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

Quarterly

GOLDEN LEGACY

HIGH INTEGRITY, PHILOSOPHICAL METAPHORS, AND A SENSE OF HUMOR ILLUSTRATE THE DEAN'S LEADERSHIP STYLE p. 4

School of Medicine and Public Health
UNIVERSITY OF WISCONSIN–MADISON

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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

January 2025

THURSDAY, JANUARY 16
Operation: Education
Health Sciences Learning Center

March 2025

TUESDAY, MARCH 4
Alternative Careers in Medicine Panel
Zoom; 5:30-6:30 pm CST

FRIDAY, MARCH 21
Match Day
Health Sciences Learning Center and livestream

April 2025

TUESDAY, APRIL 8
Alpha Omega Alpha Banquet
Memorial Union

May 2025

FRIDAY, MAY 2
Spring WMAA Board of Directors Meeting, WMAA Scholarship Reception, and WMAA Awards Banquet
Union South

FRIDAY, MAY 9
MD Graduate Recognition Ceremony and Reception
Memorial Union and livestream

June 2025

FRIDAY, JUNE 6
Medical Alumni Day, Reunions for MD Classes of 1960, '65, '70, '75, and '80, plus the Half-Century Society (MD alumni who graduated more than 50 years ago)

To register, visit wmaa.med.wisc.edu/events/

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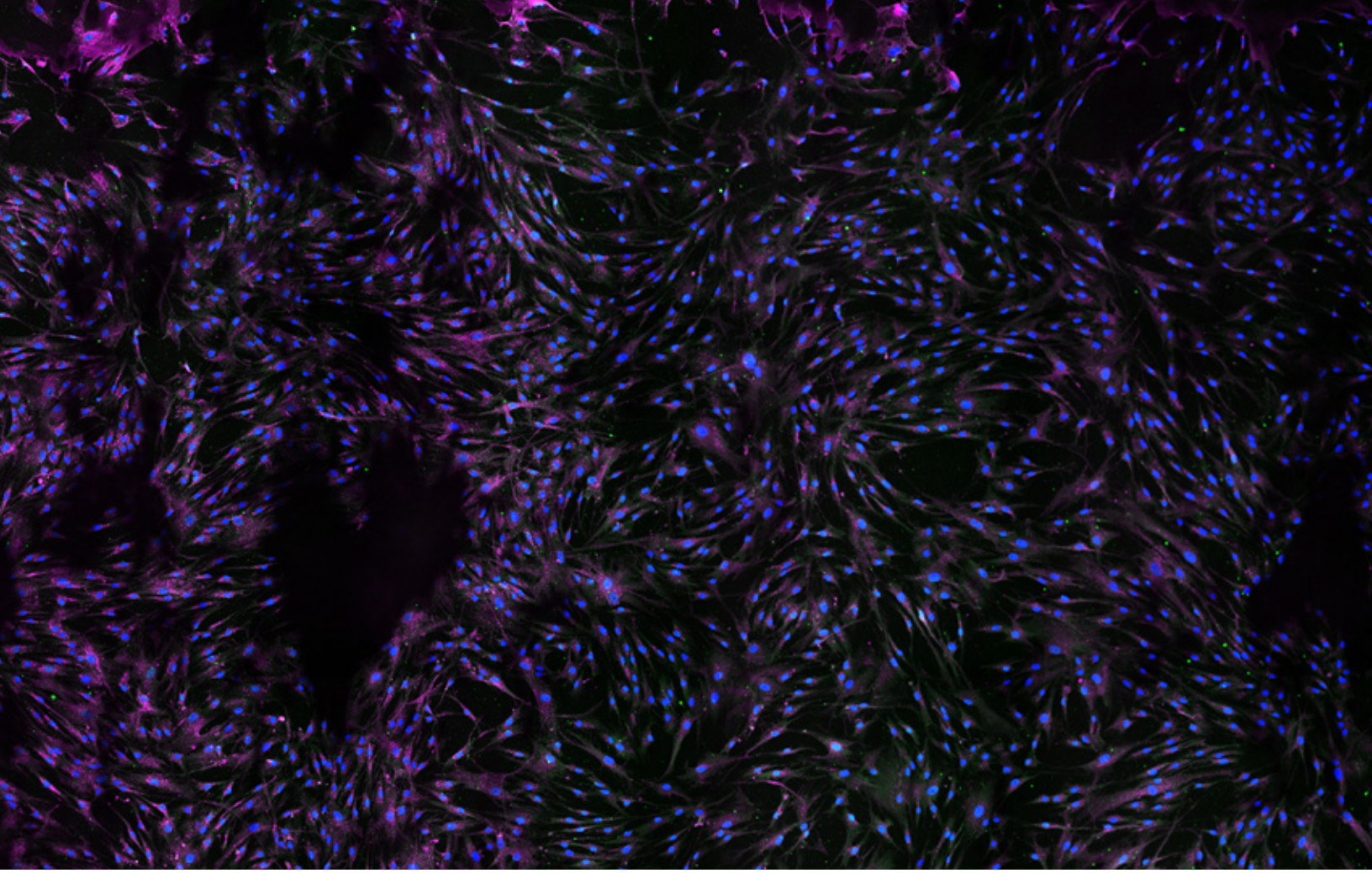

Serendipity cleared a heart shape among human lung fibroblasts in this confocal microscope image. The cells are used by researchers to study the expression of genes involved in pulmonary fibrosis. –Angie Tebon Oler, researcher II, Department of Medicine

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ON THE COVER
As he transitions into a faculty role following more than 18 years as dean of the University of Wisconsin School of Medicine and Public Health and vice chancellor for medical affairs at UW–Madison, Robert N. Golden, MD, has wisdom to share – and colorful metaphors to illustrate his ideas. –2008 photo by Todd Brown, Media Solutions

ROBERT N. GOLDEN, MD
Dean, University of Wisconsin School of Medicine and Public Health
Vice chancellor for medical affairs, UW–Madison

Lessons learned from history help guide and inspire our future success. In this issue, we cover several impactful historic events. I enjoyed reading about the exhibition "Swan Song: Adoration and Thanks for All Who Made This Possible." Curated by Micaela Sullivan-Fowler before she retired from a distinguished career at Ebling Library, the exhibit captures thoughtful stories about the people, animals, and artifacts that have made her storytelling and research guidance possible. Ms. Sullivan-Fowler's contributions have enhanced the cultural life for all of us who work and study in the Health Sciences Learning Center.

We also summarize the ceremony at which we presented our school's highest honor — the Folkert Belzer Award — to Howard Bailey, MD (PG '90, '92), Thomas Grist, MD, and Paul Harari, MD. Cumulatively, they have served for more than 100 years as faculty members at the University of Wisconsin School of Medicine and Public Health (SMPH). Their leadership accomplishments will ensure a bright future for the UW Carbone Cancer Center and the Departments of Radiology and Human Oncology, as well as the entire SMPH and the patients we serve.

The past year marked the 10th anniversary of the BerbeeWalsh Department of Emergency Medicine. The department, which had been a division in the Department of Medicine, rapidly developed under the leadership of its founding chair and current chair, Azita G. Hamedani, MD, MPH, MBA, and Manish N. Shah, MD, MPH, respectively. We deeply appreciate the department's life-saving clinical service and are very grateful for the naming gift that accelerated its creation and remarkable success in its academic and clinical missions.

Reminiscing about history while celebrating the present is a hallmark of alumni reunions. Seven MD classes enjoyed Wisconsin Medical Alumni Association-hosted reunions during Homecoming Weekend. We loved hearing alums share their memories of their SMPH experiences, and in turn, we shared updates about the school's current programs and people. We also hosted a wonderful appreciation dinner for members of the Middleton Society, our school's most steadfast philanthropic supporters, in late September.

Our strong history in genetics research laid the foundation for the creation of our Center for Human Genomics and Precision Medicine. In the Perspectives column, Muhammed Murtaza, MBBS, PhD, the center's new director, shares insights about this vitally important field and how it is shaping the evolution of patient care.

I hope some of you were able to attend the recent grand opening of UW Health Eastpark Medical Center. UW Health and SMPH leaders collaborated in planning for the integration of teaching and research at this spectacular outpatient clinical facility. UW Carbone Cancer Center's Initiative for Theranostics and Particle Therapy, which was launched in May 2024, has a robust footprint at Eastpark with a new theranostics imaging and infusion center in that facility. Construction also is underway for a proton beam facility — the first in the United States to offer upright particle therapy. These programs build upon the SMPH's strong research and national leadership in several fields and illustrate the powerful synergies created when basic and clinical science are translated into exciting new clinical applications.

With a bit of wistfulness and an enormous amount of gratitude, I read the article summarizing my past 18 years as dean of the SMPH and vice chancellor for medical affairs at UW–Madison. This account stimulated a rush of warm memories of the amazing people and the wonderful relationships that formed the cornerstone of my experience here. I have relished the privilege of serving in these roles. I look forward to the next chapter in my story, which will include a focus on mentoring and coaching the next generation of academicians at our school and university.

Thank you so much for your support and encouragement. On, Wisconsin!

As physicians, we're invited into some of the most personal, profound moments of people's lives — birth, healing, loss, and everything in between. This unique privilege reminds us how interconnected we are. And it's not just our patients who benefit from connection, it's us, too. The lessons of the Harvard Grant Study, a long-running study on human happiness and health, make it clear: relationships are among the strongest predictors of well-being.

The study followed participants for more than 85 years and discovered that the key to happiness and physical health isn't fame, money, or success. It is the quality of relationships. Strong connections protect us from stress; reduce the risk of chronic illness; and help us live longer, happier lives. Isolation can be as damaging as smoking or eating a poor diet.

As a child and adolescent psychiatrist, I see this truth every day. The young people I care for often face challenges that highlight how vital relationships are to our mental and physical health. Whether it's the bond with a trusted adult, a supportive peer group, or the therapeutic relationship itself, these connections can make all the difference in a person's healing and growth.

Health isn't just about lab results or medications; it's closely tied to the relationships in people's lives. How are we cultivating connection in our own lives — with family, friends, colleagues, and our medical community?

This is where the idea of generativity comes in — focusing not just on what we accomplish but how we guide and nurture others. It's about passing on knowledge and helping those coming up behind us. Whether it's mentoring a medical student, teaching a resident, or volunteering in our community, these acts of generosity remind us why we became physicians. They allow us to leave something lasting and meaningful behind.

But life as a physician is demanding, and finding time to focus on connection can feel overwhelming. That's why behavioral activation is important. It's a fancy term for taking small, intentional steps to align your actions with your values. Feeling disconnected? Reach out to a colleague or an old friend. Feeling burned out? Step away for a bit and engage in something that sparks joy or purpose for you. Sometimes, just showing up is the hardest step — and the most rewarding one.

As alumni of the University of Wisconsin School of Medicine and Public Health, we have a built-in community of people who understand what this life is like. And the Wisconsin Medical Alumni Association (WMAA) is here to help you stay connected — not just to the school, but to each other. There are so many ways to get involved, no matter how much or how little time you have.

You could attend Operation: Education to help guide students on their journey into medicine, or contribute to an alumni fund, such as a scholarship or the WMAA Fund, that directly benefits students. Alumni events are another great way to connect.

Whatever you choose, your involvement will make a difference. It will strengthen our alumni community and help the next generation of physicians find their footing, and it will reconnect us to the privilege and purpose of what we do.

The Harvard Grant Study shows us that relationships — more than anything — make life rich, fulfilling, and healthy. So, let's build those connections, nurture the next generation, and remind ourselves of the privilege and joy of being a part of this profession.

Thank you for being part of this incredible community. I hope to see you at an alumni event or hear from you about how you're staying connected. Together, let's keep the UW–Madison spirit thriving — for ourselves, for each other, and for the students who will carry this torch forward.

PEGGY SCALLON, MD '92 (PG '97)
President, Wisconsin Medical Alumni Association

BY KRIS WHITMAN AND ROBYN M. PERRIN, PHD

Golden Legacy

HIGH INTEGRITY, PHILOSOPHICAL METAPHORS, AND A SENSE OF HUMOR ILLUSTRATE THE DEAN'S LEADERSHIP STYLE

PHOTOS BY TODD BROWN, SIRTAJ GREWAL, JOHN MANIACI, JEFF MILLER, AND CLINT THAYER

A psychiatrist, a dean, and a vice chancellor walk into a bar … . This sounds like a set-up for a classic joke, but in this case, it is reality, referencing a leader who has made wise use of humor. As a holder of all three roles, Robert N. Golden, MD, has shared witty remarks throughout his more than 18 years as dean of the University of Wisconsin School of Medicine and Public Health (SMPH) and vice chancellor for medical affairs at UW–Madison.

His role as the SMPH's ninth dean began in July 2006, under John D. Wiley, PhD, then-chancellor of UW–Madison. Now one of the longest-serving medical school deans in North America, Golden indicated to UW–Madison Chancellor Jennifer Mnookin, JD, PhD, in January 2024 his intent to step down from his dean and vice chancellor roles when a successor is in place; a national search is nearing completion. A professor in the Department of Psychiatry, Golden will shift his focus to mentoring faculty members and trainees.

He reflects, "It has been an incredible honor and privilege to serve as dean and vice chancellor for medical affairs. I will always cherish the experience of working with so many remarkably talented and dedicated individuals within our school and our academic health system, as well as our wonderful campus colleagues and external partners."

Mnookin states, "We are deeply indebted to Dean Golden for his many incredible years of service to our students and for all his leadership in service to the health of our state's residents. His tireless dedication embodies the Wisconsin Idea and innovation for the public good. He has worked hard across almost two decades to strengthen health care in every county of Wisconsin, and it shows."

In agreement, Ned H. Kalin, MD (PG '79), chair of the Department of Psychiatry and Hedberg Professor, says, "Bob Golden has been an exceptional dean and is an extremely accomplished academic psychiatrist. With his bright intellect, quick wit, great sense of humor, and big heart, the positive impacts of his leadership have been felt at every level of our institution. While we will miss having him as the dean, we cherish him as a mentor and colleague. We are looking forward to having him come back to our department, serving as an admirable role model, and imparting his wisdom and empathy to our residents and others."

"People are more important than programs. To develop great programs, we must foster success among those who will shape and implement the plans."

–Robert N. Golden, MD

Launching Dual Careers

In 2006, Golden and his wife, Shannon Kenney, MD, felt warmly welcomed when they moved to Wisconsin to launch new phases of their careers. An internationally recognized expert on Epstein-Barr virus and associated diseases, Kenney is a professor in the SMPH Departments of Oncology and Medicine and a board-certified specialist in infectious

Opposite page: Robert N. Golden, MD, presiding over the 2017 MD White Coat Investiture Ceremony.

This page: top row (left to right): Golden, Bucky Badger, and Shannon Kenney, MD, at an MD graduation party in 2010; Golden and Rebecca Blank, PhD, show the Spencer Foreman Award in 2013. Bottom row: Golden at his desk in 2006; Philip M. Farrell, MD, PhD (PG '72), Andrew A. "Sandy" Wilcox, Fred Risser, James E. Doyle, Jr., JD, Carolyn A. "Biddy" Martin, PhD, Kevin P. Reilly, PhD, Golden, and Paul M. DeLuca, Jr., PhD, cut the ribbon for the grand opening of the first tower of the Wisconsin Institutes for Medical Research in 2008.

diseases. Now a Wisconsin Alumni Research Foundation Professor and the Wattawa Bascom Professor in Cancer Research, she co-leads the UW Carbone Cancer Center's Virology Program and has been continuously funded by the National Institutes of Health (NIH) since the start of her faculty career.

Golden has led extraordinary advancements in the SMPH's education, research, clinical, and community service missions, and built relationships with philanthropic donors leading to critical funding support. Fostering collaboration has been a hallmark of his leadership. His efforts have ranged from integrating disciplines to strengthening ties in the school's statewide campus; to creating new departments and centers; and to supporting innovations in curricula.

