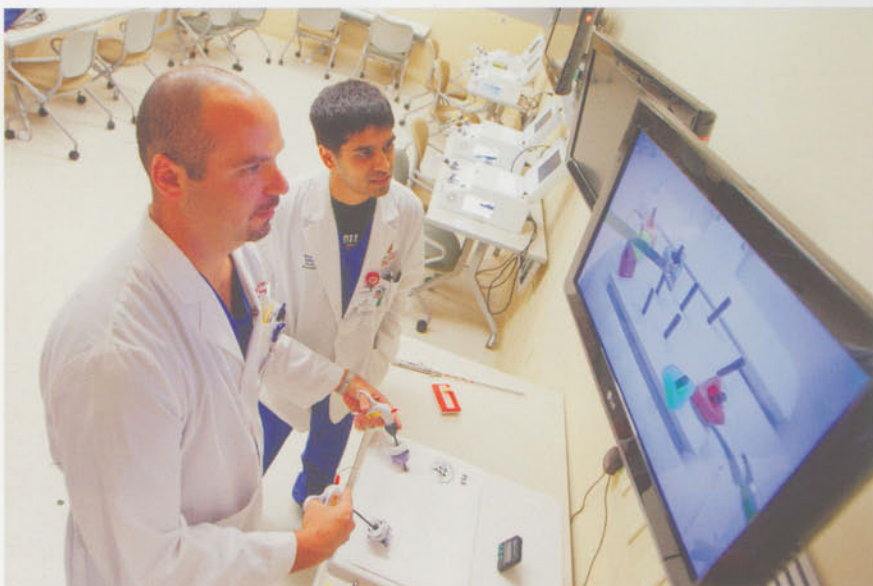
"It's the future of medical training, and we will be leaders in that future," says Page, a cardiologist who envisions physicians and care providers from around the state coming to campus to train and be certified.

"Both UW Health and the SMPH take our role as the state's teacher very seriously," he says. "This is the Wisconsin Idea in action."

The new simulation program will allow many types of research, because each of the main rooms has six nodes that gather and pull together data that can later be evaluated.

But Kent says that some of the most important aspects of simulation involve the human element—evaluating the ability of people to work together as a well-honed team, and assessing their interactions with patients and families.

"One of the most difficult days for a young physician is the first time he or she has to



Surgeon Jacob Greenberg, left, shows a surgery resident how to improve manual dexterity and decision making on a simulator called Fundamentals of Laparoscopic Surgery.

tell a family that their loved one didn't make it," Kent says. He has watched as residents evaluated film of each other interacting with actors playing bereaved family members and witnessed how they learned from each other, and from their own mistakes.

"This is the type of experience that helps you learn the art of medicine, and ultimately become a better doctor," Kent says.

Kent envisions the simulation program giving the SMPH the ability to train surgeons in new devices and procedures, saying it may draw practitioners from around the country for training.

The training aspect is also true for trauma and emergency medicine. UW Hospital trauma coordinator Amy Stacey, NP, says the simulation program will be used for teaching Advanced Trauma Life Support (ATLS) courses. She especially appreciates the ability to simulate a fast-moving trauma situation, in which a large team of physicians and nurses from a variety of specialties work together on a single patient. It will be good for training new trauma residents at UW Hospital, but also important for physicians who come to Madison from around Wisconsin for ATLS courses.

"As a level-one trauma program, we are required to offer outreach learning to our referring facilities, and we have people coming in from around the country for these courses," Stacey says. "For example, simulations can be very valuable to a hospitalist who may be the only physician on site at night in a small community hospital and who doesn't get to see some of these situations on a regular basis."

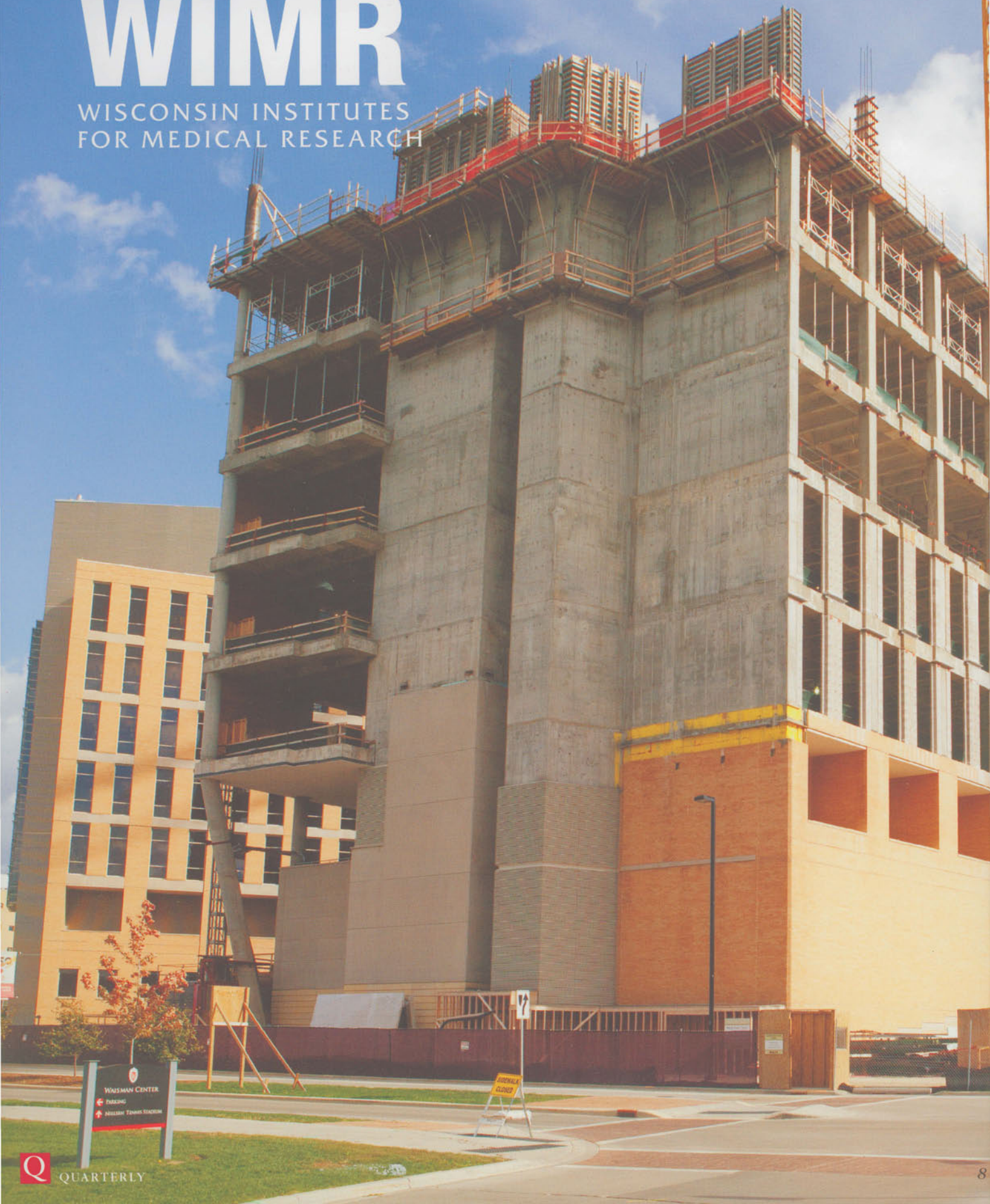
The program is also building research ties, such as the one with Robert Radwin, PhD, a UW biomedical engineering professor. He works at the "CAVE" that's part of the Living Environments Laboratory in the new Wisconsin Institutes for Discovery. The CAVE lets scientists create 3D virtual operating rooms to test how people interact while delivering patient care. Radwin creates virtual surgical and medical procedures for improving healthcare tools and devices, including a simulation of an ER trauma bay. The ideas created in virtual space at the CAVE may later be tried out at the simulation program space at the hospital.

Besides "Sim Baby," the simulation program offers a whole family of teaching manikins. These range from single-purpose

—Continued on page 39

WIMR

WISCONSIN INSTITUTES
FOR MEDICAL RESEARCH





The Story Continues

Designed to enhance the collaboration of researchers in the basic, clinical and population health sciences, the Wisconsin Institutes for Medical Research (WIMR) will eventually grow to three towers, all dedicated to moving new discoveries from the laboratory bench to patients' bedsides and out into communities.

The construction of WIMR's second tower is now under way as concrete is poured, columns rise and masonry walls begin to climb. Construction is scheduled for completion in 2013. WIMR's first tower opened in 2008 with cancer as its primary focus.

"We have planned for much more efficient use of space in this structure compared to buildings constructed in the past," says Mark C. Wells, assistant dean for facilities at the SMPH. "In addition, modern laboratory design encourages sharing of equipment and resources, so we will have much less duplication and much greater efficiency."

Tower II will have seven floors devoted to research and discovery. Novel therapies for heart and vascular disease will be the focus of one floor devoted exclusively to cardiovascular research. The puzzles of Parkinson's and Alzheimer's diseases will be explored on another floor devoted to the neurosciences.

On its research floor, cell and regenerative biology will study human biology at its most basic level. In its new space in tower two, the Eye Research Institute will continue to advance the understanding of sight in its broadest terms. And the McArdle Laboratory for Cancer Research's move into tower two will bring together 18 separate oncology department lab groups focusing their attention on cancer and new cancer therapies.

These research initiatives represent only a small part of the work that will go on inside this building as the School of Medicine and Public Health continues its commitment to the development of new knowledge and the advancement of human health.



Eric Landsness adjusts a high-density EEG cap. In his earlier MD/PhD research, he used a cap to determine whether patients in minimally conscious or vegetative states sleep.

Medical Scientist Training Program

A RIGOROUS MULTI-STAGE ADVENTURE
LEADS TO THE MD/PhD

"Choose Your Own Adventure" is the subtitle Eric Landsness has coined for the Medical Scientist Training Program (MSTP) at the University of Wisconsin School of Medicine and Public Health (SMPH) in which he is enrolled.

The MSTP, also called the MD/PhD program, combines high-quality medical training with rigorous graduate-level research culminating in a doctoral dissertation. Candidates spend their first two years in medical school, then obtain a PhD degree prior to completing their last two years of medical school. A bridging curriculum ensures that students maintain clinical skills during their research years, and stay engaged in research during their MD years.

The program's physician-scientist graduates are highly sought-after for their unique abilities to work at the interface of clinical care and basic science research. Grounded in both worlds, the graduates of the MSTP also make major contributions to the understanding and improvement of human health.

Landsness' "adventure" began with the dream of becoming an engineer who designs medical devices to help people in need. Upon completing a bachelor's degree in electrical engineering at the University of Washington in Seattle, he felt it was natural to pursue a combined MD/PhD degree in the Badger State. Though his family is based in the northwestern U.S., it includes several UW-Madison graduates: his mom from the School of Nursing; dad from the College of Engineering; maternal grandfather, B. Jack Longley, Sr., MD '42, and uncle, B. Jack Longley, Jr., MD '79, from the SMPH.

