

# MCW

*magazine*



ADVANCING BIOMEDICAL  
RESEARCH TO SAVE LIVES  
DURING THE PANDEMIC AND BEYOND

# MCW

magazine

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# Advancing Biomedical Research to Save Lives – During the Pandemic and Beyond

Throughout 2021, the world has continued to face unprecedented challenges brought on by the coronavirus pandemic. The overall pattern of the pandemic during the last 19 months has been a series of COVID-19 waves – surges of new cases followed by declines.

A large spike in COVID-19 cases in the US occurred over the early winter months of 2020–2021, when individuals traveled and gathered for the winter holidays. The arrival of FDA-authorized vaccines in December 2020 helped bring new infection levels back down in many areas through the spring of 2021. However,

another surge began in July 2021 as the contagious delta variant began to circulate and eventually become dominant.

Since March 2020 – when the virus first hit our state – the Medical College of Wisconsin

(MCW) has continued to ensure that protecting the health, safety and well-being of our students, faculty, staff, visitors and communities was our top priority.

In late December 2020, MCW and our health system partners – Froedtert Health, Children's Wisconsin and the Zablocki VAMC – received doses of the Pfizer COVID-19 vaccine and began to issue invitations to individuals to be vaccinated at approved sites within each entity. We are extremely grateful to the hundreds of MCW faculty, staff, friends and students who generously donated more than 8,000

hours of their time at the MCW Hub Vaccination Clinic to make a tangible difference in fighting the pandemic and to provide additional visibility for MCW's community outreach activities.

The clinic team administered approximately 20,000 doses to fully vaccinate nearly 10,000 individuals between December 22, 2020, and April 14, 2021 – about 60 percent of whom were community members. Also, the clinic enabled us to train 158 medical students and 56 pharmacy students under the direct supervision of licensed healthcare professional volun-

teer preceptors. Beginning this fall, we also have made COVID-19 boosters available for all MCW employees and learners – and are pleased to report that vaccinations against COVID-19 at MCW now exceed 95 percent.

In previous issues of *MCW Magazine*, we

shared that the onset of the pandemic caused us to pivot to online/distance learning, shut down/hibernate research laboratories, shift to remote work for faculty and staff, and ramp up telehealth/virtual visits by our clinical providers. MCW also emerged as the most trusted source of accurate scientific information throughout the region.

In this issue, we delve more deeply into MCW's research enterprise, including endeavors to advance biomedical research to save lives – during the pandemic and beyond (*see cover story on pages 14–17*). We also highlight the creation of a Data



*Despite the shuttering of scientific experimentation in the spring and summer of 2020, MCW scientists have persevered – demonstrating the ability to adapt and to be both safe and productive.*

# Message From Leadership

Science Institute, groundbreaking cancer clinical trials and our Medical Scientist Training Program.

Despite the shuttering of scientific experimentation in the spring and summer of 2020, MCW scientists have persevered – demonstrating the ability to adapt and to be both safe and productive. MCW research adminis-



*The MCW Hub Vaccination Clinic enabled us to train 158 medical students and 56 pharmacy students under the direct supervision of licensed healthcare professional volunteer preceptors.*

trators have pushed forward on important improvements to scientific infrastructure while investigators have continued to advance their experiments. The determination of all during a very difficult time continues to sustain MCW's growth as a nationally ranked center for innovation and discovery.

Initially, MCW's lab-based researchers largely turned their focus to what they could accomplish through virtual work, which included writing and submitting manuscripts and proposals for grants and other funding opportunities. Some studies, however, needed to continue with protections for patients, research personnel and healthcare staff.

Fortunately, because of the resilience and adaptability of MCW scientists, the pandemic has not altered our trajectory of growth as a center for research in Wisconsin and beyond. MCW continues to rank in the top third of all US medical schools for NIH research support and has the largest clinical research enterprise in the state. To continue to support and propel growth in our research mission, we are renovating and

preparing for the construction of new facilities – including the Basic Science Building and the new Cancer Research Building – that will provide the necessary infrastructure for tomorrow's discoveries. And work continues on the 2025 School of Medicine Research Strategic Plan that will provide a focused effort on growing the research enterprise.

We are pleased to report that we ended fiscal year 2021 with a better than budgeted margin of about \$43 million, or 3.2 percent – despite the financial challenges caused by the pandemic, primarily due to our effective remediation decisions; additional relief funds from the federal government; and better than anticipated clinical volume recovery (see *Finance Report* on page 31).