His approach is to surround himself with "bright, committed people who share a vision," he says. "People are more important than programs. To develop great programs, we must foster success among those who will shape and implement the plans."

Golden likens his role to that of an athletic director who "picks the right coaches, sets an overall vision, and supports each coach as they develop their players into a winning team."

He adds, "I like to synthesize different perspectives, viewpoints, and ideas. I take my work very seriously, but I just cannot take myself too seriously."

Integrating Medicine and Public Health

When Golden moved into the Health Sciences Learning Center, the UW Medical School had recently changed its name to the UW School of Medicine and Public Health, as the nation's first school to combine these complementary fields. He established teams to redefine the school's missions to emphasize disease prevention and health promotion — in addition to diagnosing and treating disease — with a focus on addressing health disparities.

Prior to Golden's arrival in 2006, former dean Philip M. Farrell, MD, PhD (PG '72), signaled that work to integrate the disciplines had only begun. Farrell stated, "As Bob has said in conversations with me, the new UW School of Medicine and Public Health must be more than just a name change. He knows that many cultural, philosophical, and programmatic changes are required. … I am certain that Bob can move the institution steadily along on its upward trajectory."

Golden reflects, "I think this integration was among the school's greatest accomplishments during my time here, and it remains a work in progress. We have done careful strategic planning; created synergies; and increased interactions throughout the university and with communities, local and state health agencies, and other organizations across Wisconsin."

Grateful for mission-critical funding and support from the school's Wisconsin Partnership Program, which had been established in 2004 (see *Quarterly*, Volume 26, Number 3, 2024), Golden says the blending of medicine and public health has gained traction nationwide.

A 21-year career at the University of North Carolina (UNC) helped prepare Golden for his SMPH deanship.

—Continued on next page

Above: Elizabeth M. Petty, MD '86 (PG '89), Golden, and Patrick McBride, MD '80, MPH, congratulate a medical student at the 2013 White Coat Ceremony. Right (left to right): Chris Kozina, MS, MBA, Alex Aravanis, MD, PhD, Jennifer L. Mnookin, JD, PhD, Johanna Whitacre, PhD, Haiying Grunenwald, PhD, Amy Kind, MD '01, PhD '11 (PG '05, '07), Anjon "Jon" Audhya, PhD, and Golden at a university-industry meeting; a medical student shakes hands with Golden at the 2009 MD graduation.

At UNC, he initially ran an 18-bed psychiatry inpatient unit; conducted NIH-funded research on the biology and pharmacology of mood disorders; and was an award-winning teacher. He became the associate director of the General Clinical Research Center and Mental Health Research Center, then chair of the Department of Psychiatry. Under his leadership, the department grew to include 85 full-time faculty members, and its NIH research portfolio jumped from $3 million to more than $20 million per year. Golden also led a development program that produced a substantial endowment. In his final role there, as vice dean of the UNC School of Medicine, he was responsible for research and educational programs; faculty development and academic affairs; and the affiliated Area Health Education Centers across the state.

Creating One UW Health

Golden is proud of helping the academic health system restructure in 2015, creating a single clinical entity referred to as UW Health. A year later, in the *Wisconsin Medical Journal*, Golden and Jeffrey Grossman, MD (PG '78), who became interim CEO of the newly restructured health system, wrote, "The merger of the hospital and physician components of [our clinical enterprise] was very much predicated on creating a more efficient infrastructure that would allow us to support the work of the academic health system of the future." Golden says the partnership benefits those who matter most: patients and communities.

Crediting UW–Madison Chancellor Emeritus David Ward, PhD, with sharing his knowledge during that period of change and beyond, Golden says, "David has been an outstanding role model and mentor. He imparts his incredible wisdom and experience while opening doors for broader input."

In turn, Ward admired Golden's vision. "When I returned to Madison as interim chancellor in 2011, I found the campus with some tense divisions. I quickly realized there was also a commitment to move forward rather than reflect on the challenges of the immediate past," says Ward. "Bob Golden was firmly focused on the future and determined to push for an ambitious reorganization of the health sciences. This engaged many constituencies within and beyond campus, and our collaboration made possible an effective consultative process and rich reflections of how to lead major changes in an academic setting."

The SMPH dean alternates between serving as chair or vice chair of the UW Health Board of Directors. In 2016, as board chair, Golden led the recruitment of UW Health CEO Alan Kaplan, MD.

Kaplan says, "Health care is a team sport, and I couldn't have asked for a better teammate than Dean Golden. It's the coordination of clinical care and community service with research and education that makes our academic health system so remarkable."

Making Strides in Parity

Gender parity among SMPH leaders is a significant accomplishment for Golden, who has recruited, mentored, and promoted qualified women to leadership roles in the school and continued to foster their success.

Describing factors that fuel this drive, including observations of gender-based barriers Kenney faced in her training and career, Golden says, "In academic

Top row (left to right): David Ward, PhD, Golden, and Dennis G. Maki, MD '67, at a 2011 Great People Scholarship event; Golden and Marc Drezner, MD, in 2019. Bottom row: Golden at a 2019 Building Equitable Access to Mentorship Program event; Golden with 2015 Dean's Teaching Award recipients: James H. Stein, MD, Paul M. Sondel, MD, PhD '75 (PG '80), Tabassum A. Kennedy, MD, Elaine M. Pelley, MD, and Mary S. Landry, MD '92 (PG '96).

medicine, historically, women have been marginalized. Everybody should be given an equal shot at achieving their full potential."

He continues, "When I arrived here, only one woman, Dr. Ellen Wald, was serving as a chair. I am pleased with our cultural shift. We pick the best person for any given position, with the expectation that we will achieve overall gender parity in leadership positions. Now, about half of our chairs are women, and this makes it easier to attract the most talented women and men who want to work where there is parity. But we have a long way to go in other aspects of inclusivity."

Noting that programs such as Centennial Scholars and Centennial Clinicians, both founded during Golden's deanship, have furthered this goal, he says, "If we want our school to be the best it can be, we must have a culture that includes and embraces individuals from a variety of backgrounds."

The effect has been transformational, according to Deneen Wellik, PhD, chair, Department of Cell and Regenerative Biology. "Having moved from an institution where women did not have an equal opportunity to participate in leadership, I have witnessed the difference at the UW School of Medicine and Public Health. That difference permeates everything about the culture," says Wellik. "Dean Golden has clearly led this change. Most institutions, including our own, have instituted diversity, equity, and inclusion offices and courses, and they hope these offices can participate in educating about cultural change. However, having the person in charge who lives that change is more powerful – and necessary – to enact real change."

"Health care is a team sport, and I couldn't have asked for a better teammate than Dean Golden." *–Alan Kaplan, MD*

Chief of Staff L. Allison Golden, MA (no relation), comments, "Dean Golden's love of the field of medicine and its people shines in all he does. He has an authentic value system and 'family-first' mindset, which he models himself and supports for others. The combination of his deep commitment and joy in his work and family makes him an especially effective mentor."

Educating the Next Generation

The SMPH includes five health professions degree programs – Doctor of Medicine (MD), Doctor of Physical Therapy, Master of Genetic Counselor Studies, Master of Physician Assistant Studies (MPAS), and Master of Public Health (MPH) – plus 27 doctorate and graduate-degree programs. The borders of the school extend to the entire state. Health professions students learn from hundreds of adjunct faculty at hospitals and clinics throughout Wisconsin.

As part of the integration of medicine and public health under Golden's leadership, teams redesigned the MD curriculum, established a Preventive Medicine Residency Program, and significantly expanded the MPH Program, which was founded in 2005 and has graduated 713 alumni to date. The MPH Program now offers nine

Top row (left to right): 2023 Wisconsin Medical Alumni Association (WMAA) awardee Jasmine Y. Zapata, MD '13, MPH '17 (PG '16, '18), and Golden; Golden with 2008 WMAA awardees Paul Bertics, PhD '84, Daniel Knoch, MD '03 (PG '08), Carlo Contreras, MD (PG '08), Kyla Lee, MD '98 (PG '02), Jeffrey Jordan, MD, Gregory Tyler, MD. Bottom row: Golden and Ned H. Kalin, MD (PG '79), at the 2007 Health Emotions Research Institute opening; Jeffrey Grossman, MD (PG '78), and Golden at the 2013 groundbreaking for UW Health East Madison Hospital.

dual-degree options to combine public health training with other fields.

Golden has prioritized the health needs of people in underserved rural and urban areas of Wisconsin. This led to the SMPH's 2007 and 2008 launches, respectively, of the Wisconsin Academy for Rural Medicine (WARM) and Training in Urban Medicine and Public Health (TRIUMPH) Program.

WARM trains medical students who intend to practice in rural areas. Of its 301 graduates, 74 percent are practicing in Wisconsin.

As for TRIUMPH, 99 percent of its graduates have pursued residency training in urban areas, and nearly 34 percent have returned to Wisconsin after their residency training.

In partnership with UW Health, the school also established the nation's first rural-track obstetrics and gynecology residency program, as well as rural residency tracks in family medicine, psychiatry, and surgery.

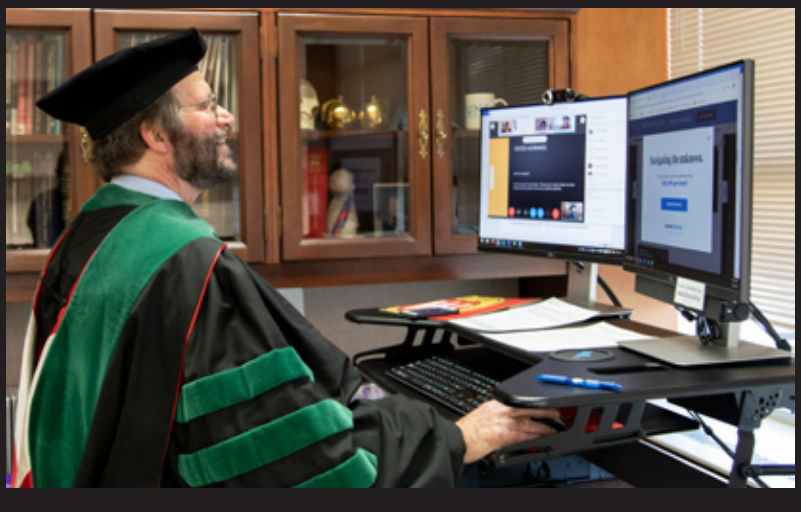
The MPAS program started distant tracks in Wausau and Platteville, Wisconsin, in 2012 and 2023, respectively, to help address shortages of health care professionals in those regions.

"Dean Golden has been a tireless champion for the development and implementation of so many innovative health professions education initiatives." *–Elizabeth M. Petty, MD '86 (PG '89)*

And in 2012, the SMPH launched the Native American Center for Health Professions to enhance the recruitment, retention, and graduation rates of Native American health professions students and to promote health education, research, and community-academic partnerships with Native communities. Through these efforts, the SMPH is among the top 10 schools in the nation for graduating American Indian and Alaska Native students, according to data from the Association of American Medical Colleges.

"Dean Golden has been a tireless champion for the development and implementation of so many innovative health professions education initiatives. He has played an instrumental role in helping establish, shape, and support unique programs that promote health equity within and beyond Wisconsin. He inspired the growth of our MPH and dual-degree programs, and helped expand global health initiatives," says Elizabeth M. Petty, MD '86 (PG '89), senior associate dean for academic affairs, SMPH, and professor, Department of Pediatrics. "In addition, Dean Golden has guided and supported our faculty in optimization of the learning environment with a focus on building community, growth of student research programs, and enhancement of services that support the success of students from all backgrounds. I deeply appreciate his thoughtful wisdom and generous spirit. He has been an inspirational leader, incredible mentor, and trusted colleague."

Top row (left to right): Golden and Alan Kaplan, MD, at a 2016 fundraiser, The Ride; Eileen Smith, Philip M. Farrell, MD, PhD (PG '72), Amy Kind, MD '01, PhD '11 (PG '05, '07), and Golden at the 20th Anniversary Grantee Showcase for the Wisconsin Partnership Program in 2024. Bottom row: Golden presides over the 2020 virtual MD graduation during the COVID-19 pandemic; Bucky Badger and Golden.



Bolstering Research

A staunch advocate for the SMPH's research endeavors, Golden has overseen increases in NIH funding from $135 million in 2006 to nearly $246 million in 2022, with the cumulative total of NIH funding awarded during Golden's leadership exceeding $2.97 billion. In the most recent national rankings (2023), the school is 22nd in NIH funding, according to the Blue Ridge Institute for Medical Research. The highest ranking in the school's history, this "reflects the incredible productivity of our faculty and leaders," says Golden.

Anjon "Jon" Audhya, PhD, senior associate dean for basic research, biotechnology, and graduate studies, notes, "Dean Golden's leadership has been instrumental in growing our research enterprise, with a focus on innovation, scientific impact, and collaboration. He has demonstrated a remarkable vision for advancing academic excellence and ensuring that our faculty, staff, and learners have the resources and support they need to thrive. I have been incredibly fortunate to work alongside him, as he has fostered the formation of many interdisciplinary research partnerships, guided by a clear commitment to diversity, equity, and inclusion."

SMPH researchers are global leaders in Alzheimer's disease and related dementias; asthma; infectious disease; medical imaging; personalized medicine and genomics; social determinants of health; stem cell and regenerative medicine; and much more. Additionally, the portfolio of industry-sponsored clinical trials has recently doubled.

Shortly after Golden arrived at the school, the NIH announced the competitive Clinical and Translational Science Award (CTSA) Program, which supports "bench-to-bedside" research and multidisciplinary collaboration. In 2007, the SMPH received CTSA funding and launched the Institute for Clinical and Translational Research.

To accommodate expanding research activities, Golden has led a more than 50 percent increase in facility space, which includes building the second tower and a wedge structure of the Wisconsin Institutes for Medical Research (WIMR), a cutting-edge translational and interdisciplinary research complex. Under his leadership, five new departments have been created, and several departments are ranked among the top 10 in their field for research funding.

"It boggles my mind that as soon as we open a building, we need even more space due to our faculty's amazing momentum," observes Golden.

He notes that the recently opened UW Health Eastpark Medical Center was built with space dedicated to clinical research, in addition to its primary mission of patient care.

Boosting Philanthropy

Annual fundraising increased more than tenfold under Golden's leadership, bolstering research and student scholarships. In 2019, the SMPH and UW Health initiated their first joint comprehensive campaign for Wisconsin Medicine, which has raised more than $500 million.

Calling scholarships the "magic sauce" for recruiting an increasingly diverse cohort of future physicians, Golden says, "About 30 percent of our incoming medical students come from

Above: In 2007, Paul M. DeLuca, Jr., PhD, and Golden at the topping-out ceremony for the first tower of the Wisconsin Institutes for Medical Research, called WIMR I. Top right: Construction of WIMR II in 2011. Bottom right (left to right): Seven of nine women who were department chairs in 2014: Patricia Keely, PhD, Terri Young, MD, MBA, Laurel Rice, MD, Ellen Wald, MD, Susan E. Lederer, PhD '87, Valerie Gilchrist, MD, and Tricia Kiley, PhD (missing from photo: Azita G. Hamedani, MD, MPH, MBA, and Donata Oertel, PhD).

backgrounds that are underrepresented in medicine. This is a dramatic improvement since I arrived. If we want people to follow their dreams and if we want a heterogeneous physician workforce in the future, we must improve access to medical education in many ways, including affordability."

Connecting with Alumni

In addition to daily meetings, Golden's calendar is dotted with special events, many hosted by the Wisconsin Medical Alumni Association (WMAA) for alums from near and far to stay connected with each other and the SMPH.

"Dean Golden may have come to Madison as a Tar Heel, but he is now a Badger through and through," says Sarah B. Rothschild, WMAA executive director. "From joining the WMAA to present awards to student preceptors across the state, to sharing his annual 'State of the School' address at Medical Alumni Day, and to personally responding to ideas or concerns raised by alumni, Dean Golden has been a stalwart supporter of this association and those who earned their degrees at the UW School of Medicine and Public Health."

