STEM CELL SCIENCE
Progress over the past two decades means hope is on the horizon for patients with a variety of serious health conditions.

Native American Health
The Native American Center for Health Professions provides a supportive environment to recruit and train professionals to care for Native populations.

Middleton Society
An evening gathering honors the school’s most loyal supporters as they learn about advances in asthma research and care.

Campus Scene (above)
This fall 2018 aerial photo features the Health Sciences Learning Center (middle), framed by other health sciences buildings. The UW School of Pharmacy is in the foreground.

—Photo by Bryce Richter, UW-Madison

On the Cover
David Gamm, MD, PhD (PG ’02, ’03), is optimistic that 20 years of progress in stem cell science will soon result in clinical benefits for patients.
It is inspiring to watch the evolution of innovative programs as they grow and expand across the years, decades and generations.

In this issue, we celebrate two decades of remarkable progress in the field of regenerative biology upon the 20th anniversary of Dr. James Thomson’s ground-breaking work with stem cells at the University of Wisconsin-Madison. We also welcome Dr. Deneen Wellik as the new chair of our Department of Cell and Regenerative Biology, which is one of the foundational components of the UW School of Medicine and Public Health’s (SMPH) stem cell research portfolio.

Our school’s Middleton Society event highlighted a remarkable “multigenerational” story of SMPH leadership in asthma research, education and patient care. Dr. Robert Lemanske—a physician-researcher in that field and our associate dean for clinical and translational research—provided an update, and his mentor, Dr. William Busse, a nationally renowned leader in asthma research, reflected on the joys of serving as a progenitor of our asthma research program, as well as a philanthropic supporter. Another notable member of the asthma team, Dr. Daniel Jackson, is the new president of the Wisconsin Medical Alumni Association. He joined the rest of us in thanking Middleton Society members for their dedication to the advancement of the SMPH’s missions. All three of these physicians earned their medical degrees at the school, as did other members of the highly productive and innovative asthma research team, which is now training a fourth generation of leaders. That group recently secured one of the largest National Institutes of Health (NIH) grants in our school’s history.

Celebrating generations of loyal supporters—in this case alumni and guests—also was a highlight of the annual Homecoming weekend. The warmth of the camaraderie more than compensated for the unseasonably cold October weather. The Badgers’ 49-20 victory over Illinois—and the “Jump Around” at Camp Randall—also kept fans warm.

In this issue, we also introduce you to Dr. Sheri Johnson, the newest generation of leadership in the proud history of our Population Health Institute. Building on the foundation created by its founders, Drs. David Kindig and Patrick Remington, Dr. Johnson’s passion for advocacy and evidence-based change will propel forward the institute’s mission of advancing the health of populations, especially those plagued by disparities.

At the SMPH fall faculty and staff meeting, I had the personal and professional privilege of recognizing Dr. Marc Drezner with this year’s Folkert Belzer Award. Dr. Drezner joined the SMPH 18 years ago as chief of the Division of Endocrinology and Metabolism in the Department of Medicine. He then served as the director of our General Clinical Research Center and, in 2006, became the inaugural director of the Institute for Clinical and Translational Research (ICTR). As you’ll read in the article on page 30, “the rest is history.”

Due to Dr. Drezner’s vision and the dedication of a talented leadership team, we have one of the best NIH-funded Clinical and Translational Science Award (CTSA) programs in the United States. In his retirement, Marc continues to offer advice and support to the new ICTR director, Dr. Allan Brasier, who accepted the baton of leadership from him and is advancing and expanding the wonderful foundation of excellence created under Marc’s leadership. (For more information about ICTR and the CTSA, see the recent issue of Quarterly, Volume 20, Number 3, 2018, or www.med.wisc.edu/ictr-advances)

As we approach the end of 2018 and prepare to celebrate the new year, I hope you will have many opportunities to bring together your families. Please also keep in mind your “extended family” at your school of medicine and public health. If your travels bring you to our neighborhood, please give us a call. We would be delighted to share with you a personalized tour of this glorious, evolving school and academic health center.

Robert N. Golden, MD
Dean, University of Wisconsin School of Medicine and Public Health
Vice Chancellor for Medical Affairs, UW-Madison
Hello to my fellow Badgers! It is truly an honor and a privilege to be selected to serve as president of your Wisconsin Medical Alumni Association (WMAA) for the next two years. I am inspired by the dedication of my colleagues who have served in this role before me. Much has been accomplished toward the goals of improving the lives of our students, connecting our alumni and supporting our tremendous University of Wisconsin School of Medicine and Public Health (SMPH). However, we have much more to do!

We live in very challenging times, the most challenging of my lifetime. We are surrounded by constant negativity and divisiveness. Rather than accepting this negativity and divisiveness as the new norm, it is our responsibility to do all we can to make changes in a positive direction. In this pursuit, I would like to take this opportunity to remind us all of the Wisconsin Idea, “that we will never be content until the benefits of our university reach every family in the state—that the borders of the campus are the borders of the state.” I truly believe this is a broad-reaching idea that can guide our approach to all we do.

When I first joined the WMAA Board of Directors in 2009, I did so with a focus on enhancing connections between recent graduates of the SMPH and the WMAA. We have made great progress toward this goal over the past decade.

Our organization does many things to enhance the lives of students. A few examples include providing funding for student organizations and interest groups, organizing Operation Education, promoting the Host Program and raising funds for numerous student scholarships. New initiatives such as the Stethoscope Program have led to tremendous strides in establishing connections among students, alums and the school.

There are many ways you can team with the WMAA to support the SMPH. We would love to see you come back for your next reunion, which may be on a spring Alumni Weekend or at Homecoming! Please consider volunteering for the Host Program—which entails providing lodging and sometimes meals to medical students who travel to your region for conferences or residency interviews. Or, if you are able, consider donating a stethoscope for a first-year medical student. With the increasing costs of medical education being transferred to our students, you also can make a difference by contributing to scholarships.

Badgers are doing amazing things all around the world. Through features in Quarterly magazine and at our annual WMAA awards dinner each spring, we highlight the incredible achievements of our alumni. We recently created a new award, the Early-Career Achievement Award, to honor an SMPH alum who has attained exemplary success in clinical service, research, education and/or administrative leadership in the first 20 years post-graduation. I personally invite you to nominate a friend or colleague for this award.

Whether you live here in Wisconsin or somewhere else across the country or the world, it is more important now than ever for all of us to spread the Wisconsin Idea! Please think of what you can do to support this school, your fellow Badgers and the community in which you live.

Thank you for all you do, and On Wisconsin!

Daniel Jackson, MD ’03 (PG ’10)
President, Wisconsin Medical Alumni Association
David Gamm, MD, PhD (PG ’02, ’03), oversees his productive laboratory at the UW-Madison Waismann Center.
Two decades after James Thomson, VMD, PhD—now an investigator of regenerative biology at the Morgridge Institute for Research at the University of Wisconsin-Madison—derived the first human embryonic stem cell lines (ESC) on this campus, his revolutionary discovery is just beginning to emerge on the clinical landscape. To date, a handful of clinical trials of ESC-derived therapies have been completed, with approximately another 16 underway worldwide.

From a patient’s perspective, 20 years may seem like a frustratingly long time for an important discovery to get from bench to bedside; however, for physicians and researchers, the strong desire to give hope to patients is balanced with realism about the path forward. Responsible science can be a slow, grueling process. But experts in the field feel more optimistic than ever, due to a critical mass of small successes.

Perhaps no field of medicine has as much reason to be hopeful about stem cell therapy as ophthalmology. Of the human trials underway, all but two involve therapies for eye disorders. David Gamm, MD, PhD (PG ’02, ’03), an associate professor in the Department of Ophthalmology and Visual Sciences at the UW School of Medicine and Public Health (SMPH), attributes this to three factors: practicality, safety and cost.

“Most new stem cell therapies require new surgical techniques and devices, but not always for the eye,” Gamm explains. “That reduces the cost of development and quickens the pace of getting new therapies through the U.S. Food and Drug Administration (FDA) and to patients.”

But Gamm, who also is the Retina Research Foundation Emmett A. Humble Distinguished Director of UW-Madison’s McPherson Eye Research Institute and the Sandra Lemke Trout Chair in Eye Research, understands patients’ frustrations. He likens the process of developing stem cell therapies to the first attempts at human flight.

“If the Wright Brothers claimed they could build a plane that would fly across the Atlantic, people would have laughed at them,” Gamm says. “What they were trying to do was glide off a hill safely, with the hope of greater things to come. And that’s where this field is right now.”

Most of the advances in the field to date have involved the development of human ESC-derived retinal pigment epithelium (RPE). The RPE is a single layer of cells that regulates the transport of nutrients and waste products to and from the retina and is considered to be the part of the eye where macular degeneration begins. In 2012, 18 adults with severe eye disease received transplants created from human embryonic stem cells, and they continue to have no apparent complications. Thirteen of them had an increase in pigmentation, suggesting that the transplanted cells were still alive. Results of the study, reported by researchers at
Advanced Cell Technology in Massachusetts, provided the first evidence of the medium-term to long-term safety and graft survival, and possible biological activity of pluripotent stem cells in individuals with any disease.

Gamm says the numerous stem cell experts at UW-Madison work together, often across disparate disciplines—from cell biology to engineering to ethics.

“This is where Jamie Thomson and UW-Madison have led the way. We have a strong sense of integrity and ethics here, and because we have this multidisciplinary approach to stem cells, we also have a sense of realism,” Gamm says. “So, while we may not have flown far yet, what we have done has allowed us to land safely. And that has allowed us to dust ourselves off, re-evaluate, climb back up that hill and try again.”

Gamm’s company, Opsis Therapeutics, is working with Cellular Dynamics International, founded by Thomson and now owned by Fujifilm, toward clinical trials for retinitis pigmentosa, a group of genetic diseases that lead to blindness at an early age. Currently, there are no treatments for these diseases.

Clinical trials for other conditions—including Parkinson’s disease, diabetes, spinal cord injury and heart disease—likely will use induced pluripotent stem cells (iPSCs), which are adult cells that are converted back into naive stem cells capable of becoming nearly any cell in the body.

Cardiologist Timothy Kamp, MD, PhD, a professor in the SMPH Departments of Medicine and of Cell and Regenerative Biology, and director of the UW Stem Cell and Regenerative Medicine Center (see sidebar), shares Gamm’s cautious optimism.

“Stem cell biology is constantly evolving,” Kamp says. “With every new legitimate effort, though, it’ll get easier for the rest of us to...
get approval from the FDA and our therapies into patients.”

Kamp cites Geron—the first company to get a stem cell trial approved by the FDA—as an example of how each success helps accelerate progress.

“Geron’s final FDA application was more than 20,000 pages long,” Kamp explains. “It took them many years and millions of dollars, but that initial process educated the FDA and provided answers to some previously unanswered questions. And that was great news for the rest of us.”