Thank you to all our alumni, donors, partners, faculty, staff and students for your dedication and commitment to MCW during 2021. You are the driving force behind our knowledge changing life and saving lives. ■

**Jay B. Williams**, Chair,  
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ALL PHOTOGRAPHS IN THIS ISSUE IN WHICH INDIVIDUALS ARE NOT WEARING PERSONAL PROTECTIVE EQUIPMENT WERE TAKEN BEFORE THE PANDEMIC.

### ABOUT THIS ISSUE

*This publication is a hybrid – joining together some of the content of a fall magazine with the broader focus of an annual report. This year's Alumni Weekend was canceled due to the pandemic, but on pages 22-24 we share special content for alumni including award recipients and new MCW/Marquette Medical Alumni Association board members, and pay tribute to the Class of 1971. Pages 26-29 are devoted to sections on Alumni News and In Memoriam. Our fiscal 2021 financials are included on the inside back cover.*

# STAT REPORT



## MCW to Launch Data Science Institute

In September, MCW's Executive Committee of the Faculty approved the creation of a new Data Science Institute (DSI) at MCW within the School of Medicine. The DSI's purpose is to advance data science as a unique scientific discipline while supporting ongoing research throughout the institution.

The institute also will provide an opportunity to further harness the vast expertise across MCW and its health system partners on and beyond the Milwaukee Regional Medical Center campus, including in fields such as bioinformatics, medical

informatics, genomics, proteomics and metabolomics, large database analyses, biostatistics and artificial intelligence. The DSI also will contribute to the education mission through the development of training and professional development opportunities, including degree-granting programs.

Data science is one of five focus areas within the 2025 School of Medicine Research Strategic Plan. The 15 MCW faculty and staff members of the Data Science Workgroup – co-chaired by Mary Horowitz, MD '80, GME '85, FEL '89, MS '91, Robert A. Uihlein, Jr. Professor of

Hematologic Research, deputy director of the MCW Cancer Center, professor of medicine (hematology and oncology) and former chief scientific director of the Center for International Blood & Marrow Transplant Research; and Mingyu Liang, PhD, PDF (postdoctoral fellow) '02, Kohler Co. Professor in Cardiovascular Research, professor of physiology and director of the Center of Systems Molecular Medicine – conducted significant quantitative and qualitative data collection and analysis prior to recommending the creation of the DSI to accelerate the growth of data science at MCW. ■

## MCW Receives \$2.7 Million Grant from AHA for Cardio-Oncology Research

Despite advancements in cancer care, patient outcomes and quality of life, cardiovascular complications continue to be the leading cause of death among cancer patients, outside of cancer recurrence.

MCW was recently awarded funding from the American Heart Association (AHA) for a grant that aims to uncover why Black and African American women are disproportionately affected by cardiovascular complications after breast cancer, and what medical providers can do to affect, predict and prevent vascular damage.

The research, titled DECODE Heartland (Discovery and Elimination of Cardio-Oncology Disparities for Equity in the Heartland), will be led by David Gutterman,

MD, distinguished professor of cardiovascular sciences and senior associate director of the MCW Cardiovascular Center, and Melinda Stolley, PhD, Ann E. Heil Professor in Cancer Research and the Cancer Center's associate director. The transdisciplinary team is supported by additional researchers at the University of Illinois Chicago and brings together experts in population science, basic science and clinical studies around a single area of research focus: cardio-oncology.

The team will study the effect of cancer treatment on blood vessels and measure whether engaging in moderate physical activity and strength training can minimize or prevent vascular damage. A unique aspect



of the research program is the inclusion of a training program that offers a collaborative research experience – with the community – to enable the next generation of researchers and physicians to prevent ongoing health disparities.

The grant application was a joint effort between MCW's Cancer Center and Cardiovascular Center. The Cardiovascular Center received additional support through funding made possible by Advancing a Healthier Wisconsin. (See story on pages 10-11.) ■

## MCW Receives 2021 Health Professions Higher Education Excellence in Diversity Award

MCW has received the 2021 Health Professions Higher Education Excellence in Diversity (HEED) Award from *INSIGHT Into Diversity* magazine, the oldest and largest diversity-focused publication in higher education. As an award recipient – a national honor recognizing US health colleges and universities that demonstrate an outstanding commitment to diversity and inclusion – MCW will be featured, along with 50 other recipients, in the December 2021 issue of *INSIGHT Into Diversity*.