Golden reflects, "Our alumni are remarkably loyal and engaged. They are devoted to their alma mater, with a special focus on supporting students."

Growing Up Out East

Raised in South River, New Jersey, Golden says his dad loved being a small-town dentist who provided care for everyone, including those who could not afford dental care.

About his mom, Golden shares, "Before it was common for women, she graduated from college, majoring in mathematics. Then, she completely devoted herself to raising my two brothers and me. That was back when it was hard for a woman to have a family and a career. It made me realize that whether you are a woman or a man, you should be able to be committed to your family and pursue your interests outside the household."

He adds, "My brothers have been incredible leaders and wildly successful in their fields."

Golden and Kenney met as lab partners on their first day at Yale University. There, he earned a bachelor's in psychology (cum laude), with distinction in his major, and she earned a bachelor's in geology (magna cum laude). Next, they earned medical degrees: his from Boston University School of Medicine and hers from Yale School of Medicine.

The couple matched together into UNC residencies – psychiatry for him, and medicine and pediatrics for her. After serving as the chief resident in psychiatry at UNC, Golden completed a psychopharmacology research fellowship at the National Institute of Mental Health, while Kenney completed a research fellowship at the National Institute of Allergy and Infectious Diseases and an infectious disease fellowship at UNC. Both launched impactful faculty careers at UNC.

In 2003, Golden was honored with the American College of Psychiatrists' Award for Research in Mood Disorders for his work in developing and applying novel approaches for measuring neurotransmitter function in depression. He has served as president of the American College of Psychiatrists; chair of the board of the Association of Academic Health Centers; and director and vice chair of the board of the American Board

Left: Golden speaks at a meeting of UW–Madison campus leaders in 2019. Lower left: Golden views a 2018 public health-related project with students in the Training in Urban Medicine and Public Health Program. Below: Golden enjoys the springtime scenery outside the Health Sciences Learning Center and Wisconsin Institutes for Medical Research before heading to his office for the May 2020 virtual ceremony for medical school graduation.

of Psychiatry and Neurology. Boston University School of Medicine and the UNC School of Medicine have both honored him with distinguished alumni awards. And in 2023, he earned UW–Madison's Slesinger Award for Excellence in Mentoring.

Focusing on the Future

"Because we are running out of research space on the west end of campus, I hope my successor will jump in with enthusiasm for WIMR III like I did for WIMR II," says Golden.

He also encourages expansion of WIMR's "science without walls" concept to include growing numbers of disciplines, campus units, and industry partnerships. The idea was initiated by Farrell and Paul M. DeLuca, Jr., PhD, former vice dean of the SMPH, and advanced by Golden; Richard Moss, PhD, former senior associate dean for basic research, biotechnology, and graduate studies; and Audhya.

Describing this vision with clarity, Golden says, "The next WIMR tower should serve as a cornerstone for a mixed-use development that brings together multiple schools and colleges with shared priorities. The west end of campus should provide on-site child care, which would elevate us as an employer of choice, as well as retail space, such as a restaurant at the top of WIMR – with lake views – that could generate funding to help support the missions that take place in the floors below."

"Dean Golden may have come to Madison as a Tar Heel, but he is now a Badger through and through."

–Sarah B. Rothschild

Additionally, he hopes his successor will further integrate medicine and public health in innovative ways; take the Wisconsin Idea even farther to improve health and health care access for disadvantaged populations; and build on the strong partnership with UW Health.

Relishing His Time

Golden and Kenney love to travel; spend time boating and water-skiing; and most of all, share time with their family.

About their dedication to always put their family first – a principle they encourage broadly – Golden says, "I cannot say enough about my wife, our four grown kids, and our grandchildren. Shannon has always been an inspiration. She is the true academic in the family, and I am amazed at the way she shrugs off barriers for women in science and medicine."

Adding that three of their children have chosen to pursue careers in medicine, and the fourth is an entrepreneur who started a successful business in commercial real estate, Golden continues, "We are incredibly proud of our children for the kind of people they are, and that is reflected in the partners they are with. Also, two of the couples have children and are amazing parents."

Related to his coming professional transition, Golden shares, "After I take about a month to catch up on sleep and read *The New York Times* from cover to cover, I will move into a new role mentoring faculty members and new leaders as I focus on opening doors for others as people have done for me."

PHOTOS BY SIRTAJ GREWAL/MEDIA SOLUTIONS

Middleton Society

THANKING DONORS FOR SUPPORTING THE DREAMS OF FACULTY, STAFF, AND STUDENTS

Opposite page: top row (left to right): D. Cecil Martin, Frank Myers, MD (PG '67, '68), and Joseph Anderson, MD '73 (PG '77); Randal Zakowski, Laura Zakowski, MD '90 (PG '96), and M2 Nathan Siewert. Bottom row: Nathaniel Chin, MD '10 (PG '16), Erin Chin, and Sterling Johnson, PhD; Ann Kaat and Daniel Kaat, DDS. This page: top row: M2s Avinash Murthy, Jacob Ludwig, Noah Pollard, Srishti Gupta, Cassandra Appiah-Ofori, Apoorva Dhawan, Madison Harris, Sophia Liu, Sakar Gupta, and Nathan Siewert. Bottom row: Lou Bernhardt, MD '63 (PG '68, '72), and Gloria Hawkins, PhD; Tamara Scerpella, MD (PG '90), Margaret Tyne, and Lee Tyne, MD '67.

In welcoming the most committed supporters of the University of Wisconsin School of Medicine and Public Health (SMPH) – members of the Middleton Society – Elizabeth M. Petty, MD '86 (PG '89), senior associate dean for academic affairs, said, "This evening, we are celebrating your generosity and thanking you, both our long-time members and new members of the family who are joining us for their first Middleton Society Dinner."

She described several areas that the society's investments and support have helped accelerate, including:

- service to patients and communities with the best care possible and a strong commitment to public health;
- outstanding education of the next generation of talented health care professionals and scientists; and
- innovative research across the full continuum of basic, clinical, translational, and population health sciences.

Lauding members' altruism, which supports the dreams and discoveries of faculty, staff, and students, Petty continued, "Our story would cease to be written without your support, such as through 'The Future Needs Us Now' campaign, the first joint comprehensive campaign for Wisconsin Medicine. Thank you!"

The keynote speaker was Sterling Johnson, PhD, professor, Department of Medicine. A leading expert on Alzheimer's disease and related disorders, Johnson described his groundbreaking research about how advanced technology can detect Alzheimer's disease before symptoms arise; what health and lifestyle factors increase or decrease Alzheimer's risk; and how to understand other brain conditions that may occur alongside Alzheimer's disease.

Zachary Morris, MD, PhD (PG '16) (left), and Jamey Weichert, PhD, are co-directors of the Initiative for Theranostics and Particle Therapy.

BY SARA BENZEL

Theranostics and Particle Therapy

INITIATIVE STRENGTHENS RESEARCH COLLABORATIONS, BUILDS PARTNERSHIPS, AND DRIVES INNOVATIVE TREATMENT

The new Initiative for Theranostics and Particle Therapy – launched in May 2024 in the University of Wisconsin Carbone Cancer Center – fosters collaboration among experts across medical oncology, radiation oncology, radiology, nuclear medicine, medical physics, and other specialties to accelerate precision radiation therapy and imaging for patients.

A key focus of the initiative is translational research, beginning in the laboratory and translating to clinical work in the form of new therapies or diagnostic techniques. Investigators are assessing how particle beam radiation may be effective in treating cancers that are resistant to conventional radiation therapy; how diagnostic and treatment steps can be combined into a single step – a process known as theranostics; and how radiation treatment plans can be personalized for each patient.

"We have a unique combination of unparalleled strengths here at University of Wisconsin–Madison," says Zachary Morris, MD, PhD (PG '16), co-director of the initiative and chair of the Department of Human Oncology at the UW School of Medicine and Public Health (SMPH). "This makes our campus the perfect setting for this initiative."

Particle Therapy: Precision for Patients

For some patients, traditional radiation therapy is not ideal. For example, depending on the location of the tumor, traditional radiation methods could expose neighboring healthy tissue to radiation doses that would exceed safe limits. Also, therapy for pediatric cancers often includes a goal of limiting the patient's radiation exposure. In such instances, particle beam radiation may be a preferred treatment.

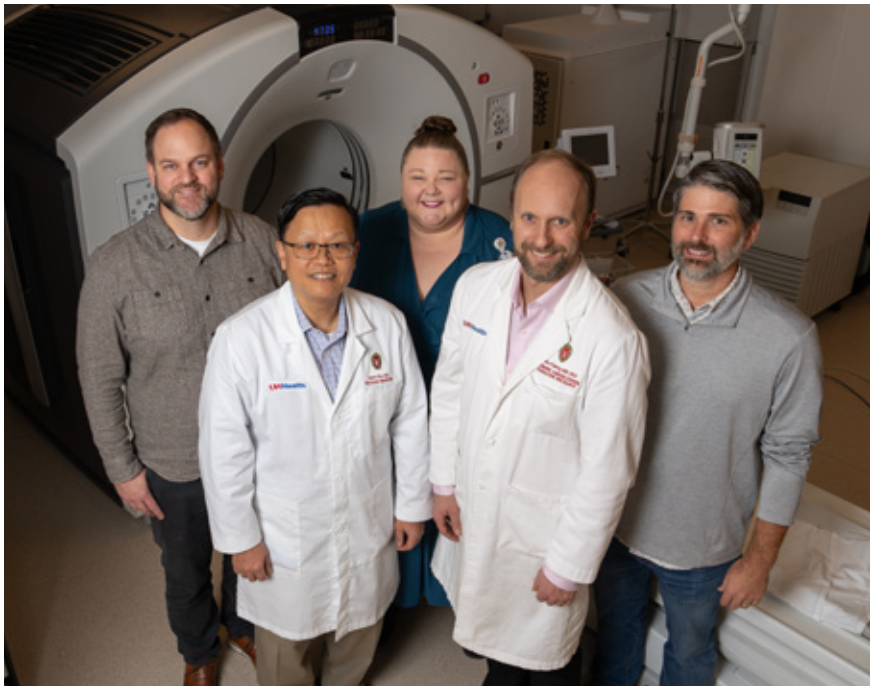
Some researchers and clinicians with the Initiative for Theranostics and Particle Therapy focus on particle beam radiation used in proton therapy, in which radiation travels to a specified depth in the tissue and stops, reducing the radiation exposure to healthy tissues and sparing treatment-related toxicities. (See sidebar article about future proton therapy to be offered at UW Health's Eastpark Medical Center.)

Theranostics: Diagnosis Combined with Therapy

Targeting tumors typically requires using medical imaging to locate the precise position of a tumor during treatment. If there are many tumors to target throughout the body, particularly small and microscopic tumors, this can be impossible.

To address this challenge, researchers with the initiative focus on radiopharmaceutical therapy, also known as targeted radionuclide therapy (TRT). This type of therapy involves injecting an agent that selectively delivers radiation to tumors no matter their size or location. These agents have been shown to prolong survival for many patients, including those with certain forms of thyroid, prostate, and neuroendocrine cancers, as well as pediatric neuroblastoma.

"Investigators at the SMPH and UW Health are pioneering the development of novel TRT agents and testing these in combination with other cancer treatments like immunotherapies, with the goal of curing cancer in patients



The clinical team for the Initiative for Theranostics and Particle Therapy (left to right): Tyler Bradshaw, PhD, Steve Cho, MD, Abby Besemer, PhD, John Floberg, MD '14, PhD '12, and Bryan Bednarz, PhD (not pictured: Joseph Grudzinski, PhD)

previously believed to have incurable disease," Morris explains.

Depending on the form of radioactivity attached to the radiopharmaceutical, the same TRT agent can be used not only for cancer therapy, but also as a new way to detect and image cancers using advanced technologies such as positron emission tomography (PET). The combination of PET molecular imaging and TRT provides a powerful tool for diagnosis and therapy. These agents are called "theranostics" due to this dual therapy and diagnostic role, according to John Floberg, MD '14, PhD '12, assistant professor, SMPH Department of Human Oncology, and radiation oncologist, UW Health.

"Researchers with the initiative will be doing critically important work to advance the translation of theranostics and particle therapy into curative treatments for patients with metastatic cancers," Floberg notes.

Describing the Theranostics Disease-Oriented Team (DOT) that has been created in the UW Carbone Cancer Center, Steve Cho, MD – chief, Section of Nuclear Medicine and Molecular Imaging, SMPH Department of Radiology – says, "We have been developing the infrastructure and workflow for a multidisciplinary group that includes faculty and staff from the SMPH, UW Health, and the cancer center. This has positioned us well to meet the clinical standard-of-care needs and emerging clinical research opportunities in theranostics."

A co-director of the Theranostics DOT and professor of radiology, Cho continues, "Our team is uniquely positioned to deliver the highest level of theranostics clinical care and bring the most promising theranostics treatments to our patients."

Dosimetry: Personalized Doses for Treatments

Theranostic imaging allows doctors to measure precisely how impactful a TRT is for each patient's cancer cells. By leveraging that capability, SMPH researchers also have developed technologies that allow doctors to use theranostic images to personalize the prescription of a TRT so it is maximally effective and safe for each patient. The process of identifying patient-specific amounts of a radiopharmaceutical therapy drug is called dosimetry, according to Bryan Bednarz, PhD, professor, SMPH Department of Medical Physics.

Dosimetry enables doctors to tailor treatments with greater precision than relying on standard dosage guidelines alone, allowing them to develop personalized dosage plans that maximize effectiveness while minimizing potential harm in patients, he says.

Bednarz adds, "This combination of advancements is a critical component of the future for cancer diagnosis and therapy."

Synergy Among Areas of Expertise

"This initiative is uniquely cooperative," says Morris. "It provides a central mechanism for individuals involved in these fields to engage with one another and put ideas together for collective advancement. This area is inherently multidisciplinary. If we stay in our silos, we only get so far, but when we work together, we can see the confluence of opportunities."

Initiative researchers are working to develop novel cancer-targeted molecular

Bryan Bednarz, PhD (left), and Tyler Bradshaw, PhD, work with a computer application that helps evaluate the impact of radiopharmaceutical treatment in individual cancer patients.

imaging and radiotherapy TRT agents; produce more effective theranostic imaging and particle therapy; advance dosimetry methods; and translate discoveries into clinical practice.

Faculty members associated with the initiative also plan to establish premier graduate and fellowship training programs for researchers and practitioners in theranostics, particle therapy, dosimetry, and nuclear and radiochemistry, according to Jamey Weichert, PhD, professor, SMPH Department of Radiology, and co-director of the initiative.

"We are creating a destination theranostics and particle therapy clinical center at UW Carbone Cancer Center with this work," says Weichert.

The initiative has membership criteria for researchers and clinicians at the SMPH and UW Health who work in these areas and wish to become involved. The unit is governed by an executive board of six UW–Madison faculty members who engage in research, clinical care, and education related to theranostics and particle therapy.

This work is possible thanks to major federal funding provided to UW–Madison, including the first National Institutes of Health-supported program project grant for theranostics, explains Anjon "Jon" Audhya, PhD, senior associate dean for basic research, biotechnology, and graduate studies at the SMPH.

"Over the last several years, our outstanding investigators have competed successfully for nationally recognized awards related to theranostics," Audhya says.

The funding includes a recent $8 million grant to construct a new, national, theranostic cyclotron resource center that will drive fundamental and translational medical science. It also includes $20 million in grants from the National Cancer Institute, and a $1.5 million seed investment from the Wisconsin Alumni Research Foundation, according to Audhya.

He adds, "This support is critical because, ultimately, our goal is to be the preeminent site for preclinical and clinical theranostics research around the globe."

Coming Attraction: Proton Beam Therapy

by Kris Whitman

Within the University of Wisconsin School of Medicine and Public Health's (SMPH) Initiative for Theranostics and Particle Therapy, some faculty and staff members are focusing on particle beam radiation used in – for example – proton therapy. This type of radiation travels to a specified depth in the tissue and stops, thus reducing radiation exposure to healthy tissues and sparing treatment-related toxicities.

