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

Quarterly



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Sleep and Consciousness

RESEARCHERS' DAILY WALKS
HELP FOSTER DISCOVERIES



School of Medicine
and Public Health
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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

OCTOBER 2017

Friday and Saturday,
October 20 and 21

Fall WMAA Board Meeting
Homecoming Weekend, UW vs. Maryland
Class Reunions for Classes of '72, '77, '82, '87,
'92, '97, '02, '07, '12

Friday, October 27

Middleton Society Dinner

NOVEMBER 2017

Saturday, November 4

Boston Alumni Reception

Tuesday, November 14

Operation Education

JANUARY 2018

Saturday, January 20

Lily's Luau Fundraiser for Epilepsy Research
Union South
See <https://lilysfund.org/luau> for details

MARCH 2018

Friday, March 16

Match Day

APRIL 2018

Friday, April 6

Alpha Omega Alpha (AOA) de Harter
Visiting Professor, AOA Banquet
and Induction Ceremony

Friday, April 27

Spring WMAA Board Meeting
WMAA Scholarship Reception
WMAA Awards Banquet

MAY-JUNE 2018

Thursday, May 10

SMPH Honors and Awards Ceremony

Friday, May 11

UW-Madison Commencement

Thursday and Friday,
May 31 and June 1

Spring Alumni Weekend
Class Reunions for the Classes of '53, '58, '63, '68,
and the Half-Century Society for all alumni who
graduated before 1968

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Research by Chiara Cirelli, MD, PhD (left), and Giulio Tononi, MD, PhD, draws international attention.

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WHITE COAT CEREMONY

First-year medical students enthusiastically accept and wear this important symbol of their future profession.

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SPRING ALUMNI WEEKEND

Four medical school classes and the Half-Century Society reunited to celebrate and reminisce.

Campus Scene (above)

Badger-red zinnias grace the walkway near the circa-1936 Carillon Tower on Observatory Drive in the heart of University of Wisconsin-Madison.

On the Cover

Giulio Tononi, MD, PhD (left), and Chiara Cirelli, MD, PhD, converse throughout their daily walks, often leading to ideas about their sleep and consciousness research.

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ROBERT N. GOLDEN, MD



Loyal readers of this column may remember the time I quoted one of my favorite Beatles' songs, "Here Comes the Sun"—and a few astute readers pointed out my error in attributing it to Paul McCartney, rather than the late, great George Harrison. In an effort to atone for my previous misattribution years ago, I will now reference another classic from the Fab Four: "Hello, Goodbye," in which they sing, "You say goodbye, and I say hello."

In this issue of *Quarterly*, we say goodbye to several dear friends and colleagues. All of us are still reeling from the loss of Dr. Patti Keely, a highly esteemed faculty member and inspiring department chair at the University of Wisconsin School of Medicine and Public Health (SMPH). She succumbed in June 2017 to her third battle with cancer, but she leaves behind a legacy that will endure forever. We also say goodbye to alumnus Dr. David Morris, who passed away in February 2017. We are delighted that his daughter, Dr. Mary Morris—a distinguished alumna—carries on his traditions of innovation, patient care and loyalty to their alma mater. David Morris and his wife

Sacia's gift to our school, in 2000, allows generations of physician-investigators to say hello to the exciting world of research via the Morris Institute for Respiratory Research.

On another front, we look forward to someday saying goodbye to the horrible scourge of Alzheimer's disease. We present, on page 21, highlights from the Science of Successful Aging Summit, which focused on research aimed at ending this devastating epidemic.

We also feature a wonderful welcoming back of folks who, years ago, said goodbye to our school but recently said hello during our spring Medical Alumni Weekend. As part of this, we describe examples of giving back, highlighted that weekend at the 50-year reunion of the Class of 1967. Drs. Mary Ellen Peters and Dennis Maki, along with many of their classmates, have given a substantial gift to advance the missions of our school through the creation of the Class of 1967 Great People Scholarship Fund.

As described on page 25, we recently honored Dr. Ann Hoffmann of Mauston, Wisconsin, with the 2017 Max Fox Preceptor Award. She is an admirable family physician

who has welcomed into her practice cohort after cohort of SMPH medical students. Through her service as a preceptor since 1990 and the leader of this effort at her medical center since 2009, she has inspired our students, who learn firsthand about community-based medical practice in a rural environment.

In this issue, we also say hello to the newly reorganized Wisconsin Institute for Sleep and Consciousness, known as WISC, as we spotlight the remarkable careers and partnership of Drs. Chiara Cirelli and Giulio Tononi. And we highlight the White Coat Ceremony and Stethoscope Program, at which we greeted our newest class of medical students. We also enjoyed and were proud to participate in the Indigenous Health and Wellness Day. On that spring day, we welcomed Native American middle school and high school students to UW-Madison with the hope that some will consider joining us as medical and other health professions students in the future.

As the leaves begin to turn color throughout the UW-Madison campus and our state, we say goodbye to an all-too-short summer and hello to a glorious fall, and we anticipate much excitement in the seasons to come.

Robert N. Golden, MD

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

Reflecting upon a beautiful spring Alumni Weekend, the Wisconsin Medical Alumni Association (WMAA) was pleased to host events for the Classes of 1952, '57, '62 and '67, and the Half-Century Society. Festivities included a Badger Trolley tour of University of Wisconsin-Madison, a luncheon and ice cream social with medical students, an evening reception and reunion dinners.

This fall, the WMAA welcomed the incoming class of UW School of Medicine and Public Health (SMPH) medical students by hosting the White Coat Ceremony, Stethoscope Ceremony and Badger Cookout. We are amazed at the varied life experiences these students have had, and we are eager to see them learn and grow throughout their time at the SMPH.

Each year, the Stethoscope Ceremony is made possible by many dedicated supporters, who graciously gift students with these useful tools. Thank you so much for your generosity now and in the future, as we start planning for next year's stethoscopes right away. In the spirit of giving back, the students contributed to their class fund on the day they received their stethoscopes. I hope you enjoy reading about all of these events in this issue of *Quarterly*.

We look forward to Homecoming Weekend and reunions for the Classes of '72, '77, '82, '87, '92, '97, '02, '07 and '12. See pages 16 and 17 and the past issue of *Quarterly* for updates from class representatives. We also are eager to see many of you at the Middleton Society dinner, where we celebrate our school's most dedicated supporters.

While we most often see alumni in the greater Madison area, we are fortunate to connect with some around the state and nation. In early November 2017, in conjunction with the Association of American Medical Colleges conference, Jill Watson and I will co-host an SMPH reunion for alumni in

the Boston area. Our honorary co-hosts—Drs. Connie Barr, Class of '75; Dolph Hutter, Class of '63; and Sari Rotter, Class of '80—are joining forces with us to honor the education they received at the SMPH and stay in touch with other medical alumni.

Given the wide geographic distribution of our graduates, we plan to expand our WMAA board to include members from regions where many alumni live, such as Atlanta, Boston, Chicago, Denver, Los Angeles, Phoenix, Portland and Seattle. Watch the next issue of *Quarterly* for more information about our newest board members.

Wherever you live, the WMAA wants to keep in touch. We are excited to announce a new online community for SMPH alumni: For[MD]. This is an invitation-only network where SMPH alumni can:

- Connect with our organization in real-time
- Communicate with fellow alumni
- Discover networking opportunities
- Learn about upcoming events

We sent an e-mail invitation encouraging alumni to “opt in.” If you are already a member of For[MD] through your residency, you can use the same log-in to access that community and our schoolwide network. In case you did not receive an invitation to join, please let us know your e-mail address (using my contact information below), as we are increasingly using e-mail to send invitations to events and school updates.

We always love to hear your news! Please feel free to contact me with your ideas, questions, updates and concerns. You can reach me at kspeters@wisc.edu or (608) 263-4913, or write to me at the address on the back cover of *Quarterly*. I look forward to hearing from you!

Karen S. Peterson
*Executive Director, Wisconsin
 Medical Alumni Association*





Chiara Cirelli, MD, PhD (left), and Giulio Tononi, MD, PhD, enjoy daily walks on their rural property.

Sleep and Consciousness

DYNAMIC DUO'S WALKING CONVERSATIONS
HELP FOSTER RESEARCH BREAKTHROUGHS

Every morning, sleep researchers Chiara Cirelli, MD, PhD, and Giulio Tononi, MD, PhD, have a routine that is as Italian as they are, and as Wisconsin as their log home in southwestern Dane County.

First is the espresso, without sugar, but often accompanied by answering e-mails. They roast and grind their coffee beans and brew them in an espresso maker that would be the envy of any professional barista. Then, no matter the weather, it's time for their one-hour hike on the trails of their heavily wooded property.

On their daily walks, they do some of their most important science—discussing ideas and plans for their next rounds of experiments at the Wisconsin Institute for Sleep and Consciousness (WISC) at the University of Wisconsin-Madison.

In the summertime, their walks take them through oak groves full of blooming wild roses, where they often surprise turkey and deer. The duo passes areas where the tangled roots of oak trees, uprooted in past storms, have been painted bright blue by Cirelli to symbolize the neural synapses so important in their “synaptic homeostasis hypothesis,” or “SHY,” which posits that sleep is the price we pay for brain plasticity. They also pass a painted symbol of the Greek letter Phi, which symbolizes Tononi’s theory of

consciousness, described in his 2012 book, *Phi: A Voyage from the Brain to the Soul*.

Cirelli and Tononi’s walking discussions have led to many breakthroughs in sleep research, including studies that received international attention in 2017: Cirelli’s paper in *Science* that provided visual proof of SHY and Tononi’s article in *Nature Neuroscience* that turned conventional knowledge about dreams on its head. The study showed that the “hot zone” for dreams and consciousness is located in the back of the brain and that researchers can predict the content of dreams based on which specific brain areas show heightened activity (see page 6).

The world’s biggest sleep conference, Sleep 2017 in Boston, featured a debate between Cirelli and another scientist on SHY. In late 2017, Cirelli and Tononi will receive Harvard University’s Farrell Prize in Sleep Medicine for their career-long contributions to sleep research, and they will teach an advanced course on sleep at the Neuroscience School of Advanced Studies in Siena, Italy. Tononi recently received the Zülch Prize from the Max Planck Society in Germany for his work on sleep and consciousness. And at the invitation of Google’s artificial-intelligence guru, Tononi will head to Cambridge University to discuss whether machines can be conscious (his theory says “no”).

This duo regularly attracts offers to move their lab to other universities around the world, but their morning walk is among the many reasons they stay in Wisconsin.

“It would be very difficult for us to beat this quality of life,” says Cirelli. “Together with working in a supportive environment that values research, it is key for us to have lots of space and be left alone. It’s hard to have someplace like this, anywhere in the world, so close to nature and yet so close to the lab.”

“Drs. Cirelli and Tononi are remarkably creative and innovative scientists,” says Robert Golden, MD, dean of the University of Wisconsin School of Medicine and Public Health (SMPH). “The stunning depth and breadth of their research runs the entire spectrum from basic cellular and animal model studies to translational and clinical investigations which have direct impact on human health and disease.”

Both professors in the SMPH Department of Psychiatry, Tononi and Cirelli met in 1984 at the University of Pisa Medical School in Italy. Tononi was a psychiatry resident, and Cirelli worked as a medical student in his sleep lab. She kept the research going when he left for New York, and then San Diego to do theoretical work at The Neuroscience Institute. Later, she moved her career to San Diego to keep working with Tononi

on sleep research. At meetings, Cirelli met with Ruth Benca, MD, PhD, then an SMPH professor of psychiatry who is now the chair of psychiatry and behavioral health at the University of California, Irvine. Benca invited Cirelli to check out Madison.

“Even though we were not really on the job market, Giulio and I said, ‘Yes,’ ” Cirelli recalls of their 2001 move to UW-Madison.

Cirelli and Tononi now direct a joint lab at the HealthEmotions Research Institute, part of the SMPH Department of Psychiatry, led by Ned Kalin, MD, Hedberg Professor and Chair of Psychiatry. Their lab has more than 20 researchers and may be one of UW-Madison’s most international groups, currently with faculty and staff from Belgium, Bolivia, Brazil, Canada, France, Germany, Italy, Japan, Poland and Switzerland. If you

follow the aroma of freshly brewed espresso, you’ll find this group above the Wisconsin Sleep Clinic on the west side of Madison.

UW-Madison’s research on sleep runs the gamut, including Cirelli’s basic research on the nature of sleep in animals as small as rats, mice and fruit flies. (Yes, fruit flies sleep, as her lab showed by using tiny probes to sample the flies’ sleep/wake activity.) Tononi’s work on consciousness and its practical, theoretical and ethical implications have been supported, among others, by the Defense Advanced Research Projects Agency and—in collaboration with Larissa Albantakis, PhD, a UW-Madison scientist—the Templeton World Charity Foundation.