MCW was selected for its success in striving for inclusive excellence through its Office of Diversity and Inclusion. The award process consists of a comprehensive and rigorous application that includes questions relating to the recruitment and retention of students and employees, continued leadership support for diversity and other aspects of campus diversity and inclusion. MCW intentionally innovates through learning and growth, incorporates inclusive leadership at all levels, attracts and builds a 21<sup>st</sup> century knowledge-force, and serves as an anchor throughout the Milwaukee community and beyond. ■

## NCAA-DOD CARE Consortium Receives \$42.65 Million Award

The NCAA-US Department of Defense Concussion Assessment, Research and Education (CARE) Consortium, of which MCW is a member, is the largest concussion and repetitive head impact study in history. The consortium



recently received a \$25 million award from the Medical Technology Enterprise Consortium (MTEC) via the US Army Medical Research and Development Command.

Michael McCrea, PhD, professor of neurosurgery and co-director of MCW's Center for Neurotrauma Research, directs the consortium's advanced research core, which includes head impact sensor technologies, advanced neuroimaging and biological markers that include detailed genetic testing.

This funding is for the next phase of the research program. This phase will investigate the nature and causes of long-term effects of head impact exposure (HIE) and concussion/mild traumatic brain injury in NCAA student-athletes and military service members.

# Why I Continue to See Patients

*Editor's Note: The passage below was excerpted from Dr. Raymond's monthly Letter from the President to MCW faculty, staff and students, disseminated on September 3, 2021.*

**O**n September 2, I completed my annual summer clinical service at the Zablocki VA Medical Center in Milwaukee – and I would like to share why I look forward to this meaningful opportunity each August.

My love of the challenges and privileges of the patient-physician relationship were formed during my medical education at The Ohio State University and training at Duke University; throughout my internal medicine internship and residency, chief medical residency and nephrology fellowship, I learned of the awesome power of the science and the humanity of medicine. As I assumed increasing research and administrative duties throughout my career, I strove to maintain a robust array of clinical duties to bring meaning to my nonclinical duties.

As a nephrologist, I care for men and women with hypertension, diabetes and other causes of renal failure. For seven years early in my career, I was chief of an exceptionally busy renal section at the Durham Veterans Administration Medical Center. As a faculty member, I also was responsible for

100 renal transplant patients and 150 home dialysis patients. Those experiences honed my skills as a physician and forged a lifelong commitment to veterans and patients with renal diseases.

For several weeks each summer at the Zablocki VA, I see patients with chronic renal failure, provide consultations, care for patients in the dialysis unit and tend to acutely ill kidney patients in the ICU and emergency department. I cherish the opportunity to care for patients, especially veterans. As importantly, continuing to see patients shows our stakeholders at MCW that I am a faculty member as well as an administrator – and that I am making a sincere effort to remain in touch with critical front-line issues that impact our clinical enterprise.

For the past two years, treating patients at the VA during the COVID-19 pandemic has enhanced my commitment to speak clearly and candidly about what we can do to combat this deadly disease. We all have had to learn how to deliver the best patient care possible in new ways. As a nephrologist, the physical examination to evaluate the state of a patient's hydration is essential to making sound decisions for critically ill patients.

Because one of the interventions that many hospitals have undertaken during the pandemic is to minimize the number of