As research and training related to proton beam therapy continue in the Wisconsin Institutes for Medical Research, UW Health and the UW Carbone Cancer Center are advancing the first academic program in the world with upright proton therapy. Proton beam is among the most precise forms of radiation treatment that can target complex tumors that are close to vital organs. The ability to limit the delivery of radiation outside the tissues being treated is a major benefit when treating children who are still growing.

Traditional proton therapy is delivered to a patient lying on their back or stomach, while upright proton therapy will be delivered to patients who are sitting, enhancing comfort while taking advantage of more natural organ positioning. The upright technique developed by Leo Cancer Care allows treatment for patients with underlying health conditions – such as certain heart or lung conditions – that can make it difficult to lie flat for the duration of therapy. Upright patients also can interact more easily with health care professionals. For children, this may reduce the need for sedation during treatment.

For more than a decade, Paul Harari, MD, has focused attention on bringing proton beam therapy to UW Health. Following a rigorous evaluation of worldwide proton beam manufacturers, UW Health selected Hitachi in Tokyo to make this a reality. Harari explains that the new facility in Madison, being constructed at UW Health's Eastpark Medical Center, "could be a paradigm changer because of the improved humanity for patients to interact with providers in the upright position and the more natural organ position that may offer advantages for normal tissue sparing. In addition, most patients are simply more comfortable being upright."

A professor in the Department of Human Oncology, Harari describes the unique requirements and remarkable efforts of the planning and construction teams building the proton facility.

"The walls of proton vaults are seven to eight feet thick, with highly specialized techniques for pouring the concrete to shield and contain the radiation," Harari says, adding that more than 13,000 tons of concrete and over 400 tons of rebar were used in the overall construction of the proton facility by UW Health.

Noting that the proton beam equipment will be transported across the Atlantic Ocean and to Madison in 2025, Harari says, "The best part is that inside these specialized proton treatment vaults, the lives of children and adults with cancer will be positively impacted for decades. This is what our multidisciplinary teams of cancer professionals are trained to do."

Above and left: Peter Newcomer, MD '95, chief operations officer, UW Health, and senior associate dean for clinical affairs, SMPH (left), and Paul Harari, MD, professor of human oncology, SMPH, lead a tour of the construction site for the proton beam facility.

Homecoming Weekend

EMBRACING FRIENDSHIPS AND BADGER TRADITIONS AMONG MD ALUMNI

SIRTAJ GREWAL AND TODD BROWN/MEDIA SOLUTIONS

Nikhil Wagle, MD '94, describes his 30-year medical school reunion as "a great weekend full of fun, laughter, and reminiscing about good times!"

Hosted on University of Wisconsin–Madison's Homecoming Weekend, October 25 and 26, 2024, by the Wisconsin Medical Alumni Association (WMAA), the MD Class of 1994 reunion – as well as those for the Classes of '84, '89, '99, 2004, '09, and '14 – included a variety of Badger traditions, explains Sarah B. Rothschild, association executive director.

"Beginning with Friday evening class receptions and dinners at the Concourse Hotel in Madison, festivities continued on Saturday at Union South," she says. "There, our Tailgate Party led up to the kickoff of the Wisconsin vs. Penn State football game. And new this year, the WMAA held a game-watching party for those who chose to remain at Union South rather than trek to Camp Randall. Of course, Bucky Badger popped in for several of our events."

Wagle says he and his classmates enjoyed it all.

"The Friday evening dinner with just our class was really fun. Afterward, we all went out and socialized even more. That was memorable as it allowed us to talk to as many classmates as possible," he says.

As the class representative, Wagle started encouraging participation among his classmates several months earlier, noting that it has been three decades since they earned their medical degrees from the UW School of Medicine and Public Health, and they are now "in the latter third of our careers."







Opposite page (clockwise from left) Jim Shropshire, MD '89, Sonya Schroeder, MD '89, Beth Ciurlik, MD '89, and Nancy Shropshire; Douglas Schulz, MD '94, Chris Laufer, MD '94, and Nikhil Wagle, MD '94; Erin Maslowski, MD '05, Kiran Maski, MD '04, and Corrie Chumpitazi, MD '04. This page: top row (left to right): Michael Kruk, MD '84, and Eric Johnson, MD '84; Donald Frisco, MD '94 (PG '98), and John Frisco; Class of 1989. Middle row: Class of 2009; Ember Ewings, MD '04, Deborah Wu, MD '04, and Jen Foster, MD '04, with families. Bottom row: Barrett Wagner, MD '14, and family; Jonathan Fliegel, MD '89, and Russ Hermus, MD '89 (PG '92).

Jim Shropshire, MD '89, also enjoyed the chance to reconnect with many classmates at their 35-year reunion.

"The WMAA did a great job of organizing the weekend. The Friday night dinner at the Concourse was great, with a private room for the Class of 1989! I loved hearing about people's plans for retirement, their grandparenthood and travels, and other topics we reminisced about," he says. "At our next reunion, we will celebrate 40 years, and I hope to see everyone return to Madison!"

Rothschild says the WMAA loves to receive feedback about what class members liked the most so they can plan accordingly for future reunions at five-year increments, ranging from five to 50 years, plus the spring reunion of the Half-Century Society for anyone who graduated from the SMPH more than 50 years ago.

Above all, the association's goal is to help classmates stay connected with each other and with their alma mater.

Wagle reflects, "Members of our class shared so many experiences during a critical time in our lives and our careers. The bonds that were created during that time are hard to break. Attending reunions demonstrates to me how strong and resilient those bonds are. The planned gatherings offer a time and venue for the class to be together again and reconnect."

MD Class Reunions

TODD BROWN/MEDIA SOLUTIONS

CLASS OF 1984

Front row (left to right): Joseph Schmitt, Julie Black, James Berman, David Rapkin, Rama Mallampalli, Bruce Abrams, Robert Mead. Back row: Mark Fenlon, Michael Meyer, Eric Johnson, William Buchta, Philip Jacoby, Susan Blase, Wendy Hanneman, George Arndt, Ann West, John Brusky, Tim Harder.

CLASS OF 1989

Front row (left to right): Paul Hunter, Steven Lipscomb, Jim Shropshire, Sonya Schroeder, Ross Lange, Jonathan Fliegel, Tim Jahn. Back row: Steve Hunter, Doug Wheaton, Thomas Brucker, Rose Turba, John Haeberlin, Beth Ciurlik, Michelle Cihla, Jeanine Swenson, Gerard Adler, Eric Gaenslen, John Cherney, Russ Hermus.

CLASS OF 1994

Front row (left to right): Doug Hendricks, Nikhil Wagle, Grant Macaulay, Kevin Wasco, Michael Roskos, Rick Staehler, Jennifer Norden, Kristen Knoepke, Sheila Patel. Middle row: Douglas Schulz, Lynda Siewert, Donald Frisco, Sonja Green, Jennifer Neff, Dorothy Shearn, Natalia Fudim, Jewel Market, Chris Koutures, Sabina Singh. Back row: Thomas Pintar, Steve Bittorf, Ron McGown, David Rossmiller, Mark Moss, David Oh, Wendy Hill.

CLASS OF 1999

Front row (left to right): Andrew Wagner, Mike Green, Amy Franta. Back row: Kent Kramer, Amy Buencamino, Brian Boville, Kevin Keele.

CLASS OF 2004

Front row (left to right): Kiran Maski, Suzanne Falkenberry, Jessica Sosso, Ben Walker, Tracy Capes, Christina Hook, Julie Gerig. Back row: Stephen Randall, Thomas Shiffler, Sarah Fox, Berta Strigel, Corrie Chumpitazi, Erin Maslowski, John Khalil, Jacob Waidelich.

CLASS OF 2009

Front row (left to right): Chirantan Mukhopadhyay, Elliza Chen, Rebecca Downs, Amber Jaeger, Jennifer Glamann. Back row: Mary Rhodes, Analisa Calderon, Sibyl Siegfried, Abby Schuh, Brittany Allen, DeAnna Friedman-Klabanoff.

CLASS OF 2014

Front row (left to right): Andy Miller, Barrett Wagner, Steven Biro. Back row: Sarah Lamont, Kathryn Zavala, Dina Marie Pitta, Stephanie Lumpkin.

Class Notes

Compiled by Andrea Larson

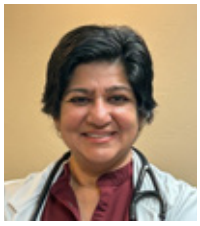
CLASS OF 1960

Leslie M. Klevay recently gave a talk, "The Contemporaneous Epidemic of Chronic Copper Deficiency," at the Wise Traditions conference of the Weston A. Price Foundation in Orlando, Florida. He also recently published on dietary salicylates and copper in *Nutrition Reviews*.

CLASS OF 1973

Mark Bishop has been appointed associate professor of anatomy and physiology in the Department of Biology at Oral Roberts University in Tulsa, Oklahoma. There, he teaches pre-health care professional students. Bishop followed in the footsteps of his father, Paul R. Bishop, MD '49, and became a country family physician.

CLASS OF 1994



Sabina Singh serves as president and chief medical officer of Anovia Clinics. Anovia Health — a Wisconsin-based health care provider with clinics in Antigo, Appleton, Clintonville, DePere, Marshfield, Merrill, Stevens Point, and Weston — was recently honored with the national Direct Primary Care Provider of the Year Award at the Hint Health Conference in Denver. Anovia Health was cited for its extraordinary growth over the past three years.

CLASS OF 2007

Sarah Panzer received designation as a NephCure specialist in glomerular diseases. NephCure is an international foundation that aims to revolutionize clinical care for patients with glomerular disease. To achieve the distinction of a NephCure specialist, the physician must be nominated by a peer, exhibit excellence in clinical care of patients with glomerular disease, and undergo vetting against selection criteria at the national level. Panzer, a nephrologist, is an associate professor in the University of Wisconsin School of Medicine and Public Health's (SMPH) Department of Medicine.

CLASS OF 2008

Emily Ruedinger was named a 2024 *MedEdPORTAL* Outstanding Reviewer. The *MedEdPORTAL* journal relies on the voluntary contributions of reviewers and associate editors to assess the quality of submissions, ensuring they are accurate, clear, complete, and relevant to health professions education. Each year, the journal's editors recognize the invaluable contribution of volunteer reviewers who provide comprehensive, timely reviews by awarding the outstanding reviewer designation. Ruedinger is an associate professor in the Division of General Pediatrics and Adolescent Medicine in the SMPH Department of Pediatrics; she also is the associate director for the Pediatrics Residency Program.

CLASS OF 2014

Daniel Shapiro has been named a fellow of the American College of Surgeons. This is an honor in which the surgeon's education and training, professional qualifications, surgical competence, and ethical conduct have passed a rigorous evaluation, and have been found to be consistent with the high standards established and demanded by the ACS. Shapiro completed his urology residency at UW Health and is an assistant professor in the SMPH's Department of Urology. He specializes in urologic oncology and minimally invasive surgery.

CLASS OF 2018

Jillian Gorski has been appointed an assistant professor in the SMPH Departments of Emergency Medicine, Pediatrics, and Medicine. She started her roles, including in the Division of Pediatric Emergency Medicine, in August 2024. She conducts research centered around the use of data science and artificial intelligence to improve emergency department care for children.

CLASS OF 2021

David Marshall completed his chief resident year at the University of Minnesota/North Memorial Family Medicine Residency and received the 2024 Society of Teachers of Family Medicine Resident Teacher Award. In August 2024, he joined the faculty at the Medical College of Wisconsin in Milwaukee, where he is an assistant professor and holds a position with the Menomonee Falls Family Medicine Residency. At Froedtert Menomonee Falls, he provides full-spectrum outpatient, inpatient, and obstetrics care. This photo is Marshall (left) with his mentor, Jason A. Ricco, MD '09, MPH (PG '14).

In Memoriam

David R. Downs, MD '57
August 21, 2024
Madison, Wisconsin

Paul N. Gohdes, MD '60
September 3, 2024
Madison, Wisconsin

Robert A. Vincent, MD '70
August 28, 2024
Appleton, Wisconsin

Francis G. Wolf, MD '73
August 10, 2024
Sheboygan, Wisconsin

Elger H. Lorenzsonn, MD '77
July 26, 2024
Stillwater, Minnesota

Georgia K. Mode, MD '82
September 22, 2024
Jefferson, Wisconsin

Mark A. Urban, MD '86
July 6, 2024
Edina, Minnesota

Roger B. Lim, MD '00
November 18, 2024
Hickory, North Carolina

FORMER FACULTY AND STAFF MEMBERS

Andrew B. Crummy, Jr., MD
October 14, 2024
Middleton, Wisconsin

Hugh V. Moss, Jr., MD
October 10, 2024
Madison, Wisconsin

Catherine Armstrong Reznikoff, PhD
September 18, 2024
Madison, Wisconsin

Julie Schneider
November 21, 2024
Sun Prairie, Wisconsin

Barry L. Sievers
November 1, 2024
Belleville, Wisconsin

Gary P. Williams, MD (PG '87)
August 21, 2024
Reston, Virginia

John B. Wyman, MD '58
November 8, 2024
Fitchburg, Wisconsin

Goodbye Dear Friend

GARY P. WILLIAMS, MD (PG '87)

Emeritus Professor of Pediatrics Gary P. Williams, MD (PG '87), died on August 21, 2024, in Reston, Virginia.

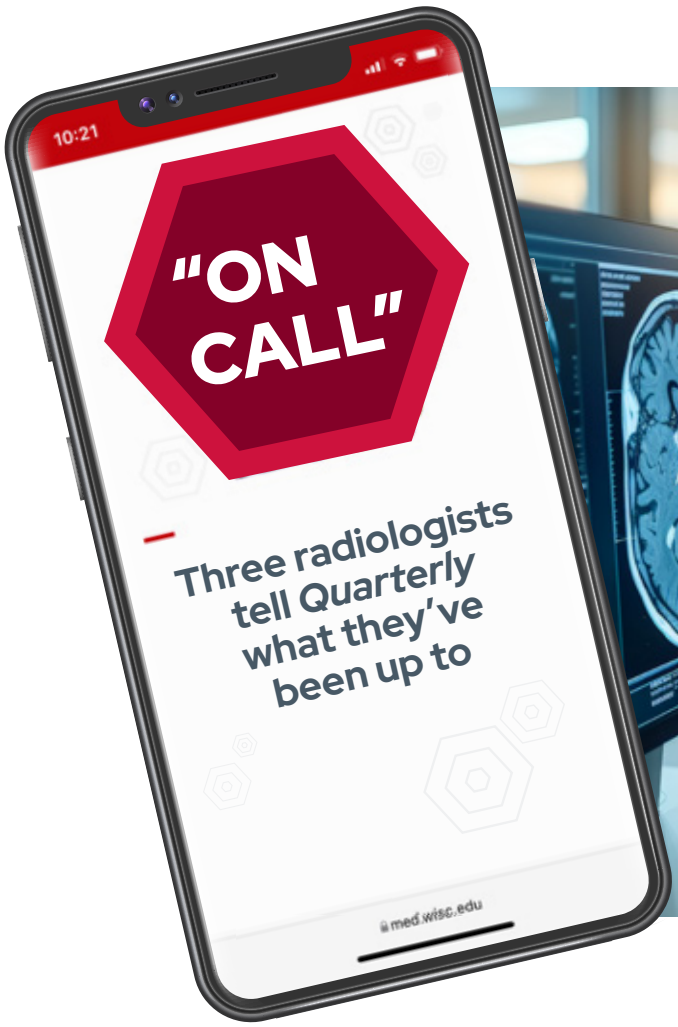
Williams earned his medical degree from the University of Pennsylvania and completed his pediatrics residency at University of Wisconsin Hospital and Clinics (now UW Health), associated with the Department of Pediatrics of the UW Medical School (now UW School of Medicine and Public Health).