Kamp is conducting pre-clinical work with colleagues from Duke University and the University of Alabama on a patch made of contracting heart muscle derived from iPSCs. He and his collaborators hope one day these cells can be used to treat patients who lose heart muscle after a heart attack. Another of Kamp’s collaborators, French researcher Philippe Menasché, MD, PhD, recently completed a phase 1 trial that transplanted ESC-derived cardiac progenitor cells into patients with severe heart failure. That therapy seems to be safe, but it’s too early to tell how effective it was in re-muscularizing damaged parts of the heart.

Diabetes is another cell-based disease in the cross hairs of SMPH researchers. In early 2018, results of the first human trial of a stem cell-derived beta cell replacement therapy were published. Jon Odorico, MD (PG ’96)—a professor in the SMPH Department of Surgery who organized the conference at which the results were presented—says while the findings were not a home run, the trial helped blaze an important trail through the FDA. Conducted by the company Viacyte, the trial was the first involving stem cells and a macroencapsulation device designed to protect the transplanted cells from a patient’s immune system. A second trial is underway in the same patient population (adult patients with type 1 diabetes and hypoglycemia unawareness), and a handful of others are planned, including one through Odorico’s company, Regenerative Medical Solutions, Inc. He hopes to have a product in clinical trials within the next few years.

“A critical mass of experts is involved in this field, and things are moving a lot faster, with more money and more industry involvement,” Odorico says. “Wisconsin has played a leading role in getting the field to this point, and we are poised to take an even more prominent role, nationally and internationally.”

As for Gamm and his patients, the conversation has begun to shift from one of resignation to one that allows for guarded optimism. He recalls a time when there wasn’t much he could offer patients, and while there are still no approved and proven stem cell therapies on the market, his message has changed dramatically.

“It’s great to be able to tell my patients that they are not forgotten,” Gamm concludes. “I can finally tell them that the hope is real.”
Middleton Society Gathering

School's dedicated supporters learn about advances in asthma research and care

Clockwise from top left (left to right): Robert Lemanske, Jr., MD '75 (PG '80); M4 Laura Tetri and guests; William Busse, MD '66; Thomas Karras, MD '69; France Karras, Kathryn Budzak, MD '69, Daniel Hathaway, MD '69, Archie Budzak.
Referring to the fall 2018 gathering of ardent supporters of the University of Wisconsin School of Medicine and Public Health (SMPH), Dean Robert N. Golden, MD, called it a “Thanksgiving dinner,” of sorts, to give thanks to the “Middleton Society family.”

“Your incredible support is fundamental to our continued success. I am delighted to share with you some ways in which we are advancing our missions,” he said.

Among several examples, Golden highlighted the school’s internationally renowned asthma research group, which recently received a $13.5 million-per-year, five-year grant to expand its work.

Robert Lemanske, Jr., MD ’75 (PG ’80)—professor, Departments of Medicine and Pediatrics, and associate dean for clinical and translational research—provided the keynote address, “When the Sneeze Becomes the Wheeze: Discovering the Origins of Asthma, and How this Will Lead to a Cure.”

Another speaker was Lemanske’s early mentor, William Busse, MD ’66, professor of medicine, who received one of the largest National Institutes of Health awards in the school’s history for the Inner City Asthma Consortium. They were joined by a third SMPH asthma researcher, Daniel Jackson, MD ’03 (PG ’10), president of the Wisconsin Medical Alumni Association.

Noting that the Busses also have been longtime members of the Middleton Society, Golden noted, “We thank Bill and his wife, Judy, for their generosity in giving back to the School of Medicine and Public Health. They recently became members of the Van Hise Society, the university’s highest level of philanthropic recognition.”
Left to right: Native American Center for Health Professions (NACHP) staff members Melissa Metoxen, Lauren Cornelius, Danielle Yancey and Lina Martin. Above and below the photo is a pattern from a Native blanket like those given to NACHP students upon their graduation.
Native American Health

CENTER FOCUSES ON RECRUITING AND TRAINING HEALTH PROFESSIONALS TO PROVIDE CARE FOR NATIVE POPULATIONS

In October 2018, the American Association of Medical Colleges (AAMC) and Association of American Indian Physicians (AAIP) issued a sweeping report on the status of American Indian (AI) and Alaska Native (AN) representation among health care professionals. Despite a decades-long focus in academic medicine on increasing minority representation, the report’s statistics on AI and AN students applying to, entering and graduating from medical school showed a frustrating similarity to those of 30 or 40 years ago.

Efforts that produced modest success in the 1990s have seen their effects dwindle. Although the nation’s MD-granting institutions have, since 1980, increased the number of medical student slots available annually by about one-fifth, the percentage of Native students nationwide remained stuck in 2017-2018, at 0.20 percent for those reporting as either AI or AN alone, and at 0.76 percent for those reporting as AI and/or AN in combination with another race or ethnicity. AAIP President Ronald Shaw, MD, has called the findings “appalling and embarrassing.”

Yet the report was not all bad news. Some schools are bucking the trend, and among those achieving a consistent and encouraging impact is the University of Wisconsin School of Medicine and Public Health (SMPH), listed ninth nationwide in the percentage of AI-AN graduates from 1980 to 2017.

Since 2012, the SMPH’s effort to recruit, support and graduate Native American physicians has been fostered by its Native American Center for Health Professions (NACHP). The center’s mission is to enhance the recruitment, retention and graduation rates of Native American health professional students and to promote health education, research and community-academic partnerships with Native communities. In 2014, the program received a significant boost through a five-year Indians into Medicine (INMED) grant from the Indian Health Service. When the grant ends in fall 2019, NACHP will have a lot to show for its efforts.

Since NACHP’s inception in 2012, the SMPH has seen a 240 percent increase in the number of Native applicants. In the 2018-2019 academic year, NACHP has 15 Native students enrolled in the MD program, which is a 375 percent increase from Native student matriculants prior to NACHP’s establishment. In total, NACHP works with nearly 40 Native students in all the health professions programs combined on the UW-Madison campus. Thirteen students have graduated since the program’s inception, moving on to residencies throughout the United States in specialties from family medicine and pediatrics to orthopedics and emergency medicine. Some plan eventually to practice in tribal communities in rural underserved areas, while others will work in urban areas where the majority of Native people live.

According to NACHP Director Danielle Yancey, the strategies that are making a difference at the SMPH mirror the best
practices outlined in the AAMC-AAIP report. These include outreach through local, regional and national student recruitment events; culturally responsive programs for enrichment and mentoring; student clinical experiences in tribal communities; involvement of an advisory council of Native health professionals; and opportunities for students to attend national conferences to network with other Native students and faculty members.

Yancey’s appointment as the center’s first full-time director in 2017 was a sign of NACHP’s growth. Raised on the Menominee Reservation near Green Bay, Wisconsin, and with experience working with tribal communities throughout the state in previous roles, she hit the ground running. In her first year as the director, on behalf of NACHP, Yancey was on the Madison Magazine “M List for Health Innovation.” That same year, she helped launch the NACHP Distinguished Lecture Series, as part of the INMED grant, which hosts Native American health professionals for presentations in Madison and in tribal communities.

In December 2018, for example, the series featured Blythe Winchester, MD, a geriatrician who practices at Cherokee Indian Hospital in North Carolina. Her presentation, “Navigating the Health of Our Elders,” was held in two parts, with the first at the SMFH and the second in the Oneida tribal community in northern Wisconsin.

Yancey also coordinated NACHP’s highly anticipated move to a new location—shared with the Office of Multicultural Affairs—on the first floor of the Health Sciences Learning Center (HSLC). The choice new space, which is part of several enhancements to the HSLC completed in early 2018, “offers greater prominence and accessibility for students and visitors,” she says.

NACHP’s success is a testament to the efforts of the entire team, as well as past leaders who helped shape the mission and vision; they include Erik Brodt, MD, founding former director, Jacquelynn Arbuckle, MD ’95, former director, and Christine Athmann, MD, former assistant director. Today’s NACHP team, in addition to Yancey, includes Lauren Cornelius, Lina Martin and Melissa Metoxen. Cornelius is a program specialist who assists with the implementation of INMED grant activities, student recruitment and advising. A UW-Madison graduate, she is an enrolled member of the Oneida Nation. Martin, a program coordinator, works with pre-college and undergraduate pre-health students in partnership with UW-Madison’s Division of Diversity, Equity and Educational Achievement. Also a UW-Madison alumna, she is a member of the Ho-Chunk Nation and a descendent of the Stockbridge-Munsee community. And Metoxen—who has been with NACHP since its inception—is the community and academic support coordinator. An Oneida tribal member, Metoxen is based primarily at an in-kind NACHP office in the Oneida Community Health Center, and the proximity helps her maintain relationships with tribal communities and coordinate tribal clinic rotations and a variety of cultural experiences for Native American medical students. In October 2018, she was honored with the UW-Madison Outstanding Women of Color Award for her multifaceted work with NACHP.

Third-year medical student Jennifer Meylor, who hails from Northern California, cites NACHP as a significant factor in her decision to attend the SMFH. She learned about the center through an article about recruiting Native American students. “I saw that in this program, Native American students were supported and thriving, and I wanted to get involved,” she says. “In my first year, NACHP hosted family dinners where I was able to meet other Native American students and start to form a community. I’ve been very close with these students and relied on them many times.”

NACHP has funded Meylor’s attendance at the annual AAMC conference to meet Native American physicians from around the country, and at conferences of a national student organization, Association of Native American Medical Students (ANAMS), for which she serves on its board.

“NACHP faculty have gone out of their way to support my involvement in this organization. In fact, this year NACHP has five students who are elected board members of ANAMS,” notes Meylor.

“Networking and mentorships with other Native physicians are so valuable,” adds Metoxen. “They help support students while they’re in medical school and help them obtain residencies where there are Native providers.”

Second-year student Ninah Divine also describes NACHP as “a huge factor in deciding where to attend medical school.” Having left her hometown of Madison for
undergraduate school, she has been happy to re-integrate into the community, especially with “people and systems in place to support my goals in medicine.”

Like Meylor, she has attended national conferences through NACHP and has participated in trips the program arranges to events in tribal communities. Examples are the Oneida Harvest and Husking Bee and a wild rice-harvesting trip to Lac du Flambeau.

“NACHP is a huge support,” Divine says. “My goals are different from those of my peers, and it’s hard to articulate them without a long history lesson. NACHP helps me to feel proud of my heritage and my motivation.”

And she looks forward to more tribal clinic rotations and appreciates NACHP’s role in coordinating the details and helping to ensure a positive experience for both students and tribal clinics.

Collaboration within the school is a priority for NACHP, which aims to enrich the experience of Native students and support the program’s goal that all SMPH students learn about the health needs of tribal communities and are prepared to provide culturally responsive care to Native people wherever they practice. These collaborations include efforts such as providing tours and workshops for students pursuing the Path of Distinction in Public Health, a four-year longitudinal experience that integrates public health into physicians’ careers. NACHP also coordinates with the SMPH’s Department of Family Medicine and Community Health, Acting Ambulatory Internship, Wisconsin Academy for Rural Medicine (WARM) and Training in Urban Medicine and Public Health (TRIUMPH) programs to arrange tribal clinic experiences in rural and urban areas for non-Native students who request them.