WISC researchers collaborate with clinicians ranging from neurologists and psychiatrists to meditation researchers

throughout UW-Madison, and beyond.

Joint work with Robert Pearce, MD, PhD, and Rob Sanders, MD, professor and assistant professor, respectively, from the Department of Anesthesiology, is illuminating the mechanisms through which the brain becomes disconnected from the external world and falls into unconsciousness during sleep and anesthesia.

Another 2017 paper, funded in part by Lily’s Fund and led by Melanie Boly, MD, PhD, clinical neurophysiology fellow, and Rama Maganti, MD, professor, Department of Neurology, and director, UW Health Comprehensive Epilepsy Program, in collaboration with Tononi, looked at how epilepsy affects sleep. It showed that small spikes of electrical activity during sleep all night disrupt its restorative function, possibly

Studying Dreams and Dreamless Sleep

Neuroscientists from the Wisconsin Institute for Sleep and Consciousness (WISC) reported in the April 2017 *Nature Neuroscience* that they identified a “hot zone” in the back of the brain where a decrease in low-frequency electrical activity shows when the brain is dreaming.

Additionally, the study showed that dreams and dreamless sleep occur in both Rapid Eye Movement (REM) sleep and non-REM sleep. Further, the contents of those dreams—whether they involved movement, faces or speech, for example—were tied to high-frequency activity in the parts of the brain in charge of those actions during wakefulness.

Giulio Tononi, MD, PhD, the senior author and the director of WISC, says the research also shows that dreams may be a valuable model for studying consciousness.

“Dreams are forms of consciousness that occur during sleep. In the course of a night’s sleep, consciousness varies: it can be absent or present in the form of thoughts, images or full-fledged dreams,” says Tononi, a professor of psychiatry

at the University of Wisconsin School of Medicine and Public Health. “We were able to compare changes in the conscious, dreaming brain to the unconscious brain during the same behavioral state of sleep. We could zoom in on regions that matter for consciousness and avoid confounding factors having to do with being awake rather than asleep or anesthetized.”

Forty-six volunteers slept at the laboratory wearing nets of 256 electrodes that covered their scalps and parts of their faces. The electrodes created a high-density electroencephalography (HD-EEG) report of brain activity. Awakened by a tone, the sleepers were asked to report whether they were dreaming.

The first study showed that in REM and non-REM sleep, subjects reported dreams when their brains’ posterior “hot zone” was activated—suggesting that dreaming depends on this brain region being active and not invaded by the low-frequency electrical activity typical of sleep.

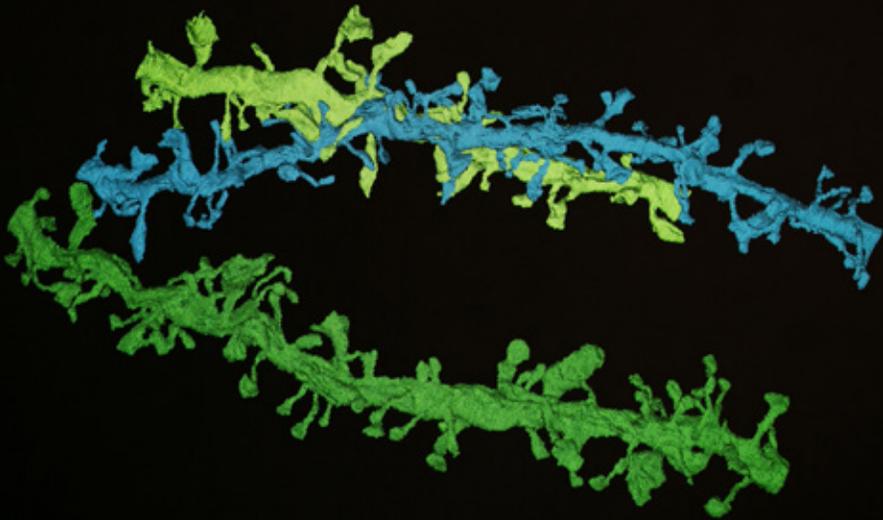
In the second test, the sleepers reported the content of their dreams. Their

brains showed high-frequency activity in regions associated with specific contents during wakefulness. For example, dreams associated with hearing speech triggered activity in areas on the left side of the cerebral cortex, which is involved in language perception and understanding.

“This suggests that dreams recruit the same brain regions as experiences in wakefulness for specific contents,” says lead author Francesca Siclari, MD, a former researcher in Tononi’s lab who now has her own lab in Switzerland. “This also indicates that dreams are ... not ‘confabulations’ that we make up while we wake up.”

In the final experiment, using EEG readings, another lead author Benjamin Baird, PhD, predicted the presence of dreaming 92 percent of the time and its absence 81 percent of the time.

“This is the first time someone has shown that forgotten dream experiences also carry a distinct EEG signature, which should encourage us to take reports of dream experiences at face value,” notes Siclari.



As described at right, researchers used electron microscopy to reconstruct images, like the one above, of synapses in a mouse brain to determine how the synapses grow during wakefulness and shrink during sleep.

causing daytime cognitive difficulties that can afflict people with epilepsy.

A few years ago, the laboratory studied the sleep of people with schizophrenia and found a dysfunctional pattern of brain waves during sleep that has been confirmed by several labs. Other studies have shown dysfunction in the sleep of people who eventually develop Alzheimer's disease.

"Sleep truly is a window on the brain," says Tononi, who holds the David P. White Chair in Sleep Medicine at UW-Madison and is the director of the WISC. "It's a time when the brain is left to its own devices, so you can see how it is working without the confounds of the environment or whether someone is paying attention. At night, we like to say, everyone is the same: the king and the beggar, the wise and the fool."

SHY holds that sleep is essential for brain recovery in all animals, making it a unique way to understand disease and health. It states that sleep cleans out unnecessary traces from the previous day by shrinking brain synapses and clearing space so more can be learned.

"This is why sleep is so essential," Cirelli says. "Synapses are the foundation of brain function, the way cells communicate with each other. Just a few hours of sleep shrinks them 18 percent on average. The implication is that sleep is fundamental for the brain to function, learn and remember—and to forget, which is just as important. It's strong evidence we need to be very protective of our sleep."

Studies show that a single missed night of sleep makes it harder for people to learn,

cuts their attention span and makes it harder to speak fluently, assess risks and appreciate a good joke. But Tononi believes sleep loss over the long haul is even a bigger threat to health and well-being.

"It's a lot like food; it's not so much what you eat on any one day, but what you eat over the long run that's important," Tononi says. "It's difficult to test, but based on SHY, we believe sleep is essential for integrating new learning with old knowledge."

He believes a limitation in machine learning is the lack of sleep-like processes to integrate knowledge, forcing machines to start from scratch to learn new things.

On Cirelli's side of the lab, work continues using the electron microscope to measure synapse strength in new areas of the brain and the developing brain. She's particularly interested in the effects of sleep deprivation in young animals, noting that it's possible sleep has a different role while the brain is growing. She's also eager to find out how sleep changes the brain after an animal has experienced a specific learning task.

Both Cirelli and Tononi are interested in seeing whether it's possible to enhance the restorative effects of sleep. For now, SHY is central to the debate of why we need sleep.

Cirelli says, "The debate is not settled, but this is a good time for sleep research because we are getting close to an answer, and we have powerful new tools to use."

And because—after long days at the lab—they can return to their hilltop and walk among the oaks, as they talk science, integrate their new knowledge and restore themselves to learn more about sleep.

Sleep: The Price We Pay to Learn

Striking electron-microscope pictures from inside mouse brains suggest what happens in our brains every day: Synapses grow strong and large during our awake hours, then shrink by an average of 18 percent while we sleep, creating room for growth and learning the next day.

A research project published in the February 2017 *Science* offers visual proof of the "synaptic homeostasis hypothesis" (SHY) first proposed by Chiara Cirelli, MD, PhD, and Giulio Tononi, MD, PhD, of the Wisconsin Institute for Sleep and Consciousness (WISC) in 2003.

This hypothesis holds that sleep is the price we pay for brains that are plastic and able to keep learning new things. And it took four years of painstaking research to provide this last crucial proof.

A large research team sliced the brains of mice and used a scanning electron microscope to photograph, reconstruct and analyze two areas of the cerebral cortex. They were able to reconstruct 6,920 synapses and measure their size.

The team deliberately did not know whether they were analyzing the brain cells of a well-rested mouse or one that had been awake. When they finally "broke the code" and correlated the measurements with the amount of sleep the mice had during the six to eight hours before the image was taken, they found that a few hours of sleep led to an 18 percent average decrease in the size of the synapses. These changes occurred in both areas of the cerebral cortex and were proportional to the size of the synapses.

The study was big news around the nation and world. It was bolstered by a companion Johns Hopkins University study that analyzed brain proteins to confirm SHY's prediction that the purpose of sleep is to scale back synapses.

For Cirelli, the study was a gamble that paid off. The lab is now looking at other brain areas and at the brains of younger mice to understand the role sleep plays in brain development.

White Coat Ceremony

STUDENTS PROUDLY ACCEPT SYMBOLIC COATS

The University of Wisconsin School of Medicine and Public Health (SMPH) welcomed its incoming medical students with white coats in August 2017.

Held each fall, the White Coat Ceremony is a symbolic event, as the coats—provided by the Wisconsin Medical Society—are a constant reminder of professionalism.

“This ceremony welcomes you to the privilege of service to patients, families and communities,” said Dean Robert Golden, MD.

Noting the students’ impressive individual histories, Golden said their diverse factors would contribute to the class’ collective strength and perspective as a group.

For instance, some incoming students were born in villages in Albania, Cuba, Ethiopia, Germany, India, Mexico, Pakistan, Poland and Vietnam, and one in a Sheboygan County, Wisconsin, town with fewer than 500 people. Classmates hailed from 26 states,

and about 80 percent are from metropolitan areas and small towns of Wisconsin.

Many classmates have worked in health care, holding positions such as emergency medical technician, hospice worker, pharmacy technician and doula. A few have been landscapers and farmers, and one was a writer’s production assistant for the medical drama, “Grey’s Anatomy.” More than 90 percent have conducted research.

Golden shared, “This is simply a snapshot of some individuals who are part of the cast of the wonderful story that is unfolding, an exciting story for the SMPH entering class. We are proud to have you join our school’s family.”





Opposite page (left to right): M1 Andrew Nguyen laughs as he dons his coat; M1 Alexis Keefe is all smiles in hers. This page: Top row: M1 Yoseph Senna greets Tracy Downs, MD, associate dean for diversity and multicultural affairs; SMPH faculty members and M2 students help new students put on their symbolic garb. Middle row: Paul Harari, MD, the Jack Fowler Professor of Human Oncology and chair of the Department of Human Oncology, shares an inspirational keynote speech; Byron Crouse, MD, associate dean for rural and community health, assists M1 Brandon Kim with his coat. Bottom row: Downs helps M1 Paige Skorseth as she accepts her white coat.



Spring Alumni Weekend

SHARING MEMORIES, REKINDLING FRIENDSHIPS



Clockwise from left (left to right): Front row: Barbara Fox, Ted Fox, MD '57, Sarah Hill, Gloria Leon, Arthur Leon, MD '57, Mary Clare Freeman, Eugene Weston, MD '55, Richard Barrick, MD '57, H. Leon Oxman, MD '57, Karen Oxman; back row: David Hill, MD '62, Sanford Mallin, MD '57, D. Joe Freeman, MD '52, Roger Rathert, MD '66, Ann Rathert; the Badger Trolley; Leon Rosenberg, MD '57, Ted Fox, MD '57, E. Richard Stiehm, MD '57, H. Leon Oxman, MD '57, Sanford Mallin, MD '57, Richard Barrick, MD '57, and Arthur Leon, MD '57, visited this mural, "A Celebration of Life," which was commissioned and supported by the Class of 1957, in the Wisconsin Institutes for Medical Research.

In early June 2017, the University of Wisconsin School of Medicine and Public Health (SMPH) buzzed with activity during Medical Alumni Weekend, sponsored by the Wisconsin Medical Alumni Association (WMAA). Members of the Classes of 1952, '57, '62 and '67, and the Half-Century Society enjoyed numerous opportunities to reconnect and visit nostalgic places.