"He was a bright, charming, and experienced internist who — in his humble and self-effacing way — added an extra dimension to the residency program," says Norman Fost, MD, MPH, professor emeritus of pediatrics.

Upon completing his residency in 1987, Williams joined the faculty of the department's Division of General Pediatrics and Adolescent Medicine. Based on his interests, he became the consulting dermatologist and clinical photographer. Williams retired in 2021.

He is fondly remembered by his colleagues and students as a kind, skillful, and dedicated pediatrician with a welcomed sense of humor.

Deirdre Burns, MD (PG '92), clinical associate professor, Division of General Pediatrics and Adolescent Medicine, says, "Over the years, I have reflected on how fortunate I was to have had Gary as my continuity clinic preceptor. He was an exceptional mentor who was a knowledgeable and thorough clinician, and he modeled compassion, dedication, and empathy. It was clear that Gary relished the practice of medicine and the relationships he had with the children and families for whom he cared."



KRISTIE GUITE, MD '09 (PG '14, '15)

At Marshfield Clinic in Marshfield, Wisconsin, I practice breast imaging. I also am part of a subspecialty radiology practice in which I am the primary breast radiologist in Marshfield.

I read all types of breast-related imaging, including mammograms, ultrasounds, magnetic resonance imaging, and molecular breast imaging. I also perform biopsies under radiological guidance and localize breast cancers before surgery.

A memorable patient was a 26-year-old mother of four who presented for breast imaging during my first year as an attending physician. She amazed me at how strong, brave, and resilient she was. When I told her she had a large cancer and needed several biopsies, she was willing to do whatever we recommended to get her diagnosis and move on with treatment.

I started medical school at the University of Wisconsin School of Medicine and Public Health (SMPH) thinking I would choose primary care because of a mentor I had when I was growing up. In medical school, I considered women's health and obstetrics and gynecology. However, it became clear that I enjoyed doing procedures but was not a surgeon, and I liked interacting with patients, but I did not enjoy outpatient clinics. During a radiology elective, I felt at home and enjoyed being part of the diagnostic team. Radiology exams felt like puzzles in which patients would present with symptoms and radiologists must figure out the reason for the symptoms.

I completed a diagnostic radiology residency at UW Health followed by a breast-imaging fellowship at the SMPH. I participate in the American Roentgen Ray Society, Wisconsin Medical Society, and Society of Breast Imaging.

Often, the radiologist is the first person to detect and inform a patient of a life-changing breast cancer diagnosis. I discuss imaging and biopsy results, do procedures, and conduct breast cancer risk assessments. We get to see our patients though challenging times.

NICK MARINELLI, MD '09 (PG '14, '15)

I am a neuroradiologist with Aurora Health Care in Milwaukee, Wisconsin. There, I handle outpatient, inpatient, and emergency cases, including general neuroradiology, neurovascular, neuro-oncology, and head and neck cases. I also review cases for multidisciplinary conferences.

Each time I help plan and deploy a new imaging technique, such as an application for computed tomography or magnetic resonance (MR) imaging, I find it exciting because we can have a greater impact on patient care. This drew me to the field of radiology, which has constant innovation.

For example, several years ago, we began using a brain MR angiography technique that can help stratify aneurysm risk or diagnose vasculitis or other vasculopathies by assessing vessel wall inflammation. The information helps clinicians better make diagnoses and apply proper treatments more quickly and non-invasively. This technique had been investigated, in its early stages, at UW Health.

Prior to attending medical school at the University of Wisconsin School of Medicine and Public Health (SMPH), I worked as an engineer for an imaging device company and was fortunate to gain exposure to several radiology departments throughout the country. This was a driving force in my desire to go to medical school and become a radiologist so I could provide patient care and maintain technical elements in my work. While attending the SMPH, I participated in its Shapiro Summer Research Program. I was exposed to neuroradiology research, an experience that furthered my interest in this field. After medical school graduation, I completed a radiology residency at UW Health and a neuroradiology fellowship at the SMPH.

Radiology offers many subspecialties with different amounts of interpretive versus procedural work. Skilled problem solving and collaboration are required to succeed in this specialty. Some subspecialties may have less frequent patient interaction, but this field excels in opportunities to develop relationships with health care providers throughout the system. I enjoy working with nurses, advanced practice providers, and physicians in other specialties.

STEPHEN TANG, MD '14 (PG '19, '20)

I am a neuroradiologist practicing primarily at Legacy Good Samaritan Medical Center in Portland, Oregon. Good Samaritan is a comprehensive cancer center, so I often participate in the care of oncology patients in addition to a more general mix of patients referred by neurologists and neurosurgeons.

One aspect of radiology that I appreciate is the fact that all diagnostically undifferentiated patients will need to be imaged at some point, bringing us into their care through diagnostic imaging and/or image-guided procedures.

It is difficult to pick just one memorable case to share, as I come across so many interesting cases daily. One such patient required a brain magnetic resonance imaging procedure for refractory epilepsy. I was able to identify a subtle finding of focal cortical dysplasia, for which surgery often provides seizure control and can considerably improve patients' quality of life.

When I began medical school at the University of Wisconsin School of Medicine and Public Health (SMPH), I was interested in neurology; however, I quickly realized that the aspect of the field I most enjoyed was the correlation of anatomy and neurologic function. I discovered this lends itself very nicely to neuroradiology.

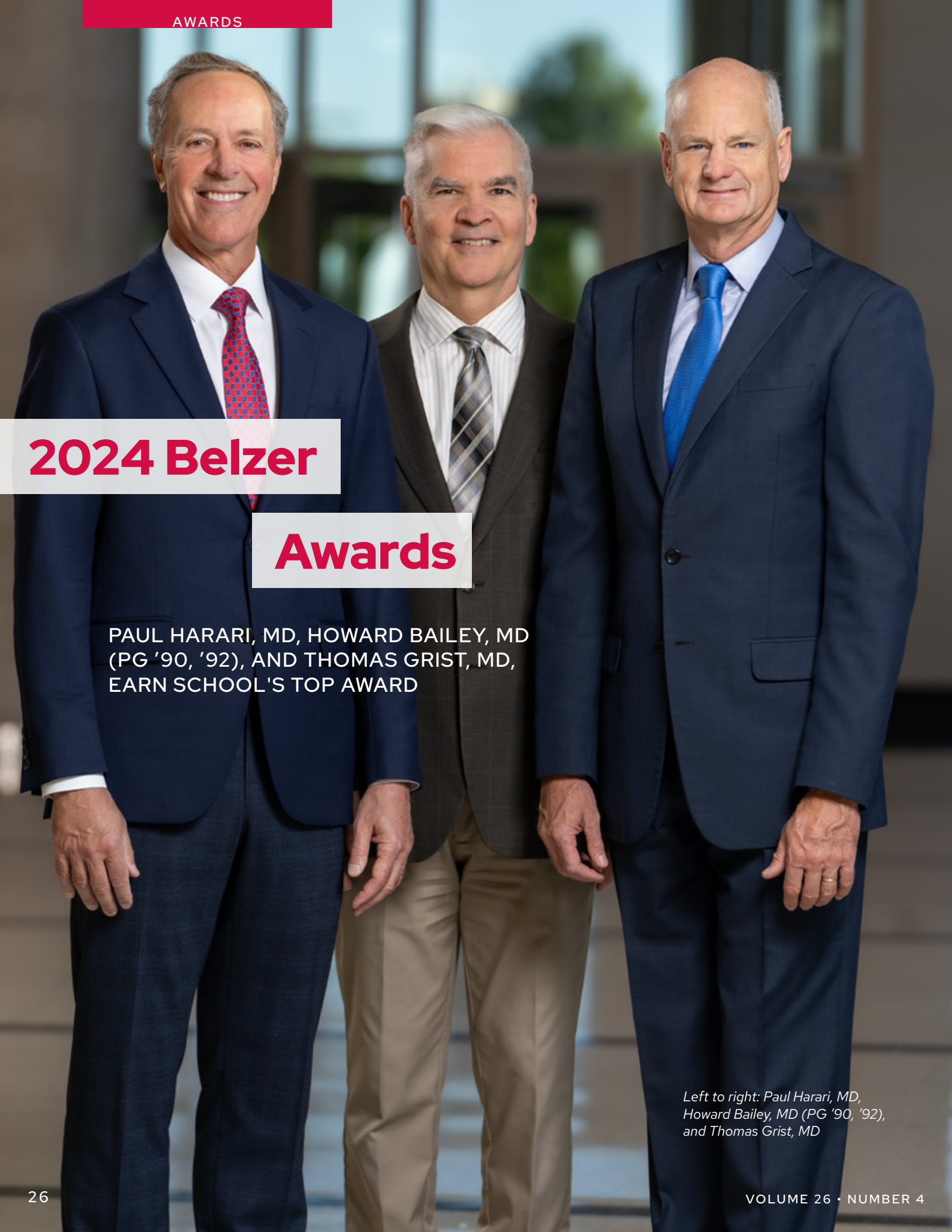
For my post-graduate training, I was fortunate to stay in Madison for my radiology residency at UW Health and neuroradiology fellowship at the SMPH, with strong mentors and teachers along the way!

I always tell interested medical students that radiologists can be the "doctor's doctor." I enjoy consulting with other doctors of different specialties and always learning more about how each specialist approaches patient care; this can vary among doctors practicing in the same specialty. Radiology also offers significant flexibility and allows me to stay in control of my work-life balance.

I encourage interested students to proactively search for opportunities to learn more about this field.

2024 Belzer Awards

PAUL HARARI, MD, HOWARD BAILEY, MD (PG '90, '92), AND THOMAS GRIST, MD, EARN SCHOOL'S TOP AWARD



Left to right: Paul Harari, MD, Howard Bailey, MD (PG '90, '92), and Thomas Grist, MD

by Michael Felber

The Folkert O. Belzer Award is the highest honor the University of Wisconsin School of Medicine and Public Health (SMPH) bestows upon its faculty members for their lifetime achievements.

In October 2024, SMPH Dean Robert N. Golden, MD, presented Belzer Awards to Paul Harari, MD, Howard Bailey, MD (PG '90, '92), and Thomas Grist, MD, who have advanced the school's missions through their expertise in important fields, including radiation oncology, medical oncology, radiology, and medical physics. Collectively, they have served with distinction as strong and impactful leaders; passionate advocates; inspirational mentors; and visionary program builders.

Named in honor of Folkert O. Belzer, MD — the transformational chair of the Department of Surgery and co-inventor of the "UW Solution," which helped revolutionize organ transplantation — the award was created more than 25 years ago to honor the school's most exceptional leaders who have had a major impact on the school and on academic medicine.

"Each of these game-changing leaders are outstanding clinicians; renowned researchers; deeply respected teachers and mentors; and effective leaders," said SMPH Dean Robert N. Golden, MD, upon presenting the awards on October 28, 2024. "They each moved a key component of our school from 'really good' to 'really great' over their long tenure as leaders."

PAUL HARARI, MD

Harari is a leader in radiation oncology, but as a teen, he dreamed of working on a different field — the kind with bases, a pitcher's mound, and green grass. A lifelong New York Yankees fan, Harari was pitching for his alma mater, Tufts University in Medford, Massachusetts, when he tore his rotator cuff.

His baseball career was over, but Harari soon found himself embarking on a vocational path that he ultimately found more rewarding. Rather than squaring off against an opponent in the batter's box, Harari took on a more implacable foe: cancer.

Raised in New York, New Hampshire, and Colorado, Harari loved anything relating to the human cell. He earned his medical degree from the University of Virginia and completed an internal medicine internship at the University of California, Davis. There, Harari became intrigued with radiation oncology and developed an interest in head and neck cancers, such as those affecting the voice box, mouth, throat, and sinuses.

When it came time to find his first faculty position after his residency at the University of Arizona Medical Center, Harari saw tremendous opportunity at UW–Madison.

"University of Wisconsin–Madison was a spectacular place for a new faculty member to spread their wings," says Harari, who joined the SMPH faculty in 1990. "One of my first priorities was to establish a multidisciplinary head and neck tumor board. This allows experts from all cancer disciplines — surgery, medical oncology, radiation oncology, and others — to thoroughly review each patient's case before commencing treatment. Rather than viewing cases through a single lens, the board provides expert input from all relevant cancer disciplines to develop the most balanced, state-of-the-art treatment recommendation for the patient. This tumor board remains a central pillar of our head and neck cancer program 34 years later."

In his research laboratory, Harari became intrigued with combining radiation with various anti-cancer drugs to improve patients' outcomes. He was a co-leader of the landmark, Phase III trial showing a survival benefit for head and neck cancer patients who were treated with radiation and the drug cetuximab. Published in 2006 in the *New England Journal of Medicine*, the trial remains the most-cited paper in head and neck oncology.

Milestones as Chair

With a growing reputation for his enterprising research and compassionate patient care, Harari was selected in 2007 as chair of the Department of Human Oncology, a position he held until mid-2024. During his tenure as chair, the department reached several milestones, including:

- doubling the number of faculty members;
- increasing the number of female faculty members from two to 15;
- tripling the amount of federal cancer research support;
- ranking among the nation's top eight radiation oncology departments in the United States, based on research dollars from the National Institutes of Health (NIH);
- launching — in 2016, with colleague Deric Wheeler, PhD '04 — the Badger Challenge, a community-wide bike/run/walk event that has attracted 3,500 participants annually and raised $4.6 million to support research at the UW Carbone Cancer Center; and
- championing creation of a UW Health facility for proton beam therapy; scheduled to open in early 2026 in the recently constructed Eastpark Medical Center, the facility will provide unparalleled precision in the delivery of radiation therapy.

Harari, who in 2018 served as president of the American Society for Radiation Oncology, also has been the principal investigator for two successive NIH-funded Specialized Program of Research Excellence grants, known as SPORE grants, worth $27 million. These funds have underwritten several translational and clinical trial initiatives designed to achieve improved outcomes for patients with head and neck cancers.

Work-Life Balance

Early in his career, it was not unusual for Harari and his peers to work up to 70 or 80 hours a week. As a husband and father of four, Harari understood the strain this took on his family. When he became chair, he did not want the next generation of faculty physician-scientists to pay such a heavy price for success.

"It is not healthy or sustainable for them to routinely work 80 hours a week," he says.

It is a clear reflection of Harari's values that the Department of Human Oncology consistently ranks highly in

professional satisfaction and low in professional burnout.

Zachary Morris, MD, PhD (PG '16), who in 2024 succeeded Harari as chair of the Department of Human Oncology, remembers feeling conflicted about wanting to coach his children's Little League games.

"I remember feeling sheepish talking about this to Paul at first," Morris says. "I was grateful when he encouraged me to do these things. That only drove me to work harder because I was not missing out on special times with my kids."

Colleagues and mentees across the United States are grateful to Harari for his wise, empathetic, and generous counsel. Among them, Daphne Haas-Kogan, MD, MBA – chair of radiation oncology at Dana-Farber Cancer Institute, Brigham and Women's Hospital, Boston Children's Hospital, and Massachusetts General Hospital, and chief of radiation oncology at Mass General Brigham – never hesitates to reach out to Harari.

"Paul is often the first person I call when I'm struggling with a major career or work-life decision," Haas-Kogan says. "He will listen carefully, understand my perspective, and infuse me with the confidence I needed to make a difficult decision."

Harari was honored with the American Society for Radiation Oncology's 2024 Gold Medal Award, the organization's highest honor, bestowed upon revered members who have made outstanding contributions to radiation oncology.

"Recognition from peers in the field you love is gratifying," Harari says. "This award reflects my good fortune to have had inspirational mentors and outstanding institutions at which to learn, practice medicine, perform research, and gain leadership skills."

HOWARD BAILEY, MD (PG '90, '92)

As a teenager, Bailey did not envision himself becoming the head of anything, much less becoming director of the UW Carbone Cancer Center – one of the nation's most distinguished academic cancer centers and among the first comprehensive cancer centers funded by the National Cancer Institute (NCI).