In addition, NACHP collaborates with SMPH faculty to facilitate opportunities to partner with tribal communities on research initiatives. In June 2018, a collaboration between the Oneida Nation and the Wisconsin Alzheimer’s Disease Research Center received a UW-Madison Community-University Partnership Award in a ceremony held at the home of Chancellor Rebecca Blank (see photo on previous page). NACHP also received the award for its partnership with the Oneida Nation.

Although knowledge is sparse about Alzheimer’s disease among Native Americans, available data suggest higher-than-average risk, especially for early onset of the disease. When the Oneida Nation Commission on Aging requested help, physicians and researchers from UW Health and the SMPH responded. They have attended community meetings to discuss warning signs, symptoms and support for caregivers. They also conduct screenings and offer information about community resources and services. In some cases, tribal members have traveled to Madison for memory screenings as part of Alzheimer’s disease research being conducted by Carey Gleason, PhD. A professor in the SMPH Department of Medicine, Gleason sees the partnership as a way to respond to the Oneida community’s needs while helping her team gather important data on the incidence and impact of Alzheimer’s disease and other dementias in a Native American community. She hopes that including the community in studies will help researchers develop prevention strategies that are effective for all populations. The project offers opportunities for student experiences, too. For instance, Meylor was involved in developing community-based educational materials for tribal members who had been recently diagnosed with dementia.

Based on her six years of experience with NACHP, Metoxen observes that Native American students come to the SMPH seeking a medical school experience that is supportive and has relevance to their background and culture.

“We have many strengths,” she says. “Dedicated staff, dedicated space, support from SMPH leaders, strong relationships with tribal communities and an active advisory council. And what drives our success as much as anything is our underlying vision. From the start, our goal was a holistic focus on what students need. We see our role as understanding why they’re here and how we can support them.”

Native traditions are an important part of NACHP graduation ceremonies. Here, Bret Benally Thompson, MD, NACHP Advisory Council member and SMPH clinical assistant professor, Departments of Family Medicine and Community Health and of Medicine (left), offers a blessing to 2018 MD graduates Andrew Steinfeldt (center) and Mercedes Williams.

Among the most significant experiences for many students is their tribal clinic rotation. Wisconsin has 11 federally recognized tribes, and each has a clinic. Divine participated in a summer externship at the Ho-Chunk House of Wellness in Baraboo.

About the experience, she says, “It helped remind me that as hard as medical school is, I can look forward to being in and serving communities that share my values. It re-energized me, and it was a reminder of why I’m pursuing medical school.”
What’s Red and White and Smiles All Weekend?
A BADGER CELEBRATING HOMECOMING!

A mid all of the “On Wisconsin” traditions happening throughout the University of Wisconsin-Madison campus for Homecoming, alumni who returned to their medical school alma mater had plenty to smile about.

At the UW School of Medicine and Public Health (SMPH), the weekend’s first agenda item was the Wisconsin Medical Alumni Association (WMAA) Board of Directors meeting—with most attendees decked out in Badgers’ red and white. Following the well-attended meeting, many participated in a classroom experience at the Health Sciences Learning Center (HSLC). Others enjoyed guided tours of the Med Flight helicopter hangar and a refreshment break in the new Active Learning Center at the HSLC before heading to the Multicultural Reunion that preceded additional festivities.

Friday evening featured a reception for the Classes of ’73, ’78, ’83, ’88, ’93, ’98, ’03, ’08 and ’13. Attended by 350 people at DeJope Hall, the event included live music and an appearance by Bucky Badger.

WMAA President Dan Jackson, MD ‘03 (PG ’10), shared opening remarks, especially thanking class representatives who worked with the WMAA staff to plan their gatherings. He also noted that alumni showed a fantastic amount of generosity to support the WMAA’s Stethoscope Program.

“Thank you to all of you who participated in the Stethoscope Program! This fall, every first-year medical student received a gift of a stethoscope funded by alumni,” Jackson exclaimed, adding that several gracious medical students were available that evening to meet their stethoscope donors.

Alison Craig-Shashko, MD ’98 (PG ’01), who attended her class reunion for the Clockwise from left (left to right): Humaira Hassan, MD ’98, Jodi Breska, MD ’98, Randy Breska, Kristin Brink, MD ’98; Gary Zimbric, MD ’78, Robert Van Der Leest, MD ’78, Susan Zimbric, MD ’78; Tonya Yu and Conrad Yu, MD ’98 (with their child).
first time, noted that she enjoyed it so much she definitely plans to return for future reunions.

“One thing that impressed me about the reunion was how same-not-same everyone seemed. We are all older and—hopefully—wiser, but still so young in spirit,” said Craig-Shashko, a pediatrician and chief of staff at Group Health Cooperative of Southcentral Wisconsin in Madison. “The separation of decades has not changed the warm feelings among friends. They all have led caring, compassionate and inspiring lives across the state and nation, like the embodiment of the Wisconsin Idea.”

Saturday’s WMAA Tailgate Party at Union South preceded the high-scoring football game. Despite colder-than-usual October weather—with the season’s first snowfall making a surprise appearance during the game—in true Wisconsin spirit, steadfast fans simply added extra layers of red and white as they cheered the Badgers toward a 49-20 win over Illinois.

Craig-Shashko counts herself among those who came away with a warm feeling on Homecoming Weekend.
Class Reunions

Class of 1978

Front row (left to right): Peter Cooley, Donald Heindel, Gary Zimbric, James Morrison, Cassandra Wanzo, Vicki Morrison, Tom Krejcie, Lawrence McFarlane, Laurie Appelbaum, James Wishau. Back row (left to right): Richard Knoebel, Wayne Kubal, Margaret Behrens, John Ziemer, Susan Zimbric, Daryl Knox, Michael Jaeger, Allon Bostwick, Benedict Gierl, Robert Van Der Leest, Rebecca Hawkins, Joseph Fok, Brian Lochen, Gary Anderson.

Class of 1983

Front row (left to right): Gary Kubalak, Kevin Sandmire, Jim Runke, Peter Stamas, John Carlson, Susan Isensee, Janie Washington, Douglas Olk, Jeff Oswald, JoAnn Zarnke. Middle row: Kay Sorenson, Christopher Huiras, Joanne Lohr, Kathryn Krohn-Gill, Bruce Stoehr, Barry Lessin, Glen Gutzke, James Schlais, Dean Sienko, Joel Cornfield, Mark Zarnke. Back row: John Sorenson, Steven Umhoefer, Reginald Allen, Michael Erdmann, James King, Eric Berg, Andrew Braun, Timothy O’Neil, Gary Koritzinsky.
Class of 1988

Front row (left to right): Stuart Winter, Robert Welch, Cate Best, Kay Gruling, Cheryl Oncken, Mary Schumacher-Hollister.

Class of 1993

Class of 1998


Class of 2003

Front row (left to right): Tina Sauerhammer, Deja Van De Loo, Kristin Grant, Stephanie Whitt. Back row: Greg Horwitz, John Kelly, Daniel Jackson.
Class of 2008

Left to right: Bridget De Long Wozniak, A.J. Weinhold, Jaime Hook

DID YOU PERFORM IN A MUSICAL GROUP AT THE SMPH?

We’re looking for photos or brief written memories from alumni who performed in musical groups, such as the Arrhythmias or Coda Blue, while attending the University of Wisconsin School of Medicine and Public Health. Photos must be high resolution, for possible publication in Quarterly. If you have items to share, please send them to quarterly@med.wisc.edu. Thank you!

CORRECTION: In the past issue of Quarterly (Volume 20, Number 3, 2018), we inadvertently referred to an alumnus as the wrong name. In the photo caption on page 9, we listed Gordon Roedel, MD ’17, as “George Roedel, MD ’17.” We have corrected his name in the online version of the magazine. We regret the error and thank Dr. Roedel for his understanding.
“On Call”
Three Urologists Tell Quarterly What They’ve Been Up To

CHRISTINA KIM, MD ’97

In January 2019, I joined the faculty of the UW School of Medicine and Public Health in Madison. Following my residency at the University of Connecticut and pediatric urology fellowship at the University of Pittsburgh, I practiced pediatric urology for 14 years in Hartford, Connecticut. Until 2016, I was the medical director and fellowship director of pediatric urology at the University of Connecticut and Connecticut Children’s Medical Center. I also was an associate professor of urology at New York Medical College.

During medical school, I was drawn to urology for its wide array of surgical cases. I enjoy pediatric urology because patients are often asymptomatic from conditions such as hypospadias, undescended testis, urinary reflux or ureteropelvic junction (UPJ) obstruction. We have high success rates with surgery.

I have always enjoyed performing minimally invasive surgery. Robotic surgery was fairly new in pediatrics during my training, but I appreciated its benefits for children. In 2005, I initiated a robotic program at Connecticut Children’s Medical Center and performed the first robotic surgery on a child in the state of Connecticut. I advanced the scope of cases performed at our hospital and, in 2009, performed the first pediatric robotic sigmoid vaginoplasty.

When faced with potential surgery for my daughter’s UPJ obstruction, I knew a robotic approach would be our family’s preference. Compared to open surgery, robotics has a quicker recovery and improved cosmesis.

I am eternally grateful to Dr. David Uehling, who was the chair of the Department of Urology at the SMPH when I was a medical student. He graciously took time to answer my questions and review residency programs. His advice steered me toward a training program that matched my hopes and aspirations. I encourage those interested in this field to shadow a urologist and seek advice.
Since I completed my urology residency at UW Health in 2005, I have been employed at SSM Health, Dean Medical Group and St. Mary’s Hospital in Madison, Wisconsin. I initially practiced general urology with an emphasis on incontinence and voiding disorders. My practice evolved into seeing patients with issues related primarily to female pelvic medicine and voiding dysfunction.

Several years ago, the American Board of Urology began offering a subspecialty certification in female pelvic medicine and reconstructive surgery. After earning that certification, I practiced primarily within that subspecialty until the past few years, when I took on more administrative duties for the hospital and clinic. Now, my primary role is one of administrative duties in urology and surgical quality and safety.

While many cases are memorable, the most lasting impressions are from those in which a urologic intervention changed someone’s life trajectory. Often, things that may not, to the observer, seem catastrophic can impact every aspect of someone’s world. For example, incontinence can permeate every aspect of life, including feelings of self-worth, employment, and social and family interactions.

Thus, sometimes what we consider a routine intervention can profoundly impact a patient. I am blessed to have been able to share in some of these moments.

I am a member of the Wisconsin Urologic Association; American Urologic Association; and Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction.

For medical students interested in urology, I wholeheartedly endorse it. This is a great specialty with lots of growth potential. It nicely blends medicine and surgery, giving us the ability to see a variety of patients, operate and do procedures in the clinic.

Currently, I am the chief urology resident at the University of Rochester Medical Center (URMC) in Rochester, New York. Next year, I will begin a two-year urologic oncology fellowship at the Cleveland Clinic.