Many alumni and guests attended the Mini Med School, which featured the latest research about how patients and physicians can best work together to improve health care decision-making. The talk, co-sponsored by the Departments of Surgery and Medicine, was led by Toby Campbell, MD, MSci (PG '04), associate professor (CHS), Hematology, Medical

Oncology and Palliative Care, and other SMPH faculty members.

Friday's festivities included a Badger Trolley tour of UW-Madison, with stops for alumni and guests to visit popular attractions and tour the Medical Sciences Center, Anatomy Lab and Bardeen Laboratories. Participants returned to the Health Sciences Learning Center (HSLC) for lunch with medical students and an



Top row (left to right): Peggy Kappy and Michael Kappy, MD '67, pose near a historic letter they donated to the SMPH (see Quarterly, Volume 19, Number 1); Fred Lamont, MD '67, and Barry Bast, MD '67, review a timeline at the Medical Sciences Center. Middle row: An exhibit in Ebling Library attracted alumni and guests; E. Richard Stiehm, MD '57, visits with M2 Nnenna Ezeh. Bottom row: Patrick McBride, MD '80, MPH, presents a Brown Derby to Patrick Lee, MD '16, PhD '14, whose class had the most donors in the past year; Susan Isensee, MD '83 (PG '86), and Fred Lamont, MD '67, pose. Eugene Nordby, MD '43, visits with M2 Camilla Khan.

ice cream social featuring campus-made Babcock ice cream. Alumni also toured the HSLC and heard from student guides about today's medical school experiences.

WMAA President Susan Isensee, MD '83 (PG '86), and Past President Patrick McBride, MD '80, MPH, kicked off the Friday evening celebration with a reception at the University Club.

McBride presented the annual Brown Derby Awards to the Class of '75 for the

largest amount contributed, Class of '51 for the highest percent of participation and Class of '16 for the largest number of donors. The Brown Derby—a tribute to Dean William Middleton, MD, who used a derby to encourage students to share knowledge during classes and to recognize superior student achievement—serves as a way for the SMPH and WMAA to recognize classes that have outstanding giving records each year.

Isensee and McBride presented 50-year medallions to members of the Class of '67. They also honored them for their generosity in creating the Class of 1967 Great People Scholarship Fund (see page 20).

Participants who celebrated the longest stretch since medical school were Eugene Nordby, MD '43, and those who gathered for their 65-year reunion (see class photos on the following pages).

Class Reunions



CLASS OF 1952 AND MEMBERS OF THE HALF-CENTURY SOCIETY

*Front row (left to right):
William Richards ('52),
D. Joe Freeman ('52),
David Westring ('58),
Eugene Nordby ('43),
John Wyman ('58).*

*Back row:
Eugene Weston ('55),
Charles Ihle ('65),
Ralph Hawley, founding director
(retired), Wisconsin Medical
Alumni Association.*

CLASS OF 1957

*Front row (left to right):
H. Leon Oxman, Arthur Leon,
Anne Schierl, Ted Fox,
Bruce Stoehr.*

*Back row:
Glen Holt, Richard Barrick,
James Ferwerda,
Sanford Mallin,
E. Richard Stiehm,
Leon Rosenberg,
John McKenna*



TODD BROWNMEDIA SOLUTIONS (4)



CLASS OF 1962

*Front row (left to right):
Robert Barnes, James Basiliere,
Kathryn Nichol, Charlotte Burns,
Richard VanDreel.*

*Back row: Charles Vavrin,
David Hill, David Cline,
Marcus Cohen, Richard Geline.*

CLASS OF 1967

*Front row (left to right):
Thomas Madland, Bob Lederer,
Mary Ellen Peters, James Schuster,
Philip Guzelian.*

*Second row: Leigh Iverson,
Frederick Spiegler, Thomas Taylor,
John Bargren, Thomas Winch,
Edward Kinsfogel, Neil Hoffman,
Michael Kappy, Leon Helmbrecht,
Phillip Lerner, William Gee.*

*Third row: Thomas Jackson,
Dennis Maki, Larry Johnson,
Fred Lamont, Jim Kuplic.*

*Back row: Stanley Cupery,
Barry Bast, Pierce Meier,
Lee Tyne, William Klish.*





Caroline Paul, MD (right), examines a young patient at the UW Health Pediatric and Adolescent Medicine Clinic.

AMY L. WHITE, MD '00

While I practice primary care pediatrics in Austin, Texas, I also am a founding partner in Remedy Urgent Care. There, we perform urgent care house calls, and I do routine check-ups. It's exciting to practice medicine in this new way, and I love being able to spend ample time with patients in the comfort of their homes. Kids love showing me their pets and hobbies, and they are much happier at home than in an office. In addition, I'm learning about business development, marketing and management.

A case that is close to my heart includes two young sisters who were diagnosed with Niemann-Pick Disease Type C1. Patients with this disease, caused by a genetic mutation, are not able to metabolize cholesterol and other lipids properly. It was a devastating diagnosis, and I've joined the family in their goal to help raise awareness and fund research to find a cure through the Firefly Fund. I've laughed and cried with them, held their hands, and admire the strength and determination

they've shown during this heart-breaking year.

I chose to enter pediatrics because I love the joy, humor and honesty of children. I knew during medical school that they were my favorite patients to work with, and I found primary care pediatrics to be exciting due to its diversity and interesting cases. I love watching my patients grow up and helping them stay healthy.

For a medical student considering pediatrics, I'd say you'll never have a boring day! I hear funny stories from kids all day, get to hear about



and help with the challenges of parenting, and have many happy patients who make me smile.

ANDREW JANOWSKI, MD '10

After medical school, I completed my residency at the Children's Hospital of Pittsburgh, where I thrived in my pediatric training. Next, I completed a pediatric infectious diseases fellowship at Washington University in St. Louis and joined its faculty.

I chose infectious diseases because I get to see patients who have diseases from all medical disciplines, as every specialty needs our expertise at some point. My specialty is the closest thing to being like the TV show "House" as I get to try to solve medical mysteries.

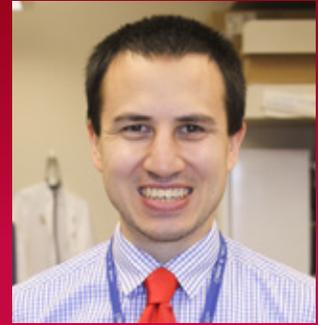
Sadly, it doesn't always fit into a one-hour episode.

My most memorable case was a young woman with sepsis that nearly required extracorporeal membrane oxygenation. Thankfully, we thought about histoplasmosis and initiated therapy long before her tests confirmed the diagnosis. A year later, at age 19, she is preparing to marry her childhood sweetheart.

In addition to consulting on incredibly puzzling cases, my specialty is enabling me to build a research career. As my first project, I discovered a new virus family (statoviruses)

present in mammals. I am working on a recently discovered encephalitic virus (astrovirus VA1). It is incredible to think that I'm the first person in the world to propagate this virus and see the particles by electron microscopy.

I serve on the education committee for the Pediatric Infectious Disease Society. Now that I have time to provide training for others, I want to continue to shape our trainees as thoughtful, caring team leaders and innovators of science. It is now my turn to give back to our future in medicine.



PATRICE EVERS, MD '94

I am an assistant professor of pediatrics at the Tulane University School of Medicine in New Orleans. For 22 years, I have been associated with Tulane, where I currently teach residents in continuity clinics and medical students in the outpatient clinic and well-baby nursery. Tulane's Pediatric Clinics mostly serve an inner city, urban population and refugee/immigrant families in the New Orleans metropolitan area.

Through my academic practice, I see patients for routine and acute care, and care for children who have chronic and severe medical and

psychological needs. Our clinic is located in a high-poverty area, and the patients who make the biggest impression on me are those who—against all odds—overcome their obstacles to succeed. It is rewarding to play a significant role in my patients' development and achievement.

My goal to become a pediatrician started early, and I was able to solidify that goal in medical school. I am grateful that my education at the UW School of Medicine and Public Health prepared me well for my pediatrics residency at Tulane. There, I was offered the chief resident position and

accepted a staff position upon completion of my residency.

I enjoy the atmosphere of this family-oriented profession. Also, I have proudly learned to appreciate the "laissez les bons temps rouler" attitude that pervades southern Louisiana. This Cajun expression means "Let the good times roll!"

I would tell medical students that every day is different and challenging due to the variety of patients I see in the general pediatrics outpatient clinic. I also would share that a career in pediatrics is a solid investment in our young people, the future of our society.



Know Your Class Representatives

Each University of Wisconsin School of Medicine and Public Health (SMPH) graduating class has one or more class representatives who play an integral role in working with the Wisconsin Medical Alumni Association (WMAA) to plan class reunions. Those featured here and online hope classmates will join them at their reunions in fall 2017.

JOHN KRYGER, MD '92 (PG '97)

What type of practice are you in now, and where?

I practice pediatric urology at Children's Hospital of Wisconsin. I also am a professor and chief of pediatric urology at the Medical College of Wisconsin. Both are in Milwaukee.

What's your fondest memory of medical school?

The friendship and camaraderie our class developed during the grueling first two years of medical school in the old building at 1300 University Avenue will stick with me forever. I still have fond, vivid memories of the lecture halls, anatomy labs, ping-pong battles and various personalities of our classmates.

What are your hobbies/interests?

I enjoy spending time with my wife and dogs, attending Badger sports events and relaxing at our cottage.

What SMPH faculty do you remember the most, and why?

Dr. Dennis Maki was so dedicated, passionate and intelligent. He is an amazing physician role model. I found him to be inspiring, occasionally intimidating and personable all in one package.

What are your plans for your reunion?

Dr. Keith Stuessi and I are planning a class reunion reception on Friday night at Steenbock's on Orchard, inside the Wisconsin Institutes of Discovery. Then, on Saturday, we're hoping for a large gathering

at the WMAA Tailgate Party at Union South and Homecoming football game.

Message to your classmates?

Our Class of '92 was an amazing group that bonded together so well during medical school. Twenty-five years have passed! We have to seize this opportunity to celebrate! Time will never give us this moment again.

Other news

We will be celebrating our 25-year class reunion with a new class scholarship fund. It will be named the Class of 1992 Todd Van Blaricom, MD, Memorial Scholarship Fund in honor of our dear classmate. Todd was loved by all of us and was our class president, as well as the leader of the medical school band. He passed away in January 2004.

NOELLE DOWLING, MD '97

What type of practice are you in now, and where?

I have a full-time outpatient family practice with the SSM/Dean Medical Group in Waunakee, Wisconsin.

What's your fondest memory of medical school?

I will always remember the camaraderie built around the cadaver tank—it was such an intense and amazing opportunity to learn about the human animal with my tank partners. I cannot forget the privilege of being matched with an expectant family for the pregnancy and birth of their first child,

Natalie. (This is the only time I was thrilled to be able to carry a beeper.) We are friends to this day, even as Natalie has graduated from college.

What are your hobbies/interests?

I am busy raising two middle schoolers, Finn and Harper, and I dabble in meditation and mindfulness. My partner, Dr. Anne-Marie Lozeau, and I love to get outdoors with our Portugese Water Dog, Melia, and travel to the coast of New Hampshire every summer with our family.

What SMPH faculty do you remember the most, and why?

Dr. June Dahl in pharmacology stands out for me. She had high standards, was passionate about her subject matter and could easily make pharmacology clinically relevant. And she was simply classy.

Message to your classmates?

I hope people can attend our reunion from near and far and bear witness to all the curvy paths we have traveled, and also how much we have continued to learn and grow as physicians and as people. Our jobs remain, at the core, a privilege in that we can make a tangible and meaningful impact on people who are traveling their own curvy paths—it's a pretty cool thing!

DIANE (BONTKE) WEIS, MD '97

What type of practice are you in now, and where?

I practice primary care in Austin, Texas.



John Kryger, MD '92 (PG '97) (right)



Noelle Dowling, MD '97



Allen Hayman, MD '02 (right)

What's your fondest memory of medical school?

I have many fond memories of all the friends and colleagues I made while attending medical school.

What SMPH faculty do you remember the most, and why?

I fondly recall our anatomy professors.

Message to your classmates?

Unfortunately, I will not be able to attend our 20th class reunion, but I really wish I could be there to see all of you.

ALLEN HAYMAN, MD '02

What type of practice are you in now, and where?

I am an anesthesiologist with Spectrum Medical Group in Portland, Maine. I also am a shareholder with the medical group's Southern Anesthesia Division in Portland.

What's your fondest memory of medical school?