"The SMPH and MSTP have been very flexible in helping me tailor this program to meet my needs and educational goals," says Landsness. He looks forward to combining the clinical and research skills he is acquiring, as well as his affinity for electrical engineering, in a future career at an academic medical center, which would also provide him the opportunity to teach.

For MSTP alumnus Peter Todd, MD '04, PhD '02, a similar goal has become a reality. Now the Bucky and Patti Harris Professor

and assistant professor of neurology at the University of Michigan (UM), he is the co-director of the National Fragile X Consortium Clinic at UM.

Todd's UW-Madison neuroscience PhD and medical degree led him to an internship and adult neurology residency at the Hospital of the University of Pennsylvania in Philadelphia, and a subsequent fellowship in neurogenetics and movement disorders at UM. He entered the tenure-track UM faculty position in 2010.

"I do what MD/PhDs are trained to do—I run a lab targeted at translational research in neuro-degenerative diseases, which takes approximately 80 percent of my time. I also see patients with those types of disorders about 20 percent of my time, and teach residents and students in both research and clinical settings," Todd explains.

MD/PhDs generally are prepared better than others to develop clinically applicable research, test it and make it available to help people in need.

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"I believe that the integrated MD/PhD degree makes me a much better researcher and more likely to have my work impact clinical care for patients than if I had only one degree," Todd says.

The program's leadership team includes director Deane Mosher, MD, professor of medicine and biomolecular chemistry; associate director Anna Huttenlocher, MD, professor of pediatrics and medical microbiology and immunology; associate director Robert Blank, MD, PhD, associate professor of medicine; associate director Brad Schwartz, MD, professor of medicine; and administrator Paul Cook, PhD.

MSTP leaders begin providing students myriad opportunities to learn about UW-Madison researchers early on in the program—usually at the onset of medical school. They coordinate weekly seminars, journal clubs, annual symposiums, retreats and more. One leader serves on the thesis committee for each MSTP student, and each director teaches an MSTP-specific course in the first two years of medical school.

Mosher says: "Our biggest role is to get to know the students so we can help match them up with the most appropriate research

mentor who will allow them to do exciting research and get through in a reasonable amount of time."

As with all MSTP candidates, Landsness spent the summer between his first and second years of medical school doing three research rotations with the goal of choosing a lab and mentor for his graduate research. Sleep and brain plasticity research being conducted by Giulio Tononi, MD, PhD, professor of psychiatry, piqued his interest, leading him to choose Tononi as his research mentor. He also worked closely with Ruth Benca, MD, PhD, professor of psychiatry and director of Wisconsin Sleep, and Chiara Cirelli, MD, PhD, associate professor of psychiatry.

During the PhD component of the program, students function fairly independently as research investigators. They learn to propose hypothesis-driven research in a rigorous scientific process, conduct experiments that will test the hypothesis, analyze the data and present the results in a peer-reviewed manner so they can reach solid scientific conclusions.

For instance, Landsness' research focused on whether patients in minimally

conscious and vegetative states sleep. He helped master the use of a device to allow high-density electroencephalographic (EEG) recordings from the scalp using 256 electrodes, which provides a richer set of data on which to base theories compared to the standard eight electrodes. Then, using his engineering and medical training, he applied the use of the sleep cap to measure slow wave sleep patterns to help determine whether a patient is in a minimally conscious or vegetative state, and published the findings in *Brain*.

The new cap is now used by many researchers in brain studies and has the potential to be used as a clinical tool to determine the level of consciousness, and related prognoses, of severely brain-damaged patients.

Mosher says students can pursue research in practically any field, including engineering, epidemiology, biostatistics and the social sciences. He and Huttenlocher emphasize that few, if any, institutions compare to UW-Madison in the breadth and depth of graduate programs available to students and relevant to medicine.

The Goal is Research Closely Coupled With Patient Care

Joe Wildenberg, who will graduate with his MD/PhD this coming May, plans to become a neuroradiologist in the future, imaging brains and looking for new neural pathways.

The Eau Claire, Wisconsin, native chose Beth Meyerand, PhD, SMPH professor of medical physics and chair of the UW College of Engineering's biomedical engineering department, as his research mentor. She had worked with the late Paul Bach-y-Rita, MD, who studied the brain's capacity to radically reorganize itself following stroke, traumatic injury or antibiotic toxicity.

Bach-y-Rita developed a system in which patients with little or no vestibular function wear a helmet that responds to

their movements by sending impulses through a computer to a strip of electrodes on the tongue. By keeping the impulses centered on the tongue, the patient is able to maintain balance without assistance while standing or walking.

The system had fabulous results that were evident in patients' behavior, explains Wildenberg. "But we had no idea what was actually going on inside the brain."

Working with others, Wildenberg used functional magnetic resonance imaging (fMRI) to better understand how the tongue interface interacts with the brain. They pursued the theory that tongue stimulation without a helmet may provide a similar positive effect for subjects.

"My data analysis shows that the tongue stimulation activates a pathway in the brainstem that is present anatomically but not normally used," he says. "This allows different regions of the brain to take over functions of the damaged cells," and provides significant clinical improvement that increases cumulatively through repeated sessions.

Following graduation, Wildenberg hopes to remain connected to this research in some fashion during his residency and fellowship years, and beyond.

"My goal," he says, "is to do research closely coupled with patient care at a major university like this one, and perhaps this one, if that becomes possible."

Landsness, who completed his PhD and just transitioned to his third year of medical school, praises other aspects of the program as well.

"It's one of the best medical-scientist training programs in the U.S. due to its excellent level of mentorship, leadership and assistance with transitions, plus the freedom for students to pursue the research of their choice," he says.

Mosher applauds the campus leaders who have supported the program since its inception in 1986. Jointly sponsored by the SMPH and the UW-Madison Graduate School, the MSTP earned accreditation by the National Institutes of Health (NIH) in 1998. Thanks to an institutional training grant from the NIH and funding from the SMPH, MSTP students receive a stipend and have their tuition waived.

Drawing candidates from across the country, program staff interviewed more than 200 applicants and enrolled 12 new candidates for 2011, for a total of 78 students now in the program. A total of 56 students have graduated from the MSTP.

"The quality of our students is incredible," says Huttenlocher, who will become director upon Mosher's upcoming retirement.

MSTP leaders have reduced the average student's time in the program to eight years. They remain flexible, though, allowing for more time when special circumstances arise or when students wish to pursue deeper levels of research. For example, Landsness' classmate Sarah Wernimont chose to spend an extra year in the lab so that she could develop additional research projects while starting a family.

A Winona, Minnesota, native with a bachelor of science degree in biochemistry from the University of Chicago, Wernimont chose a basic science research track focused on the role of T-cells in immunology for her doctoral work.

"I wanted a really strong foundation in basic science, and am fascinated by the field of immunology—including the many pieces that go into generating an immune response to keep you healthy and keep you from

developing cancer," she explains. Wernimont, now in her third year of medical school, completed her PhD in Huttenlocher's lab.

"My research relates to how T-cells get to places where they need to be activated and the activation process. Your body is filled with T-cells, whose function is to kill infected cells and cancer cells, but not to indiscriminately kill healthy tissues. When they encounter antigen-presenting cells (APCs), the T-cells receive a signal indicating that they should attack; the T-cells then adhere to the APCs via receptor proteins called integrins," she explains. "I learned that T-cell integrins are regulated very differently compared to how other integrins work."

She has published her work widely in journals such as *Journal of Immunology*, *Blood*, *Journal of Biological Chemistry* and *Molecular Immunology*.

Wernimont says committing to a program that may take eight or more years can seem daunting initially.

"However, it's not just those years without life happening," she says. "You have to establish a good balance among all aspects of your life to make it work. This *is* life, and it's important to enjoy the process."

She and her husband, Kirke Rogers, MD '08, met on their mutual first day of medical school. Their daughter, Alice, was born during Wernimont's fourth year of her PhD work. Rogers is now completing an anesthesiology residency at UW Hospital and Clinics, and Wernimont is starting to think about her future residency choices—and a career in rheumatology or maternal-fetal medicine.

While Wernimont admits it's sometimes difficult to manage the logistics of the MD/PhD program and parenthood, she credits her parents, in-laws and close friends who are always willing to help. Fellow MD/PhD students also step up.

"The MD/PhD group is so close-knit. We've had weddings, babies, good times and bad times together, and we're there for each other whenever needed," says Wernimont.

Todd, in Michigan, stresses the importance of balance.



MARTIN VLOET, UNIVERSITY OF MICHIGAN PHOTO SERVICES

Peter Todd, now on the faculty at the University of Michigan, believes his two degrees make it more likely that his research will impact clinical care than if he had only one.

"Given that MD/PhD training can sometimes take up to 15 years from beginning medical school until starting a first faculty position, it is important to remember that you can't put off starting the rest of your life, such as getting married, having children, trying new things, having hobbies and spending time with friends," he says.

It's a rewarding adventure, Todd adds.

"You really need to want research to be a major component of what you do in the long term to succeed," he says. "But I think I have the best job in the world, and I am never bored, so I recommend it despite the challenges involved. My advice is to make sure you enjoy the journey at each stage."

NIETO SELECTED FOR TWO NATIONAL COMMITTEES



Javier Nieto, MPH, MD, PhD, has been named to a prestigious Institute of Medicine (IOM) committee charged with developing new methods to evaluate the impact of community-based programs for preventing chronic diseases

such as heart disease and diabetes.

Nieto, the Helfaer Professor of Public Health, is chair of the SMPH Department of Population Health Sciences, and an expert in epidemiology of cardiovascular diseases and sleep disorders.

The committee began meeting this past summer and has a year to come up with recommendations on the best ways to measure the value of community-based, non-clinical prevention and wellness strategies.

The IOM is an independent, nonprofit organization that works outside of government to provide

unbiased and authoritative advice to decision makers; it is the health arm of the National Academy of Sciences.

Also this past summer, the National Research Council (NRC) named Nieto to a national group charged with organizing a conference on research on fatigue in transit operations. The conference was sponsored by the Transportation Research Board, also an arm of the National Academy of Sciences, and took place in Washington, DC, in October.

The aim of the conference was to provide a forum for researchers and practitioners

engaged in identifying the best practices to address the public health issue of transit drivers and other transit workers falling asleep at the wheel. A report will be issued in early 2012.

The NRC is a private, nonprofit institution that is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering.

AMERICAN COLLEGE OF PHYSICIANS HONORS HAASE

Sharon Haase, MD '85, an SMPH clinical professor of medicine based in Beaver Dam, Wisconsin, has earned the American College of Physicians (ACP) Laureate Award.

The Laureate Award is the highest distinction recognized by the college within a state chapter. The award honors Haase's excellence in medical care and medical education, as well as outstanding service to her community, the people of Wisconsin and the ACP.

The award was presented to Haase at the Wisconsin American College of Physicians Annual Scientific Meeting. In conjunction with receiving the award, Haase delivered the keynote "Middleton Memorial

Lecture" at the meeting, held on September 10, 2011.