Most of my cases are for cancers of the urinary tract, such as kidney, ureter, bladder, prostate, testis and penis. I also regularly treat urinary stone disease and occasionally perform genital and urinary tract reconstructive procedures. I use a variety of surgical techniques, including endoscopy, open surgery, microscopic surgery and robot-assisted laparoscopy.

In the clinic, I perform a wide variety of procedures, such as cystoscopy, image-guided biopsies and vasectomies.

One particularly memorable case was an open partial nephrectomy for a six-centimeter renal mass in a horseshoe kidney—a condition that occurs during embryologic development in which the kidneys are fused and “caught” below the inferior mesenteric artery. Due to the patient’s complex anatomy, we generated a 3-D printed model of the kidney at the URMC Surgical Simulation Lab using the patient’s CT scan. We were able to rehearse the surgery on the printed model before the patient’s surgery. We successfully removed the tumor, while sparing the remainder of the horseshoe kidney, with no complications.

I chose urology because I have a special interest in prostate cancer, especially in the development of new diagnostic biomarkers. I was inspired by my research mentor, Dr. David Jarrard, a distinguished urologic oncologist and basic science researcher at the UW School of Medicine and Public Health.

I attend the American Urologic Association meeting yearly to present my prostate cancer research. I find urology to be one of the most exciting fields in medicine.
As of July 1, 2018, three University of Wisconsin School of Medicine and Public Health (SMPH) alumni—Peggy Scallon, MD '92 (PG '97), Juliane H. Lee, MD '94, MS, and Jon Scholl, MD '17—joined the Wisconsin Medical Alumni Association (WMAA) Board of Directors for their initial three-year terms. Karen Peterson, WMAA executive director, thanks these three new members and all of the board members for their dedicated service to supporting the SMPH’s missions.

Peggy Scallon, MD '92 (PG '97)

Your current practice?
I am the medical director of a residential treatment unit at Rogers Memorial Hospital in Oconomowoc, Wisconsin, for teens who are struggling with severe depression, behavioral disturbances and suicidality.

After graduating from the SMPH, I completed a psychiatry residency at the University of Colorado Health Sciences Center followed by a child and adolescent psychiatry fellowship at the SMPH. I first worked in private practice in Madison, and then I was on the faculty of the SMPH Department of Psychiatry from 2002 to 2016, many of those years as the child and adolescent psychiatry training director.

Your fondest memory of the SMPH?
I have always loved working with kids, so one of my favorite activities as a medical student was the Doctors Ought to Care program, in which medical students went out to public schools to share health-related topics. We emphasized the dangers of smoking, so we brought damaged lungs and other organs so kids could see for themselves the destructive effects of smoking cigarettes.

Additionally, my fondest memories of the SMPH relate to my wonderful classmates, and the lifelong friendships we have made. We shared so many experiences as students, and since those times, we have stayed close, watching each other’s families grow up.

SMPH faculty member you most remember and why?
Drs. Roseanne Clark and Pat Kokotailo influenced me the most. Dr. Clark was the small-group leader of my first-year clinical interviewing course. She is incredibly warm and caring, and she was the best listener I had ever met. She became an important friend and mentor, and we later became colleagues at the SMPH.

Dr. Kokotailo was a pediatrician in the Adolescent Medicine Clinic at the American Family Children’s Hospital. Due to her non-judgmental and kind manner with teens, they opened up to her, which allowed her to provide excellent care.

Your hobbies and interests?
My husband and I enjoy running and biking together and taking friends and relatives boating on Lake Mendota.

Family update?
We love to spend time with our children, Oliver, age 24, and Genevieve, age 19. Oliver is a TV reporter in Florida, and Genevieve is a freshman at the University of Notre Dame. We are adjusting to life as “empty nesters” now that we just have two tiny dogs to look after.

Goals for the WMAA?
I want to support the SMPH in its wonderful missions. I hope to bring extra attention
and support for children’s mental health and advocacy, and I hope to recruit and support students who are considering careers in psychiatry.

The SMPH has been an incredible gift in my life. Before I started medical school, I imagined it to be scary, competitive and harsh, but my experiences—as a student, faculty member and WMAA board member—have proven it to be the opposite. SMPH faculty members, administrators, and the staff of the WMAA and UW Foundation are kind, dedicated, and loads of fun!

Juliane H. Lee, MD ’94, MS
Your current practice?
I am a pediatric anesthesiologist at Children’s Hospital of Wisconsin (CHW) and an assistant professor in the Department of Anesthesiology at the Medical College of Wisconsin, both in Milwaukee. I also practice pediatric pain management and medical acupuncture.

Your fondest memory of the SMPH?
My fondest memories involve camaraderie-forming moments with classmates and other teammates on services during third and fourth years. They were the real moments when we knew we were in this together. I had a great group of study buddies, and we were “in it together,” supporting each other and learning that medical school was a team sport. When I started clinical rotations, I realized we were on teams for a reason. We don’t conquer disease independently. We work together to deliver the best care possible for patients. My residents and attendings made me feel like an integral part of the team, especially in surgery, even as a student.

SMPH faculty member you most remember and why?
I remember and respect so many of my professors and attendings. The late Dr. Paul Bertics gave me a few tutoring sessions in biochemistry. He helped me realize that I understood the material better than I had thought, which reassured me and allayed my fears. During my clinical years, Dr. Stuart Knechtle left a lasting impression on me, as well. During a transplant service rotation, I considered which of my professors might do surgery for my mother to receive a new organ one day. Dr. Knechtle was tremendously dedicated to doing the right thing for his patients, so I knew we would be very lucky to have him as my mother’s surgeon if she needed one.

Your hobbies and interests?
I love seeing results with acupuncture and helping people feel better without pharmacological agents. I practice acupuncture in the hospital and clinics at CHW and have a small private practice.

I enjoy traveling both domestically and abroad, studying gemology at the Gem Institute of America, taking writing courses, and volunteering for breast cancer research in my community and to help at the Paul Newman summer camp for sick kids in Colorado.

Family Update?
I am the proud, adoring aunt of eight wonderful nieces and nephews. Each is more talented, creative and inventive than we imagined possible. I can’t wait to see how they will change the world for the better! I am happy to live near my four sisters, but even happier to say how emotionally close we are. They are not just my sisters—they also are my besties.

Goals for the WMAA?
At this point, I am learning as much as possible about the WMAA and how I can best contribute in an impactful way.

Jon Scholl, MD ’17
Your current practice?
I am a second-year internal medicine resident at UW Health, and I’m hoping to practice as a hospitalist in the Madison area after residency.

Your fondest memory of the SMPH?
My fondest memory is the Medical Student Association (MSA) retreat during my first year of medical school, when we went to Dr. Patrick McBride’s cabin. We had the best intentions of setting aside some dedicated study time, but we quickly gave up on the Krebs Cycle in favor of an intense three-on-three basketball tournament on the makeshift basketball court in his barn.

SMPH faculty member you most remember and why?
While most of the basic science lectures from my first year are now a blur, I still remember a great deal of basic physiology because of the excitement and passion that Dr. Kevin Strang brought to the subject matter. His energy was infectious, and I feel honored to have had the opportunity to be a teaching assistant for his undergraduate physiology class in the summer between my first and second years of medical school.

Your hobbies and interests?
My wife, daughter and I love exploring all the fun family activities that the Madison area has to offer. After residency, when life slows down a bit, I would love to get back into brewing beer, playing ultimate frisbee and curling at the Madison Curling Club.

Family Update?
My wife, Allison, and I had our daughter, Maisy, during my third year of medical school. It’s hard to believe she is 3 years old already! We continue to balance our busy schedules as I complete my residency and Allison builds her career as a midwife with The Madison Midwives in Fitchburg, Wisconsin. Luckily, Maisy has two sets of amazingly supportive grandparents who live nearby in Oconomowoc, Wisconsin, and they can fill in when Allison’s and my call schedules overlap.

Goals for the WMAA?
I realize that the reputation of the SMPH (and thus, our MD degrees) is only as good as the continued investments we make to keep the program great. With that in mind, I would like to find new ways to keep young alumni engaged and dedicated to committing their time, talent and treasure back into the SMPH and WMAA.
Patrick McBride, emeritus professor, Division of Cardiovascular Medicine, Department of Medicine, University of Wisconsin School of Medicine and Public Health (SMPH), was named 2018 Instructor of the Year for the SMPH’s Physician Assistant (PA) Program. McBride lectures on hyperlipidemia, lipid disorders and secondary heart disease prevention in the program’s Clinical Medicine II course. Upon his 2017 retirement, he partnered with the UW Center for Tobacco Research and Intervention on donor relations to build its endowment. Jackie Busse, a pediatrician in a private group practice in Santa Cruz, California, is the lead author and editor of the *Pediatric Quick Start Guide to Plant-Based Nutrition*, published by The Plantrician Project, a nonprofit group dedicated to empowering health care professionals with knowledge of the benefits of a whole-food, plant-based dietary lifestyle. Michael Stauder has been named associate professor of radiation oncology at the University of Texas MD Anderson Cancer Center, Houston. He is a member of its Breast Radiotherapy Service, which offers breast cancer expertise by a full team. He also is a member of the Morgan Welch Inflammatory Breast Cancer Research Program and Clinic and several national and international organizations, and has participated in several educational and mentorship activities, including resident training and global academic programs.

IN MEMORIAM

Robert F. Wichser, MD ’46
Venice, Florida
March 3, 2018

Phillips L. Gausewitz, MD ’47
San Diego, California
January 29, 2018

James A. Gunn, MD ’47
Grand Rapids, Michigan
February 24, 2018

Kathleen M. Raleigh, MD ’51
Modesto, California
June 2, 2018

Karl L. Helwig, Jr., MD ’54
Winona, Minnesota
August 15, 2018

Loren H. Amundson, MD ’56
Sioux Falls, South Dakota
March 27, 2018

Ned B. Hornback, MD ’56
Indianapolis, Indiana
September 5, 2018

Joseph D. Stein, MD ’58
Duluth, Georgia
March 14, 2018

John W. Weiss, MD ’58
Oakland, California
October 31, 2018

Leonard I. Stein, MD ’60
Madison, Wisconsin
July 7, 2018

Connie M. Lee, MD ’61
Oshkosh, Wisconsin
September 27, 2018

Alan S. Bensman, MD ’62
Minnetonka, Minnesota
May 17, 2018

Eugene P. Juel, MD ’63
Arroyo Grande, California
June 2, 2018

Gary N. Guten, MD ’64
Mequon, Wisconsin
September 13, 2018

Douglas A. Reasa, MD ’65
Hartland, Wisconsin
July 20, 2018

Clayton J. Hauser, MD ’77
St. Petersburg, Florida
July 16, 2018

Robert A. Kearl, MD ’82
Phoenix, Arizona
August 22, 2018

Diana J. Lampsa, MD ’85
Palmyra, Wisconsin
June 20, 2018

Ronald V. Myers, Sr., MD ’85
Belzoni, Mississippi
September 7, 2018

Eleanor R. Eichman, MD ’09
Wauwatosa, Wisconsin
July 14, 2018

Former Faculty Member:
Gregory J. Beirne, MD
Arena, Wisconsin
August 22, 2018
Wake-up Call

by Elizabeth Neary, MD ’91 (PG ’97)

Life took a dramatic turn when my husband of 40 years, Bill Bula, was diagnosed with a glioblastoma in November 2017 and died in May 2018, at age 63. Even though I had experienced grief with the death of my parents and college roommate, the death of my soul mate and best friend shook me to the core. I wrote these poems shortly after he died.