My wife and former medical school classmate, Dr. Jen Hayman, and I talked about this for over an hour. We have so many great memories, and I decided to list some of them:

- Getting accepted to UW-Madison and the UW School of Medicine and Public Health
- Our White Coat Ceremony
- The anatomy lab and the ceremony honoring those who had donated their bodies for our education

- The WMAA Candy Bowl
- The Essen Haus
- Our celebrations at Pizza Hut's all-you-can-eat buffet after each test
- Dinner with Dean and Mrs. Farrell
- Dinner with Dr. and Mrs. Schalch
- The Memorial Union Terrace
- The running trails along Lake Mendota
- Match Day and the "pool" for who got picked last to read their match assignment

What are your hobbies/interests?

Jen and I love to spend time with our 8-year-old daughter, Gray. We like to hike, run, go to local sporting events, camp, read and explore all the gustatory establishments in the Greater Portland area.

What SMPH faculty do you remember the most, and why?

Dr. Don Schalch, our faculty advisor, was such a motivation for our class, as well as for Jen and me. He was always there for us with advice, support and unconditional empathy.

What are your plans for your reunion?

We have some schedule conflicts that we are trying to work out so we can attend the reunion. We would love to see all of our classmates and catch up on how everyone is doing and where people are living.

Message to your classmates?

Why would you not want to come "home" to Madison for a visit and a trip down memory lane?

Other news?

Jen is a clinical associate professor at Tufts University School of Medicine and a pediatric hospitalist at Barbara Bush Children's Hospital at Maine Medical Center.

CLASS REPRESENTATIVES WHO ARE PLANNING REUNIONS

These classes will hold reunions on Friday and Saturday, October 20 and 21, 2017.

1972: John Pederson

1977: Charles Frinak

1982: Robert Lebel

1987: Matthew Solberg

1992: John Kryger

1997: Noelle Dowling, Amy Herbst, Eric Jagar and Diane (Bontke) Weis

2002: Anna Carley, Andrea DeMets, Allen Hayman and Teresa Sapida

2007: Mia Gintoff Cohen and David Sommerfeld

2012: Kyle Pauly Wood and Bob Zemple

 **There's More Online!**
Visit med.wisc.edu/51061

CLASS NOTES compiled by Andrea Larson

We want to hear from you!
med.wisc.edu/shareyournews

CLASS OF 1955

Lawrence Field was selected by the Board of the International League of Dermatological Societies (ILDS) to receive the 2017 ILDS



Certificate of Appreciation for International Leadership. This award is made to outstanding individuals who have given life-long dedication to particular aspects of dermatology, beyond what one would expect of a dermatologist in his or her normal practicing life. He will receive the award at the Dermatologic and Aesthetic Surgery International League Annual Meeting in China in October 2017.

Stephen Stein, a retired orthopedic surgeon, published his debut novel, *The Oath*, a vivid, multilayered tale that focuses on doctors in Auschwitz, Germany, and their fates after World War II. Stein lives in Batesville, Indiana, and sits on the Ivy Tech Community College Foundation Board of Directors and the Batesville Community School Board.

CLASS OF 1987

Jeffrey Gaver started his career in veterinary medicine in the Oconomowoc, Wisconsin, area. Through the Rotary Club, he developed a project in Haiti and led medical mission trips there, for which he received several honors. Later, he earned his master of public health degree from the University of Minnesota and his medical degree from the UW School of Medicine and Public Health, completed an emergency medicine residency and year as chief resident at the

Medical College of Wisconsin and practiced emergency medicine for five years. He later completed an internal medicine residency at Aurora Sinai Medical Center and practiced as an internist in Oconomowoc for 20 years. Throughout his career, he flew weekly as a physician on UW Med Flight in Madison. He wrote two books, 20 years apart, about his flight experiences: *Flight Log: A Book About Life, and Sometimes Death*; and *Epilogue: Stories of Hoping, Coping, Inspiration and Redemption*. Gaver served as the medical director of the Milwaukee Mile Race Track and the Road America Race Track in Elkhart Lake, Wisconsin, where he continues to provide emergency services. Following retirement, he and his wife, Bonnie, moved to Sun City, Arizona, in 2014. He joined Arizona State University (ASU), where he serves as an urgent care and primary care physician in student health and provides medical consultation and occupational medicine services for the Department of Animal Care Technology. He also mentors internal medicine residents. Gaver is chair of the ASU Pandemic Medical Sub-committee. His hobbies are model railroading, fishing and writing. He has two adult children.

CLASS OF 1988

Jerry Miller

recently had a research article—“Genomic Analysis of Melanoma Evolution Following a 30-Year Disease-Free Interval”—published in the *Journal of*



Cutaneous Pathology. It is the first published case that proves a lineal relationship in an ultra-late melanoma metastasis. It also is supporting evidence for the cancer stem cell theory. Miller is a dermatologist with Forefront Dermatology. He and his wife, Lynn, reside in Kohler, Wisconsin, with their 5-year-old child, J.J.

IN MEMORIAM

Gerald W. Schwiebinger, MD '48
 Cornelius, Oregon
 May 8, 2017

Clayton R. Haberman, MD '49
 Stanwood, Washington
 April 29, 2017

Henry C. LaBrec, MD '56
 La Crosse, Wisconsin
 March 10, 2017

Phillip D. Lerner, MD '67
 Seminole, Florida
 June 26, 2017

Jean Johnson, MD '68
 Ripon, Wisconsin
 April 29, 2017

Richard W. Gerber, MD '72
 Caldwell, Idaho
 March 17, 2017

Gary O. Overson, MD '74
 Onalaska, Wisconsin
 May 8, 2017

1989

The International Association of HealthCare Professionals welcomed **Gerard Adler** to the organization with his upcoming publication in *The Leading Physicians of the World*. Adler is an orthopedic surgeon with vast expertise in all facets of his work, especially sports medicine, arthroscopy, cartilage repair and transplantation. Having practiced for

more than two decades, he now cares for patients within Aurora Medical Center in Summit, Wisconsin.

1992

Gregory Lewis has been appointed the program director for the California Hospital Medical Center/University of Southern California—Family Medicine Residency Program.

DO YOU GET OUR E-MAILS?

If you do not receive invitations to reunions and information about other special events via e-mail from the Wisconsin Medical Alumni Association (WMAA), please add "wmaa@med.wisc.edu" to your address book. This will keep our messages from landing in your spam folder! Please also visit www.med.wisc.edu/alumni to update your contact information. We want to be able to stay in touch!

GOODBYE DEAR FRIEND: PATRICIA KEELY, PHD

It would be easy to simply say Patricia (Patti) Keely, PhD, was a world-class, nationally recognized breast cancer researcher at the University of Wisconsin School of Medicine and Public Health (SMPH). And that would be correct—but only part of the picture.

Keely succumbed to advanced pancreatic cancer on June 24, 2017.

Those who knew her help reveal all that Keely was in her personal and professional life.

Her leadership, mentorship and collaborative nature allowed her to make a tremendous impact in this world, according to Howard Bailey, MD (PG '91), associate dean for oncology and director of the University of Wisconsin Carbone Cancer Center.

"Our thoughts are with her son, David, her spouse, Tom, and her parents and siblings. Our deepest condolences to her family for their profound loss," he says. "Wisconsin's cancer community will miss her and cherish her significant and valuable contributions."

In addition to wife, mother and nurturer of backyard chickens (as shown in photo), Keely's official titles were chair of the SMPH Department of Cell and Regenerative Biology, Jan and Kathryn Ver Hagen

Professor of Translational Research and principal investigator at the Keely Lab.

To the eight current members of her laboratory, and the more than a dozen past members, she most surely made an indelible impact, according to various news stories chronicling her inspirational life journey, which included two previous battles with cancer.

In a beautiful show of appreciation, the current members of the lab threw a dance party for her in April 2017 to celebrate her life and what she meant to them.

"This is the Keely Lab, it's all affected by who she is," said Joseph Szulczewski, a graduate student who works at the lab, in an interview with a Channel 3 television reporter regarding Keely.

Her prolific research career, which includes countless publications, was most recently focused on cell signaling related to cellular differentiation and transformation and included her sentinel research on the role of the cellular microenvironment in the behavior of breast cancer cells.

Her academic and research leadership roles also included appointments as the co-leader of the Tumor Microenvironment Group at the UW Carbone Cancer Center and co-principal investigator at the Laboratory for Optical and Computational Instrumentation, as well as an affiliate



appointment in the Department of Biomedical Engineering.

In addition to her research and academic record, Keely also was a wonderful colleague and friend, according to SMPH Dean Robert Golden, MD.

"She leaves behind a remarkable legacy as an outstanding scientist, dedicated mentor, strong academic leader, and caring and committed person," he shares.

The Patricia Keely Memorial Fund has been set up, and donations can be made online through the UW Foundation at supportuw.org or by contacting Jill Watson at jill.watson@supportuw.org or (608) 262-4632.

Scholarships Help Support the Next Generation of Physicians

GRATITUDE SPURS CLASS OF 1967 CAMPAIGN



TODD BROWN/MEDIA SOLUTIONS

Four of the donors to the Class of '67 Fund (left to right): Dennis Maki, MD '67, Leon Helmbrecht, MD '67, Mary Ellen Peters, MD '67, Pierce Meier, MD '67.

To honor their 50th medical school anniversary, members of the University of Wisconsin School of Medicine and Public Health (SMPH) Class of 1967 created a Great People Scholarship Fund aimed at easing the debt burden for future physicians.

In early 2017, Leon Helmbrecht, MD '67, John Jaeger, MD '67, Dennis Maki, MD '67, Pierce Meier, MD '67, and Mary Ellen Peters, MD '67, wrote the following to their classmates:

"Almost two years ago, we—along with our great friend, Eric Wedell, MD—wrote to you about the creation of our Class of 1967 Great People Scholarship Fund, encouraging your participation. ... We were sad when Eric passed away last October, yet remain very inspired by the example he set as a physician who lived an incredible life of service.

"Moved by Eric's model of 'giving back'... together let's give at least another \$55,000, and reach \$250,000 by year's end."

At the class' reunion in spring 2017, Patrick McBride, MD '80, MPH, past president of the Wisconsin Medical Alumni Association, said, "I want to convey an

enormous thanks to the Great Class of 1967 for what you have accomplished with your Great People Scholarship Fund. After just two years, 49 percent of you have contributed, and the fund balance sits at \$240,000—just \$10,000 away from reaching your year-end goal of \$250,000."

The first two students to receive a Class of 1967 Scholarship, Ashok Bhattarai and Kathryn Eszes, are greatly benefiting from the group's generosity.

"Five years ago, my friend Mary Ellen Peters contacted me about coming to our 45th reunion. She presented the idea for the Class of 1967 Campaign and has inspired others to contribute. I liked the idea, and I felt it was time for me to start giving back," says Helmbrecht, who practiced adult and pediatric urology in Pomona, California, until he retired from patient care in 2008.

"I was lucky to have had a family that could cover my educational expenses—which were much lower than they are for current students," he reflects.

Peters shares deep gratitude for those who donated to the fund. Reflecting on

her long career in diagnostic radiology at UW Health and the SMPH, Peters says it felt like a good time to help the next generation of physicians succeed.

Another classmate and UW Health colleague—Maki—worked with Peters and the UW Foundation to establish the fund.

An infectious disease researcher and physician, Maki joined the SMPH faculty in 1974. He says the Class of '67 has been cohesive since Day 1.

"My classmates are good human beings and leaders in their communities. It is a privilege to be part of this class," he says.

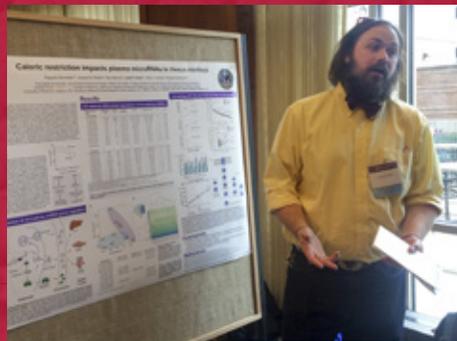
Maki recalls his medical school days, when he could make enough money at student jobs to pay for his education, something that's out of reach these days.

"It's fulfilling to give back to students at the great university that provided me with many wonderful opportunities," he says.

For more information about donating, contact Jill Watson, the SMPH's philanthropic partner, at the UW Foundation, at (608) 262-4632 or jill.watson@supportuw.org.