A farm kid from Wyndmere, North Dakota (population 450), Bailey is a first-generation college student who did not think about medicine as a career until his first year at the University of North Dakota (UND). In 1981, he was admitted to the UND School of Medicine and Health Sciences, becoming only the second person from his hometown to go to medical school.

"I was not a great student in general, but I enjoyed the sciences and studying the human body," Bailey recalls.

Before earning his medical degree, Bailey had an epiphany that would chart his professional course for 40 years.

"I remember this elderly patient with a very aggressive cancer," he says. "Her caregivers were doing everything they could to get her ready for one last car ride so she could see the fall harvest, and the nobility of it all really struck me. This heavily influenced my decision to specialize in oncology."

After completing an internal medicine residency at Southwestern Michigan Area Health Education Center in Kalamazoo, Bailey says he was thrilled when the SMPH took him on as a medical oncology fellow in 1988.

"Typically, pedigree matters, and on paper, I wasn't much," he admits. "Some places where I applied hardly gave me the time of day. Coming to UW–Madison was a great opportunity, and this is where my passion for research and patient care blossomed."

Bailey and his wife expected to leave Madison once he completed the medical oncology fellowship and a subsequent research fellowship, but a faculty vacancy presented Bailey with an unexpected opportunity. With encouragement from Paul P. Carbone, MD – the namesake of today's cancer center – Bailey applied for and got the position.

Bailey's clinical and translational research has focused on the development of new agents that treat disease more effectively and help prevent cancer, resulting in near continuous funding from the NCI for more than 30 years.

"The Carbone Cancer Center was one of the country's first purveyors of chemoprevention clinical trials," says Bailey, a former chair of the American Society of Clinical Oncology's Cancer Prevention Committee. "This work played a pivotal role in the evolution of vaccines to prevent human papillomavirus and breast cancer. It also helped identify beneficial anti-cancer aspects of green tea, pomegranate, resveratrol, and flavopiridol."

Empathy and Compassion

As a clinician, Bailey immediately sensed the importance of sensitivity and empathy when caring for patients with chronic, often life-threatening diseases.

"When you are sitting down to tell someone they are going to die, whether they are 19 or 90, it is essential to do that with utmost compassion," Bailey says. "I wanted to learn to get it right."

Bailey's clinic days often run late because he wants to give each patient as much time as warranted.

"If a patient needs two hours, they get two hours," he says. "Even if it is my 20th appointment that day, it is always the first for the patient."

Renee Gray, a 13-year survivor of ovarian cancer from McFarland, Wisconsin, says Bailey never forgets that a cancer patient is a person with a disease, not the disease itself.

"He is a human being who cares for other human beings," says Gray, whose late husband, Aaron Gray, died in 1998 from a rare cancer at age 34. "Dr. Bailey not only cared so compassionately for Aaron, but he was so kind to my children and me. He reminds you of the saying that you remember a person above all because of how they make you feel."

Since being named director of the UW Carbone Cancer Center in 2015, Bailey has routinely tapped into the talent surrounding him, from colleagues to staff, community supporters, and volunteers.

"Howard has an endearing quality of empowering others and making them feel that they are truly making a difference," says Tim Cleary, chair, UW Carbone Cancer Center Advisory Board.

Sports-Legend Support

Among those who have helped Bailey enhance the UW Carbone Cancer Center's brand and triple the annual amount of money raised through philanthropy are two Wisconsin sports legends: two-time U.S. Open golf champion Andy North and UW Badgers Men's Basketball Coach Greg Gard.

"We don't always appreciate what an incredible cancer research powerhouse lies in our backyard," says North, who with his wife Susan North, have spearheaded the Andy North and Friends initiative since 2009.

The initiative, which has raised more than $18 million for the UW Carbone Cancer Center, has paid off many times over.

"Because of federal grant support, every dollar we raise turns into $12 to $15 that supports cancer research right here, and Howard has been a big part of that," says Andy North.

Coach Gard and his wife, Michelle Gard, got to know Bailey shortly after the coach's father, Glen Gard, was diagnosed with an incurable brain tumor in 2015.

"Howard was immensely helpful during my dad's treatment," Greg Gard says. "We knew it was an uphill battle, which he ultimately lost, but Howard made himself available to us for support whenever we needed it."

With tremendous gratitude for Bailey and his colleagues, the Gards decided to give back by launching the Garding Against Cancer initiative, which includes events in Madison and throughout Wisconsin. Their efforts have raised more than $9 million for UW Carbone Cancer Center since 2016.

"Michelle and I were both born and raised here, so we wanted to impact people across the state. My dad was all about helping your neighbor, and having Howard's strong support helped make Garding Against Cancer successful," says Greg Gard.

With retirement in his plans, Bailey – with his wife and two grown children – looks back on his 36 years in Madison with tremendous pride.

"Howard always maintains a great work-life balance," says Mark Albertini, MD (PG '87, '91), one of Bailey's longtime colleagues and friends. "It has been such a pleasure working alongside him for nearly four decades. I look forward to spending more time with Howard as he begins the next chapter of his life."

THOMAS GRIST, MD

If there was a genetic marker for innovative craftsmanship, Thomas Grist, MD, would test positive. His great-grandfather, who built the house in Appleton, Wisconsin, where Grist was raised, invented the automatic pop-up toaster. His father invented a special welding technique used to build the lunar-landing module that allowed Apollo astronauts to walk on the moon more than 50 years ago.

As for Grist, a faculty member in the SMPH Departments of Radiology and Medical Physics since the early 1990s, his body of work has significantly touched the lives of millions of patients around the world.

Grist's fascination with medicine began in middle school while learning about Christiaan Barnard, MD, a South African heart surgeon and medical innovator best known for performing the world's first heart transplant in 1967.

"The way he combined medicine and engineering intrigued me," Grist recalls.

Grist studied biomedical engineering at Marquette University in Milwaukee, Wisconsin, and spent his college summers working up the road at the Waukesha facilities of GE Medical Systems, now GE HealthCare.

"I was one of the first seven engineers at GE HealthCare to work on a promising technology we now know as magnetic resonance imaging (MRI)," Grist says. "MRI was transformational because it gave us a much more detailed look at tumors or injuries within the body's soft tissues compared to previous methods. We did not have that kind of information on an X-ray. MRI enabled us to diagnose diseases in places like the brain, heart, or pancreas without using ionizing radiation. MRI is widely viewed as one of the greatest medical discoveries of the 20th century, and before long, GE HealthCare became one of the industry's pioneers in developing and manufacturing MRI scanners."

Pioneer in Magnetic Resonance Applications

After completing his radiology residency at Duke University, Grist joined the SMPH faculty in 1991. He worked closely with two mentors – Charles Mistretta, PhD, and Patrick Turski, MD, FACR, now emeritus professors – to develop a non-invasive approach, called magnetic resonance angiography, for visualizing blood vessels. For patients, this breakthrough avoids the need to undergo more invasive catheterization or angiogram procedures. Instead, detailed imagery of blood vessels is achieved simply through an intravenous infusion of a contrast dye.

Throughout more than three decades at the SMPH – including serving as chair of the Department of Radiology from 2005 to 2023 – Grist has played a pivotal role in the development of multiple MRI applications, including a form of magnetic resonance angiography called 3D TRICKS (time-resolved imaging of contrast kinetics).

"Essentially, TRICKS tracks a patient's blood flow during an MRI procedure," Grist says. "It creates multiple, three-dimensional images of blood vessels so we can quickly and precisely visualize physiology and disease."

Former UW–Madison Chancellor John Wiley, PhD, benefited from 3D TRICKS after passing out while doing hobby welding in 2013. Thanks to 3D TRICKS, Grist determined that Wiley's subclavian artery was diverting blood destined for Wiley's brain to his arms, which he had raised while welding. A stent was placed in the artery, and Wiley fully recovered.

Starting before and continuing throughout his 18-year span as chair of the Department of Radiology, Grist negotiated several strategic agreements between UW–Madison and GE HealthCare relating to imaging modalities.

"Having Tom Grist's guidance and advice over the years has been invaluable. His leadership and contributions have created a foundation

–Continued on page 36

Manish N. Shah, MD, MPH (left), and Azita G. Hamedani, MD, MPH, MBA

Ten Life-Saving Years

THE BERBEEWALSH DEPARTMENT OF EMERGENCY MEDICINE CELEBRATES A MILESTONE

by Treena Fischer

In 2024, the BerbeeWalsh Department of Emergency Medicine (DEM) marked a decade of outstanding patient care, education, and research as an academic department at the University of Wisconsin School of Medicine and Public Health (SMPH).

"There was no academic emergency medicine at UW–Madison when I joined the school's faculty in 2006, but there was incredible potential," says Azita G. Hamedani, MD, MPH, MBA, founding division chief of emergency medicine from 2009 to 2014, then founding chair of the department upon its creation. "With Dean Robert Golden's support, we set a goal to build one of the best emergency medicine programs in the country. Ten years later, we have accomplished more than I ever hoped or envisioned."

The department has quickly become a national leader in academic emergency medicine, spurred by a transformative gift from James Berbee, MD, MS, MBA (PG '14), and Karen Walsh, who have longstanding ties to the department and university. Their gift supported a rapid expansion of the department's clinical footprint, educational programs, and research enterprise, led by Manish N. Shah, MD, MPH. Having been recruited to the department in 2015 to build its research portfolio, Shah stepped up to helm the department as chair in 2022.

"We take pride in the incredible things our department has achieved and the trajectory we're on to address some of the greatest challenges in emergency medicine today," Shah says.

Clinical Impact

DEM's 70 physicians and 26 advanced practice providers deliver critical, time-sensitive care to nearly 120,000 patients

Jamie Hess, MD, MMM (left), and Joshua Glazer, MD '11

annually at four emergency departments (EDs) in Madison.

The flagship BerbeeWalsh Emergency Department at University Hospital, part of UW Health, provided care for nearly 70,000 adult and pediatric patients in 2023. The state-of-the-art facility handles the region's most serious and complex emergency conditions, including traumatic, infectious, oncologic, and cardiac emergencies. Innovations like its Extracorporeal Cardiopulmonary Resuscitation Program — a collaborative with cardiac surgery — and operational innovations like CareSTART — a physician-staffed triage/fast-track area — tackle big challenges with even bigger ideas.

The ED at UW Health East Madison Hospital is the DEM's fastest growing site; its annual patient census has more than tripled since opening in 2015. To meet the rising demand for emergency care, particularly for the sickest patients that only UW Health can care for, the health system is expanding both EDs, with plans to open nearly 60 new patient care rooms by 2026.

The dedicated pediatric ED at University Hospital, affiliated with American Family Children's Hospital, is a regional leader in specialized emergency care for children. The unit's team has grown from three to 10 fellowship-trained pediatric emergency medicine physicians who have built strong partnerships across UW Health Kids, ensuring 24/7 care and access to specialized emergency services for its most vulnerable patients.

At the William S. Middleton Memorial Veterans Hospital's ED, an expansion to round-the-clock coverage by board-certified emergency physicians has been complemented by nationally acclaimed quality-improvement initiatives. This ED recently earned Level 2 Geriatric Emergency Department Accreditation from the American College of Emergency Physicians — one of only three in Wisconsin.

Turning 40 in 2025, UW Health Med Flight predates the DEM. Since its inception, this premier critical-care-transport service has added three helicopters and opened three new air bases to better serve the region. By expanding its resources and capabilities, Med Flight's team of highly trained physicians, nurses, and respiratory therapists can deliver world-class emergency care to more critically ill and injured patients across the upper Midwest. The team's use of advanced technology in the field, such as carrying whole blood and transporting patients on extracorporeal membrane oxygenation, known as ECMO, continues to improve trauma care and health outcomes in the region. Med Flight's role in the UW Organ and Tissue Donation program further underscores its life-saving impact.

One of the Med Flight helicopters

Excellence in Education

The last decade has seen unprecedented progress in the department's educational mission. Its residency program has grown from 18 to 39 residents, providing future emergency physicians with comprehensive training in academic and community settings. In addition to its landmark "3+1" training model, which offers residents a capstone year of protected niche training after graduation, the DEM now sponsors 10 fellowship programs, many accredited, in areas such as emergency medical services, critical care, global health, medical education, and ultrasound.

From community medical directors to residency program leaders, professional sports team physicians to institutional directors of disaster medicine, the DEM has recruited and graduated the brightest up-and-coming leaders in its specialty. A growing alumni network is working to advance health care practice, education, and policy worldwide.

It is no surprise that emergency medicine has become a top specialty choice for students at the SMPH. The field is now a required rotation for medical students, providing early exposure to the fast-paced, multifaceted specialty. Beyond traditional medical education, the DEM's commitment to inclusivity extends to exceptional opportunities for students from disadvantaged backgrounds and those passionate about serving marginalized communities.

Pioneering Research

Research is a cornerstone of the department's impact.

"We are among the most highly funded research programs in emergency medicine, making profound discoveries that are being translated into practice and improving patient care," says Shah.

—Continued on page 36

At East Madison Hospital (left to right): Megan Gussick, MD '12 (PG '15), Brian Sharp, MD, and Meinkeng Stephannie Acha-Morfaw, MD

Swan Song

EXHIBIT HONORS THE PEOPLE, ANIMALS, AND ARTIFACTS RELATED TO THE HISTORY OF THE HEALTH SCIENCES

Ebling Library staff members Joe King, MA (left), and Mary Hitchcock, MA, MS, view items in the Swan Song exhibit.

by Kris Whitman

As a parting gift to cap off her nearly 25 years at University of Wisconsin–Madison, Micaela Sullivan-Fowler, MS, MA, curated an exhibit, "Swan Song: Adoration and Thanks for All Who Made This Possible," in the Ebling Library for the Health Sciences. The exhibit will be available through spring 2025 for anyone to view in the Historical Reading Room of Ebling Library inside the Health Sciences Learning Center.

The history of the health sciences librarian and curator of rare books and special collections, Sullivan-Fowler says, "Swan Song honors the people, animals, donors, bodies, students, artists, and others who made my storytelling and research guidance possible. You'll learn how a narrative is created from diverse sources, discover previously unheralded voices, appreciate raw material used by modern artists or researchers, sigh at the primary material from recent public health issues, and encounter how one image can provoke multiple lines of inquiry."

She continues, "Like the ephemera, a flower that was pressed between the pages on miscarriage, the last bit of morphine in a 1918 doctor's box, the messy ink smudges in Dr. Betty Bamforth's anatomy text, the ad in the *American Journal of Surgery* espousing the benefits of cigarettes; all have the potential to act as scaffolding in a historical narrative, and provide evidence in a discourse on health care, and health's relationship to the world as a whole."

Describing Ebling's collection — including many items provided by

Micaela Sullivan-Fowler, MS, MA (top right), and her colleagues hosted an opening reception for Swan Song in November 2024.

donors — as an "extraordinary legacy," Sullivan-Fowler says, "If you can spend time reviewing these collections, they can tell you stories you never expected."

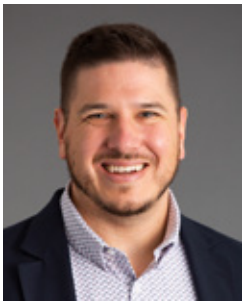
Noting that Sullivan-Fowler has worn many hats, including as head of Ebling's marketing and communications, Christopher Hooper-Lane, MA, AHIP, library director, says, "Micaela has been acknowledged in dozens of books, and she is an amazing educator — daily with library patrons; through courses with the Department of Medical History and Bioethics; and in various seminars and podcasts."

Sullivan-Fowler earned graduate degrees in library science from University of Illinois, Champaign-Urbana, and in public history from Loyola University, Chicago. In 2021, she won the Librarians, Archivists, and Museum Professionals in the History of the Health Sciences Lisabeth M. Holloway Award for significant contributions to the profession and organization, and its 2021 Best Online Resource Award for "A UW–Madison Research Guide on the Pandemic of 1918."

A 2019 exhibition created by Sullivan-Fowler, "Staggering Losses: WWI and the Influenza Pandemic of 1918," was covered in *Quarterly*, Volume 22, Number 2, 2020. She and colleagues also recently created the Health Advertisements Database from Ebling Sources, called HADES, which is a searchable database of historical, health-sciences advertisements (search.library.wisc.edu/digital/AMedicalAds).