Haase is a preceptor for fourth-year SMPH medical students, a position she has held since establishing an internal medicine practice in Beaver Dam in 1988. In 1989, she became the medical school's first female head preceptor. In 2003, she was honored with the school's Max Fox Award, given annually to an outstanding preceptor whose effective service as a mentor and teacher has guided UW medical students.

In 1992, Haase's Beaver Dam practice became UW Health's first community clinic.

Haase graduated with honors from the SMPH. She has received many teaching



and leadership awards from UW-Madison, the American Society of Internal Medicine and the ACP at the state and national levels. She is the immediate past governor of the Wisconsin Chapter of the ACP and has

served on numerous national ACP boards and committees.

JOHN WINGREN, MEDIA SOLUTIONS

MEDICAL STUDENTS ARE A HIT AT THE STATE FAIR

BRYCE RICHTER, UNIVERSITY COMMUNICATIONS



“Oh, ick! Let me see that!” Children who visited the SMPH display at UW-Madison Day at the Wisconsin State Fair in August got to don exam gloves and surgical caps and poke

and prod at diseased livers and blackened lungs. The display featured several medical-oriented activities for the public.

About a dozen students from the TRIUMPH (Training in Urban Medicine and Public Health)

program, and their leader, Cynthia Haq, MD, professor of family medicine and TRIUMPH director, joined Bucky Badger, the Paul Bunyan axe, the Babcock ice cream truck and other Wisconsin icons to help bring the campus to the fair.

It was tough competing with Heisman Trophy winner Ron Dayne and Braveheart, the abandoned dog saved by the UW School of Veterinary Medicine, but the medical students managed to pull together one of the most popular displays on the fair’s central park.

The Milwaukee-based TRIUMPH students borrowed some cadaver organs from the anatomy lab so they could share

the Doctors Ought to Care (DOC) program with young fairgoers.

More typically, student members of DOC take the organs to schools to show children what happens inside their bodies if they make healthy or unhealthy lifestyle choices.

In another part of the tent, children (and some parents and grandparents) lined up to have their blood pressure, weight and other measurements taken as part of a “Measure Me, Measure You” display. No word on whether fairgoers were measured before or after they ate traditional fair treats such as cream puffs, corndogs and deep-fried butter.

\$9.2 MILLION GRANT AWARDED FOR REDUCING SMOKING

A partnership between UW’s Center for Tobacco Research and Intervention (UW-CTRI) and the Wisconsin Women’s Health Foundation (WWHF) will receive \$9.2 million over five years from the Centers for Medicaid and Medicare to reduce smoking rates among Wisconsin Medicaid enrollees, with a special emphasis on pregnant smokers.

The new “Striving to Quit” initiative will target BadgerCare Plus members in two regions of the state and BadgerCare Plus high-risk pregnant women in five counties. More than 8,000 adults and 3,000 pregnant women will be offered free

smoking cessation counseling through the statewide Quit Line managed by UW-CTRI and WWHF’s First Breath Program.

Participants will receive incentives for making attempts to quit and achieving their goals, which will be verified using carbon monoxide testing. Implementation will begin in January 2012.

“Some 70 percent of smokers want to quit, and this grant will help thousands of Medicaid enrollees access the Wisconsin Tobacco Quit Line and succeed,” says Michael Fiore, MD, MPH, UW-CTRI director.

UW-CTRI combines ground-breaking tobacco research with

practical application. It also provides services to thousands of Wisconsin residents through its outreach program and its Quit Line, which provides cessation service to anyone anywhere in Wisconsin.

According to Sue Ann Thompson, WWHF president, “Wisconsin ranks above the national average for pregnant smokers. This grant will help us target these women with a proven smoking cessation program, resulting in healthier moms and babies and lower healthcare costs to the state.”



Class OF 2015



CHRIS FRAZEE, MEDIA SOLUTIONS (6)

A FORMAL WHITE COAT WELCOME

The 173 members of the Class of 2015 officially joined the SMPH family this fall when they donned their symbolic white coats for the first time at the White Coat Ceremony. The celebration is among the most important in a medical student's four-year experience at the school.

This year, as in most, leaders from the SMPH, the Wisconsin Medical Alumni Association and the Wisconsin Medical

Society welcomed the new class with greetings and inspirational messages. The students were asked to confirm their new responsibilities and commitments to their patients, communities, teachers, classmates and themselves by reading the Student Code of Medical Ethics.

The new class members are diverse in age and socio-economic background. They majored in a variety of subjects at undergraduate colleges across the

country, but more than 50 percent attended UW-System universities. Their interests and life experiences range from teacher to singer in a rock band, Peace Corp volunteer to journalist and National Rowing Team member to medical interpreter.

In their classes, labs and learning communities, the new class members have begun gelling as a group, the first steps in a future that will have them serving as members of the healthcare team.



'Cognitive' Computing Chips Unveiled

UW-Madison researchers are part of the IBM-led team that recently unveiled a new generation of experimental computer chips—the first step in a bold project to create a computer that borrows principles from the mammalian brain.

The chips combine neuroscience and nanotechnology to operate more like brain cells by thinking and learning from experiences. They also run on much less power than current computer technology.

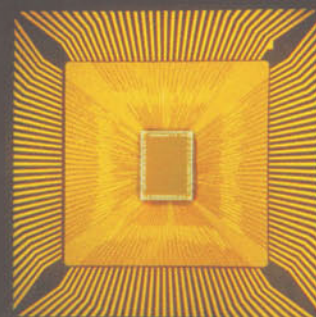
SMPH neuroscientist Giulio Tononi, MD, PhD, leads the UW team, which is designing the software to teach the chips to learn and think.

"We are using the new IBM neurosynaptic chip to develop cognitive computing architectures that are good at integrating information—a key adaptive feature that the brain excels at, and which has proven difficult to achieve using conventional computers," says Tononi, professor of psychiatry at the SMPH and an internationally known expert on consciousness.

The ultimate goal is to create a small, low power-usage computer that analyzes complex information from multiple senses at once, but also dynamically rewires itself as it interacts with its environment.

The UW team includes scientists from the computer sciences and the neurosciences. Along with Columbia University and IBM, they are the "software" team for the project.

Meanwhile, experts from Cornell and the University of California-Merced are



collaborating with the IBM team to design the "hardware."

IBM also announced that the project has been awarded about \$21 million in new funding from the Defense Advanced Research Projects Agency (DARPA) for the second phase of the project.

Parents' Stress Marks DNA of Children

Parents who are stressed during their children's early years can leave an imprint on their sons' or daughters' genes that lasts into adolescence and may affect how these genes are expressed later in life, say SMPH researchers and their University of British Columbia (UBC) collaborators.

The study, published in *Child Development*, focused on epigenetics—the expression of genes, rather than the underlying sequence of DNA. A central component of epigenetics is methylation, in which a chemical group attaches to DNA segments, dampening gene function in

response to social and physical environments.

Marilyn Essex, PhD, professor of psychiatry, has been studying participants in her long-running Wisconsin Study of Families and Work (co-directed with UW psychology professor Janet Hyde, PhD). This project follows the health and development of children from some 500 Wisconsin families.

In the current study, researchers measured methylation patterns in cheek-cell DNA collected from more than 100 adolescents at age 15. These patterns were compared to data obtained in 1990 and 1991, when these same children were infants

and toddlers, and their parents were asked about their stress levels such as depression, family-expressed anger and financial stress.

The researchers, led by UBC's Michael S. Kobor, PhD, found that higher stress levels reported by mothers during their child's first year correlated with methylation on 139 DNA sites in adolescents. They also discovered 31 sites that correlated with fathers' higher reported stress during their child's preschool years.

"This study is further proof of the importance of those early years and the lasting effects of children's family environments during infancy and preschool," Essex says.



Anti-Parasitic may Prevent Non-Melanoma Skin Cancers

The same anti-parasitic agent used to treat African sleeping sickness may also ward off non-melanoma skin cancer years after treatment, according to research at the UW Carbone Cancer Center.

More studies are needed, says lead author Howard Bailey, MD, professor of medicine at the SMPH, but it may be good news because public health efforts to curb sun exposure have not resulted in fewer skin-cancer cases.

Bailey used the anti-parasitic DFMO, or a-difluoromethylornithine,

in his original study from 1998 to 2007. The phase III, randomized, double-blind trial of 291 men and women with a history of non-melanoma skin cancer originally determined that the group that received DFMO had fewer basal-cell cancer recurrences. However, DFMO appeared to provide little to no protection against squamous-cell cancers.

In the follow-up study, Bailey and his team reviewed the medical records of 209 of the original participants. The scientists discovered that participants who took the anti-parasitic agent for up to

five years continued to have fewer basal-cell cancers, but the difference lessened over the years since stopping the drug. They also found no evidence of negative side effects from taking DFMO other than initially observed slight hearing loss while participants took the drug.

About two million cases of non-melanoma skin cancer are diagnosed each year.

The follow-up study was presented at the 10th Annual American Association for Cancer Research (AACR) International Conference on Frontiers in Cancer Research



in Boston by Wisconsin researcher Sarah Kreul, MD.

New Clues to Axon Growth

SMPH researchers have discovered how a key molecule helps new nerve cells extend and navigate great distances to reach their targets. The molecule—focal adhesion kinase, or FAK—regulates how growth cones at the tips of axons anchor to supportive extracellular matrix, or ECM.

Appearing in the *Journal of Neuroscience*, the study also demonstrates what makes axons turn.

“Adhesion to ECM is a critical part of axon extension,” says Timothy Gomez, PhD,

associate professor of neuroscience. The adhesion occurs at sites on the surface of growth cones called point contacts.

Earlier studies linked FAK to growth factors involved in axon migration, but Gomez’ team used a powerful brain nerve growth factor called BDNF to see how it would affect adhesion to ECM.

Researchers cultured embryonic spinal cord nerve cells on a component of ECM called laminin. The neurons were labeled with a fluorescent

protein showing point contacts with laminin.

Adding BDNF caused the neurons to grow profusely and form many new point contacts with laminin. When FAK was blocked, all aspects of the response to the growth factor were shut down.

The study showed that FAK is needed for several aspects of BDNF’s effect on growth cones, including the dynamic assembly and recycling of point contacts with ECM.

The team also showed that they could make more point contacts on one side

of a growth cone attached to laminin by exposing it to gradients of BDNF. This resulted in the axon’s turning toward BDNF, the first clear evidence that point contact distribution can control the direction of axon growth.



Great People Scholarship Fund



WILLIAM AND RIVA MERKOW

Great People Scholarships: Donors and Student Recipients

Drs. Joseph Contasti ('53) and Thomas Webster ('55)

Dr. Victor W. and Barbara Gieschen ('55)

Dr. Herbert and Ruth Giller ('47)

Dr. William and Riva Merkow ('43)

Dr. Jeffrey Rosengarten and Family ('86)

School of Medicine and Public Health

Wisconsin Medical Alumni Association

Heather Nennig

May Tun

Philip Miles

Benjamin Sudolcan

Melanie Scharrer (Contresan)

Quinn Kirchner

Helen Yu

by Ann Grauvogl

A publishing job, an observant supervisor and a curious mind propelled Benjamin Sudolcan toward medical school.