Science of Successful Aging

INAUGURAL SUMMIT FEATURES RESEARCH ADVANCES



REBECCA WASIELESKI/WISCONSIN ALZHEIMER'S DISEASE RESEARCH CENTER (6)

by Rebecca Wasieleski

The University of Wisconsin School of Medicine and Public Health (SMPH) and Division of Geriatrics and Gerontology, Department of Medicine, hosted the Science of Successful Aging Summit: The Aging Brain and Dementia at UW-Madison. World-renowned experts in Alzheimer's disease and dementia shared presentations around these four topics at the April 2017 event:

- Epidemiology and Demography of Aging and Dementia
- Biology of Aging and Neurobiology of Dementia
- Frontiers in Dementia Diagnosis, Therapeutics and Preventive Health
- Regenerative Medicine, Aging and Dementia

"The summit brought together local, national and international scientists for a collaborative, cross-disciplinary exchange of ideas focused on aging research," says



Sanjay Asthana, MD, SMPH associate dean for gerontology, Duncan G. and Lottie H. Ballantine Chair in Geriatrics, and professor and head of the Division of Geriatrics and Gerontology. "We hope this event will result in collaboration and further the research needed to improve the health and well-being of our aging population here in Wisconsin and beyond."

The Wisconsin Alzheimer's Disease Research Center, which Asthana directs, hosted a poster session at the event, attracting 29 entries from across campus. Poster winners were Priya Balasubramanian, PhD, postdoctoral research associate, Division of Geriatrics and Gerontology;

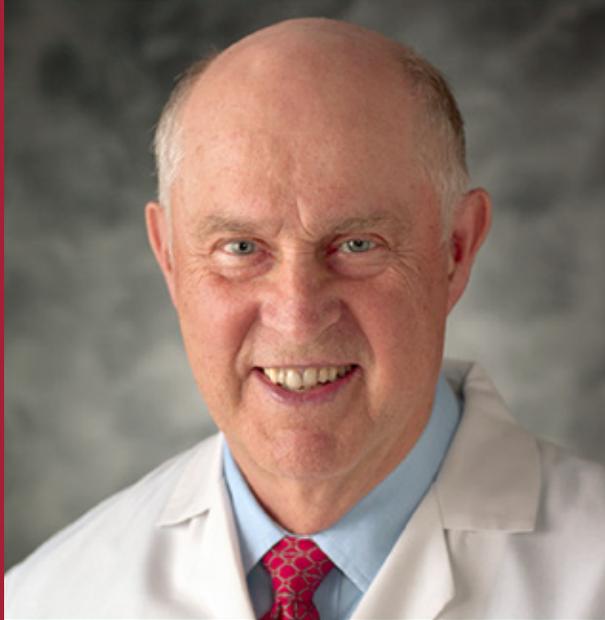
Nicole Cummings, trainee, Biology of Aging and Age-Related Disease T32 training grant; and Kathleen Miller, graduate student, Department of Kinesiology.

In early 2015, UW-Madison Chancellor Rebecca Blank and SMPH Dean Robert Golden, MD, identified healthy aging as one of the top institutional priorities and set a goal to synergize gerontology research and training across the university. In an effort to meet those aims, the SMPH and Division of Geriatrics and Gerontology will host the Science of Successful Aging Summit every other year, with a different focus each time.

Clockwise from left: Sanjay Asthana, MD (left), and UW-Madison Chancellor Rebecca Blank; Josef P. Clark, PhD, postdoctoral fellow, Department of Medicine; Dorothy Farrar-Edwards, PhD, professor of medicine and kinesiology, and Anita Bhattacharyya, PhD, senior scientist, Waisman Center; Carey Gleason, PhD, associate professor of medicine, and Andrew Merluzzi, Neuroscience and Public Policy student; view of the poster session.

The Morris Family's Vision

FATHER-DAUGHTER TEAMWORK AND FAMILY'S PASSION HELPED ESTABLISH AN INSTITUTE THAT KEEPS ON GIVING



DAVID MORRIS, MD '54, AND MARY MORRIS, MD '83

Following David Morris' death in February 2017, Mary Morris has continued in the practice they shared

by Masarah Van Eyck

As a young family physician who had recently returned from serving as a U.S. Air Force flight surgeon, David Morris, MD '54, began his civilian career in a private practice in the southwestern Wisconsin town of West Salem. He often encountered patients with agriculture-related respiratory allergies, which would progress into wheezing and incapacitating fatigue.

Realizing the discomfort and inconvenience the illnesses caused for rural patients—at times of the year when farmers are busier than ever—piqued his interest in conducting allergy-related research. He learned of a treatment, more common in

Europe than the United States, that entailed delivering minuscule amounts of antigens via drops under the tongue, the site of the body's largest collection of dendritic cells, which are important messengers in the immune system. This technique, he posited, would stimulate the cells, causing them to down-regulate a patient's allergy through the cervical lymph nodes. He believed that by working with the body's natural immune system, patients would build a tolerance to the antigens. If successful, David Morris hoped, he could eliminate his patients' debilitating symptoms.

By 1960, board certified in family practice (and later by the American Board of Allergy

and Immunology), David Morris began to explore similar therapies for allergies to triggers like dust mites, molds and foods. A decade after his first successful treatment, he and his medical partners founded Allergy Associates of La Crosse, Wisconsin, where he had moved with his wife, Sacia Morris, and their growing family. There, the medical partners trademarked the La Crosse Method Protocol™, a sublingual immunotherapy treatment designed to help patients build tolerance to a growing list of environmental and food allergies. They and others they have trained have since treated nearly 200,000 patients, published their findings in peer-

reviewed journals and presented their work at national conferences.

When the World Health Organization endorsed sublingual immunotherapy as a viable alternative to injection therapy in 1998, David Morris and his partners established a complementary educational company, Allergychoices, Inc.™ The company keeps U.S. physicians and patients abreast of the latest science behind the protocol; provides training and patient education; and supports treatment through licensed pharmacy, testing and support services across the United States, enabling patients to get consistent care close to home.

Yet, while some professional groups—such as the world health initiative on allergic rhinitis, called the Allergic Rhinitis and Its Impact on Asthma—endorse sublingual therapy, the majority of mainstream allergists have yet to embrace the treatment. Many argue that research investigations have not fully proven its efficacy. And many consider that a few outstanding questions, related to optimal dose and the efficacy of multi-allergen sublingual immunotherapy, remain.

Through the years, David Morris repeated to colleagues, “What matters is that the patients get better.” When he died in early 2017, David Morris left a thriving practice of devoted colleagues, including his daughter, Mary Morris, MD ’83.

The second of David and Sacia Morris’ four children, Mary Morris spent Saturdays and summers helping at the clinic during her teen years. After completing her internal medicine residency at Mount Sinai Medical Center in the University of Wisconsin School of Medicine and Public Health (SMPH) Milwaukee Academic Campus, she practiced at St. Luke’s Hospital in Milwaukee for two years before joining David Morris’ practice in 1989. In La Crosse, Mary Morris and her husband, Jim Killoran, raised three daughters next door to her parents, and she pursued her research interests related to the therapy.

Mary Morris says carrying on her father’s undertaking is bittersweet. Like her father, she finds reward in the appreciative patients who benefit from the treatment. Marveling at her father’s fortitude, she equally admires her

mother, who buttressed her husband when people dismissed his theory.

Mary Morris recalls, “I used to ask my dad, ‘How did you get so brave? How could you be shunned and still stand up?’”

She promptly responds—in a low-pitched voice to mimic her father’s likely reply, “Patients are getting better, honey! That’s what matters.”

In recent years, Douglas DeBoer, DVM, professor of dermatology at the UW School of Veterinary Medicine, working in partnership with Mary Morris, found sublingual immunotherapy effective in combating allergic reactions in dogs. It is now the standard of care in the veterinary world, Mary Morris says, noting the drops allow pet owners to administer the treatment at home and save a significant amount of money.

Representing another legacy of David Morris’ passion—built through a sizeable gift he and Sacia Morris made to his medical school alma mater, the UW School of Medicine and Public Health, in 2000—the school established the Morris Institute for Respiratory Research in the Clinical Science Center. Designed to facilitate interdisciplinary research, the 10,000-square-foot facility brings together basic scientists and clinical experts in allergy, immunology, pulmonary medicine and more.

“My dad knew that people walking past one another in the hall to get a cup of coffee would be more likely to strike up conversations and share information for a larger cause,” Mary Morris says, as she describes David Morris’ vision for the institute. “That was, perhaps, his biggest legacy. By creating a vision for a physical space, he influenced interactions among clinicians, academicians and researchers.”

A *Quarterly* article in fall 2000 noted that David Morris considered the SMPH (then UW Medical School) a member of his extended family. It also noted that David Morris saw the gift as a way to further immunotherapy research and honor the memory of one of his former mentors, the legendary Dean William S. Middleton, MD. Morris was the president of the last class Middleton saw through



David Morris, MD '54 (recently deceased), and Mary Morris, MD '83, practiced together for 27 years.

all four years of medical school, and he remembered Middleton fondly as an involved, hands-on administrator.

At the time of the gift, David Morris said, “My wife and I have always given a significant portion of our earnings charitably. I thought it was time to do something for the medical school, to honor the caliber of the research.”

Through the Morris Institute, the family’s legacy continues to grow.

David and Sacia Morris’ gift has had “a remarkable, positive multiplier effect” in terms of securing major federal funding, describes SMPH Dean Robert Golden, MD.

Today, the Morris Institute is home to cutting-edge research investigations that foster partnerships with colleagues locally, nationally and internationally. Among these studies is the Urban Environment and Childhood Asthma (URECA) study, for which James Gern, MD, an SMPH professor of medicine and pediatrics, is the principal investigator. URECA is a multi-site study funded by the National Institutes of Health’s National Institute for Allergy and Infectious Diseases, as part of its Inner-City Asthma Consortium (see page 24).

Gern, Nizar Jarjour, MD (PG ’89), and Robert Lemanske, Jr., MD ’75, are among several physician-researchers who conduct ground-breaking research in the Morris Institute. Jarjour serves as its director and

is a professor in the SMPH Department of Medicine and head of that department's Division of Allergy, Pulmonary and Critical Care Medicine. Their asthma research, and that of colleagues, was featured in *Quarterly* magazine, Vol. 18, Number 3.

UW-Madison is ranked number 1 among all public institutions in the United States and number 4 among all institutions for asthma research, according to the research analytics firm Expertscape (www.expertscape.com).

"The Morris Institute established an infrastructure that has enabled creative interactions among clinician-scientists and facilitated the growth and development of multi-talented, interdisciplinary research teams. These teams have contributed significantly to a more comprehensive understanding of the pathogenesis of respiratory diseases and to safe and effective treatment approaches to them," says Lemanske, a professor in the SMPH Departments of Pediatrics and Medicine, associate dean for clinical and translational



Sacia Morris and David Morris, MD '54, made a substantial gift to the UW School of Medicine and Public Health, which established the Morris Institute for Respiratory Research in 2000.

research and deputy executive director of the UW-Madison Institute for Clinical and Translational Research.

Jarjour concludes, "We greatly appreciate having such a wonderful facility

where physicians, scientists and research coordinators work closely together to conduct cutting-edge research that is contributing to improved understanding and treatment of allergic and respiratory diseases."

Early Pet and Pest Exposures Reduce Asthma Risk

by Gian Galassi

Children exposed to high indoor levels of pet or pest allergens during infancy have a lower risk of developing asthma by age 7, new research supported by the National Institutes of Health (NIH) reveals. The findings, published in the *Journal of Allergy and Clinical Immunology*, may provide clues for the design of strategies to prevent asthma from developing.

While previous studies have established that reducing allergen exposure in the home helps control established asthma, the new findings suggest that exposure to certain allergens early in life—before asthma develops—may have a preventive effect. The observations come from the ongoing Urban Environment and Childhood Asthma (URECA) study, which is funded by the NIH's National Institute of Allergy and

Infectious Diseases through its Inner-City Asthma Consortium.

"Our observations imply that exposure to a broad variety of indoor allergens, bacteria and bacterial products early in life may reduce the risk of developing asthma," says James E. Gern, MD, principal investigator of URECA and a professor of medicine and pediatrics at the University of Wisconsin School of Medicine and Public Health, where he conducts research in the Morris Institute for Respiratory Research. "Additional research may help identify targets for asthma prevention strategies."

The URECA study investigates risk factors for asthma among children living in urban areas, where the disease is more prevalent and severe. Since 2005, URECA has enrolled 560 newborns from Baltimore, Boston, New York City and

St. Louis at high risk for developing asthma because at least one parent has asthma or allergies. Investigators have been following the children since birth, and the current research report evaluates the group through age 7.

A previous URECA report suggested that exposure to certain bacteria during infancy may protect 3-year-olds from recurrent wheezing, a risk factor for developing asthma. In the current report, researchers found associations between the abundance of certain types of bacteria in the house dust and an asthma diagnosis by age 7, suggesting that exposure to certain types of bacteria in early life might influence development of asthma. Additional research is needed to clarify potential roles of these exposures in asthma development.