DEATH STOPS THE WORLD

Ground the planes.
Bring on the rains.
Silence the chick-a-dee.
Cut the electricity.

He was my sun, my moon, the stars in the sky
First smile in the morn, the light in my eye
Last hug in the eve, my everything guy.

With him by my side, I felt safe and secure
Now, an unmoored boat left floating offshore.

Last year, never dreaming this would be our fate
Enjoying lattes, an early morning date.

The world moves forward ... Is it just a bad dream?
No ... he’s dead, I silently scream.

WAKE-UP CALL

Mornings are the worst.
You wake up
And
Realize
AGAIN
That you will not
See him today
Or any day.

Left to right, Christine, Samantha and Anna Williams, Brian Williams, MD ’09, Claire Bula, Julia Williams, Beth Neary, MD ’91 (PG ’97), and Bill Bula on Thanksgiving Day in 2017, around the time of Bill Bula’s diagnosis with glioblastoma.

Elizabeth Neary, MD ’91 (PG ’97), is a clinical adjunct assistant professor in the Department of Pediatrics at the University of Wisconsin School of Medicine and Public Health (SMPH). (See article about Neary’s career in Quarterly magazine, Volume 19, Number 2, 2017.) Following a 15-year career as a pediatrician in private practice, she changed her focus to teaching and patient advocacy. With a strong focus on public health, she is a steering committee member for the Wisconsin Environmental Health Network and a grant reviewer for the SMPH’s Wisconsin Partnership Program. Neary also teaches environmental health to pediatric interns and first-year medical students and has taught in the school’s “Healer’s Art” course.
When Brita E. Lundberg, MD ’91 (PG ’94), decided to leave the practice of medicine and return to the classroom for patient advocacy training, it was easy to imagine herself back at the University of Wisconsin-Madison. After all, having earned her medical degree at the UW School of Medicine and Public Health (SMPH) and completed an internal medicine residency at UW Health, she says the academic medical center’s exceptional clinical training has informed her practice and served her well throughout her career.

So, when she learned about the UW Law School’s Center for Patient Partnerships—directed by its founder, Martha (Meg) Gaines, JD, distinguished clinical professor of law—she thought, “What wonderful symmetry. UW-Madison gave me my first career as a physician, and it will offer me the gift of a second career as a health advocate.”

### Lundberg’s First Career

The robust training she received to become a diagnostician and her practice experience—at the SMPH and UW Health, followed by an infectious diseases fellowship at the University of Colorado and teaching, research and patient care positions in the Infectious Diseases Division at Atlanta-based Emory University and Grady Health System—formed the foundation of her first career. Lundberg points to a strong mentor at the SMPH, Dennis Maki, MD ’66, emeritus Ovid O. Meyer Professor of Medicine in the Divisions of Infectious Diseases and Pulmonary and Critical Care Medicine.

“I learned from him both as a clinician and a person,” she recalls.

Maki’s teaching, research and patient care still inspire her in her role as founder and CEO of Lundberg Health Advocates, a Boston-based patient advocacy service.

“He has the most comprehensive way of thinking about a patient and case, and that mental rigor and thoroughness was reflected in his clinical chart notes,” she says of the longtime SMPH faculty member. “They were inspiring to read.”

She continues, “Today, as the medical system moves farther away from the model of physicians as great diagnosticians, it is less common to come across notes with the degree of complex, high-level thinking that I learned to value as a student.”

Instead, pressed for time and pressured to take on impossible caseloads, physicians less commonly offer clinical summaries that “give thought to the whole gamut of what a case could represent,” she says, adding that they often merely reiterate a patient’s symptoms and recommend a procedure.
“We are creating a model that is neither patient- nor physician-centered. This is really the crux of what our patients are facing today,” Lundberg says, adding that, as a member of the Society to Improve Diagnosis in Medicine, she is interested in taking on this challenge in her second career. **The Other Side of the Exam Table**

With hindsight, great shifts in personal and professional trajectories can look like little more than new chapter titles. Yet, amid the changes, that path can feel dark, figuratively or—as for Lundberg—literally.

Her first big shift occurred when she took time away from her practice “to become a human pancreas.” With a young daughter diagnosed with type 1 diabetes, Lundberg says long nights of checking and treating her blood sugar levels felt “like being a resident for 12 years, except the call schedule was more challenging—there was no time off.”

She felt she could not practice at that point because she worried that the resultant sleep deprivation would have prevented her from providing her patients with an equal quality of care. Then her parents were diagnosed with heart failure and Parkinson’s disease in rapid succession. Around that time, Lundberg says, other relatives and friends called upon her for advice regarding their medical circumstances.

“I thought, ‘Maybe instead of going back to practicing medicine, I would be more valuable to patients on this side of the exam table, helping them navigate the system rather than being a direct care provider,’” Lundberg recalls.

From her experience with family members, she saw the potential many times for the details of patient care to fall through the cracks. In addition, she hoped that she might serve as a megaphone for the patient voice by supporting those who felt they hadn’t been heard by their doctors.

After research led her to the Center for Patient Partnerships, Lundberg completed a semester of introductory coursework and a clinical clerkship in patient advocacy. She was fascinated to learn about the history of advocacy and, as part of her community advocacy requirement, penned a resolution on the human health impacts of fossil fuels—specifically, natural gas, an issue she championed as a member of the Massachusetts Medical Society’s Occupational and Environmental Health Committee.

Lundberg exclaims, “My experience at the Center for Patient Partnerships was transformational!”

**The Power of Knowledge**

In less than two years since she completed her training, Lundberg has started a private health advocacy business and published on environmental health matters. She also regularly testifies to local government bodies and talks to boards of health and other interest groups across Massachusetts. And she dreams of someday providing health advocacy services to all patients in need, whatever their means. It’s a bold, rewarding vision for a physician who was trained to tackle complex problems, and it satisfies her deep quest for solutions.

Most rewarding is the opportunity to empower her clients as they navigate difficult diagnoses and decisions.

“My clients are smart and knowledgeable about their conditions. They engage the medical system at a high level, but they usually find some aspect of the system that they can’t untangle,” Lundberg says.

That’s where her expertise and resources come in, whether through reviewing a patient’s chart, sharing medical research from such sources as UpToDate or reaching out to colleagues around the country.

Having been a practicing physician helps, Lundberg acknowledges.

“It’s easier to get questions answered because I speak the language,” she says.

For example, a client wanted to explore cardiac stenting instead of open-heart surgery, as a physician in his area had recommended. Lundberg contacted a cardiologist with whom she trained to get his thoughts.

She notes, “Once I learned that this was potentially not an unreasonable option, I was able to direct my client to the top expert in his area and ask, ‘What do you think?’”

Lundberg emphasizes that her goal is to support her fellow clinicians, who often say they are grateful to have her there because it makes their jobs easier. Take, for example, a client who was prescribed digoxin for atrial fibrillation and heart failure but was reluctant to take it. Because Lundberg was familiar with the patient’s adherence to Buddhism and meditation and his wariness of new medications, she reassured him by saying, “Oh, digoxin! That’s derived from the foxglove plant. It’s been used to treat patients with heart failure for more than 200 years!” The result: improved patient adherence.

Lundberg finds it rewarding to be able to help patients address and cope with their conditions, which often interfere with their quality of life and can cause anxiety and helplessness.

“Giving knowledge to patients is critical,” she explains. “Knowledge is power, and it lowers anxiety.”

In this era of payer-centered care and time limitations for providers, Lundberg says, “I feel fortunate and privileged to have time to connect with patients and medical specialists—and to close the loop so miscommunication is less frequent.”

**Being the Change**

Lundberg does not regard the emergence of health advocacy as the answer to the industry’s larger limitations. Instead she hopes that eventually “the real sea change will be made within the medical system, allowing my role to become superfluous.”

The goal should be to value high-level thought processes that can lead to prompt and accurate diagnoses, while allowing providers time to connect with patients.

“We all want the same things,” Lundberg explains. “The goal is to incentivize good medicine. We need to create disincentives for systems that over-reimburse for certain things and under-reimburse for the intellectual work of sitting down for half an hour and thinking through a case.”

Recalling Maki’s early influence, she shares, “I know there are physicians who still take the time to develop a differential diagnosis. I read their notes!”
Grateful to Gundersen

CELEBRATING COLLABORATION IN LA CROSSE

Clockwise from top left (left to right): M2 Aaron Anderson, M2 Mikayla Gallenberger, M2 Alekses Clifton, M2 Kim Vidma, M2 Bailee Stark and M3 Collin Lash gathered at the event; Kyla Lee, MD ’98, celebrates her Gold Foundation Award with Elizabeth Petty, MD ’86 (PG ’89); Greg Thompson, MD, speaks; Paul Klas, MD ’83, and Ben Jarman, MD, visit.

In keeping with the Wisconsin Idea, the reach of the University of Wisconsin School of Medicine and Public Health (SMPH) extends to the borders of the state and beyond. Honoring a 30-year collaborator in this goal, the school’s administrators and the Wisconsin Medical Alumni Association (WMAA) held a reception in summer 2018 to recognize Gundersen Health System, which serves as the SMPH’s Western Academic Campus. As part of the school’s Statewide Campus, it helps further the Wisconsin Idea through several robust endeavors in which SMPH students learn from community-based mentors.

At Gundersen’s flagship campus in La Crosse, Wisconsin, and in nearby towns dotting the rural landscape, SMPH medical students have opportunities to complete rotations in about 20 specialties. Further, the health system is a partner in the SMPH’s Wisconsin Academy for Rural Medicine (WARM), which aims to reduce the rural physician shortage by admitting and training medical students who intend to practice in rural communities. Elizabeth Petty, MD ’86 (PG ’89), explains that WARM selects the student candidates, and the faculty and staff in the Statewide Campus provide the environment and talent to train them.

Among these are the honorary hosts, who also are WMAA board members: Gundersen physicians Kyla Lee, MD ’98, Abigail Taub, MD ’12 (PG ’16), and Michael Witck, MD ’07. All are SMPH adjunct faculty members, as is Greg Thompson, MD—Gundersen’s chief medical officer and director of medical education, and the SMPH’s associate dean for the Western Academic Campus—who gave a brief talk. Overall, approximately 70 SMPH alumni are employed by Gundersen in numerous specialties; nine adjunct faculty members practice in the La Crosse area; and many of them participated in planning and rolling out the SMPH’s new ForWard Curriculum.
As a former SMPH medical student who did rotations at Gundersen and now practices and teaches medical students there, Witcik shares, “The impact of the collaboration between Gundersen and UW-Madison is vital—from the perspective of medical students who learn to provide patient care and network with other healthcare providers and from the perspective of attending providers.”