Having retired in December 2024, she is looking forward to spending time with her family, expanding her garden, traveling, and reading, of course. She remains reachable at Micaela.sullivan-fowler@wisc.edu in her retirement.

Tillman is the New Associate Dean for Admissions



David Tillman, MD (PG '15, '16), became the associate dean for MD admissions for the University of Wisconsin School of Medicine and Public Health (SMPH) in June 2024. He leads recruitment and admissions efforts for the MD program. An associate professor in the BerbeeWalsh Department of Emergency Medicine, he will continue to serve as an emergency medicine and Med Flight physician at UW Health.

Tillman's strategic-planning efforts have led to the development of a highly successful and tailored student advising system. He has elevated emergency medicine to a highly sought-after specialty among SMPH medical students and was pivotal in advancing the emergency medicine curriculum and clinical experience for a diverse body of students. Nationally, Tillman has been a pioneer in establishing advising standards for medical students preparing to apply for emergency medicine residencies. His presentations and publications have focused on student success, equity, and process improvement.

"I can think of no better steward for the admissions process," notes Mary Westergaard, MD, a professor of emergency medicine who previously served as interim associate vice chair for faculty development in the BerbeeWalsh Department of Emergency Medicine.

Tillman earned his medical degree from The Ohio State University College of Medicine. During his emergency medicine residency at UW Health, he served as chief resident; he then completed a fellowship in undergraduate medical education in emergency medicine at the SMPH and, in 2016, joined the faculty.

Walaszek Becomes the Associate Dean for Faculty Affairs and Development

Art Walaszek, MD, professor of psychiatry and medicine, is the new associate dean for faculty affairs and development at the University of Wisconsin School of Medicine and Public Health (SMPH); he began the role in December 2024.

Walaszek joined the faculty of the SMPH Department of Psychiatry in 2002 and has held numerous roles, including as the residency training director and vice chair for education and faculty development in that department. As associate dean, he focuses on developing, implementing, and assessing faculty development programs, including managing faculty promotions and awards.

The school's Office of Faculty Affairs and Development provides resources to support academic and professional development for approximately 2,000 faculty members.

"Our faculty serve as the foundation for all our missions," says SMPH Dean Robert N. Golden, MD. "Supporting their ongoing professional growth and development is the cornerstone for achieving our vision."

Walaszek provides care to older adults with psychiatric illnesses. As a member of the Wisconsin Alzheimer's Disease Research Center and Wisconsin Alzheimer's Institute, he leads public health research on the care of people living with dementia.

Walaszek earned his medical degree from Northwestern University Medical School in Chicago. He completed a psychiatry residency at University of Washington Affiliated Hospitals, Seattle, and a geriatric psychiatry fellowship at Northwestern Memorial Hospital in Chicago.

Fiore Honored with Award from the National Academy of Medicine

Michael Fiore, MD, MPH, MBA, founding director of the University of Wisconsin Center for Tobacco Research and Intervention (CTRI), accepted the National Academy of Medicine's Gustav O. Lienhard Award for Advancement of Health Care at the academy's meeting in October 2024.

The academy presented the medal for Fiore's leadership to advance science and translate research into medical practice to help people address their tobacco use.

Fiore, a professor emeritus of medicine at the UW School of Medicine and Public Health, led the CTRI for 32 years with Tim Baker, PhD, founding associate director.

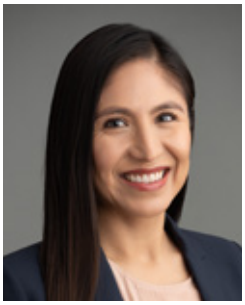
Clinicians and health care systems largely ignored smoking until the 1980s. Fiore initiated multiple efforts to integrate evidence-based tobacco-dependence treatment into health care. As a result, millions of smokers have quit.

In 1991, he proposed that tobacco-use status be adopted as a vital sign for every patient at every health care visit. Today, that is the standard nationwide.

He chaired the panels that produced all editions of the U.S. Public Health Service's (PHS) Clinical Practice Guideline: Treating Tobacco Use and Dependence.

Further, Fiore chaired the first U.S. Health and Human Services Subcommittee on Tobacco Cessation, ultimately resulting in the establishment of a national quit line for smoking cessation; served as an expert witness in the U.S. Department of Justice lawsuit against the tobacco industry; and led efforts to use electronic-health-record technology to integrate tobacco-dependence treatment into health care.

Anaya Named a Fellow of the National Academy of Medicine



Yohualli B. Anaya, MD, MPH, has been named the 2024 National Academy of Medicine (NAM) Fellow to Advance State Health Policy. An associate professor in the Department of Family Medicine and Community Health at the University of Wisconsin School of Medicine and Public Health, Anaya will have the opportunity to experience and participate in evidence-based health care or public health studies that improve the care and access to care of patients in domestic and global health care systems. She was chosen for the two-year fellowship based on her qualifications, accomplishments, and expertise relevant to the work of the NAM and the National Academies of Sciences, Engineering, and Medicine.

"The fellows will play an active role in our process of developing comprehensive policy solutions to provide health advice to the nation and globally," notes NAM President Victor J. Dzau, MD.

Anaya practices primary care medicine at Wingra Family Medical Center in Madison. Her research interests include equity in access to health care, including immigrant health, workforce, and policy.

The NAM, initially called the Institute of Medicine when it was founded in 1970, is an independent organization of eminent professionals from diverse fields, including health and medicine; the natural, social, and behavioral sciences; and beyond. It serves alongside the National Academy of Sciences and the National Academy of Engineering as an adviser to the nation and the international community.

Aggarwal Participates in Fellowship Through Two National Organizations

Nakul Aggarwal, PhD '22, a neuroscientist and medical student, has been awarded a fellowship through a partnership of two organizations — the American College of Neuropsychopharmacology and Americans for Medical Progress. Called the Biomedical Research Awareness Day (BRAD) Fellowship, it aims to raise public awareness about the importance of biomedical research, particularly animal-based work, in driving medical discoveries and advancing patient care.

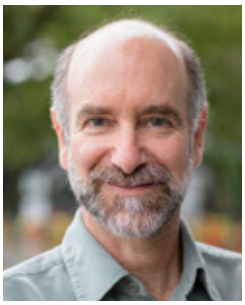
Aggarwal hopes to focus his fellowship project on the role of cross-species research in basic, translational, and clinical science domains.

"I am particularly excited to extend efforts to increase patients' awareness of biomedical research and garner public support, which is integral to the long-term outlook of animal-based scientific inquiry," he says.

BRAD is an outreach program that educates the public about why, when, and how animals are involved in research. This international day of events, hosted by individual research institutions, staff, and volunteers, honors the role of animals in improving human and veterinary medicine.

Aggarwal is a student in the University of Wisconsin School of Medicine and Public Health's Medical Scientist Training Program. His graduate work included cross-species, translational studies that characterized white-matter alterations in early-life pathological anxiety. He plans to enter a research-track psychiatry residency in summer 2025 and pursue a career as a physician-scientist in child and adolescent psychiatry.

Patz Leading Center Focused on Energy, Climate, and Health



Fast-emerging policies to combat climate change often ignore short-term human health and equity considerations. A new University of Wisconsin–Madison center will address that gap by establishing evidence to help guide policy decisions that maximize health benefits and reduce planetary warming.

The Health-First Climate Action Research Center launched in September 2024 with a $3.8 million grant from the National Institutes of Health. Jonathan Patz, MD, MPH — a Vilas Distinguished Professor in the UW School of Medicine and Public Health's (SMPH) Department of Population Health Sciences — leads the center. It brings together faculty and staff from UW–Madison, UW–Milwaukee, and the Medical College of Wisconsin, Milwaukee.

"Recognizing the threat, societies are now motivated to reduce their dependence on fossil fuels," says Patz, also a professor of environmental sciences. "Our center will operate with a community-driven, health-first approach to climate policymaking."

As work begins, the center is focusing on citizen-scientist engagement; community use of air-pollution monitors; decision-making models that balance policymaker and community needs; and assessment of links between climate change and childhood asthma in Milwaukee public schools.

Other SMPH leaders associated with the center include Bruce Barrett, MD, PhD (PG '97), professor of family medicine and community health and of population health sciences, and Jomol Mathew, PhD, associate professor of population health sciences.

2024 BELZER AWARDS *Continued from page 29*

and legacy that will be felt for years, propelling us to a bright future. We are incredibly grateful and proud of this longstanding partnership and the significant impact on improving care for millions of patients across the world," says Manuela Govin, executive - academics, GE HealthCare.

Grist also was instrumental in GE HealthCare's multi-million-dollar flagship gift to help launch construction of the first Wisconsin Institutes for Medical Research (WIMR) tower, which opened in 2008 and includes laboratories, imaging rooms, and radiation sciences research space.

"GE HealthCare's gift was the catalyst for the Medical Imaging Services Core at WIMR," Grist says. "The gift brought together many people who used to be in disparate campus locations, and it has fostered invaluable collaboration among researchers in the Departments of Radiology and Medical Physics who specialize in MRI, computed tomography (CT), ultrasound, positron emission tomography (PET)/CT, and PET/MR."

Faculty Expansion

During his tenure as chair, Grist more than doubled the number of Department of Radiology faculty members from 63 to 134.

"Clinical demand for imaging has grown substantially, along with patient volume across the UW Health system," says Grist. "Moreover, the Medical Imaging Services Core has enabled us to significantly boost our research and education capacity. Ultimately, however, it is about the quality of the people we have been able to recruit. With their dedication to innovation and clinical excellence, the department is in good hands."

Ironically, Grist's first faculty hire nearly two decades ago, Scott Reeder, MD, PhD, succeeded Grist as chair in early 2024.

"Tom is one of those unusual people who combines an extensive background in technical innovation with a strong sense of humanity and values," Reeder says. "He has been a wonderful mentor to me and has helped set this department up for even greater success. He also likes to have fun and live life to the fullest, be it kite surfing, water skiing, cross-country skiing, or bicycle riding. Because Tom also loves to dance, in late 2023, the department held a disco party to celebrate his 18 years as chair."

To honor Grist, in 2024, the GE HealthCare Foundation established a $3 million endowment fund to help the Department of Radiology recruit, retain, and recognize an outstanding research leader. From now on, the department's position of vice chair of research also will be named the Thomas Grist, MD/GE HealthCare Foundation Distinguished Chair in Radiology Research.

The only thing greater than Grist's commitment to UW–Madison and his department is his love for his wife and their five grown children.

"Tom truly does it all," says Reeder. "He's a kind, compassionate person, an outstanding radiologist, a remarkable innovator, and a great leader, and he puts it all in one hat."

TEN LIFE-SAVING YEARS *Continued from page 31*

The DEM leads groundbreaking research programs in brain health, infectious disease, informatics, and more. Much of this work focuses on improving care for older adults, particularly those with dementia, by enhancing emergency care and transitions to home and community care.

Its innovative Emergency Department Research Coordinator Program, launched in 2016, has enrolled thousands of patients into studies led by UW–Madison and industry researchers, including medical device trials. This program serves as a national model that allows investigators to efficiently and effectively carry out high-quality studies.

A Commitment to Humanism

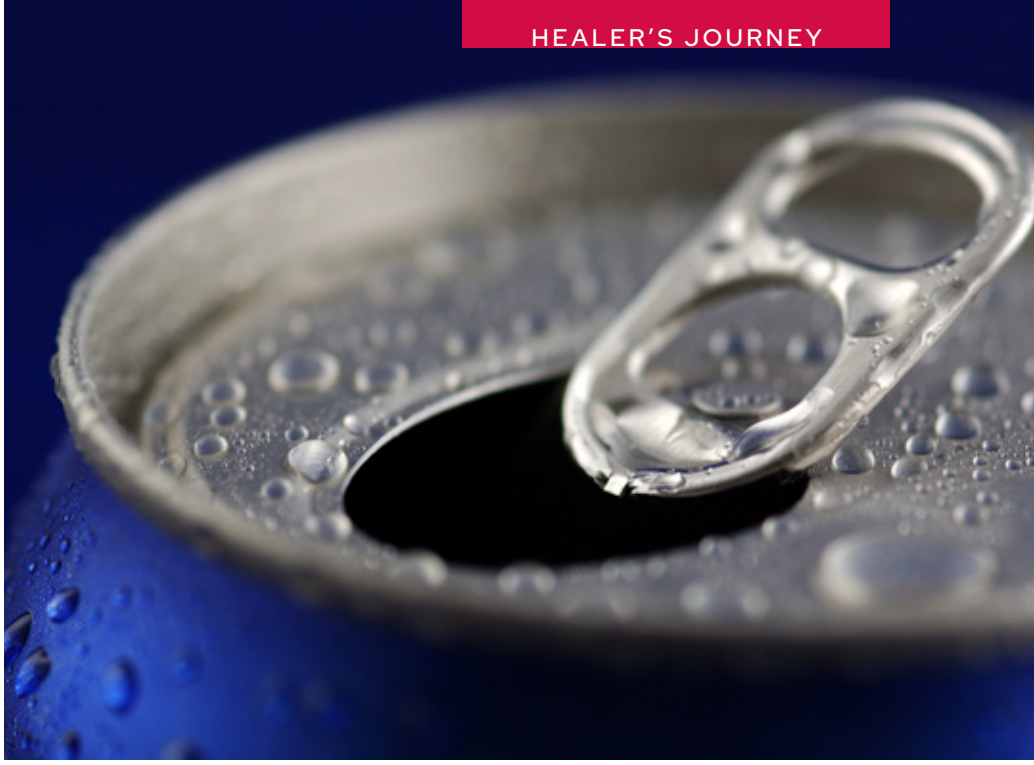
At the core of the DEM's mission is a commitment to humanism in medicine. Every aspect of its work is guided by the belief that health care should respect the dignity of each patient, in addition to treating illnesses and injuries. This patient-centered philosophy is reflected in the department's holistic care, particularly for vulnerable populations, ensuring that emotional and psychological well-being is always considered alongside physical health.

Forward Focused

DEM's influence continues to grow. Holding leadership roles across the SMPH and UW Health, emergency medicine faculty members are helping shape the future of health care delivery and education, to best serve patients and learners throughout the enterprise.

As it celebrates 10 years as an academic department, the BerbeeWalsh Department of Emergency Medicine's commitment to remarkable health care will continue to drive it forward, always focused on turning adversity into opportunity and improving emergency care in Wisconsin and beyond for decades to come.

Simanjit Mand, MD



The Pepsi

by Nick Gallo, MD

Mr. G didn't look too good. BIPAP forced oxygen into his barrel-shaped chest, where emphysematous lungs wheezed audibly with each breath. Accessory muscles tugged with all their might. A cardiac device rested in a skin pocket below his left clavicle. An irregularly irregular heart rhythm scribbled across the monitor.

Tattooed on his chest was a long scar from a previous triple bypass. Thin skin spread tightly over brittle bones. The stigmata of lifelong tobacco use were evident even from outside his room (my theory was confirmed after finding a crumpled pack of Marlboros in his pocket). His appearance resembled that of a skeleton, yet he was full of life.

The weakness and shortness of breath that landed him in the intensive care unit (ICU) were explained by multiple abnormalities, including acute anemia from a diverticular bleed; pneumonia resulting in an acute exacerbation of chronic obstructive pulmonary disease; and atrial fibrillation with rapid ventricular response. When I first met Mr. G, we discussed the severity of his illness and the fact that he would be staying in the ICU. He responded by asking, "Doc, give it to me straight, do you think I'm gonna make it? I just want to see my daughters again – they are my pride and joy. I've been pretty sick the past few years, and they take good care of me at home."

I told him I was optimistic he would get through this and assured him our team would update his daughters regularly. He followed up by stating, "They don't even let me drink Pepsi because of my diabetes. Do you think I can have one if I get out of here?" I asked him to relax as best he could to focus on his breathing and promised him a Pepsi when he got out of the ICU. His only follow-up question was, "Can I get that in writing?"