Max Fox Award

HOFFMANN HONORED FOR SERVICE AS PRECEPTOR

Ann Hoffmann, MD—the lead preceptor at the Mile Bluff Medical Center in Mauston, Wisconsin, since 2009 and a volunteer preceptor there since 1990—earned the 2017 Max Fox Preceptor Award for her dedication to the University of Wisconsin School of Medicine and Public Health's (SMPH) Fourth-Year Preceptorship, which in 2017 evolved into the Ambulatory Acting Internship.

The annual award by the Wisconsin Medical Alumni Association and SMPH honors a Wisconsin physician whose outstanding service as a preceptor has played an important role in educating medical students. Started in 1926, the preceptorship was the nation's first apprenticeship to prepare students for community practice; it has 50 volunteer physicians statewide.

"Dr. Hoffmann helps teach medical students how to provide care and improve health in rural communities," says SMPH Dean Robert Golden, MD. "She is helping us reach one of our school's major goals: to increase the number of physicians who practice in Wisconsin, especially in underserved rural and urban settings."

At an award ceremony, Course Director Paul Hunter, MD, read student comments:

- "Dr. Hoffmann was the most kind, caring teacher and physician."
- "I felt like I was contributing to the patient's care rather than witnessing it."
- "She is a great role model and gave me plenty of independence."

A family physician, Hoffmann earned her medical degree from Georgetown School of Medicine, completed a residency at the Naval



Ann Hoffmann, MD (front), and (left to right) Byron Crouse, MD, Dean Robert Golden, MD, and Paul Hunter, MD, celebrate Hoffmann's award.

Hospital in Pensacola, earned a certificate of added qualification in geriatrics and served in the U.S. Navy before she joined Mile Bluff Medical Center.

STUDENTS, PHYSICIANS INDUCTED INTO

Gold Humanism Honor Society

In August 2017, the University of Wisconsin School of Medicine and Public Health (SMPH) inducted 18 fourth-year medical students, two faculty members and a resident into the Gold Humanism Honor Society. The society recognizes and encourages in physicians the development of humanism, compassion, integrity, respect and service toward patients and colleagues.

"These aspects of medical education and practice are vital to our profession. We encourage students to seek these attributes," explains Gwen McIntosh, MD '96, MPH, assistant dean for students.

The SMPH's 2017 inductees are:

- Erik Anderson
- Sean Buck
- Michael DeBoer
- Tyler Etheridge
- Jenny Giang
- Annemarie Giuca

- Edwarda Golden
- Katharine Kelly
- Laura Lins
- Jeffrey Mahlum
- Brittany McAdams
- Julia McPherson
- Lawrence Moore
- Emily Olson
- Max Rusek
- Iris Vuong
- Gabrielle Waclawik
- Rebecca Warwick
- Han T. Cun, MD, third-year resident, Department of Obstetrics and Gynecology
- Lamya Boujelbane, MD, assistant professor, Department of Medicine
- Kyla Lee, MD '98, education leader, Western Academic Campus-Gundersen Health System in La Crosse; she also received the Leonard Tow Humanism in Medicine Award from the Gold Foundation.



TODD BROWN/MEDIA SOLUTIONS

M4 Edwarda Golden places a Gold Humanism Honor Society pin on M4 Annemarie Giuca's white coat.

MCSWEENEY IS THE NEW ASSISTANT DEAN FOR ADMISSIONS

Mary McSweeney, MD '91 (PG '96), once went through the application process to get into the University of Wisconsin School of Medicine and Public Health (SMPH). She now is overseeing the recruitment and selection of the next generation of its medical students.



A cardiac anesthesiologist at UW Health and associate professor in the SMPH Department of Anesthesiology, McSweeney became the assistant dean for admissions for the MD Program in July 2017. Her recruitment efforts include reaching out to prospective students from underrepresented groups, such as minorities and those from economically disadvantaged parts of Wisconsin.

MD applications are reviewed by the Admissions Committee, on which McSweeney served since 2008. While she is stepping into a process with which she is familiar, she says there still is a tremendous amount to learn.

"I absolutely love the people working in admissions," McSweeney shares. "My impact is to continue the excellent work they are already doing."

The Badger alumna cherishes the opportunity to make a difference at the school and hospital system that nurtured her throughout her career. After medical school, McSweeney completed an anesthesiology residency and cardiothoracic and vascular anesthesiology fellowship at UW Health and, in 1998, joined the SMPH faculty. She will continue to care for cardiac patients one or two days per week.

JARJOUR APPOINTED TO GROSSMAN CHAIR IN HEALTHCARE LEADERSHIP

Nizar Jarjour, MD (PG '89), became the first University of Wisconsin School of Medicine and Public Health (SMPH) faculty member to be appointed to an endowed chair named in honor of his mentor: The Jeffrey Grossman Chair in Healthcare Leadership.



Established with contributions from UW Health, the SMPH and its clinical departments, the chair recognizes the positive impact Jeffrey Grossman, MD (PG '82), has had throughout the academic medical center. It honors "a faculty member who has demonstrated true servant leadership to the academic health care system."

Jarjour leads the SMPH Department of Medicine's Division of Allergy, Pulmonary and Critical Care Medicine. After earning his medical degree with highest honors at Damascus University School of Medicine in Syria, he completed a residency at Cook County Hospital in Chicago and a fellowship in pulmonary and critical care medicine at UW Health. His wide array of roles reflect his excellence in clinical care; teaching; high-impact, asthma-related research; and administrative leadership, including serving as the assistant director of the UW Institute for Clinical and Translational Research and a member of the UW Medical Foundation (UWMF) Board of Directors. In 2016, Jarjour was appointed as a UW Health senior vice president and the UWMF president.

"I've looked up to Dr. Jeff Grossman for 30 years," Jarjour notes.

PETERSON LEADING NATIONAL ALUMNI AND DEVELOPMENT GROUP

Karen S. Peterson, executive director of the Wisconsin Medical Alumni Association (WMAA), is serving a one-year term as the vice chair of alumni and development for the Association of American Medical Colleges' (AAMC) Group on Institutional Advancement (GIA).



The GIA is the only national professional development group devoted exclusively to the role of institutional advancement in academic medicine. Its membership includes more than 700 alumni relations, communications, development, marketing, public affairs and community relations professionals at AAMC-member institutions.

Resources and peer-to-peer connections in the GIA enable members to increase awareness, understanding and support among the public, media, alumni, policymakers and donors for medical education, health care and biomedical research organizations.

As part of this group, Peterson will help plan the 2018 Institutional Advancement Conference in Seattle. The GIA's work extends to participating in strategic planning, recruiting new GIA members, increasing the engagement of members, mentoring members in their professional development and planning web-based training.

At the University of Wisconsin School of Medicine and Public Health (SMPH), Peterson is an assistant dean for alumni and external relations. She has led the WMAA since fall 2000. That organization's goal is to create lasting relationships among SMPH alumni and students by visibly supporting alumni, students and residents and advancing the mission of the school.

GRANT WILL FUND RESEARCH INTO MEDICAL DEVICE BIOFILMS

Jeniell Nett, MD '03, PhD '09 (PG '06, '13), is among 17 U.S. physician-scientists to be awarded a 2017 Clinical Scientist Development



Award from the Doris Duke Charitable Foundation (DDCF). The award aims to help promising physician-scientists build their research programs so they can achieve independent careers.

The three-year, \$495,000 grant will further Nett's research program, which is investigating how *Candida albicans* grows as sticky sheets on the surfaces of implanted medical devices. These biofilms cannot be cleared by the human immune system, unlike free-floating *Candida* cells.

Candida biofilms on devices such as pacemakers, vascular or urinary catheters, shunts or artificial heart valves can lead to systemic, often life-threatening infections. *Candida* biofilms on central venous catheters are estimated to cause 100,000 deaths in the United States and cost \$6.5 billion each year.

In 2016, Nett's team published a study showing that *Candida* biofilms prevent neutrophils from mounting a defense response. Research supported by the DDCF funding will investigate the theory that *Candida* biofilms produce glycoproteins on their surface, which inhibit neutrophils from releasing extracellular traps and allow the yeast to evade the immune system.

"The goal is to find new drug targets that can be effective," explains Nett, an assistant professor in the University of Wisconsin School of Medicine and Public Health's Department of Medicine.

MAJOR GRANTS HELP TACKLE CHILDHOOD CANCER

The Midwest Athletes Against Childhood Cancer Fund awarded nine grants to the University of Wisconsin School of Medicine and Public Health's Departments of Pediatrics and Human Oncology, marking the fund's 40th year. Awards in 2017 have brought the overall total to greater than \$60 million for childhood cancer research in Wisconsin. The grants will fund each of these projects for \$100,000 over the next two years:

Christian Capitini, MD: "Improving Graft-Versus-Leukemia Effects of Ex Vivo Activated NK Cells through JAK/STAT Blockade"

Ken DeSantes, MD: "Support for Clinical Research Infrastructure" and "Treatment of Relapsed or Refractory Neuroblastoma with Ex-Vivo Activated and Expanded Haploidentical NK Cells and Hu14.18-IL2"

Jacquelyn Hank, PhD '78: "Monitoring of Immune Network Responses in Pediatric Neuroblastoma Patients Treated with Anti-GD2 Immunotherapy"

Inga Hofmann, MD (with Emery Bresnick, PhD): "Prognostic Markers and Therapeutic Targets in GATA2-Related Myelodysplastic Syndromes and Leukemia"

Mario Otto, MD, PhD: "Targeted Molecular Radiotherapy to Improve the Outcomes in Children with Malignant Brain Tumors" and **(with Dana Baiu, PhD)** "Strategies for Improving Recovery of Immune Function following TCRab-Depleted Hematopoietic Stem Cell Transplantation"

Alexander Rakhmievich, MD, PhD: "Combining Innate and Adaptive Immune Activation for Treatment of Experimental Neuroblastoma"

Paul Sondel, MD, PhD '75 (PG '80) (with Amy Erbe Gurel, PhD): "Determining the Influence of KIR/KIR-ligand Genotypes in the Outcome of High-Risk Neuroblastoma Patients Following Anti-GD2 Based Immunotherapy"

FLU SURVEILLANCE RECEIVES A FUNDING BOOST

Jon Temte, MD '87, PhD (PG '93), received a \$2.4 million award from the Centers for Disease Control and Prevention to continue work that has found flu activity in schools is a good warning system for flu in the community.



A professor of family medicine and community health at the University of Wisconsin School of Medicine and Public Health, Temte has been tracking flu-like illnesses through the "Oregon (Wisconsin School District) Child Absenteeism Due to Respiratory Diseases Study" (ORCHARDS) for three years. When parents report a student absence, screeners determine whether a student may have the flu. If indicated, researchers go to the home to collect nose and throat specimens to be tested for 17 respiratory viruses. They have made more than 700 home visits.

"We found that widespread flu activity in the community shows up one to two weeks after the flu appears in schools. Children take the flu home to relatives, and it spreads," notes Temte, adding that researchers have found a high correlation between school absences for influenza-like illnesses and positive flu cases reported by clinics.

In ORCHARDS II, Temte's team will investigate virus transmission within households. This will continue to provide an early warning system for seasonal influenza in Oregon and contribute to a growing body of data.



KATHLEEN
SHANNON, MD

Providing Hope

FOR PATIENTS WITH MOVEMENT DISORDERS

Interview by Susan Lampert Smith

In her first year as chair of the University of Wisconsin School of Medicine and Public Health's (SMPH) Department of Neurology, Kathleen Shannon, MD—a movement disorders specialist—has led efforts to earn center of excellence designation from the Huntington's Disease Society of America for the UW Health Neurology Clinic. It was the first such center of excellence in Wisconsin; the UW Health Muscular Dystrophy Clinic has since earned a similar status.

The designation recognizes patient-centered care and means patients don't need to leave Wisconsin for multidisciplinary care. Shannon's department has started destination medicine clinics at UW Health at the American Center for patients with Huntington's disease and those with epilepsy who are on a ketogenic diet. A clinic that treats neurological conditions in women is being planned.

Before she joined the SMPH, Shannon led multiple research studies on Parkinson's and Huntington's diseases at Rush University Medical Center in Chicago. She now is working to open similar clinical trials at the SMPH.

What led you to the movement disorders specialty?

When I was young, my Uncle John had Parkinson's disease, and my siblings and I would watch him walk *very slowly* from the car to our door. One day, a miracle occurred. Uncle John was one of the first people in the nation to be treated with levodopa, and he could walk again! I never forgot that miracle.

What other challenges do your patients face?