Petty notes, “We are incredibly grateful for the dedicated, talented Gundersen physicians who provide innovative education and mentoring for students in the traditional MD Program, the WARM Program and residencies. They contribute greatly to trainees’ success.”

Sixty-two SMPH graduates have matched to residencies at Gundersen in the past 10 years.

At the event, Petty presented the WMAA Distinguished Clinical Teaching Award to Evan Kemp, MD (PG ‘14). The award recognizes clinical instructors from each major teaching location in the Statewide Campus; recipients are selected by fourth-year medical students.

Evan Kemp, MD (PG ‘14), accepts the WMAA Distinguished Clinical Teaching Award from Elizabeth Petty, MD ’86 (PG ’89).

A Gundersen pediatric hospitalist and an SMPH clinical adjunct professor, Kemp earned his medical degree from the University of North Dakota School of Medicine and completed a residency at the American Family Children’s Hospital.

Petty also honored Lee, who received the Gold Foundation Leonard Tow Humanism in Medicine Award at the SMPH’s Gold Humanism Honor Society induction in August 2018. The award recognizes a faculty member who demonstrates clinical excellence and outstanding compassion in the delivery of care and who shows respect for patients, their families, and health care colleagues.

Lee earned her medical degree at the SMPH and completed an internal medicine residency at Gundersen. She also received the SMPH Dean’s Teaching Award in 2014.
Drezner Earns Belzer Award

THE HONOR RECOGNIZES HIS ACHIEVEMENTS IN LEADERSHIP AND INNOVATION

Left to right: Dean Robert N. Golden, MD, presents the Belzer Award to Marc Drezner, MD.

by Kris Whitman

When presenting the 2018 Folkert Belzer Lifetime Achievement Award to Marc Drezner, MD, University of Wisconsin School of Medicine and Public Health (SMPH) Dean Robert N. Golden, MD, noted, “Our school is largely defined and shaped by its people. The best thing about being dean is that I am surrounded by this community of incredibly bright, passionate and dedicated individuals who embrace the very best traditions of academic medicine and the Wisconsin Idea.”

Indeed, Drezner’s passion for the Wisconsin Idea—specifically his aim to help turn discoveries into health improvements for people throughout the state and beyond—and his dedication to furthering the school’s goals were central to the SMPH leaders’ decision to bestow upon him this prestigious award at the fall faculty and staff meeting in October 2018.

The award, created 22 years ago, “recognizes an outstanding individual who has had a pivotal impact on the school, and on the people and populations we serve,” said Golden.

He continued, “The intent of the award—named in honor of Dr. Folkert Belzer, the former chair of the Department of Surgery whose discoveries dramatically enhanced the field of organ transplantation—includes recognition of the ‘unsung hero’ whose contributions have extended over a period of time.”

During his research, teaching and patient care career—which began with 25 years on the faculty at Duke University followed by 18 years at UW-Madison—Drezner has been recognized as an expert in bone and mineral metabolism and has contributed to the knowledge of genetic diseases such as X-linked hypophosphatemic rickets and osteomalacia. He also has brought attention to postmenopausal osteoporosis through his work to characterize the psychosocial impact of this disease. Further, his research led to clinical studies that resulted in the discovery of a new disease, pseudohypoparathyroidism type 2, in 1973.

Drezner earned his medical degree at the University of Pittsburgh and completed an internal medicine residency and endocrinology fellowship at Duke University, where he held several faculty positions, ultimately as a professor of medicine and director of the Endocrinology Training Program and of the Center for Nutritional Studies.

He joined the SMPH faculty in 2000 as professor and chief of the Division of Endocrinology, Diabetes and Metabolism in the Department of Medicine. In 2005, Drezner became the director of the General Clinical Research Center. Capping off his productive career at UW-Madison, he retired in July 2018 from his most recent roles: senior associate dean for clinical and translational research in the SMPH and executive director of the Institute for Clinical and Translational Research (ICTR), which is a collaboration among the SMPH, the schools/colleges of Nursing, Veterinary Medicine, Pharmacy and Engineering, and the Marshfield Clinic Research Institute.
Looking back, Golden said, “In 2006, when I joined the SMPH as dean, it was clear to me that we really needed to accelerate the translation of the school’s incredible research discoveries to the ‘bedside’—to directly impact patient care. At that time, the National Institutes of Health (NIH) had recently established its Clinical and Translational Science Awards (CTSA) Program, which presented a great opportunity. I recognized that Marc was a highly productive physician-scientist who had successfully moved his laboratory discoveries into clinical applications—and that he had personally achieved the goals of the CTSA Program. I thought he would be the perfect person to steer our CTSA ship.”

With that program in mind, in 2006, the SMPH created ICTR—initially funded by a substantial grant from the Wisconsin Partnership Program and generous support from the UW Medical Foundation—and Golden asked Drezner to create and lead a team to apply for the first CTSA grant in 2007. He has since led teams that implemented the first award and successfully applied for competitive renewal grants in 2012 and 2018.

ICTR’s many goals include training young investigators to conduct clinical and translational research, and establishing community-academic partnerships to help inform research design and initiate conversations about translation and dissemination of discoveries into diverse settings.

Drezner noted that ICTR’s community-engaged research programming—with activities in 58 of Wisconsin’s 72 counties—is the nation’s largest among CTSA grant-holding centers and includes a strong emphasis on collaboration and team science. (A feature article in Quarterly magazine, Volume 20, Number 3, 2018, includes much more about ICTR; see med.wisc.edu/ictr-advances)

Upon accepting the Belzer Award, Drezner shared his gratitude for the opportunities he’s had at the SMPH. He pointed to the “family feeling” about the way people work toward common goals.

“I have had multiple ‘families’ here, starting with endocrinology. The Diabetes Management Service we established was my first real venture into making the health of patients in Wisconsin better because our work entailed communicating closely with referring physicians about new technologies to manage diabetes in their patients,” explained Drezner.

“The past 12 years with the CTSA have been the most remarkable. It was truly a family effort, and I am indebted to each ‘family’ member,” he says. “Our work was not easy, but it was pleasurable to see the incredible work we could accomplish together, always in the right spirit.”

Drezner recalled, “At my retirement party, I was deeply touched by how many people thanked me for helping impact their careers. But, in turn, I feel indebted to them for their accomplishments.”

His personal successes have been many, as reflected in numerous academic awards; election into the American Society of Clinical Investigation, the American Association of Physicians and the Association of Osteobiology; service on NIH study sections; inclusion in ranking of the Best Doctors in America from 2002 to 2017; and placement on the University of Pittsburgh Endocrinology Wall of Fame. He is widely published, and he has served on editorial boards for professional publications and as treasurer and president of the American Society of Bone and Mineral Research, as well as editor of the Journal of Bone and Mineral Research. Moreover, he is proud to have trained 16 physician-scientists and doctoral students, many of whom hold high-ranking positions in academic medicine.

About his retirement, Drezner said he misses the people at UW-Madison but does not miss facing intense deadlines. He and his wife of 51 years, Sherree Drezner, moved back to the region of North Carolina that they called home for several decades before they became Wisconsinites. There, they have reunited with lifelong friends and seized upon the opportunity to spend more time with their children and grandchildren. This has enabled them to share in the excitement as their grandchildren continue to grow into adolescence and beyond.

Reflecting upon a longstanding rivalry he had with Golden—based on their past careers at Duke and the University of North Carolina, respectively—Drezner quipped that they do not talk about basketball, but he will always treasure his friendship and working relationship with Golden.

“Everybody in academic medicine runs into brick walls, but at the UW School of Medicine and Public Health, especially under Dean Golden’s guidance, the overarching attitude is, ‘Let’s figure out a way to get around that wall,’” Drezner noted. “And this positions the school’s faculty and staff to make extraordinary advances.”
Practice Makes Perfect
HANDS-ON WORKSHOPS HELP STUDENTS HONE PROCEDURAL SKILLS

by Andrea Schmick

Making the leap from learning about clinical procedures to doing them is less intimidating when the “patients” are fellow trainees—who generally approach the experience with good humor, knowing that the tables will turn when it’s their time to practice the same skills.

This feeling prevails at the annual Procedures Fair at the University of Wisconsin School of Medicine and Public Health (SMPH), which gives students hands-on experience in many of the procedures that physicians, particularly in primary care, encounter daily.

The 2018 fair—held on a November evening at the Health Sciences Learning Center—welcomed more than 120 UW-Madison undergraduate, physician assistant and first- and second-year medical students.

More than 40 faculty members, residents, fellows, staff and volunteers—including third- and fourth-year medical students who had participated in previous years—served as teachers. Some are trained to act as mock patients for sensitive procedures, such as obstetrical ultrasounds. Anatomical teaching tools included traditional education models, along with more creative props, such as bicycle tire tubes, oranges, carrots and cocktail wieners.

Each enrolled trainee could choose two of 13 available workshops at the Department of Family Medicine and Community Health’s (DFMCH) now-signature event.

For example, in the obstetrics basics workshop, students learn how to “date” a pregnancy, use handheld Doppler ultrasound to detect fetal heart tones, check a laboring patient’s cervix and deliver a baby. In the

During a casting workshop, Danalyn Rayner, MD ’00 (standing), helps two SMPH students apply casts to DFMCH resident Carly Salter, MD.
Suturing and IV procedures workshops, they review relevant anatomy, principles and techniques—and then have ample opportunity to practice those delicate skills.

New this year were workshops on wilderness and rescue medicine, sterile technique and wound care, and EKG interpretation.

Planners aim to provide a low-stress, fun learning event, while also giving students the opportunity for one-on-one contact with faculty members and residents from the DFMCH.

The Procedures Fair is sponsored by the DFMCH Office of Medical Student Education (OMSE), led by David Deci, MD, and the Family Medicine Interest Group (FMIG), led by a team of first- and second-year medical students along with faculty advisor Jacob Bryan, MD. Joyce Jeardeau, OMSE student services coordinator and FMIG staff advisor, oversees recruiting and organization for the event.

“The fair is a meaningful way for learners to experience the full spectrum of family medicine alongside experienced teachers,” reflects Deci. “It’s a great way to forge connections with learners who may be considering future careers in family medicine.”

He continues, “Students who participate in the fair consistently say that the experience is fun and well taught, but also very practical and useful.”

The FMIG recently earned the American Academy of Family Physicians’ Program of Excellence Award for its exemplary efforts to grow and support interest in family medicine. It was one of 18 medical school FMIGs around the nation to win the award for 2018.
Welllik Named Chair of Cell and Regenerative Biology

Deneen Welllik, PhD, is the new chair of the Department of Cell and Regenerative Biology at the University of Wisconsin School of Medicine and Public Health (SMPH). She began this new role on December 1, 2018.

She previously held faculty appointments at the University of Michigan in the Department of Internal Medicine, Division of Molecular Medicine and Genetics, and the Department of Cell and Developmental Biology. She also directed the Center for Organogenesis, which is an interdisciplinary group of more than 140 faculty members from four schools and 25 departments at the University of Michigan. Further, she led that university’s National Institutes of Health-funded T32 Training Program for Organogenesis.