Through the peaks of his illness, he never lost his quick wit and quickly became a fan-favorite patient on the floor. His raspy voice roared over the noise from his BIPAP and the other machines in the ICU. Nothing short of intubation and sedation was going to stop the endless flow of jokes and stories. He shared tall tales from growing up as a "tough guy" on the south side of Chicago, serving in the military, traveling the world, and living what he called a "fast and loose lifestyle."

When I rounded with his nurses, it became common practice to talk about his care plan then exchange Mr. G stories. He gradually improved as I had hoped, but it was clear he would need to get stronger before going home to his daughters.

One morning, I received a call from our house supervisor who asked if Mr. G would be appropriate for transfer to a non-medical floor. I selfishly wanted him to stay on my service but reluctantly agreed to the transfer. With Mr. G leaving the ICU and my promise in mind, I set out to find a Pepsi. After losing $1.80 to two different vending machines, I finally secured a sweet can of soda from the VA Canteen. When I met with Mr. G later that day, I told him I had both good and bad news to share. The bad news was that he was too healthy to be on my service. The good news was that he could finally have the Pepsi he had been craving. "Doctor's orders," I told him.

For the first time during his admission, he was speechless. With watery eyes, he took one of my hands in both of his and held me tight. He expressed his gratitude and left me with these parting words, "Have a fun life kiddo; don't forget to cause some trouble."

I won't ever look at a can of Pepsi the same way again.

ABOUT THE AUTHOR

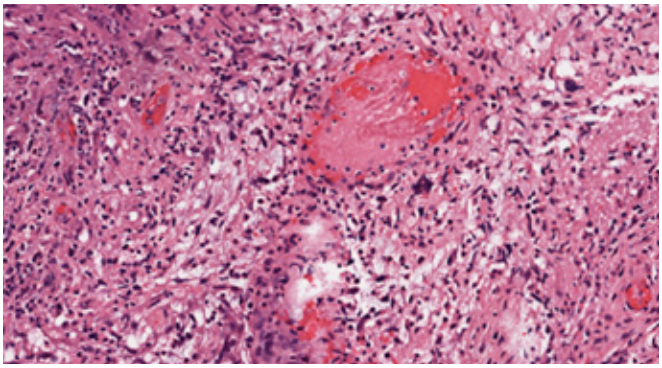
Nick Gallo, MD, is a third-year internal medicine resident at UW Health. This piece tells the story of one of his most memorable patients, highlighting human resilience. Creative writing has become an outlet for Gallo to reflect on the challenges of residency and honor his patients through their unique stories. He will continue his training in a pulmonary and critical care fellowship at the University of Illinois in Chicago, where he will explore his interest in the intersection between pulmonary and palliative care medicine. Gallo grew up in Western Springs, Illinois, and was exposed to medicine through his parents – Steven Gallo, MD, and Regina Gallo, RN – a physician and nurse, respectively. The younger Gallo earned his medical degree at Rush University in Chicago. In his free time, he enjoys reading nonfiction and participating in hot yoga and endurance exercise; he recently completed his first half-Ironman.

AI Helps Identify Sex-Specific Risks Associated with Brain Tumors

A University of Wisconsin School of Medicine and Public Health (SMPH) research team has developed an artificial-intelligence (AI) model to identify risk factors for aggressive glioblastoma and how they differ between sexes.

Pallavi Tiwari, PhD, associate professor of radiology, bioengineering, and medical physics, and her colleagues published their findings in *Science Advances*.

Glioblastoma is more common in men than women, and these tumors in men are often more aggressive, with median survival after diagnosis being 15 months. But prior to this study, identifying characteristics that



forecast which tumors will likely grow more quickly has proven elusive.

"The ton of data collected in a cancer patient's journey has previously only been studied in a siloed fashion. AI has huge potential here," says Tiwari.

Tiwari and her former graduate student Ruchika Verma, PhD, analyzed digital images of pathology slides in search of patterns that might forecast the pace of tumor growth and the length of patient survival. They built a model that can identify patterns that might not be apparent to the naked eye. Using data from multiple studies of glioblastoma patients, they trained the model to recognize characteristics such as the abundance of certain cell types and the degree to which these invade surrounding healthy tissue. AI can also identify patterns of characteristics and survival time for each sex. For females, higher-risk characteristics include tumors infiltrating into healthy tissue. Among males, the presence of certain cells that surround dying tissue is associated with more aggressive tumors.

The researchers hope the new knowledge helps improve patient outcomes.

Humid Heat Affects Dialysis Patients

Dialysis patients — especially those in humid cities in the southeastern United States — have higher death rates during extreme heat events.

That's according to a new, population-based study from the University of Wisconsin School of Medicine and Public Health (SMPH). Researchers found that deaths among adults on dialysis for kidney failure jumped between 15 and 20 percent during extreme humid-heat events, defined as having a heat index greater than 105 degrees Fahrenheit for two or more days or more than 115 degrees for one day.

"A warming planet poses higher risk to vulnerable populations," says Matthew

Blum, MD, MHS, an assistant professor in the SMPH Department of Medicine and a nephrologist at UW Health. "We need to find ways to protect them from extreme weather."

Dialysis patients often have conditions such as diabetes and heart and lung diseases, which make it more difficult for them to tolerate extreme heat, according to Blum. Also, people with kidney failure have difficulty regulating body temperature.

For the study, published in the *American Journal of Kidney Diseases*, Blum and colleagues analyzed records from 945,251 patients. During the 20 years covered by the study, 498,049 patients were exposed to at least one extreme-heat event. The largest number occurred in the South (49.3 events per urban area).

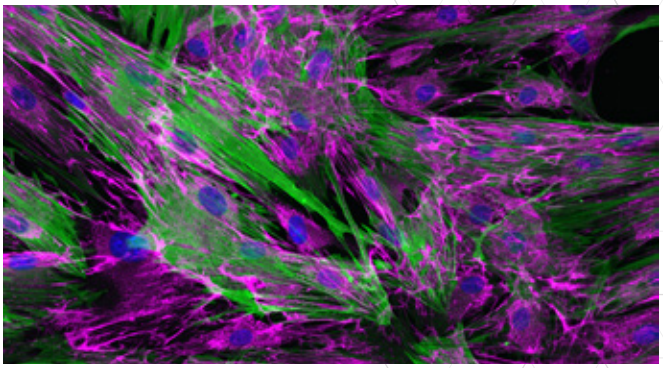
A total of 500,025 deaths occurred during 2.5 million person-years of follow-up, with exposure to an extreme-heat event associated with an 18-percent-higher risk of death. Data were adjusted for multiple variables. The greatest relative risk of death was associated with the southeastern United States, which accounted for more deaths than the Southwest despite a similar number of extreme events.

The most common causes of death included myocardial infarction, cardiac arrest or arrhythmia, congestive heart failure, and sepsis.

Research Aims to Stop Progression of Lung-Scarring Disease

An interdisciplinary group of scientists from the University of Wisconsin School of Medicine and Public Health and its Institute for Clinical and Translational Research (ICTR); UW College of Engineering; and UW School of Pharmacy will investigate biological processes that promote lung scarring from idiopathic pulmonary fibrosis (IPF). With the aid of artificial intelligence and advanced 3D modeling, they also will develop and refine imaging techniques and drug delivery systems that could help stop IPF's progression.

The new work is possible thanks to nearly $11 million in funding from the U.S. Department of Defense.



NATHAN SANDBO LABORATORY

IPF kills an estimated 40,000 people every year in the United States. Despite this, researchers still do not understand exactly how and why IPF takes hold and progresses, and doctors have few effective therapies.

"New, creative, and transdisciplinary research teams are needed to push the boundaries of existing disciplines to address this complex disease," says Allan Brasier, MD, executive director of ICTR. Brasier, who is leading the study, is a globally recognized researcher of inflammation and its role in heart and lung diseases.

Patients with IPF often suffer significant breathing impairments that can limit their ability to maintain independence. The median life expectancy following diagnosis is three to five years, and IPF is a leading reason for lung transplantation.

The research collaboration has been three years in the making, with ICTR providing team-science support, program management, coordination, pre-awards, and compliance support to the team through its Strategic Research Alliance Program.

"Forever Chemicals" are Prevalent in Wisconsin Residents

Most Wisconsin residents have some "forever chemicals" (known as PFAS) in their blood, but those with the highest levels are higher-income, older white men who have eaten locally caught fish, according to a new study by researchers at the University of Wisconsin School of Medicine and Public Health. The study was led by Amy Schultz, PhD '19, MS, a scientist on aging.

PFAS are manufactured chemicals used widely in industrial and consumer products. They tend to concentrate higher in the food chain. Some earlier studies link PFAS to human health problems, including cancer, lower birth weight, and changes in puberty.

The study, published in *Environmental Research*, used blood samples from volunteers in the Survey of the Health of Wisconsin (now called Real-World Evidence to Advance Community Health, or REACH). Wisconsin State Laboratory of Hygiene (WSLH) scientists developed and used a new method to detect PFAS at lower levels, according to Meshel Lange, study co-author and WSLH laboratory manager.

The study also investigated correlations between volunteers' PFAS levels and their environment, eating habits, lifestyle, race, income levels, and other factors. The researchers found the strongest links between higher PFAS levels and those of older age, male gender, non-Hispanic white race, higher income levels, and those who eat locally caught fish.

Knowing who is most likely to be affected by PFAS can help researchers target public health messaging and interventions, but this study was unable to determine whether there is a cause-and-effect relationship, according to Schultz. She adds that, overall, PFAS averages were low in the study volunteers.

Next-Generation Diagnostics for Precision Medicine

When a patient presents to clinic, they embody a unique combination of lifestyle choices, genetics, social exposures, and diet, together with pathophysiological characteristics of their presenting illness. Professionals who provide precision medicine aspire to personalize diagnosis and treatment strategies to match each patient's needs as closely as possible.

The idea of providing the right treatment to the right patient at the right time is not novel by itself. Physicians already strive to identify and recommend interventions best suited for individual patients, in the light of available clinical evidence. However, since the early 2000s and completion of the first human genome sequence, technological breakthroughs in genomics have improved our ability to molecularly characterize each patient's genetic background and illness. This unprecedented level of granularity enabled us to better identify subsets from the "average" patient population and make more precise treatment decisions. Early examples of genomics-guided precision therapy include pharmacogenomic applications (such as genotype-guided warfarin dosing) and molecularly targeted cancer therapies (such as therapies for lung and breast cancer that target specific genetic mutations).

Over the last decade, our ability to collect data from individual patients across multiple modalities has expanded manyfold. Alongside molecular data about genetics and pathology, longitudinal data about physiology and exposures can be readily collected through wearable devices; multiomic analyses of blood and other body fluid samples; and public datasets of environmental and social determinants. Advances in data science and machine-learning methods allow integration of this information, together with imaging and electronic health records. While genomic sequencing technologies fueled its origins, the artificial intelligence (AI) revolution is poised to drive the era of precision medicine 2.0, with opportunities to develop next-generation diagnostics that can enable early detection, prevention, and interception of disease.

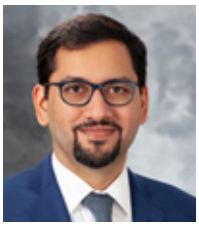
As an integrated health system, University of Wisconsin School of Medicine and Public Health (SMPH) and UW Health are well-placed to identify gaps in current clinical practice, develop technologies to address these gaps, and build evidence to translate them into improved patient outcomes. At the Center for Human Genomics and Precision Medicine (CHGPM) — supported by National Institutes of Health (NIH) funding — we are building scientific foundations to develop multimodal diagnostics across multiple diseases. For patients at high risk of developing cancer, earlier detection and interception improves the chances of achieving cure. In a project I lead in partnership with the Pancreatic Cancer Prevention Clinic led by Rebecca Minter, MD, MBA, professor and chair of surgery, and Carbone Cancer Center's BioBank led by Stephanie McGregor, MD, PhD, associate professor of pathology, we are applying machine-learning methods to develop multianalyte blood tests that could improve detection of pancreatic cancer and aid clinical decision-making in high-risk individuals.

Patients with rare genetic diseases and their families often face a diagnostic odyssey. At the CHGPM, we are evaluating whether the integrated analysis of genomic and molecular data together with electronic health records can improve our ability to diagnose rare genetic diseases. In recognition of these efforts, the Undiagnosed Disease Program at CHGPM — established by M. Stephen Meyn, MD, PhD, professor of pediatrics, and now led by Bryn Webb, MD, associate professor of pediatrics — was recently recognized as a Diagnostic Center of Excellence by the NIH.

Translating multimodal diagnostics into the practice of pathology also presents new challenges for assay validation and implementation. AI-driven integrated diagnostics to assist clinical decision-making are more complex than conventional molecular assays. In partnership with the UW Health Precision Health Program led by Elizabeth Kearney, MS, MBA, senior director, the CHGPM is building infrastructure and a pipeline to facilitate analytical and clinical validation of novel technologies and their transition from academic demonstrations into health care practices. Industry partnerships, such as those facilitated by Wisconsin's Regional Technology and Innovation Hub (Tech Hub), will be critical to advance promising candidates through clinical trials and regulatory approvals.

Expanding access to a new generation of AI tools has captivated popular imagination. These advances could enable us to accurately and rapidly analyze multidimensional data and offer personalized recommendations for prevention and treatment. At the CHGPM, we focus on separating reality from hype and building clinical evidence to lead the way into this next era of precision medicine.

MUHAMMED MURTAZA, MBBS, PHD
Director, Center for Human Genomics and Precision Medicine, and associate professor, Department of Surgery, University of Wisconsin School of Medicine and Public Health



... 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*.

HINT ABOUT PHOTO ABOVE:

This physician owns a dairy farm.

ABOUT LAST ISSUE'S PHOTO:

Brad Wozney, MD '95 (PG '98), won the prize drawing and will receive a gift from the Wisconsin Medical Alumni Association!

In the last issue of *Quarterly*, 42 people identified John Beasley, MD (PG '75), professor emeritus, Department of Family Medicine and Community Health in the University of Wisconsin School of Medicine and Public Health (SMPH).

Beasley earned his medical degree from the University of Minnesota. After stints in the Peace Corps and work in family planning, he completed a family medicine residency at the SMPH and joined the school's faculty. He became the director of medical student education and of the family medicine residency in Eau Claire and Madison, and the medical director of the Physician Assistant Program. He founded the Wisconsin Research and Education Network and co-founded the wide-reaching Advanced Life Support in Obstetrics Course. Now retired, he continues to present talks and write articles about human factors in medicine. His hobbies include maintaining vintage tractors and, until three years ago, flying his private airplane.

Contest entrants mentioned his ready smile and frequent jokes, and many said he let them fly with him to rural clinical sites – often letting them hold the yoke to feel the thrill of flying. Kathy Krohn-Gill, MD '83 (PG '86), called those experiences "the original zoom meetings!"

Osman Sanyer, MD '83, shared, "Dr. John Beasley was one of my early mentors when I was a medical student with the intention of becoming a family physician. The specialty was still nascent, having emerged from its roots in general practice about a decade earlier. I remember Dr. Beasley as being welcoming, engaging, and intentional in his commitment to teaching excellence. I went on to practice family medicine for nearly 40 years, and I credit Dr. Beasley as being one of a handful of Wisconsin-based family physicians who influenced my choice."

Noting that Beasley was her small-group preceptor during medical school, Pam Heilman, MD '90, wrote, "He was a wonderful, compassionate role model who influenced my pursuit of family medicine as a career. I recall shadowing him at his clinic in Belleville, Wisconsin, visiting his farmette, and going for a ride in his plane – all very foreign experiences at the time for a city kid from Racine."

PLEASE SHARE YOUR NEWS!

Please send information about your honors, appointments, career advancements, publications, volunteer work, and other activities. We'll include your news in *Quarterly* as space allows. Please include names, dates, and locations. Photos are encouraged.

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