There's a lot of stigma associated with these inherited diseases. In the United States,

maybe because of our society's Puritanical origins, some people—unaware of their biases and misconceptions—place blame upon individuals who have genetic diseases.

Is it difficult to work in a field that has not had break-through treatments?

Well, I have never cured anyone, but I have helped countless people improve their quality of life. I am grateful for the long-term relationships I have with my patients and how their progressive diseases challenge me to rework their plans to make things better.

What about future treatments?

So far, the new medications in movement disorders are simply symptom modifiers. However, potentially disease-altering therapies are on the horizon. New multiple sclerosis drugs are monoclonal antibodies (MCAs), and researchers are studying the use of MCAs for Parkinson's and Alzheimer's diseases. Clinical trials are underway in Europe and Canada on the use of gene-silencing therapies to block "messages" that help create the protein in Huntington's disease. And a new study using CRISPR/Cas9 gene editing in Huntington's disease mouse models looks impressive. We need that gene during development but not in adulthood, so, potentially, we could edit it out before the disease appears in middle age.

Why is it so important to have more clinical trials here?

I think clinical trials are important because they distinguish our academic medical center. It's beneficial for patients to go to a medical center that is studying the next generation of drugs, even if they are not going to participate in a clinical trial.

Some new drugs are crazy expensive!

Spinraza, which treats spinal muscular atrophy (SMA), costs \$125,000 per dose, and the schedule for the first year costs \$750,000. Some other new drugs aren't miraculous, but that one is. Children with this condition don't produce a protein necessary for motor nervous system development.

A recent Grand Rounds described a 5-year-old child with SMA who required a ventilator, and a 1-year-old child with the same mutation who had started getting Spinraza at 3 weeks of age. Without the drug, such patients are paralyzed and never hit developmental milestones, such as walking. But the 1-year-old was running around and talking. Many questions remain, such as: How long should patients be treated? Once the nervous system develops, can patients stop treatment? These types of drugs are under development for many chronic diseases, including Alzheimer's and Parkinson's, and it will be a challenge to find ways to pay for the therapies.

What's the biggest challenge facing neurology in Wisconsin?

We must make sure Wisconsin residents, including those in rural areas, get good care. We face a major shortage of neurologists and are looking at ways we can care for as many people as possible. Our Telestroke Program lets us do real-time consults with hospitals around the state, and we're adding new stroke neurologists so we can expand this service to more rural areas. Stroke is another area that has seen remarkable progress!

Why should medical students consider entering neurology?

Neurology offers many types of practice models, so there is something for everyone. This field is a good choice for people who love to solve mysteries and work in partnership with patients to arrive at the best treatment at each step along the way.

How's life in Madison compared with Chicago?

I traded a 90-minute daily commute for a five-minute walk to work, which makes me happier. People around me seem happier, too, because they live in a beautiful, healthy community. I miss Chicago's diversity, but Madison and the university are working hard to welcome a more diverse population. Madison is a great place to live and work.

Indigenous Health and Wellness Day

STUDENT EVENT PUTS THE “WE” IN WELLNESS



Middle and high school students from around Wisconsin gather at Dejepe Hall's fire circle, which features plaques representing the state's Native American tribes.

CHRIS FRAZEE/MEDIA SOLUTIONS (5)

With a focus on blending elements of indigenous culture and college culture, the University of Wisconsin School of Medicine and Public Health's (SMPH) Native American Center for Health Professions (NACHP) welcomed 83 Native American middle and high school students from throughout Wisconsin to UW-Madison in late April 2017. The youth explored the rich history of the campus region, including the centuries-old effigy mounds in the Lakeshore Preserve near the event's hub, Dejepe Hall.

The NACHP offers innovative ways to enhance recruitment of Native American health professions students and engage students with Native health and wellness.

With the goal of putting the “We” in Wellness, the 13th annual Indigenous Health and Wellness Day provided training for students to learn simple ways to incorporate

fitness and relaxation strategies into their lives and shared opportunities for them to learn about health sciences careers and required training, directly from UW-Madison health sciences professionals and students.

The action-packed day was organized in collaboration with Madison College, the Great Lakes InterTribal Council, Wisconsin Council on Children and Families, UW Health and Unity Health Insurance. Their goals included encouraging young students to explore and learn more about campus life, which included hearing from American Indian students who have navigated pre-college and college programs, and health care professionals.

“We want to help the young students increase their knowledge about college and how to prepare for it. This is the first time many of them have visited a large college campus,” says Melissa Metoxen, community

academic and support coordinator for the NACHP. “We want them to be able to picture themselves attending college.”

With this in mind, 12 organizations and groups from across campus participated in a resource fair, which provided the students with hands-on activities, such as learning how to fill prescriptions.

“If we can get any of the students thinking, ‘I want to go into nursing or medical school or become a pharmacist,’ we will have made progress,” says Metoxen, adding that a former participant in Indigenous Health and Wellness Day earned a degree in human development studies at UW-Madison in 2016 and now works for the SMPH.

This year's 34 high school and 49 middle school students represented eight Native American communities from throughout Wisconsin. Their day began with a welcome



Clockwise from top left: Team-building activities were an important part of the day; Well for Culture taught students some easy poses they can do to get active; Little Thunder performed several songs throughout the day; during a campus tour, students read a plaque, with narration by Rebecca Comfort.

song and blessing by Alton “Sonny” Smart, PhD, from Bad River Ojibwe and drumming by Little Thunder of the Ho-Chunk Nation.

Keynote speakers were the co-founders of Well for Culture, Chelsey Luger of Anishinaabe/Lakota and Thosh Collins of O’odham/Haudenosaunee/Wa-Zha-Zhi.

Luger and Collins shared wellness-related topics from indigenous and western perspectives, and they focused on the importance of mind and body health.

“Well for Culture aims to dispel harmful myths and offer ways to improve public health in Native communities. They look to the history of Native peoples and their own lives to find a healthy life balance by connecting the mental, physical, spiritual and emotional facets of life,” says Metoxen, adding that they taught the students fun

exercises that could be done at any level to promote balance and strength of body and mind, and led indigenous-themed games.

Students took walking tours to visit the 30-year-old Tree of Peace and effigy mounds around the area of Observatory Hill.

At the end of the tour, students gathered at Dejope Hall’s fire circle, which features plaques and symbols of Wisconsin’s tribes. Using crayons and paper, they created keepsake impressions of the emblems.

Several campus leaders addressed the group, and the afternoon resource fair provided opportunities for students to learn about support programs and social organizations at UW-Madison. A video presentation by representatives from the PEOPLE Program (Pre-College Enrichment Opportunity Program for Learning Excellence)

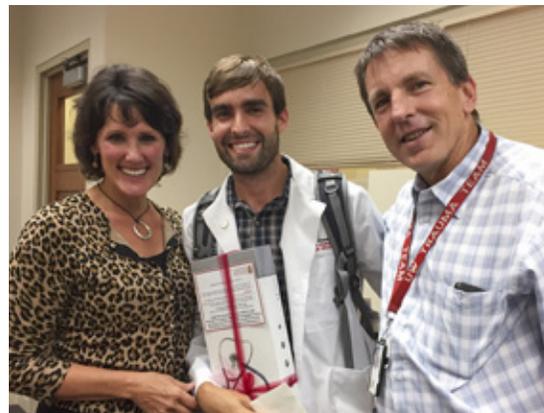
illustrated a project in which university students had interviewed friends about how it feels to be a Native student on a predominantly white campus. A question-and-answer session gave viewers a chance to learn more from peers and offer insights.

As students said goodbye to UW-Madison—while Little Thunder performed a travel song—Indigenous Health and Wellness Day organizers remained hopeful that some would return. They were thrilled when they saw a favorable statistic on the post-event evaluation: 76 percent of the students who submitted the survey indicated, “Yes—I am interested in attending college.”

 **There’s More Online!**
Visit med.wisc.edu/NACHP

Stethoscope Definition Enhanced

A HEARTFELT GIFT WITH LIFELONG SYMBOLISM



Above, clockwise from left (left to right): M1 Katy Jensen, Bucky Badger and M1 Chris Glover share a message of gratitude; Maria Weber, MD '88, M1 Dan Lang (nephew) and Gerald Lang, MD '88, celebrate sponsoring their nephew's stethoscope; M1 Omar Jarrett and M1 Kerry Zimdars write thank-you notes to those who helped them succeed. Page 33 (clockwise from top left): M1 Maria Leighton donates \$1 to her class fund; M2 Kirsten Gunderson, M2 Ryan Valk, M2 Katarina Nguyen and M2 Miko Filon serve ice cream; M1 Sarah Styer, M1 Haley Zimmerman, M1 Anthony Gjyzeli and M1 Chris Glover find Bucky's heartbeat; Philip Farrell, MD, PhD, poses with M1 Katie Mooney, MPH; Gwen McIntosh, MD '96, MPH, presents a stethoscope to M1 Ali Lohr.

Dictionary definitions define stethoscopes in practical terms, but the Wisconsin Medical Alumni Association (WMAA) added “symbolic gift” to the meaning—as generous alumni of the University of Wisconsin School of Medicine and Public Health (SMPH) bestow these tools upon entering medical students each fall. Further, the WMAA strategically matches recipients and donors based on interests or geography, such as hometown or practice location.

At a late August 2017 ceremony, SMPH faculty presented each new student with a high-quality stethoscope to use throughout their training and careers. Gwen

McIntosh, MD '96, MPH, described many ways the WMAA helps students throughout medical school and beyond.

“The WMAA will be an integral part of your medical school experience, hosting great events and providing alumni support—from scholarships to networking and shadowing opportunities,” McIntosh, associate dean for students and a member of the WMAA Board of Directors, told the group.

Each student and stethoscope donor pair will get to meet each other during the academic year. One such pair—SMPH Emeritus Dean and Professor Philip Farrell, MD, PhD, and Katie Mooney, MPH—

had already known each other for about a year when Farrell surprised Mooney with the gift of a stethoscope (see photo on next page, bottom left). The two share a passion for cystic fibrosis (CF) research, in which Farrell has been devoting his career.

They met in fall 2016, shortly after Mooney completed a master of public health (MPH) degree at Northern Illinois University, when she began working with Farrell on a CF-related study with parents of newborns. Their project seeks to understand if and how parents would like to receive positive newborn screening results that indicate minimal to no health problems for the child



but may cause emotional distress for the family. Ultimately, Mooney and Farrell believe this research can help inform policies for disclosing newborn screening results at a population level.

Mooney feels fortunate to have joined the research team, which has allowed her to build upon experience she gained through her undergraduate work in psychology and graduate studies in public health.

"My efforts have been met with immense support and guidance from Dr. Farrell and other colleagues," she says. "It was an unexpected honor to be gifted my stethoscope from someone who initially welcomed me to the UW School of Medicine

and Public Health and continues to help shape my professional identity."

She notes that in addition to being an expert in newborn screening, Farrell has a "keen awareness of practical considerations that make for productive, meaningful student research, such as open communication and engagement with professional societies."

Farrell—who served as chair of the Department of Pediatrics from 1985 to 1994 and dean of the SMPH from 1994 to 2006 and is now semi-retired—notes, "It's a wonderful feeling to help a student who will certainly be a superstar physician. In view of Katie's superb contribution to a challenging research project, I regard this gift as a token of appreciation."

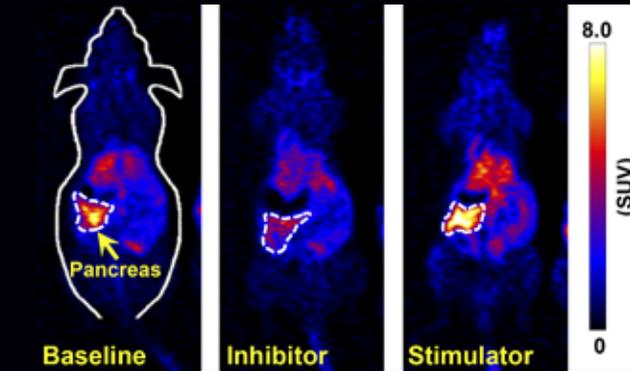
Also a history buff, Farrell shared with Mooney the story of the invention of the stethoscope by René Laennec in 1816.

Summarizing parts of Laennec's treatise *De l'Auscultation Médiate*, published three years later, Farrell notes, "While walking to Hôpital Necker in Paris, Laennec had watched schoolchildren holding hollow sticks to their ears while others used the opposite end for singing and making other noises. He built his first instrument as a hollow wooden cylinder, which he later refined to comprise three detachable parts and added a funnel-shaped cavity to augment the sound."