Seven years ago, he was doing page layout and design for a Madison publisher, when the company began working on medical books for the American Academy of Ophthalmology.

"Whenever I was working on those books, I was much less efficient and much slower," he says.

Finally, his boss asked a crucial question: "Are you trying to learn to be a doctor by reading those textbooks?"

Given Sudolcan's interest in medicine, that supervisor pushed him to begin night classes at UW-Madison, then to cut back to half time to study, and, finally, to leave the job to finish his biology degree.

This fall, the 28-year-old Sudolcan joined the SMPH Class of 2015. Thanks to a Great People Scholarship sponsored by alumnus William Merkow, MD '43, and his wife, Rosalind (known to most people as Riva), Sudolcan says he can pursue a career in family medicine.

Some third- and fourth-year students choose their specialties to pay their debt, Sudolcan says.

"(The scholarship) allows me to focus on what I want to do, rather than how much I'll make when I leave," he says. "It's a small grace."

Besides, he says, knowing that someone else cares about his education brings another level of responsibility to do well.

"It feels like Dr. Merkow and his wife care," he says.

The Merkows say they are glad to be able to help.

"Philanthropy is in our blood," they say, adding that the scholarship is a way to "pay back" for the excellent education

William received at the SMPH. He began making annual gifts to the school through the Wisconsin Medical Alumni Association (WMAA) when he started practicing in 1950, and he's a long-time member of the Middleton Society that recognizes significant givers.

A grade school science teacher gave him advice he hasn't forgotten, says William.

"He said, 'Whatever you do, try to make this world a better place for the next guy.'"

Riva Merkow remembers how grateful her Jewish family was when life improved after the Great Depression.

"We felt how lucky we were to be here," she says. "It got better. Also, we were safe from what was going on in Europe."

The WMAA has made the Great People Scholarships Program a priority.

"The WMAA is committed to reducing student debt by providing fairly significant scholarship dollars, and the match is a real sell for alumni," Executive Director Karen Peterson says.

The UW Foundation and the WMAA match 50 cents for every \$1 given to Great People Scholarships designated for medical students. As a result, all gifts to this fund receive a \$1 for \$1 match.

In addition to setting up named funds with a minimum of \$25,000, alumni can contribute to the WMAA Great People Scholarship. This fund was established with \$100,000 from the WMAA and a \$50,000 match from the UW Foundation.

The average medical student's debt at graduation is \$150,000, Peterson notes. The students are heading to residency, often starting a family and trying to make loan payments.

"It's like having another mortgage," Peterson says.

William Merkow was born in Milwaukee; Riva Merkow, in Madison. They met because William's father, who owned

a general store, wanted his son to have someplace to share the Passover meal while he was a medical student, so he talked to a Madison wholesale distributor who knew Riva's father. The friend wrote a letter of introduction.

"I thought he was nice," Riva remembers. "But I was dating a couple of other people."

The couple married almost 70 years ago, June 14, 1942. William, a surgeon, practiced medicine until he turned 90 a year ago, spending 40 years at Waukesha Memorial Hospital, where he helped establish the first surgery department, and 20 years with QuadMed.

"I was reluctant to retire," he says. "People ask me what my hobbies are: My hobby is working."

The couple's three sons and two of their daughters-in-law also became physicians. Son Steven, MD '80, an orthopedic surgeon at Waukesha Memorial Hospital, daughter-in-law Ann Bartos Merkow, MD '79, an internist at QuadMed in West Allis, and brother Leonard Merkow (MD 62) earned UW medical degrees. Middle son, Robert, an orthopedic surgeon who died in a 1989 plane crash on his way to care for patients in Shell Lake, Wisconsin, earned his undergraduate degree at UW-Madison.

The Merkows credit their son Steve for letting them know about the Great People Scholarship Program and the matching dollars available from the Foundation.

"I was all in favor of it," William says. "It's a great value. I would recommend my colleagues do the same."

For Sudolcan, the Great People Scholarship eases his worry about medical school costs.

"Being self-reliant throughout my undergraduate years, I took a lot more debt than I am comfortable with," he says.

Born in San Antonio, Texas, to Southern Baptist ministers, Sudolcan left home at 17



to go to college. A year later, he joined the U.S. Air Force to stabilize his finances. The day he started tech school, September 11, 2001, the world changed. After a tour in Qatar and an honorable discharge, Sudolcan worked in New York, transferred to Schaumburg, Illinois, as a visual merchandiser, discovered Madison "and thought it was the most amazing city ever."

Sudolcan took seven years to earn his undergraduate degree and said the transition to constantly studying for medical school has been difficult.

"But the payoff is so immense and great, it's easy to stay focused. My dream now is building a relationship with patients and focusing on preventive care," he says.

He hopes he can translate his hard work and education into a better quality of life for his future patients.

Get to Know

ANNA HUTTENLOCHER, MD

The new director of the MD/PhD program talks about taking a risk on zebrafish to advance her research program and helping students transition to their own scientific careers.

You soon will become the new director of the MD/PhD program. What does that mean for you?

I've been very involved in the program as associate director for the past 12 years. I'm very excited about leading the program and continuing the tradition of excellence Deane Mosher has established as director. I run my own large research program and as the director of pediatric rheumatology at American Family Children's Hospital I have a large clinical practice, so it was a difficult decision. But I'm very committed to training physician-scientists.

How will this affect your clinical practice?

I'll cut back on my clinical work significantly, passing patients to a recently hired member of the pediatric rheumatology team and reducing my inpatient service from four months to six weeks a year. I love clinical medicine so I'm a little sad about this, but I feel sometimes it's important to make these kinds of transitions.

What was your own journey into research like?

I first became very interested in research when I was at Oberlin College. My plan was to go to graduate school, but I decided on medical school after my mother was diagnosed with lung cancer. I went to Harvard Medical School but they didn't have a combined MD/PhD program then. After my internship and residency, I became immersed in research during a fellowship in pediatric rheumatology-immunology at the University of California, San Francisco, and I completed four years of basic research training as a pediatric scientist development fellow, which helps pediatricians transition into research. My post-doc research focused on understanding the basic mechanisms that regulate cell migration.

How has your clinical practice informed your research?

In my practice, I see children with autoimmune diseases and immune dysfunction, mostly childhood arthritis and lupus. I wanted to study my patients' immune

cells in the lab. Our first in vitro studies showed that in some patients with inherited chronic inflammatory disorders known as auto-inflammatory diseases, their neutrophils didn't migrate normally to inflammatory cues—they moved very slowly. I wanted to understand better how these immune cells move in a live organism and why patients develop chronic inflammation.

Enter zebrafish?

Yes, zebrafish were a better choice than model research organisms like fruit flies and worms because zebrafish are a vertebrate genetic model with a vasculature and an immune system quite similar to that of mammals. Best of all, of course, the fish are transparent and you can watch live cells move in them under a microscope. So I took a risk in 2001, just after starting my own research program, and began using the zebrafish for observing the movement of their immune cells in response to tissue damage.

What did you find initially?

What became clear, to our surprise, was that neutrophils and leukocytes would go to the wound site, spend a little time there and then they would leave. That went against dogma, which held that neutrophils would go to a wound site, do their job and then undergo apoptosis—die. Macrophages then would come and clear them out. Intuitively, it didn't make sense to me that with a minor wound, say a scratch, you would go through this whole process, including dying. It seemed wasteful.

How did you advance that work?

In order to publish our finding that neutrophils were going to the wound site and then leaving as a form of resolving the response, we needed to develop a fluorescent reporter line, and that took a couple years. Eventually we expressed green fluorescent protein under the neutrophil-specific promoter MPO and could very clearly see this reverse migration—neutrophils weren't dying at the site, they were leaving it. Ours was the first study to show that reverse neutrophil migration occurs in live animals.

How did the scientific community take this new information?

There was a lot of resistance at first. It was incredibly hard to publish this paper since it went against dogma. People thought our findings might be an artifact of our zebrafish model. But now reverse migration is pretty widely accepted—and has recently been demonstrated in mouse models as well. Maybe textbooks will be changed.

What clinical implications might come from this?

Our ongoing findings and new findings others are making these days may change the way we think about inflammatory responses. Do patients with autoimmune diseases and immune dysfunction have impaired migration that leads neutrophils to be trapped within tissues? Could we find a way to release them? We think zebrafish and perhaps mouse models can answer important questions such as these.

Is it fair to say you've had a flurry of papers in high-profile journals lately?

Yes.

How do graduate students figure in the picture?

I currently have five graduate students and five post-docs in my lab. They take leadership roles on their projects and are critical for the lab's productivity.

You've joked that your lab is productive in other ways, too.

Yes, there are a lot of babies in the lab! I tell my students, "There's no one time better than another to have a child so if you're ready to have one now, do it."

Is this the voice of experience talking?

Yes, I have two sons. I had the first when I was in medical school and the second during my residency. There were definitely times when it was hard. But I managed with a very supportive spouse, Andrew Bent, a UW professor of plant pathology. Having babies then was a challenge, but it worked out very well: my oldest son is now in medical school and my youngest is in college.

-Continued on page 39

Anesthesiology

Resident Sean Bruggink, MD '09, has found that the specialty offers a powerful combination: providing medical care and performing intricate procedures in the OR.



by Dian Land

Sean Bruggink, MD '09, is grateful that, unlike most other medical schools, the SMPH requires medical students to do a rotation in anesthesiology during their third or fourth year. That rotation was a turning point for him.

"It took me by surprise," says Bruggink, now an anesthesiology resident at UW Hospital and Clinics (UWHC). "Until that rotation, I thought I wanted to specialize in general surgery or internal medicine."

The rotation taught him that anesthesiology is a powerful combination of providing medical care and performing intricate procedures in the OR.

During medical school his favorite classes had been physiology, taught by Kevin Strang, PhD, and pharmacology, taught by June Dahl, PhD. Anesthesiology seemed to meld those two topics nicely, and that appealed to him.

"A lot of an anesthesiologist's job is manipulating the body's physiology with any number of medications to support patients during the stresses of surgery," he says. "And we do a fair amount of procedures, such as intubations, inserting central lines and conducting trans-esophageal echocardiography."

Bruggink liked other rotations during his medical school clinical years, but anesthesiology remained a favorite.

"I remembered how much I enjoyed reading anesthesiology journals when I got home, and how well I tended to mesh with people I had worked with in the OR," he says. "I just kept coming back to it."

Above all, he came to appreciate the vital role anesthesiologists play in the surgical suite, essentially serving as the internist for the OR.

Bruggink is now in the third year of the program, which totals some 45 to 50 residents. They all began with a clinical base year, or internship, which is designed to provide a broad foundation of medical knowledge and clinical experience preparing participants for subsequent clinical training.

The following clinical anesthesiology years (CA-1 through CA-3) offer residents multiple experiences of increasing complexity in a variety of subspecialties.

"Throughout the clinical years, resident progress is closely monitored and supervised by faculty," says Paul Kranner, MD '88, director of the program since 1999. "We encourage residents to think independently and develop the critical decision-making skills that are needed as they progress to those increasingly complex cases."