Welllik’s laboratory focuses on the role of Hox genes in organogenesis, tissue homeostasis, and tissue renewal and repair—areas in which Welllik is recognized as an international expert. She is highly regarded for her leadership in the field of cell and regenerative biology and for her passion for mentoring at all levels, which will benefit many at UW-Madison.

“Dr. Welllik will be an inspirational and driving force as the department continues its quest to answer the most important and fundamental questions in the field,” says Robert N. Golden, MD, dean of the SMPH and vice chancellor for medical affairs at UW-Madison. “We look forward to supporting her leadership in the development of the next generation of scientists and their advancements in the field of cell and regenerative biology.”

Temte Lauded with National Public Health Award

Jonathan Temte, MD (PG ’93), PhD ’93, professor, Department of Family Medicine and Community Health, University of Wisconsin School of Medicine and Public Health, was honored with the 2018 Public Health Award from the American Academy of Family Physicians (AAFP).

It recognizes his contributions to public health nationwide, including leadership as chair of the Centers for Disease Control and Prevention’s (CDC) Advisory Committee on Immunization Practices. Temte was the first family medicine physician to serve on that committee and now is chair of the Wisconsin Council on Immunization Practices.

“It is an honor to be recognized,” says Temte. “The award also reflects the longtime support I’ve received from colleagues and mentors at the Wisconsin State Laboratory of Hygiene, Wisconsin Division of Public Health, Madison/Dane County Public Health, UW Department of Family Medicine and Community Health, Wisconsin Academy of Family Medicine and CDC.”

Temte is a prolific author and active presenter on topics related to immunizations, the environment and respiratory disease transmission. He has been active on pandemic influenza and bioterrorism working groups for the state of Wisconsin. His research interests include viral disease surveillance in primary care; absenteeism monitoring in schools as early warning for influenza outbreaks; early detection of influenza in long-term care facilities; seasonality and epidemiology of influenza; attitudes toward immunization; and assessment of primary care workloads.

Coon Honored for Discovery in Proteomic Sciences

Joshua Coon, PhD, professor of biomolecular chemistry and chemical at the University of Wisconsin-Madison, earned a Discovery in Proteomic Sciences Award from the Human Proteome Organization (HUPO).

The award recognizes Coon’s outstanding effort and achievement in proteomics, the study of cellular proteins and their functions. HUPO is an international organization that represents and promotes proteomics through global cooperation and collaborations by fostering the development of new technologies, techniques and training.

Coon and his lab team develop and apply mass spectrometric technology to study human health and develop scientific instruments to measure molecules in living systems. He has made significant contributions to proteomics and metabolomics research by developing next-generation instrumentation and methods, proteomics workflows, novel isotopic labeling quantitative approaches and associated software development. Coon’s work has influenced many labs in the United States and abroad, and the tools he has created are in use throughout the world.

Coon is the inaugural holder of the Thomas and Margaret Pyle Chair at UW-Madison and an affiliate of the Morgridge Institute for Research. He now serves as director of the National Institute of General Medical Science-funded National Center for Quantitative Biology of Complex Systems. He joined the UW-Madison faculty in 2005.
Safdar, Moore, Raman Receive High-Risk, High-Reward Awards

The National Institutes of Health (NIH) recognized several University of Wisconsin-Madison faculty members with its New Innovator Awards, designed so work can move forward swiftly. UW-Madison placed second among U.S. public universities for the number of faculty receiving the awards.

New Innovator Award recipients Nasia Safdar, MD, PhD (PG’00), professor of medicine, Darcie Moore, PhD, assistant professor of neuroscience, and Srivatsan Raman, PhD, assistant professor of biochemistry, will receive more than $6.8 million in total funding for unconventional studies that carry the potential to transform the medical field as part of the NIH’s High-Risk, High-Reward Research Program.

Safdar will strengthen a clostridium difficile prevention mathematical model; Moore will focus on understanding the mechanisms underlying aging in neural stem cells; and Raman will aim to understand protein allostery.

Greenberg Receives Healthcare Research and Quality Grant

Caprice Greenberg, MD, MPH, FACS, professor, Department of Surgery, University of Wisconsin School of Medicine and Public Health (SMPH), was awarded a five-year, $1.9 million R01 grant from the Agency for Healthcare Research and Quality (AHRQ) for her project, “Video- Based Collaborative Learning to Improve Ventral Hernia Repair.”

The study will test two approaches to video review and performance feedback: web-based surgical coaching versus asynchronous video-based feedback. The grant will advance the work of Greenberg’s team at the Wisconsin Surgical Outcomes Research Program, including Jacob Greenberg, MD, Jessica Schumacher, PhD ’09, and Sudha Pavuluri Quamme, MD.

Greenberg is a surgical oncologist who specializes in breast cancer and a health services researcher who focuses on improving patient safety and quality of care. The AHRQ is the lead federal agency charged with improving the safety and quality of the U.S. health care system. It develops knowledge, tools and data to improve the health care system and help patients, providers and policymakers make informed health decisions.

The Morgridge Distinguished Chair in Health Services Research and vice chair of research in the SMPH Department of Surgery, Greenberg’s research interests include improving operative performance and patient safety, decreasing practice variation and engaging patients and other stakeholders in promoting high-quality surgical care for those with cancer.

Johnson, Team Awarded Alzheimer’s Registry Renewal Grant

The Wisconsin Registry for Alzheimer’s Prevention (WRAP) has been awarded a five-year, $19 million renewal grant from the National Institutes of Health to enable in-depth study of molecular hallmarks of Alzheimer’s disease in the brain and spinal fluid.

“We still don’t know why some people get the disease and others do not, but the WRAP study is pursuing answers to these questions, and early-detection tests are critical,” notes Sterling Johnson, PhD, professor, Department of Medicine, University of Wisconsin School of Medicine and Public Health, and principal investigator, WRAP.

The grant’s funding will expand capacity for in-depth tests for biomarkers that serve as early signals of potential future disease.

“Ten years ago, we didn’t have the tools to diagnose Alzheimer’s disease with precision and confidence,” Johnson says. “Now, with clear methods for detecting pathological features in the brain, we can focus on how to prevent or reduce them.”

WRAP, which began in 2001, is the largest family history study of Alzheimer’s disease in the world. Its data are shared with 16 other Alzheimer’s studies at the SMPH, and data sets are available upon request to researchers worldwide.

“This is a team-science effort. The WRAP study has resulted in a constellation of linked studies looking at things like how genetics, health history, lifestyle, stress and even microbes in the gut can accelerate or affect disease progression. We’re discovering so much,” comments Johnson.
Interview by Andrew Hellpap

In January 2018, Sheri Johnson, PhD, became director of the University of Wisconsin Population Health Institute (PHI) at the UW School of Medicine and Public Health (SMPH).

Before this, she was an associate professor of pediatrics at the Medical College of Wisconsin in Milwaukee and previously worked at Sinai Samaritan Medical Center, Children’s Hospital of Wisconsin and Milwaukee Health Services, Inc. She also was the state health officer in the Wisconsin Department of Health and Family Services.

Johnson earned her PhD in clinical psychology from Boston University and completed a clinical psychology internship at Children’s Hospital of Boston/Judge Baker Children’s Center and a clinical psychology fellowship at Harvard Medical School.

The PHI—and its mission to translate research for policy and practice—has existed in various ways in the Department of Population Health Sciences since 1984. It received its current structure in 2005 and recently became a stand-alone institute.

It has four main initiatives: County Health Rankings and Roadmaps, Evaluation Research group, Health Policy group, and Mobilizing Action Toward Community Health.

The institute partners with public health departments, business leaders, educators, investors, advocates, government (tribal, state and local), health care providers and the public to conduct research, community-engaged programs, training and more.

What’s an example goal of the PHI?
What Works for Health (WWFH), which highlights evidence across multiple determinants of health, exemplifies how the institute translates research for practice. The database includes “evidence at your fingertips” and is a component of County Health Rankings and Roadmaps, a partnership between the PHI and Robert Wood Johnson Foundation. Evidence ratings are assigned so policymakers and practitioners understand the strength of evidence behind an approach.

What interested you in this role?
It’s a tremendous opportunity to be able to build on the PHI’s legacy. I am most interested in working to accelerate progress toward health equity. The institute’s work is influential in helping stakeholders understand and address multiple factors that influence health.

Why did you switch from clinical care to population health?
As a graduate student in the mental and social health department of a Federally Qualified Health Center in Massachusetts—through the mentorship of interdisciplinary professionals and neighborhood residents from Jamaica, Somalia, South Africa, Haiti and the United States—I learned the importance of diagnosing and treating individuals, families and communities, and the conditions that surround them.

It’s fulfilling to work with children and families faced with “problems in living” and mental illness. I’m honored to be trusted to hear about their struggles and accompany them through healing and recovery.

What is the greatest barrier to health equity in Wisconsin?
A barrier to achieving health equity is insufficient understanding about why there are differences in the distribution of social, economic, environmental and health care resources. Through a UW Native Nations Workgroup training, I learned about the history of Indian Boarding Schools in Wisconsin and how forced removal of children has impacted the health and well-being of many. I had known some aspects of this historical trauma, but the training helped me better understand how these policies and practices connect to current health disparities.

What are some of the most prevalent impacts of health equity in the state?
The most prevalent impact of health inequity is a collective loss of potential and honor.

How does the PHI interact with policy-making in Wisconsin?
The Evidence-Based Health Policy Project uses several approaches to deliver research and tools to stakeholders and policy-makers. Briefings at the State Capitol provide legislators, agency employees and others with evidence about priority issues. We also share helpful resources at UW-Madison—such as our searchable database, What Works for Health.

What are the most outstanding policy questions affecting Wisconsin?
Wisconsin’s childhood poverty rate was 16 percent as of the “2017 County Health Rankings” report, and the rate was much higher for children of color. I hope we can work together to assure that all children have the essential building blocks for long, productive, fulfilling and healthy lives.

Have you moved to Madison?
I split my time between Milwaukee and Madison. I serve as the UW-Madison representative on the Milwaukee County Mental Health Board, volunteer with Big Brothers/Big Sisters there, and spend time with my mother and friends on weekends.

In Madison, I enjoy the lakes and bike trails. I try to spend time outside as much as possible. And I love Greenbush Bakery!
Cadmium Exposure Lowers Ability to See Contrast

Exposure to cadmium may increase the risk for vision issues, according to researchers from the University of Wisconsin School of Medicine and Public Health (SMPH). The study, published in *JAMA Ophthalmology*, examined contrast sensitivity, a measure of how well someone sees an image against a background.

Researchers analyzed data from a large, ongoing study of aging adults in Beaver Dam, Wisconsin. Nearly 2,000 adults who were free of contrast sensitivity problems provided baseline data with follow-up exams—including blood tests and eye screenings—at five-year intervals. Data collection took place from 2005 to 2017, with participants ranging from 21 to 84 years old at baseline. Ten years into the study, nearly 25 percent had developed an impaired ability to see contrast, and a higher incidence was linked to higher levels of cadmium exposure.