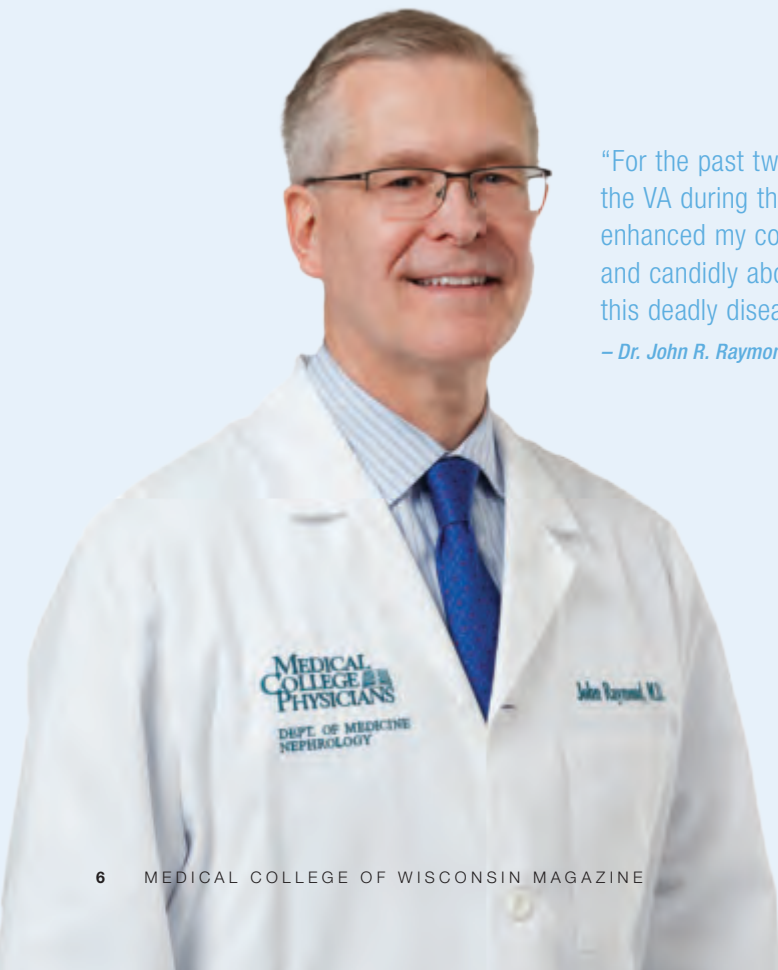
providers who actually can go into a patient's room, I have had to change my practice and learn to rely on the physical examination and the judgment of others – such as ICU doctors, hospitalists and bedside nurses – for clues about what to recommend for fluid resuscitation, diuresis and renal replacement

therapy. This new reality has given me a profound appreciation for the skills and judgment of other team members and has helped to bring the nephrology consultants closer to our ICU colleagues.

I also love talking to patients and their families – although wearing a mask, gowning up and practicing social distancing places barriers between the patient and the provider, and this has posed a personal challenge for me because of the way I like to practice medicine. However, even though I have been a physician for almost 40 years, in medicine one constantly has to learn, adapt and reinvent the way that we care for patients. The lesson for all of us in academic medicine is that we need to continue to adapt to different ways to educate, conduct research, treat patients and support the health of our communities. ■

*“For the past two years, treating patients at the VA during the COVID-19 pandemic has enhanced my commitment to speak clearly and candidly about what we can do to combat this deadly disease.”*

*– Dr. John R. Raymond, Sr.*



# A Personal Crusade Against a Public Health Crisis

For the first decade of her career, Louella Amos, MD, GME '06, FEL '09 and '10, associate professor of pediatrics (pulmonary and sleep medicine) at MCW and a pulmonologist at Children's Wisconsin, had been doing what all great physicians do – provide excellent care. Then, in June 2019, a normally healthy pediatric patient was admitted to the ICU with respiratory distress, unique lung features and an unusual collection of symptoms – and Dr. Amos and colleagues couldn't pinpoint the cause. Then another was admitted. And another. Eventually, eight patients were admitted that month with those similar symptoms, and after finally figuring out the cause, she added “crusader” to her resume.

The common thread among the patients was “vaping” – a way of inhaling nicotine that was created to wean people off cigarettes but has found its way into the hands of children. Many of them. By one estimate from the National Youth Tobacco Survey, 27 percent of high school students and 10 percent of grade schoolers were vaping in 2019. And Dr. Amos and colleagues were quickly starting to see the damage it caused to their patients' developing lungs. They'd seen enough to consider it a health crisis, potentially

impacting children across the US. So, in July 2019, they called a news conference to share an explanation of the symptoms and to warn parents, other healthcare providers and children about the severity of the condition that would later become known as EVALI (E-cigarette or Vaping product use Associated Lung Injury). E-cigarettes are the device used to vape.

“My son was in sixth grade at the time, and it was frightening to think of him using e-cigarettes,” Dr. Amos says. “So, I went on a crusade to educate students, parents, teachers, school nurses, elected officials, other medical professionals and anyone else who had an interest in reducing the use of e-cigarettes in children.”