Residents benefit from the high level of surgical care provided at UWHC, especially complex vascular procedures and transplantation, adds Kranner.

"Very few centers in the country offer this variety," he says.

Residents serve as members of the anesthesia care team that includes anesthesia assistants, nurse anesthetists and supervising attending anesthesiologists. On a typical day, the faculty members may circulate among two or three surgeries and in the Pre-Op units where patients are prepared for surgery.

Bruggink says he is learning skills in Pre-Op as well as in the OR.

"Our communication skills must be superb because we have only about five minutes to talk to each patient in our Pre-Op clinic," he says. "It's a challenge to learn how to convey competence and compassion, to put patients at ease, in that short a time."

During their CA-2 year, residents rotate through ultrasound-guided regional anesthesia and advanced airway management, continuing with a full spectrum of anesthesia subspecialty experiences.

As a CA-2, Bruggink is getting extensive experience caring for the most critically ill patients. He just began working in the Trauma and Life Support Center at UWHC, and will do additional advanced rotations in pediatric, obstetric, regional, neuro-anesthesia and cardiac anesthesia.

Cardiac anesthesia has resonated most strongly with Bruggink, and he is hoping to do a one-year fellowship in the subspecialty

once he finishes the UWHC program at the end of next year.

"I'd be learning in greater depth how to provide anesthetics for patients undergoing valve replacement, bypass grafting, ventricular assist device implantation and heart transplantation," he says.

His ultimate plans? Either to work in private practice in a mid-sized hospital or maybe teach and work in academia, he says.

The practice he's gotten at the front of classrooms has helped clarify his interest in teaching. This semester he is instructing in a portion of the Patient, Doctor and Society course, and next semester he will teach the anesthesiology department's Advanced Cardiac Life Support to fourth-year medical students. Informally, he likes helping medical students and surgical residents as they rotate through anesthesiology.

After finishing his fellowship, Bruggink and his wife, a pharmacist at UWHC, know for sure that they'd like to end up in their home state of Wisconsin.

Bruggink grew up in Minocqua, where the family participated in all kinds of summer and winter recreational activities. During summer breaks from UW-Madison, where he ultimately majored in biochemistry, he worked as an orderly in a nearby hospital emergency department.

"I really liked it," he says. "It's probably what drove me to medicine."

In his spare time now, he still fishes and skis, but also enjoys home-brewing and playing his bass guitar. In medical school, he was known for his hot licks as a member of the student band, The Arrhythmias, as well as for being a student leader.

When Bruggink finishes his residency next year, he will join a lineage of anesthesiologists "descending" from Ralph Waters, MD, who created the first academic anesthesiology program in the country at Wisconsin in 1927.

You Will be Taking Care of us Someday

by Patrick McBride, MD '80, MPH

Every year in our student orientations, we say to our new arrivals: "You will be taking care of us some day, so we want to be sure that you graduate as high quality physicians."

Little did I know I'd have a personal opportunity to test that concept this past summer.

I had just finished writing a grant to help our medical students, and my wife, Kim, and I took a vacation. Thirty minutes into the vacation, we were riding bikes near Waupaca, Wisconsin, on a beautiful morning.

We saw storm clouds far off in the distance, and decided we'd better turn around. We thought we had time to get home safely, but didn't realize that the storm was moving 75 miles per hour. I felt a few drops of rain, turned to my wife to tell her to be careful and heard a huge crack.

A tree had broken in half and landed on Kim and her bike. The tree missed her head by a fraction of an inch, and struck her arm and broke it. This threw her off her bike face first. I was off my bike in seconds, and found her face down, motionless. That moment is frozen in my memory, and haunts me to this day.

My reactions immediately vacillated between being a physician and being a husband. I was horrified. Fortunately, I heard her moan, which told me she was alive and breathing. I turned her carefully, stabilizing her head and neck in case of a spine injury. Her face was badly lacerated, she was bleeding, and her arm and face were swelling rapidly. But she was alive.



Tree downed by microburst

The storm whipped up in massive proportions—trees were cracking and falling all around us in a flurry of hail and lightening strikes. We found out later that more than 500 trees were downed in the storm's five-mile path. We also learned that this very rare weather condition of intense, sudden horizontal winds from a large storm is called a "microburst."

A neighbor was riding with us and called 911. My medical training kept me focused on my wife's care, but I struggled with thoughts about how seriously she was hurt, and whether I might lose her. I worried I would make a mistake, and the storm made it

challenging to assess her. While I was holding her, praying for her life and for help to arrive, trees were dropping to the left and right of us. I was terrified.

It took more than 30 minutes for an ambulance to arrive due to the need to cut through trees to get to us. I felt guilty that Kim was hit and I was fine, though she later told me she was glad that I was there for her and she would not have known what to do if the situation had been reversed. I am extremely grateful for her bike helmet, which saved her life.

We were transported to Riverside Hospital in Waupaca, where many of

our SMPH alumni practice, and where Kim received rapid, high-quality care.

I knew then that she would make it, but would need to be moved for surgical care. When we first arrived to the ER at UW Hospital, a former student now working there reassured me that they were ready for my wife. Kim was then transferred to the new UW Trauma and Life Support Center, where she received fantastic care from trauma surgeons and plastic surgeons. Many residents, nurses and others were also on hand to help. (I found out later that the residents had had a very high patient census that day, but they never let on for an instant that they were stressed.)

We would eventually discover that my wife had multiple facial fractures, multiple arm fractures, a chip fracture of her sixth cervical vertebrae, and that she would require extensive plastic surgery.

During Kim's hospitalization, a total of five of our SMPH graduates were involved in her ongoing care. I was so impressed by how well they performed. I could tell that due to their Patient, Doctor and Society course and all of their clinical training, they were very well prepared.

In my role as professor of medicine and associate dean for students, I had worked closely with these former students, and that made it awkward for all of us. I had to trust that they were qualified, and I am sure they wondered if I was going to judge their performance. As a physician and concerned family member, I wondered about getting "special treatment," and wanted to be sure that the caregivers' primary focus was my wife. I struggled to stay in my role as a husband and not a physician.

I was moved by how comforting everyone was, not just to Kim, but to me. Every former student, after

finishing a careful assessment of my wife, would turn to me and ask, "How are you doing?" I was grateful, and learned from my former students about the importance of the care and comfort of family members. Their calming, high-quality attention made all the difference. I could relax and trust in their education and abilities.

After extensive surgery to Kim's face, and a six-hour operation to her arm, my wife is steadily improving, although much therapy remains in order for her to return to her work as a ceramic artist.

This experience of one gust of wind, one flash of lightning and a million-to-one chance of being caught up in a microburst made me appreciate all that I have been given. I now know what it means very personally to be sure to tell my wife every day how I feel about her.

We are grateful that Kim will eventually make a full recovery. We know that there are many people who have difficult injuries and devastating illnesses. This experience has helped me to be more aware of what it feels like to almost lose a loved one.

I also truly know the great value of a comprehensive medical education. I will do what I can to make sure that all of our students become outstanding physicians, like those who cared for my wife. I am also personally grateful to all the SMPH faculty and staff who contribute so much to educating and training our students.



Kim's bike after the storm



For information on how to submit entries, go to med.wisc.edu/27504

Middleton Society

CELEBRATION 2011



Highlighting Student-Donor Connections

by Dian Land

Middleton Society members rarely get a chance to interact informally with a group of SMPH medical students at one time. And medical students hardly ever spend an evening rubbing elbows with the school's top donors.

But those kinds of connections were made at this year's Middleton Society Celebration on September 16, 2011, when 22 SMPH students mingled with approximately 150 donors.

It was a unique opportunity for all parties concerned.

"We wanted to showcase select students and the special programs they represent during the social hour as a bonus for Middleton Society members," says Karen Peterson, executive director of the Wisconsin Medical Alumni Association (WMAA). "And we wanted students to meet the people whose gifts help pay for those programs—and so much more at our medical school."

Students answered questions as Middleton Society members read their posters describing TRIUMPH (Training in Urban Medicine and Public Health), WARM (Wisconsin Academy for Rural

Medicine), the Medical Scientist Training Program (MD/PhD program) and MEDiC, the student-run volunteer clinics for underserved patients in Madison.

Charles Frinak, MD '77, a family practice physician at Beaver Dam Community Hospital, welcomed the opportunity to meet current medical students. He had been closely involved with some of them as a preceptor in the past, but not for several years.

"It was great to feel student energy and enthusiasm," Frinak says.

He chatted with Megan Schultz at the MEDiC poster, noting that the program was



Become a Member

The Middleton Society is the philanthropic society of the SMPH. It honors alumni, faculty and friends who, with their gifts, support the concept of hope and encourage the scientists, clinicians, teachers and students who work to translate hope into action.

Gifts to the school help researchers tackle the world's most devastating diseases, support promising medical students who will save lives in the future and ensure that every community can be a healthy community. Gifts may endow a professorship, help find new treatments for cancer or establish community partnerships to combat, for example, childhood obesity.

There are three levels of giving, each named for one of the school's strong leaders.

Farrell Fellows have contributed \$1 million in gifts and pledges or through irrevocable, deferred gifts.

Bardeen Fellows have contributed \$25,000 in gifts or pledges or through irrevocable deferred gifts.

Middleton Fellows have contributed \$10,000 in gifts and pledges or through irrevocable deferred gifts.

For more information, contact Jill Watson at jill.watson@supportuw.org.



Far left: Bardeen Award winner Joe Wildenburg talks to Victor Haughton. Center: MD/PhD student Sarah Wernimont describes her immunology research. Above: TRIUMPH student Ariana Sundick visits with Greg and Barbara Sheehy.

somewhat similar to the Blue Bus that began during his time.

"I think MEDiC is a good clinical experience for first- and second-year students," he says. "It also has a positive impact on the community."

Schultz says it was a privilege to hear about the varied experiences and passions of Frinak and other Middleton Society members.

"It is not often that we students get the chance to speak one-on-one with such distinguished and experienced professionals," she says. "It was wonderful to be able to personally thank

these men and women who have given so generously to my education at the SMPH."

Chadd Funk, an MD/PhD student, agreed that it was a privilege to meet and personally thank some of the donors.

"I especially enjoyed hearing about their motivations for giving to our school," he says. "Some donors shared personal stories about their past interactions with the medical community as a patient, while others spoke of lost loved ones, for whom the gifts represented a special part of a lasting legacy."

Funk, who recently completed his first two years of clinical training and has begun his doctoral work, was also



Above, from left, Mark Kaeppler, Caitlin Wallach, Ebba Hjertstedt, Megan Schultz, Jennifer Ciske, Benjamin Ciske, Farah Kaiksow and Parker Hoerz represent TRIUMPH and MEDiC. Below, Michael Fiore (left) receives the Belzer Award and James Stein talks about preventive cardiology.

impressed by the genuine interest donors had in his experiences.

"It was a meaningful evening that, in a sense, pulled back the curtain and allowed us to meet an extraordinary group of people whose generosity sustains our school and enables the many accomplishments of our faculty and students," he says.

Funk was one of 11 students who were featured in a video shown to the entire assemblage right after dinner. Many people found the students' humility and heartfelt gratitude very touching.