Typically, cadmium exposure happens through inhaling cigarette smoke or eating green leafy vegetables, rice and shellfish. The incidence of the impairment was highest in the 65- to 84-year age group. More than 87 percent of the cases occurred in participants whose visual acuity was no worse than 20/40 at any time.

“Contrast sensitivity is an important part of vision. Impairment increases difficulty for near-vision tasks, like reading small print, inserting keys into locks and night driving,” says Adam Paulsen, a researcher in the Department of Ophthalmology and Visual Sciences (DOVS) and the study’s lead investigator.

“We found that the risk for developing contrast sensitivity may be somewhat preventable, for example, by not smoking.”

Karen Cruickshanks, PhD, professor, DOVS and Department of Population Health Sciences, is the study’s principal investigator, and Carla Schubert, DOVS researcher, is its second author.

Protein Mutations Predispose to Leukemia

Research at the University of Wisconsin-Madison offers a better understanding of GATA-2, a key gene in blood cell development that when mutated causes a predisposition to develop acute myeloid leukemia (AML). Findings, published in the *Proceedings of the National Academy of Sciences*, may lead to improved targeted therapies for this type of leukemia.

The study’s senior author, Emery Bresnick, PhD, professor, Department of Cell and Regenerative Biology, aimed to understand how GATA-2 disease mutations affect the protein function in cells.

“We developed a system to study how normal and mutant forms of GATA-2 function to control genes and cellular differentiation using ‘primary’ or normal cells,” he explains.

As predicted, normal GATA-2 stimulated the development of both cell types. However, cells containing the GATA-2 mutant were heavily skewed toward the myeloid type, essentially making no erythroid cells. Also, while normal GATA-2 targeted the full set of genes, mutant GATA-2 preferentially targeted genes favoring myeloid development.

“The serendipitous discovery was that certain disease mutants were more active than wild type GATA-2, though only in the myeloid-specific contexts,” says Bresnick, director, Blood Research Program, co-director, Genetic and Epigenetic Mechanisms Program, UW Carbone Cancer Center. “This provides evidence to support a new paradigm in which GATA-2 deficiency does not fully explain the disease mechanism.”

Bresnick and his team found evidence that some GATA-2 mutants have a gain of function at certain genes in the genome, and a loss of function at others. These changes corrupt the genetic network that creates a predisposition to myelodysplastic syndrome and AML.
Blockages of Nerve-Cell Proteins Cause Disease

A University of Wisconsin School of Medicine and Public Health study identified a molecular basis underlying hereditary spastic paraplegia (HSP), a neurodegenerative condition that makes walking difficult to impossible.

Published in *Cell Reports*, findings show how a gene mutation in TFG impairs neurons from forming structures needed to transmit signals properly to the legs. More than 70 genes are linked to HSP, but individual contributions are unclear.

Led by Anjon Audhya, PhD, professor of biomolecular chemistry and the study’s senior author, the team first engineered the mutation into human stem cells using CRISPR and then differentiated the cells into human neurons. By tracking the protein in normal and mutant cells, they found that mutant TFG failed to accumulate as usual at a major protein-processing center, known as the endoplasmic reticulum. This impaired protein trafficking, elevating a stress response in the neurons, which can lead to neuronal death.

The team also found that axons between cells failed to connect in neurons expressing mutated TFG. An adhesion protein was found at high levels on the surface of normal neurons but was reduced on the surface of mutant axons.

“Nerve conduction speed depends on the bundling of these axons; if it’s reduced, that translates into an inability to walk normally,” Audhya says.

He and his team will screen for drug therapies by monitoring how they affect stress levels and axon bundling. This could improve screening and therapies for neurodegenerative diseases.

Study Discovers Cause of Genetic Blood Disorder

Scientists at University of Wisconsin-Madison have identified mutations that cause myelofibrosis, a rare genetic blood disorder in children.

Mutations in a protein that controls the production of blood platelets are the source of a genetically inherited form of macrothrombocytopenia with focal myelofibrosis, according to the study’s lead author Inga Hofmann, MD, assistant professor, Department of Pediatrics, UW School of Medicine and Public Health, and medical director, UW Program for Advanced Cell Therapy.

Hofmann and her team showed that the protein G6b-B, which also regulates the production and function of megakaryocyte—a large bone marrow cell—can be manipulated to increase production of blood platelets, suggesting a new treatment approach. The findings were featured as the September 2018 cover article in the journal *Blood*.

Myelofibrosis is a serious bone-marrow disorder that disrupts the body’s production of red blood cells. It can lead to bone marrow scarring and severe anemia, weakness and an enlarged spleen. While the disease is much more common in adults, only about 50 cases have ever been reported in children. The only known treatment is a hematopoietic stem cell transplant.

Hofmann and her collaborator, Yotis Senis, PhD, a professor of hemostasis at the University of Birmingham in England, set out to understand how G6b-B works in the marrow and determine ways to treat children who have the condition. They discovered that loss of the G6b-B protein leads to abnormal megakaryocytes, marrow scarring and low platelet counts.

“If we could manipulate the pathway involving the G6b-B protein in myelofibrosis patients, we might be able to restore normal platelet-producing cells in the bone marrow cells and stimulate the production of normal blood cells,” Hofmann says.

Understanding the relationship between megakaryocyte and the G6b-B protein is a significant advancement in the entire field of myelofibrosis.
Health inequity is among the most profound problems facing our nation. The opportunity to live a long, healthy life is not equally available for all. Many conditions, including Alzheimer’s disease and diabetes, disproportionately impact minorities and socioeconomically disadvantaged persons. These populations are more likely to experience poorer health, in part due to the social determinants of health—conditions in the environments in which people are born, live, work, play, worship and age that impact a wide array of health, functioning and quality-of-life outcomes and risks.

Research confirms that social determinants of health are among the fundamental drivers of health inequity. Such factors are now the focus of many initiatives supported by the National Institutes of Health (NIH), Centers for Disease Control and Prevention, World Health Organization and others.

As physicians, we often observe how “health care” and “social care” intertwine and how they, together, impact health. For example, living in substandard housing with inconsistent electricity makes it nearly impossible to properly refrigerate insulin. Poverty may limit opportunities to buy nutritional food and worsen cardiovascular risk factors. And residing in unsafe neighborhoods may make it difficult to exercise or access pharmacies and clinics.

**Multipronged Efforts**
The University of Wisconsin School of Medicine and Public Health (SMPH) embraces its responsibility to address health inequities and catalyze sustainable change. With partners, the school has launched initiatives that span education, research and practice to address the social determinants of health. Many such programs are supported by the SMPH’s Wisconsin Partnership Program (WPP), which allocates grants to research, education and community partnerships designed to improve the health of Wisconsin.

**Education**
SMPH medical student education increasingly focuses on health equity and social determinants. For instance, the new ForWard Curriculum emphasizes longitudinal public health and the application of knowledge in community settings. The Wisconsin Academy for Rural Medicine and the Training in Urban Medicine and Public Health programs aim to increase the number of physicians who practice in underserved settings. And the Wisconsin Population Health Service Fellowship’s goals address the social-health system interface. These and other programs assure that SMPH graduates are ready to holistically advance health.

**Research**
Innovative basic, clinical, translational and public health research provide another cornerstone for building a healthier state. To make meaningful gains in health equity, continued research into factors that drive, modify and ameliorate social determinants’ impact is imperative. One of the newest such innovations is the NIH-funded Neighborhood Atlas (see figure below; source: Neighborhood Atlas, 2018, UW Department of Medicine, https://www.neighborhoodatlas.medicine.wisc.edu). It is a first-of-its-kind, free, customizable, online mapping tool that allows anyone to visualize locations of disadvantage throughout the United States, including Puerto Rico. Research partnerships with Native American, African American and other minority populations, a proud tradition at the SMPH, have led to critical advances across a large breadth of conditions, including asthma, Alzheimer’s disease and others.

**Practice and Community**
Translation of educational initiatives and research discoveries toward “real-world” change requires a deliberate focus on clinical practice and community engagement. WPP-funded innovations involving multidisciplinary stakeholders leverage authentic community partnerships, targeting the social determinants of health while establishing the necessary groundwork for independence and sustainability. We also know that sustainable change requires the SMPH’s students, faculty and staff to mirror Wisconsin’s diversity, which will continue as a focus for the school.

**Future Vision**
We are on the cusp of a revolution in the field of health equity, and the SMPH is committed to help lead the way. As the challenges of the social determinants of health evolve, so must we. Continued investments are essential to insuring lasting progress. Along with our key partners, the school will continually work to eliminate health inequities and, in so doing, serve as a model for the nation.

Amy J.H. Kind, MD ’01 (PG ’05), PhD ’11
Associate professor, Division of Geriatrics and Gerontology, Department of Medicine, SMPH
I Know YOU

... OR DO I?
If you think you can identify the person in the photograph at right, send your guess to quarterly@med.wisc.edu. We’ll draw one of the correct responses and announce the winner in the next issue of Quarterly.

For the last issue (see below), Larry D. Grant, MD ’89, won the prize drawing and will receive a gift from the Wisconsin Medical Alumni Association!

HINT ABOUT PHOTO ABOVE:
She has been a longtime preceptor.

ABOUT LAST ISSUE’S PHOTO:
In the past issue of Quarterly, 19 people correctly guessed the identity of Philip R. Hamilton, III, MD ’73. As stated by John Schwartz, MD ’76, Hamilton was “a shining star gone way too soon.”

Hamilton was a professor of obstetrics and gynecology at Sinai Samaritan Medical Center in Milwaukee, Wisconsin, from 1978 to 1989. He was chair of the Department of Obstetrics and Gynecology at Temple University in Philadelphia starting in 1989 until his death in 1990. At his medical school alma mater, the University of Wisconsin School of Medicine and Public Health, a scholarship established in Hamilton’s honor recognizes his superior dedication and service to the school and the community.

Allen H. Babbitt, MD ’68 (PG ’74), wrote: “As a resident, I had Phil on his third-year OB/GYN rotation. I was his chief resident the following year. We worked together for several years at Mt. Sinai Medical Center with the UW residency program there. He then moved on to chair the Department of Obstetrics and Gynecology at Temple University. … He was a good friend.”

Doug Olk, MD ’83, recalled, “I did my third-year obstetrics and gynecology rotation at Mt. Sinai in Milwaukee in the fall of 1981. I learned tons from [Hamilton], and I had the opportunity to deliver a baby. While I didn’t go into obstetrics and gynecology, it was a hands-on rotation and a real confidence-building experience.”

Francis Wolf, MD ’73, noted, “He was an outstanding physician and a truly fine human being. Of interest, in medical school, he and I were on our obstetrics and gynecology clerkship together, an area I knew I would never be interested in. Of course, Phil went on to be a very respected obstetrician. We practiced in the same hospital, Aurora Sinai Samaritan Medical Center.”

Classmates, Brian Kanter, MD ’73, and Richard Boxer, MD ’73, shared, respectively, “Phil was passionate about caring for the underserved,” and “Phil was a true gentleman, a class act.”
We Want to Hear From You

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

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