Since June 2019, Dr. Amos has given talks on the dangers of vaping to students at about eight grade schools and high schools and about 12 local and regional community groups. Her efforts reach beyond the borders of southeastern Wisconsin. She recently spoke at an American Heart Association webinar panel about the effect e-cigarettes have on children and continues to testify in Madison in support of Tobacco 21, which would limit the sale of nicotine and tobacco products in Wisconsin to people over 21. She also has presented cases of EVALI at the Society of Critical Care Medicine Conference, consults with elected officials and healthcare providers around the country and has been interviewed by numerous local, state and national news organizations. Dr. Amos is hopeful that these efforts are paying off. The

2020 National Youth Tobacco Survey indicated that the number of high school students vaping had decreased to 20 percent and the number of grade school children vaping decreased to five percent. More importantly, she has seen a significant drop in the number of severe lung injuries from vaping.

“Regardless of the controversies and political leanings, everyone agrees e-cigarettes aren't good for children,” she remarks. ■ – ANTHONY BRAZA



## Defining a New Lung Disease

When normally healthy pediatric patients began showing up at Children's Wisconsin in June 2019 with respiratory distress and unique symptoms and features that perplexed the care teams, they quickly brought together specialists from around the hospital to determine the cause of this perplexing situation. Dr. Amos, Michael Meyer, MD, FEL '01, professor of pediatrics and chief of pediatric critical care, Lynn D'Andrea, MD '87, GME '90, professor of pediatrics and chief of pediatric pulmonary and sleep medicine, and Michael Gutzeit, MD, GME '88, chief medical officer at Children's, were part of the core team that helped determine the cause and impact of this new lung disease – which was eventually called EVALI.



# Teaching to Teach: Pharmacy School Certificate Program Helps Clinician Impart Research

For Elizabeth Cleek, PhD, RN, academic fellow in primary care research at MCW, her research interest in child advocacy and protection grew out of her professional background in pediatric acute trauma.

Dr. Cleek served as a trauma nurse practitioner and a certified pediatric nurse practitioner during her clinical career. After she began losing her eyesight, Dr. Cleek found she could still care for injured children by altering her career path toward research and education.

“When I worked with patients, the ones that I lost the most sleep over were the child abuse patients,” shares Dr. Cleek. “Within pediatric healthcare, child maltreatment is a significant health concern and can have immediate and lifelong health risks associated with it.”

Helping healthcare providers identify child maltreatment and intervene as early as possible can help change a child’s health trajectory. “The value of research is to get it out in the community, to teach what we find and to help. It needs

to change our practice,” says Dr. Cleek.

To expand her skills in educating healthcare professionals, Dr. Cleek enrolled in the MCW School of Pharmacy Interprofessional Teaching Certificate Program. “My goal is to educate nursing and other healthcare professionals because responding to child maltreatment requires an inter-professional team.”

The School of Pharmacy Teaching Certificate Program was designed to provide participants with the didactic education, training and experiences needed to function as a faculty member and/or preceptor in both academic and practice settings. The program, originally conceived for pharmacy residents and professionals, was opened to other healthcare professionals earlier this year.

“The concepts that they teach are global and appropriate to multiple professionals,” says Dr. Cleek. “It’s helping translate my research into education for healthcare professionals and students.”

Brianne K. Bakken, PharmD, MHA, teaching certificate program chair, and Kevin M. Bozyski, PharmD, program vice-chair, say that interprofessional education has been a goal of the program since its conception.

“We saw a gap in terms of local pharmacy residency programs which didn’t have a teaching certificate option and practicing pharmacists who missed out on the opportunity. We also asked, ‘What about medical residents, postdoctoral fellows and physicians?’ There isn’t a teaching certificate equivalent in their world,

so why wouldn’t we open it up to them?” Dr. Bakken remarks.

“It’s not just a matter of having clinical knowledge; it’s also a matter of how you communicate with other people. Traditionally, I think that’s always viewed in the patient lens, but so much of it is about interprofessional teams and knowing how to talk to a variety of audiences. At the core, that is teaching,” says Dr. Bozyski.

The didactic portion of the program, delivered in live monthly education seminars and recorded web-based lectures, covers topics such as how to write learning objectives, give an effective presentation and adapt to different learning styles. In addition, each member of the program engages in two didactic teachings, lab facilitations or precepting experiences. Program participants also develop a teaching philosophy with their assigned mentor before graduation. Participants can elect to complete the program in one or two years to meet their professional needs.

Dr. Cleek has a mentor in both the MCW School of Pharmacy and the School of Medicine. Dr. Bakken met with Dr. Cleek and her mentors to adjust her experiences in order to fulfill the program requirements and give her a personalized experience.