"We have never been able to truly capture the sincerity of the feelings of so many students," Peterson says. "The video was a great way to convey those feelings."

Students remained front and center when Dean Robert Golden asked recently named Bardeen Scholars to come to the stage for recognition. The scholarship, named in honor of the school's first dean,



acknowledges fourth-year students who have exhibited academic success, personal character and professional ethics.

Faculty member Michael Fiore, MD, MPH, director of the UW Center for Tobacco Research and Intervention, was also honored at the gathering. He was given the Folkert Belzer Award for lifetime contributions to his field. Thanks to Fiore's two decades of leadership, UW-CTRI has created and disseminated clinical and public policy strategies used throughout Wisconsin and around the world.



Capping the recognitions, Golden presented Mark LeFebvre, long-time development leader for the school, a small token of appreciation—a captain's chair—for his years of service.

Even though preventive cardiologist James Stein, MD, chief of the Division of Cardiovascular Medicine, was the last speaker on the evening's program, he kept the audience completely engaged with a lively talk on the newest approaches to detecting and preventing heart disease.



I Know
You

OR DO I?

If you think you can identify the SMPH alumnus at right, send your guess to quarterly@med.wisc.edu. We'll draw one of the correct responses and announce the winner in the next issue of the magazine.

HINTS: This alum, a member of the varsity baseball team as an undergraduate, was a house fellow in a lakeshore dormitory with three other medical students. Dean William Middleton called him by the endearing name of "Nimrod." After medical school, he was a Marine Corps doctor at Guam and Iwo Jima.



Our last Mystery Alum was Jeanine Harting (Swenson), MD '89. In the picture above, Jeanine shows her

relief and pleasure on Match Day. She matched to the pediatrics program at Children Hospital of Pittsburgh while husband to be, classmate Todd Swenson, matched to the orthopedics program at University of Pittsburgh.

Today Jeanine is a marriage and family psychotherapist at Greensquare Developmental Specialists in Milwaukee.

A pediatric cardiologist for many years, she worked in academic medicine, private practice and a large multi-specialty clinic before returning to school in 2007 to learn and train in systemic psychotherapy.

"I love and am completely challenged by children, families and how complex it all is," she says. "I have been passionate about growing, changing and learning as a professional to help families."

Beth Neary, MD '91, identified Jeanine to win our prize.

"Jeanine was a year ahead of me in medical school and was particularly friendly and helpful," says Beth, who was in the Independent Study Program and raising two children as a student.

For the past 14 years, Beth has been in private practice in general pediatrics at Associated Physicians in Madison.

TITO IZARD, MD '96

Inner City Doctor

At the Milwaukee Health Services clinic he heads, Izard works to improve the city's serious problem of infant mortality.

by James E. Causey

Tito Izard, MD '96, is a self-proclaimed "inner city doctor" whose mission is to provide medical care to the underserved with both compassion and accountability.

We need more physicians like Izard, physicians who can care for the mothers in our city who are losing their babies. Too many of those babies are dying in the inner city of Milwaukee.

Izard, 42, is president and chief executive officer of Milwaukee Health Services Inc., a two-story, red brick clinic at 2555 N. King Drive. His family grew up about a mile from where he works today.

Izard understands the challenges facing many of the women he sees in his clinic, and he told me that his holistic approach is a complex blend of compassion and accountability. It's complex because if he's too compassionate, the patient looks for excuses and doesn't take ownership of his or her health or situation. On the other hand, hammering a person over the head who has no support system doesn't help, either.

"It's a fine balancing act, but it's the best way to help a patient improve their situation," Izard said.

Izard can relate to his mothers-to-be on a personal level because his own wife suffered two devastating birth outcomes. The couple lost one child soon after birth. Another, born prematurely, survived and has not had any long-term health issues.

Middle- and upper-middle-class African-Americans are not immune to infant mortality or bad birth outcomes. Izard and his wife are both physicians; both are healthy, wealthy and educated. But still, they were affected.

Statistics show that a married, educated black woman's birth outcomes are worse than those of a white woman with just a high school diploma.

I can empathize because my daughter's mother delivered our child months early. My daughter, Taylor, spent her first three months in an incubator before she could finally come home.

In 1995, Izard's son was born with hypoplastic left heart syndrome. Tylan lived eight days and never made it home.

His oldest daughter was only 4 pounds, 2 ounces at birth. His wife's water broke at 15 weeks, and she was on bed rest for four months until labor was induced at 34 weeks.

Fast forward to today, and his daughter, Tracy, is now 10 and a state-level gymnast. "Tracy was a miracle birth," Izard said. "It was our faith that helped us get through."

In half of the bad birth outcomes, the mothers did nothing wrong, which is the scary part, Izard said. Unfortunately, too many bad birth outcomes are concentrated in certain Milwaukee ZIP codes.

Izard grew up in inner-city Milwaukee, on North Port Washington Road and Capitol Drive. His parents did not go to college, but they stressed the importance of a good education. As a result, Izard and his two brothers graduated from Marquette University. His oldest brother is a physician, and his younger brother is a successful entrepreneur.

I met Izard in 1987 when we were freshmen at Marquette. Even then, he was driven and knew exactly what he wanted to do. I nicknamed him "Doc" because anyone who knew him knew he was going to do something special. He majored in medicine but also minored in social work because he wanted to serve the underserved.

Milwaukee Health Services is always packed with patients because there is a health care disparity in the city. Those with the highest needs have the most limited access to health care. Milwaukee's inner city is mostly devoid of physicians, dentists and other health care providers.

The government says more than 35 million Americans live in underserved areas. The gap is expected to widen more over the next several years.

Inner city residents and those living in rural communities will suffer the most.

Could Izard make more money elsewhere? Sure, but he is driven by his faith, and he wants to make a difference.

He also knows that if you look at where he grew up and look at the fact that he was a black male who attended Milwaukee Public Schools, he could have ended up as just another statistic.

"People could have looked at me and my brothers and at our situation and believed that I would not turn out like this," he said.

But in many cases, people can beat the statistics. Izard did. He overcame obstacles by having parents who always told him and his brothers to strive to do their best. He received an urban public school education and went on to do great things.

Now he's helping women to improve their chances of delivering healthy babies by teaching them skills to help them to gain some control over the things that they can control.

He talks to expectant mothers about building a strong support system and the importance of having that support ideally through the father but also through their faith and beliefs, family members and friends.

More important, Izard is building a strong medical community in the 53212 ZIP code, a part of the city that has struggled with high infant mortality.

We need more services like this in Milwaukee's central city. We also need more doctors like Tito Izard.

Reprinted with permission of the Milwaukee Journal Sentinel. Causey is an editorial writer and columnist with the paper.



Drs. Charles Heise and Greg Kennedy perform colorectal surgery at UW Hospital and Clinics.



There's More Online!

To see more On Calls, go to med.wisc.edu/31626.

SAMIR F. ABDO, MD '76

I am in solo general surgery practice in a rural community setting in Southeastern Illinois. I am on active staff at Ferrell Hospital in Eldorado, Illinois, and Harrisburg Medical Center in Harrisburg, Illinois. I have been here my entire 30-year professional career. It has been a great place to raise four terrific children.

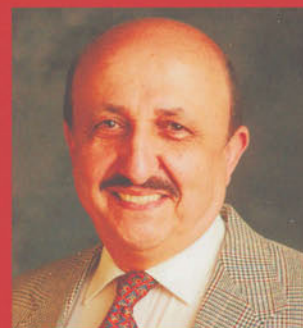
My practice has evolved significantly over the years. Typically, I do laparoscopic cholecystectomy, hernia repair, tonsillectomy, gynecologic surgery, skin lesions, some colon surgery and a lot of gastrointestinal endoscopy. My first few years in practice, I also did many vascular cases.

One memorable case was a repair of a ruptured abdominal aortic aneurysm on a very high-risk patient at 3 a.m. (I'm glad I don't do that anymore!) The patient went on to full recovery and a long healthy life.

I enjoyed almost every rotation in medical school, and felt I could have gone into any of those fields. But I was particularly attracted to surgery because we deal with rather sudden disruptions of a person's life that may have debilitating or even life-threatening implications. We help the patient overcome these unplanned situations and get them back to their normal living as quickly as possible.

Fortunately, we can accomplish this for the great majority of our patients. In the unfortunate cases where we are unable to cure the disease, we can hopefully alleviate the patient's suffering. Surgery is a very exciting and rewarding field both intellectually and emotionally.

I completed my five-year surgical residency at Akron General Medical Center in Akron, Ohio. It was a community hospital affiliated with Northeastern Ohio Universities College of Medicine. It was a great program that prepared me well for the career I had planned for myself.



I'm forever indebted to all the great SMPH professors who provided the foundation of my medical education, especially the support and guidance of Dr. James Petterson. I was particularly honored to have had a rotation with Dr. William Middleton. (May I implore my classmates and fellow alumni to join the Middleton Society?)

SCOTT GYLLING, MD '81

I am now in my 24th year of practice at Kaiser Foundation Hospital in Sacramento, California. I typically handle routine general surgery cases such as all types of hernia repairs, cholecystectomy, and breast and colon surgery.

A memorable case occurred in one of my first years in practice. A middle-age woman came in to the emergency department in the middle of the night in septic shock. Plain films showed mediastinal and retroperitoneal air in the upper abdomen. At surgery, she had a large inflammatory mass involving her transverse colon. After removal of the mass and colostomy, I learned

that the mass was a cystic cancer of the pancreas that had eroded into the colon. When I reversed her colostomy, I resected the rest of the pancreatic cancer with a distal pancreatectomy and splenectomy. She visited me every year until her death from a primary lung cancer, 16 years after I operated on her.

I chose surgery due to the great variety of cases. My third-year rotation at UW Hospital, with chief resident Luis Suarez, and the Chief, Folkert Belzer, influenced me immensely. I also did a fourth-year rotation in La Crosse with Bill Gallagher at Skemp Clinic and in Madison at St. Mary's Hospital. Prior

to my third-year rotation, I was actually considering psychiatry! I did my residency at the University of California, Davis at the suggestion of Betty Bamforth, then assistant dean of the school.

Medical students interested in general surgery should know that much of it is emergency surgery. A lot happens at night and call is a necessary part of the practice. General surgery involves a wide variety of clinical problems and requires the ability to deal with problems rarely seen. The elective surgery is usually straightforward and high volume. You must be able to meet patients, rapidly



establish rapport, solve their problem and move on to the next patient.

Although it is rare for me to follow patients for a long time, as in the example above, I have had the satisfaction several times of becoming the family surgeon, operating on parents, children and relatives. I feel that is the highest compliment.

DON J. SELZER, MD '96

I'm part of the 40-member Division of General Surgery at Indiana University (IU) School of Medicine. I see in-patients and out-patients at University Hospital and IU Health North Hospital. I also see weight-loss surgery patients at the IU Health Bariatric and Medical Weight Loss Center.

In addition to bariatric surgery, I focus on surgical treatment of foregut diseases and hernia repair. So, I commonly treat gastroesophageal reflux disease and other inflammatory and functional diseases of the distal esophagus, stomach and proximal intestine.