New Ways to Gauge Diabetes Progression, Treatment

In a study published in *Diabetes*, Weibo Cai, PhD, Matthew J. Merrins, PhD, and colleagues used positron emission tomography to detect minute levels of a radioactive chemical in the mouse pancreas. Cai, the study's senior author and an associate professor in the University of Wisconsin School of Medicine and Public Health's Department of Radiology, says that unlike previous methods for measuring the quantity of beta cells, the new test also measures how actively these cells are making insulin.

The test may be used to evaluate treatments or cell



transplants intended to slow or reverse diabetes. With a provisional patent filed through the Wisconsin Alumni Research Foundation, he has begun planning a series of human trials. The first step would look at the distribution and potential toxicity of the radioactive

manganese chloride used as a tracer, which has a short half-life.

Cai is not proposing to replace existing inexpensive, reliable tests for detecting diabetes. Instead, the new test could track the effectiveness of measures intended to

dampen the immune assault that kills beta cells. Other tests detect beta cells by identifying unique receptors, but the cells' presence does not indicate whether they are making insulin.

"Our test is based on the calcium channel that the cell uses to exchange chemicals with its environment. The cell has to be active to take up manganese chloride, and having more functioning beta cells means there's more insulin," says Cai.

This study, with 15 authors, highlights great collaboration among faculty in many UW-Madison departments.

Poor Sleep Linked to Multiple Brain Changes



An international research team led by University of Wisconsin-Madison scientists found that people who experienced poor sleep in late midlife also had brain characteristics that point to an increased risk for developing Alzheimer's disease.

Published in *Neurology*, the study was led by Barbara Bendlin, PhD, associate professor of medicine and Alzheimer's disease researcher at the UW School of Medicine and Public Health (SMPH), and Kate Sprecher, PhD '17, who was a doctoral candidate in Bendlin's lab.

"Findings suggest that improving sleep during midlife could reduce a person's risk of Alzheimer's disease. While not everyone with sleep problems will develop Alzheimer's, sleep disturbance is a common, treatable issue for many middle-aged Americans," Sprecher says.

Participants—with normal memory—were recruited from the Wisconsin Registry for Alzheimer's Prevention, a large group of volunteers, most of whom have a parental risk for Alzheimer's disease and who take part in research studies on Alzheimer's disease. They answered a questionnaire about their sleep habits, and researchers examined their cerebrospinal fluid for factors, including amyloid plaque and tau protein levels, related to Alzheimer's disease.

"Those who reported more sleep problems showed signs of more amyloid being deposited in the brain, a

hallmark of Alzheimer's disease," notes Bendlin. "Dr. Sprecher also examined markers related to brain-cell injury and activity of cells that respond to injury, which were associated with subjective reports of sleep quality."

Several co-authors are from UW-Madison; others are from the William S. Middleton Memorial Veterans Hospital in Madison, the University of Gothenburg in Mölndal, Sweden, and the University of California, Irvine.

Protein Improves Immune Response in Colon Cancer

A better understanding of the function of non-cancerous cells and tissue surrounding colon cancer is providing a clearer picture of how the immune system recognizes and accesses the cancer site, according to a University of Wisconsin Carbone Cancer Center (UWCCC) study.

Published in the *Journal of Immunology*, the study found a biomarker in the tumor microenvironment that may better predict which patients will benefit from immunotherapies.

“Cancers that have infiltration of immune system T cells have a better prognosis and potentially do better with immunotherapies,” explains Dusty Deming, MD, an assistant professor in the UW School of Medicine and Public Health’s Department of Medicine. “We need to know what controls the immune microenvironment and the infiltration of T cells. This study is a big step in that direction.”

Recent studies by UWCCC hematologist and researcher Fotis Asimakopoulos, MD, PhD, and his group have shown that the protein versikine,

when present in the myeloma tumor microenvironment, helped recruit and train T cells. Versikine is generated from the matrix processing of its parent protein, versican, which sustains inflammation and blocks the immune system from fighting cancer, explains Asimakopoulos, an associate professor of medicine.

These senior co-authors wanted to see if there was overlap between the behavior of the myeloma and colorectal cancer tumor microenvironments. They found that colorectal cancers had higher levels of versican, but



healthy surrounding tissue had higher levels of versikine. They also found that if versikine levels were high in the tumor, T cell infiltration into the tumor was also high. This work sets the stage for future research aimed at improving patient outcomes.

Sports Specialization May Increase Injury Risk

High school athletes who specialized in a single sport experienced more lower-extremity injuries than athletes who participated in a variety of sports throughout the year, according to a study by researchers at the University of Wisconsin School of Medicine and Public Health (SMPH) and published in the *American Journal of Sports Medicine*.

This was the first study to prospectively document the association between sports specialization and lower-extremity injuries in a large, diverse group of high school athletes.

The study demonstrated that athletes who classified themselves as moderately specialized had a 50 percent higher incidence of lower-extremity injuries, and athletes who had a high specialization classification had an 85 percent higher incidence of lower-extremity injuries.

“Sports specialization appears to be an independent risk factor for injury, as opposed to simply being a function of increased sport exposure,” notes Tim McGuine, PhD, the study’s lead investigator, and a senior scientist and researcher in the SMPH

Department of Orthopedics. “Athletic associations, school administrators, coaches and sports medicine providers need to better educate parents and athletes on the increased chances of injury risk and provide more opportunities for diversified athletic play.”

McGuine and his colleagues enrolled 1,544 students into the study during the 2015-2016 school year. Participants completed a questionnaire about all of their sports participation during the previous 12 months and activities planned for the upcoming school year. Researchers tracked injuries.



Soccer had the highest percentage of athletes being highly specialized. Players whose primary sports were basketball, football and soccer sustained more lower-extremity injuries than their peers who were in baseball, tennis, track, volleyball or wrestling.

“Should I Get an MPH Degree?”

REFLECTIONS ON STUDENT QUESTIONS AND MY JOURNEY



“Should I get an MPH degree?”
As a physician trained in preventive medicine and public health, this is the most common question I have been asked by pre-med students, medical students, residents and practicing physicians since I received my master of public health (MPH) degree more than 30 years ago. I usually respond in three ways.

First, I say, **“It depends on your career goals.”** I look for answers such as “I want to become an advocate in my community for programs and policies that keep people healthy,” or “I want to be able to improve access to high quality health care in my health system.”

When the University of Wisconsin School of Medicine and Public Health established its MPH Program in 2005, the core curriculum focused on five traditional competency “pillars,” including epidemiology, biostatistics, social and behavioral sciences, health management and policy, and environmental health. Now, to best meet the nation’s evolving, most pressing public health needs, our MPH Program is transforming its curriculum to focus on new “cross-cutting” competencies, including evidence-based

approaches to public health, public health and health care systems, planning and management to promote health, policy in public health, leadership, communication, interprofessional practice, and systems thinking—competencies directly connected to improving the health of communities and health systems.

Sometimes people ask me what stage of a career is the best time to get an MPH. Some students complete an MPH before medical school, which gives them a unique perspective during their medical training. Others complete their MPH after medical school, allowing them to align their public health training with their clinical perspectives. And for some it works best to complete those degrees simultaneously, through our MD-MPH Dual-Degree Program. We are fortunate to be able to provide scholarships from the Wisconsin Medical Alumni Association and Perlson Fund for many of these students.

Second, I say, **“An MPH is neither necessary, nor sufficient.”** Many accomplished physician leaders in public health have gained experience and expertise in the course of their careers, without formal training. I also have known physicians who obtained an MPH, but years later say they never really applied their public health knowledge in their work. It’s what you do with what you learn that counts.

Finally, I encourage students to **“Talk with others who have completed their MPH degrees.”** Several accomplished leaders in our school, who work in a variety of clinical specialties, also have public health training. They include:

- **Emergency medicine:** Azita Hamedani, MD, MPH, MBA; Manish N. Shah, MD, MPH
- **Family medicine:** Jennifer Edgoose, MD, MPH; Patrick McBride, MD '80, MPH

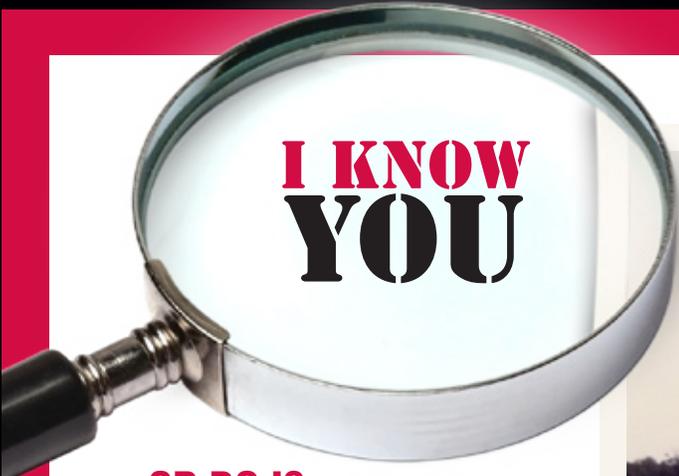
- **Internal medicine:** Shobhi Chheda, MD, MPH; Michael Fiore, MD, MPH, MBA
- **Pediatrics:** Gwen McIntosh, MD '96, MPH; Dipesh Navsaria, MD, MPH (PG '09)
- **Preventive medicine:** Jonathan Patz, MD, MPH; Parvathy Pillai, MD, MPH
- **Surgery:** Caprice Greenberg, MD, MPH; Ann O'Rourke, MD '02, MPH '06

In my case, I recall—on my last day of medical school—asking Dr. Dennis Maki (MD '67) similar questions. We discussed my career goals, including my interest in working in global health with a focus on prevention. He picked up the phone, called the Centers for Disease Control and Prevention (CDC) and spoke with the (then) director of the Epidemic Intelligence Service Program, Dr. Phil Brachman (MD '53). That brief conversation with someone who had trained in medicine and public health changed my life. In line with Dr. Maki’s advice, I went to the CDC, where I completed my MPH as part of its Preventive Medicine Residency and career development programs.

“Should I get an MPH?” The answer to this question depends first on whether you want to integrate medicine and public health in your career. If you do, then an MPH may provide you with the skills to become a better physician in terms of caring for patients and for entire communities. If you’re not sure, keep your eyes open and ask questions of others who have distinguished careers in medicine and public health—with or without formal MPH training. But beware—these conversations may change your life.

Patrick Remington, MD '81, MPH

*Professor and Associate Dean for Public Health; Director, Preventive Medicine Residency Program
University of Wisconsin School of Medicine and Public Health*



I KNOW YOU

... OR DO I?

If you think you can identify the person in the photograph 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 *Quarterly*.



For the last issue (see below), John Wegmann, MD '68, won the prize drawing and will receive a gift from the Wisconsin Medical Alumni Association!

HINT: THIS PHYSICIAN WAS KNOWN TO LOOK AT THE "BIG PICTURE."

ABOUT LAST ISSUE'S PHOTO:

In the past issue of *Quarterly*, nine people correctly guessed the identity of Helen Dickie, MD '37, professor emeritus, Department of Medicine, University of Wisconsin School of Medicine and Public Health (SMPH). She mentored thousands of SMPH students from 1955 until her death in 1988.

A clinical and academic pulmonologist, Dickie amassed an enormous library of X-rays that she used for teaching. She was known as a "stickler" for making sure students could accurately identify various diagnoses.

According to the "Changing the Face of Medicine" web site by the National Library of Medicine: "She was a pioneer in the detection and treatment of tuberculosis, and identified a disease among Wisconsin farmers, which she called 'farmer's lung,' [which] involves a hypersensitivity alveolitis caused by exposure to fermented moldy hay. She also devised a means for its prevention."

David A. Sorber, MD (PG '82), shared, "Who doesn't have a story about Dr. Dickie? When I was a senior resident on her service, the students were intimidated, even terrified, by her demeanor. But when it came to grading, she was fair, kind and instructive. She also remembered me years later when our paths crossed unexpectedly."



Rainer N. Zahlten, MD (PG '74), a retired professor from the SMPH Department of Medicine, wrote, "When I saw the picture of Dr. Helen Aird Dickie in the last issue of *Quarterly*, it struck a nostalgic cord regarding my years at the University of Wisconsin from 1969 to 1975. As an assistant professor of biochemistry at the Enzyme Institute, and later a resident in internal medicine and a fellow in gastroenterology and liver diseases, I encountered Dr. Dickie as a tough, demanding teacher and a dedicated physician whom we all admired."

We Want to Hear From You

Please send us information about your honors, 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.

CONTACT INFORMATION:

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750 Highland Ave.
Madison, WI 53705



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Zorba Paster, MD, and his granddaughter, Bella Paster.