“The faculty have gone out of their way to make it meaningful for me,” shares Dr. Cleek. “They didn’t just make me fit into their program. If an experience wasn’t valuable for me, the attitude was, let’s work together to find something different.”

For more information about the Teaching Certificate Program, visit [www.mcw.edu/pharmacy](http://www.mcw.edu/pharmacy). ■

– MICHELLE SCHAEFER



Dr. Brianne Bakken teaches learners enrolled in the MCW School of Pharmacy’s Interprofessional Teaching Certificate Program.



# MCW Welcomes Inaugural Class in the Master of Science in Genetic Counseling Program

This fall, the MCW Graduate School of Biomedical Sciences welcomed its inaugural class of students in the Master of Science in Genetic Counseling (MSGC) program. The successful enrollment of all 10 applicants who were matched with the program marked the culmination of years of discussions and planning that began in 2016 with conversations undertaken as part of the development of a strategic plan for genomics-related education at MCW.

Planning for the MSGC program accelerated in early 2019, spurred by funding from the Advancing a Healthier Wisconsin Education and Workforce Development Pathway. The program aims to address the shortage of genetic counselors in the state and to prepare the next generation of genetic counselors to be diverse leaders at the forefront in the delivery of precision health. Jennifer Geurts, MS, assistant professor in MCW's Genomic Sciences and Precision Medicine Center, serves as the MSGC program director.

MCW's MSGC program is one of two certified training programs in Wisconsin, and one of only 51 in the US. The 21-month program enrolls a new cohort of students at the beginning of each fall semester and will consist of coursework, clinical practicums and a research thesis. Students in the program will benefit from dedicated educators at diverse practice locations and have access to clinical experiences from more than 20 genetics clinics located in a variety of community settings.

The first year of admissions for the program was a success, as more than 10 times the number of applications were submitted than slots were available. A strong emphasis was placed on recruiting and admitting students who were representative of the general population diversity of the greater Milwaukee area, with a focus on first-generation and underrepresented learners.

It was this focus that particularly appealed to Siomara Santana, among the students enrolled in the program's



*The inaugural class of students in MCW's Master of Science in Genetic Counseling program matriculated in fall 2021.*

first cohort. "A lot of other programs that I looked into had a mission that didn't really speak to me the way that MCW's did, with the inclusion of diversity," Santana shares. Her interest in the program was further driven by her positive experience with MCW's Apprenticeship in Medicine (AIM) program in which she participated as a rising junior in high school. "This is exactly where I should be. It felt more like home."

As recruitment begins for the second cohort of students, the MSGC program will look to build upon the positive momentum from its first year of admissions. Santana has confidence in the program's ability to attract and select a competitive yet cohesive pool of candidates. "I love my cohort class. The program did an awesome job of picking a great group that feels like a family."

Students who successfully complete MCW's MSGC program will be eligible for the American Board of Genetic Counseling (ABGC) certification examination and subsequent licensure in states where available. Genetic counseling is one of the fastest growing health careers, with an anticipated 26 percent job growth rate from 2020-2030, according to the US Bureau of Labor Statistics. ■

—ANTHONY J. PEREZ

# Pushing the Boundaries of What's Possible

Every day, scientists and clinicians at the MCW Cancer Center are putting in the work to advance cancer discoveries and uncover new treatments that have significant potential for individuals with rare and aggressive cancers.

These individuals work together with teams of experts from disciplines across the Milwaukee Regional Medical Center and from other leading cancer centers designated by the National Cancer Institute. This collaborative approach pushes the boundaries of scientific discovery and exposes what's possible in academic medicine.

MCW teams are advancing biomedical research, producing innovative cancer clinical trials and addressing cancer disparities to give every person a fighting chance to survive. They're doing this with one collective aim – to eradicate cancer in Wisconsin and beyond.

Below are several MCW studies that are changing the landscape of what's possible in cancer care.

## Team Science Approach at MCW Builds MOMENTUM for Personalized Radiotherapy Treatments

Radiotherapy – or radiation therapy – is a common and effective cancer treatment used in approximately half of all patients with cancer. While it's an indispensable tool in treatment, traditional radiotherapy has limitations, often when malignant tumors come close to healthy organs that could be damaged by exposure to radiation.