One case that stands out was a gastric bypass I

performed on a 600-pound wheelchair-bound man. Over the course of the following year, he lost 250 pounds. When he returned for his one-year follow-up appointment, he and his wife had tears in their eyes. It was the first time in three years he was able to wear shoes.

I was strongly attracted to surgery when I entered medical school. The emphasis on primary care in our first two years caused me to reconsider. But when I entered the operating room on my first rotation as a third-year student, it was clear to me that I was in the right place. In my mind, the wide variety of diseases general surgeons treat allowed

me to combine the best of both worlds.

As a fourth-year student, I was convinced an away rotation would confirm my interests. I was accepted to the trauma surgery service at IU, and, as they say, "That was that." I matched there and completed my surgery residency in 2002 following five clinical years and a one-year research fellowship. I then completed a one-year Minimally Invasive Surgery Fellowship at Mount Sinai Medical Center.

I'm involved in laparoscopic surgery and surgical education societies. As a member of the Simulation Committee of the Association for Surgical



Education, I've helped generate a white paper on the use of simulation in surgical education.

My newest interest is political advocacy. As a result, I recently joined the Legislative Committee of the American College of Surgeons and the Society of American Gastrointestinal and Endoscopic Surgeons.

CLASS NOTES

Compiled by Joyce Jeardeau

CLASS OF 1971

Retired from pediatric neurology, **Leslie Brody** has a few hobbies to keep him busy. His list includes: genealogy, G- and HO-scale model trains, accordion, guitar, Scottish smallpipes, Irish uilleann pipes, installing lighting in a dollhouse he built, a 55-gallon reef tank, breeding cockatiels in his outdoor aviary, mini- and micro-radio control helicopters, and learning how to use a scroll saw. His biggest problem is trying to figure out which hobby to dive into first.

CLASS OF 1974

Robert M. Goisman, director of medical student education at the Massachusetts Mental Health Center in Boston, recently retired after almost 32 years there. He continues in private practice and as associate professor of psychiatry at Harvard Medical School (HMS). He recently received the 2011 Special Faculty Prize for Sustained Excellence in Teaching from HMS and a special award from the Harvard Longwood Psychiatry Residency Training Program.

CLASS OF 1975

Having spent her career in academic medicine and clinical research as a hepatologist at UCLA and the University of Southern California (USC), **Karen Lindsay** completed a masters in medical management degree at the USC Marshall School of Business in 2006 to work in research administration at the university. Her area of focus has been viral hepatitis for the last two decades. In 2009, in order to work on development of direct-acting antiviral agents for hepatitis C, she joined

Tibotec, a research and development company based in Belgium, as global medical director for hepatitis. In 2010, she became professor emerita of medicine at USC.

CLASS OF 1981

Ophthalmologist **Kevin Wienkers** completed his surgery mission this year to Africa; this was his third mission. His other two missions were to the Philippines in 1996 and India in 2009. He is also the ophthalmologist for the Green Bay Packers. In his free time, he enjoys being a private pilot, wind surfing, sailing, scuba diving and fly fishing.

CLASS OF 1986

Diane Biskobing is the program director for the endocrine fellowship at Virginia Commonwealth University and the core educator in the internal medicine residency program. She is also a Girl Scout leader. She was not able to enjoy her classmates at their reunion and cheer on the Badgers because she took her Girl Scout troop to New York City, a trip they had been planning for two years. The troop of 13-year-old girls took in all the sights.

CLASS OF 1993

Alexander Scharko has been named director of consultation/liaison psychiatry at the Children's Hospital of Philadelphia. After graduating from the



SMPH, he worked two years in HIV virology/immunology in the SMPH Department of Pathology and Laboratory Medicine with C. David Pauza, PhD. Alexander was an intern at Milwaukee County Hospital and completed his residency in psychiatry and fellowship in child and adolescent psychiatry at UW. He then completed a two-year research fellowship in child and adolescent psychiatry at the Johns Hopkins University School of Medicine. He was on the faculty at Johns Hopkins and the Medical College of Wisconsin, and will now be joining the faculty at the University of Pennsylvania School of Medicine.

CLASS OF 1996

Orthopedic surgeon **Matthew Geck** will be making his 11th trip to Cali, Colombia, in May 2012 as part of SpineHope. SpineHope performs



two missions every year, bringing advanced spinal treatments to children around the world who otherwise would not receive the intensive, modern care for complex spinal problems. During his last trip in May 2011, he and three other U.S. surgeons and three local spine specialists performed 15 surgeries on children. SpineHope (SpineHope.org) partners with local doctors, provides education and sponsors research. Matt is co-founder and board member of SpineHope and co-chief at the Seton Spine and Scoliosis Center in Austin, Texas.

As a certified instructor for clinical-patient communication through the Institute for Healthcare Communication, **Stephanie Wojtowicz** regularly teaches local physicians and mid-levels. She is also the chair for Springfield (Illinois) Clinic's

task force on improving patient satisfaction. Stephanie will be presenting, along with two colleagues, on the topic of physician engagement in the patient satisfaction process at the Press Ganey National Client conference in Dallas in November.

Lee Faucher

has been appointed medical director of the Burn Unit at UW Hospital and Clinics. In this position, he is responsible for working with the burn unit staff to provide direction for medical and surgical issues in caring for burn patients. Faucher is an associate professor in the Department of Surgery and serves in a number of leadership roles, including medical director of trauma and secretary/treasurer for the Medical Staff Office. He also leads the Medical Student Surgical Interest Group, and lectures on burn and trauma in the Medical Student Lecture Series.



CLASS OF 2001

Wendy Molaska has successfully started, maintained and been medical director for Reach Out and Read (reachoutandread.org), an early childhood literacy program. Her first program was at Salud Clinic in Fort Morgan, Colorado, where she previously practiced, and now she's involved in one at Doctors Park Physicians in Platteville, Wisconsin. According to Reach Out and Read, "Reading aloud to children is a proven technique to help them cope with stress and anxiety, whether it is because of natural disaster, separation from a parent or another difficult situation. Because of the unique pressures on military families, including separation, deployment, injury or even the death of a parent, Reach Out and

Read launched an initiative in 2006 to deliver our model to military children nationwide." Of all children ages 5 and under who get their care at a military healthcare facility, more than 25 percent are provided services by Reach Out and Read.

CLASS OF 2004



Tracy Capes (center) helped create A Stitch in Time, a non-governmental organization that treats women in underserved and under-developed countries who suffer from pelvic floor disorders like prolapse and incontinence and other benign gynecologic conditions. "We are three female ob-gyns (two generalists and myself), a female midwife and an interested photo-journalist," she says. "We have made several trips to Bangladesh and are returning in January 2012. We also hope to expand to treat women in Guatemala next year as well." Tracy finished her obstetrics-gynecology residency at Columbia University Medical Center in 2008. She completed a fellowship in urogynecology/female pelvic medicine and reconstructive surgery at Mount Sinai School of Medicine in New York. She currently works at Aurora Women's Pavilion in the Center for Continence and Pelvic Floor Disorders in West Allis, Wisconsin.

CLASS OF 2006

Margaret Chin volunteered in a rural clinic in West Kalimantan, Borneo, Indonesia for two months in 2010 as part of the Yale/Johnson & Johnson International Global Health Scholars Program. She also lived in New Zealand for six months, working as a rural locums provider in four clinics on the North Island.

IN MEMORIAM

Neal Gansheroff, MD '67
January 31, 2011
Bala Cynwyd, Pennsylvania

Gerald Johnson, MD '56
August 14, 2011
Prescott, Arizona

Thomas Malueg, MD '61
August 23, 2011
Neenah, Wisconsin

GOODBYE, DEAR COLLEAGUE—FRITZ BACH, MD

Fritz Bach, MD, a physician, immunologist and geneticist who made key discoveries related to organ transplantation while he was a faculty member at the SMPH, died August 14, 2011.

In the field of bone marrow transplants, “I think it would be fair to say he really was one of the early giants,” says Paul Sondel, MD, PhD, head of the Division of Pediatric Hematology and Oncology at the SMPH. A former student and colleague of Bach’s, Sondel was quoted extensively in a *Boston Globe* obituary.

Upon arriving at Wisconsin in 1965, Bach began novel test-tube experiments that simulated the way organs are rejected after transplantation. He mixed immune cells from one individual with immune cells of another, and studied the reactions.

The experiments led him to characterize cells responsible for transplant rejection and identify genes that turn on the cellular process. He

learned how to manipulate the responses to promote successful transplantation.

Bach called his technique the mixed leukocyte culture, or MLC. In 1968, as reported in *Lancet*, he showed that the MLC test could be used to select the best family member as a donor for bone marrow transplantation.

“Now, tens of thousands are done worldwide each year,” Sondel says. “There are probably hundreds of thousands of individuals alive today because of successful bone marrow transplants. It all really happened because of Fritz Bach.”

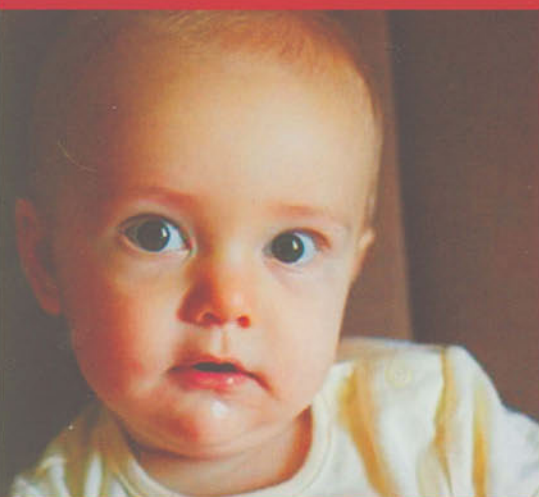
The MLC test laid the groundwork for a description of the major histocompatibility complex (MHC), a group of proteins that characterizes the unique immune features of each person. Bach later described two distinct MHC proteins and how different components of the immune system respond to them, shedding light on immune responses important in fighting infection and cancer.



LOW-MADISON ARCHIVES

Later in his career at Harvard University, and once he retired, Bach was involved in the ethical aspects of transplantation.

LETTER TO THE CLASS OF 2011



Each year the graduating medical school class selects a cause to which they donate their fundraiser proceeds. This past August, as the Class of 2011, you contributed your hard-earned \$700 to the “Baby Varness Educational Fund” that we established in memory of my husband, Todd Varness, MD.

Teaching was one of Todd’s greatest passions, and he genuinely enjoyed the time he spent with many of you in the interdisciplinary course, on the pediatric wards, or through mentorship. I recall him beaming that you were curious, insightful, and made him look so forward to coming to “work.”

He would have been very touched by the memorial you coordinated in his honor on Match Day. You took time out of a special day dedicated to honoring your own hard work to selflessly honor his work. And now through your thoughtfulness and generosity, it is so meaningful that you are contributing to his son’s education as Todd contributed to yours.

Our son Quinn was born last December, four months after Todd lost his life to testicular cancer. So far, he is proving to be quite the curious student himself! I am certain he will put your gift to good use. Thank you all so very much, and best wishes in your continued endeavors!

—Dierdre Varness, MD '07

SIMULATED LEARNING *Continued from page 7*

training torsos such as "Chester Chest" and "Peter PICC Line" to more complex devices, such as the "HeartWorks" torso that allows cardiologists, anesthesiologists and cardiothoracic surgeons to practice taking ultrasound images (echocardiography), either through the chest wall or down through the esophagus. These ultrasound views of the heart show up on the screen, which also includes an online teaching text about cardiac physiology.

Probably the most sophisticated manikins are the Meti HPS (human patient simulator) models. These manikins can respond to drugs (they react based on reading a scan of the drug's barcode), can "breathe" in anesthesia gases and expel carbon dioxide, and react to exams with thumb twitches and pupils that automatically dilate and constrict depending on the light.

The cousins of the HPS manikins, models named i-Stan and 3GMan, react with visible cyanosis in the nail bed, chest flail, realistic

secretions from the nose and mouth, and trismus, or lockjaw, just to make placing that airway tube extra difficult.

Physicians from around the state can look forward to meeting the sophisticated teaching tools as the UW Simulation Program soon shifts into high gear.

Just don't call them "Dummies." With their high-tech training features and human-like responses, a better name for Sim Baby and her relatives might be "Smarties."

FACULTY Q & A *Continued from page 23*

How do you feel about nurturing graduate students?

Helping people through all aspects of their career development is a big part of what I do and I will do even more of it as director of the MD/PhD program. Mentoring is a very intense interaction that you don't get with other aspects of your work. To me, it's one of the most enjoyable parts of the job. Graduate students come to our labs

without a lot of experience and they leave as scientists who generally know what they want for their future. It's an amazing transition to watch.

What do you like to do in your spare time?

We go on a good back-packing trip each year. I joined a back-packing club when I was 11, and now my kids lead back-backing

trips. I enjoy walking my dogs—one's a Golden Retriever-Poodle mix and the other is a Standard Poodle. I read fiction and have been getting back to photography after many years. I used to be a serious viola player, so I play some and enjoy concerts and also American Players Theater.



Quarterly is a Winner!

The Printing Industries of Wisconsin has honored *Quarterly* and its printer, Suttle-Straus of Waunakee, Wisconsin, with the 2011 Best of Category Award for a magazine series. The graphics excellence award recognizes companies that demonstrate superb craftsmanship in creating visual artistry. Suttle-Straus has brought quality printing to *Quarterly* for more than a decade.

ATWITTER ABOUT SOCIAL NETWORKING

I'll always remember my first text message sent to my second oldest. Rather than reply to my questions, he responded with surprise. He was acknowledging that he had actually received a text from me.

It went something like this (with apologies to the American Association Against Acronym Abuse—AAAAA):

Dad: BTW wru? will u b in Chicago 2moro? Talk L8R. ^5

Son: OMG my frst txt from my father.

Little did I know that this would be a beginning of social networking for me.

Then there was the, "I saw you...on Facebook."

"You must be mistaken," I said.

"Yes, I did." "No, you didn't." "Yes, I did!"

"No way," I insisted, using my most prodigious debating skills.

My policy is to avoid this form of Internet usage. I receive hundreds of e-mails as it is, and I have zero interest in spending more time online. So I studiously endeavor to keep my profile extremely low.

But I felt that claims of having been seen on the Internet deserved more research. To settle the score, I "Googled" myself. I found many listings of every conceivable variety. Few were about me. Among the many entries under the name of Chris Larson, I found a trial attorney, an architect, a culinary expert and a porn star.

"How potentially embarrassing," I thought. "Someone might 'Google' my name and think that I'm a lawyer!" Satisfied that my Internet footprint was miniscule, I logged off.

With ever growing opportunities to be part of Webinars and white paper summaries of current practices in medicine, I wanted to be fair and give the Internet more consideration. What I found were often thinly disguised advertisements for physicians' practices, services or cutting-edge cures appearing as medical presentations.

But it turns out that Twitter, one form of this social media phenomenon, is now being used in medical education. For an overview, see "The Use of Social Media in Medical Education" at slideshare.net/jkhewett/the-use-of-social-media-in-medical-education.

Twitter is a more recent form of this phenomenon. It's a free social networking and micro-blogging service that enables users to send and receive messages known as Tweets. These are text-based posts of up to 140 characters displayed on an author's profile page and delivered to an author's subscribers, known as followers. Senders can restrict delivery to those in their circle of friends or, by default, allow open access.

Tweeting is becoming a popular option among students and faculty as a medical education and communications tool. The SMPH and other institutions are exploring live discussions, links to scientific papers, answering medical students' questions during live surgery, scheduling Twitter Forums and other applications of this technology.

For example, @UMDNJ_RWJMS Tweets, "Lead poisoning is entirely preventable. The key is stopping children from coming into contact with lead and ...fb.me/OmuQwScl."

And there are hashtags (#). Hashtags are a method to add a reference label to a conversation for future searches.

An announcement of a Twitter Q&A might look like this. "Patrick Remington, Associate Dean for Public Health at the University of Wisconsin School of Medicine and Public Health, will be taking questions via Twitter from 2-3 PM EDT today. Submit your questions to: @RWJF_PubHealth or @CHRankings and make sure to use the hashtag #healthrankings."

So, Internet and "short message service" (SMS) technologies and sites will very likely play an increasing role in our professional lives. Perhaps we'll spend less time traveling to meetings to deliver or listen to lectures, and use that time more efficiently and effectively to communicate directly with each other. It might help us learn about new approaches to healthcare, procedures and therapies—in real time.

Christopher Larson, MD '75
Quarterly Editorial Board Chair





Inbox

► **SUBJECT: NEW DEVICE FOR HYDROCEPHALUS**

Neurosurgeon Joshua Medow, MD, is using his engineering skills to develop a possible solution for children with hydrocephalus. Working from a large prototype, he and colleagues from the UW-Madison College of Engineering have developed a tiny, implantable device that measures intracranial pressure. See videos of how the project has come together at med.wisc.edu/32282.

► **SUBJECT: STUDENTS EXPRESS THEIR GRATITUDE**

The SMPH offers students unparalleled opportunities in education, research and community service. This is possible thanks in large part to the generosity of our donors. Students expressed their gratitude in a video that was shown at the 2011 Middleton Society Celebration. To watch it, go to med.wisc.edu/79.

► **SUBJECT: A CLOSER LOOK AT HOMECOMING**

A fall tradition was renewed the weekend of October 14-15 when medical alumni gathered in Madison for the annual Homecoming Weekend. You can relive the weekend by viewing our photo galleries from the dinner and tailgate party at med.wisc.edu/87.

► **SUBJECT: SIMULATION PROGRAM GRAND OPENING**

The brand new Simulation Program celebrated its grand opening on November 1, 2011. To read more about the program that is transforming clinical education at the SMPH and UW Hospital and Clinics, go to med.wisc.edu/simulation.

► **SUBJECT: FOLLOW US ON SOCIAL MEDIA**

If you're on Facebook or Twitter, you can keep up with the latest news from the School of Medicine and Public Health. Learn about research advances, student life and more by following us at facebook.com/uwsmpH and twitter.com/uwsmpH.



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 locations. Photographs are encouraged.

Have you moved? Please send us your new address.

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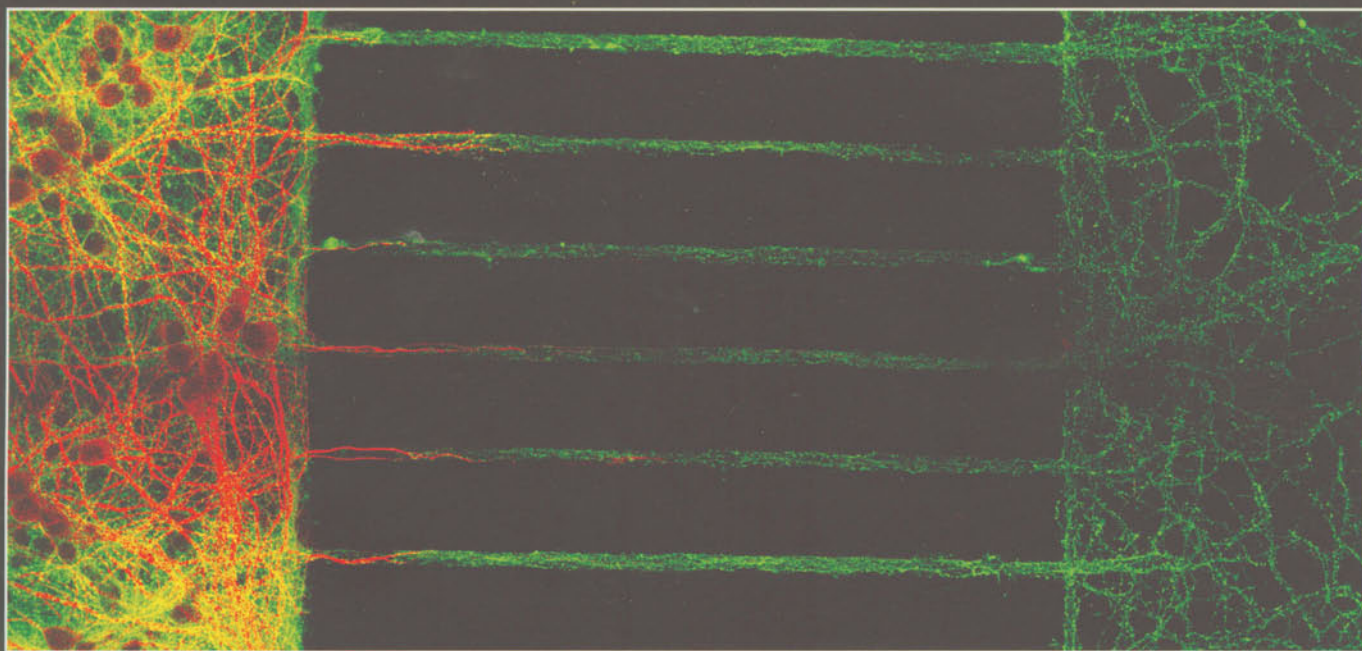
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Nerve cell communication occurs when one neuron's axon sends impulses to another neuron's waiting dendrite. The connection occurs at a juncture called the synapse, which contains tiny sacs, or vesicles, filled with neurotransmitters that mediate communication. Ewa Bomba, a researcher in the laboratory of Howard Hughes Medical Institute Investigator Edwin Chapman of the SMPH Department of Neuroscience, is studying the way one important synaptic protein, VAMP2, moves along axons. She grows neurons in a special chamber that allows mostly axons, which are very exploratory, to cross straight channels to waiting dendrites. The neat system makes it much easier to see protein trafficking than would a normal preparation, where axons and dendrites mix together. In this image, VAMP2 is stained green, showing where synaptic vesicles appear on axons. Red-orange-colored structures are dendrites. Image courtesy Dr. Edwin Chapman, Annette Figueroa-Bernier and Ewa Bomba.