*Dr. William Hall is one of the principal investigators on the international MOMENTUM study.*

New advancements in radiotherapy technology are showing promise for safer and more effective cancer treatment. The Elekta Unity MR-linac – cutting-edge technology at the Froedtert & the Medical College of Wisconsin Clinical Cancer Center – enables doctors at Froedtert Hospital's Milwaukee location to see tumor tissues more clearly, safely deliver higher doses of radiation and adapt the radiation dose to the precise needs of each patient. The Clinical Cancer Center is one of the only cancer centers in the US able to deliver this therapy.

Armed with this technology, MCW scientists and physicians are embarking in new research as part of an international cohort to study the outcomes of patients receiving radiation treatment around the world. "It's a team science approach that brings together major cancer centers around a common cause to improve cancer treatment for patients," says William A. Hall, MD, MCW associate professor of radiation oncology and surgery and one of the global principal investigators on the international MOMENTUM study (Multiple Outcome Evaluation of Radiation Therapy Using the MR-linac).

In this study, patients enroll in a registry and provide detailed feedback on their radiation treatment. This includes side effects and cancer outcomes. This project is creating a worldwide database accessible to physicians and researchers from any MOMENTUM institution. "By understanding what one patient is experiencing, we can tailor treatments for future patients to provide better care and more positive treatment outcomes," says Dr. Hall.

## Collaborative Cardio-Oncology Research Takes Holistic Look at Patient Care, Racial Disparity

While highly effective in the treatment of cancer, chemotherapy produces many side effects for patients. One potential side effect – cardiovascular disease – impacts some more than others.

To better understand the link between chemotherapy and heart disease, MCW set out to examine why Black and African American women are disproportionately affected by cardiovascular complications after breast cancer compared to white women, and what medical providers can do to predict and prevent vascular damage.

Led by David Gutterman, MD, distinguished professor of cardiovascular sciences, professor of medicine and senior associate director of the MCW Cardiovascular Center, and Melinda Stolley, PhD, Ann E. Heil Professor in Cancer Research and associate director of the MCW Cancer Center,



(l-r) Dr. Amanda Smolock and Dr. Sarah White are testing a combination of robotics and histotripsy – a technique that uses sound waves to liquefy and destroy cancer cells.

the transdisciplinary team includes researchers from both MCW and the University of Illinois Chicago. The team is studying the effect of cancer treatment on blood vessels and asking whether adding an exercise regimen during chemotherapy could produce different results.

“We know exercise can improve cardiovascular fitness and quality of life among cancer patients undergoing treatments,” Dr. Stolley remarks. “However, most studies have predominantly white patient samples and are not focused on assessing outcomes for women of color. Additionally, many of these same studies do not include

science – as well as MCW’s continued commitment to understanding and improving cancer disparities. “The synergistic nature of this work will propel science forward, stretch how we think about cancer disparities and enable us to make faster progress toward closing these gaps,” Dr. Gutterman shares.

### Noninvasive Technology Harnesses Sound Waves to Destroy Cancer Cells

MCW is participating in the first nationwide trial to study a non-invasive technology to treat liver cancer tumors. The trial, #HOPE4LIVER, is a collaborative effort with HistoSonics, a medical device company that developed

long-term follow-up on patient response nor look at the physiological pathways that link exercise to cardiovascular outcomes.”

Funded by a \$2.7 million grant from the American Heart Association, the study underscores the power of team

a novel robotic platform with potential to transform cancer treatments.

The technology, recently installed at the Froedtert & MCW Clinical Cancer Center, uses a combination of robotics and histotripsy – a technique that uses sound waves to liquefy and destroy cancer cells. It’s a first-of-its kind, noninvasive alternative to surgery. “This technology is unlike any existing procedure and has the potential to revolutionize cancer therapy,” says Amanda Smolock, MD, PhD, MCW assistant professor of radiology, who is partnering with the study’s principal investigator, Sarah White, MD, MS, vice chair and professor of radiology and surgery (surgical oncology) at MCW.

MCW is one of a select few study sites across the country to take part in the #HOPE4LIVER trial, an example of how MCW continues to lead the way in taking breakthrough technology from bench to bedside. According to James Thomas, MD ’91, PhD ’89, MCW professor of medicine, associate director of the Cancer Center, “Our participation in this groundbreaking study is a demonstration of our commitment to advancing patient care by leaning into innovative therapies and extending our knowledge of what’s possible through research.” ■

– LEE DICKERT AND NIKITA VILIM

## Forging the Future of Cancer Immunotherapies

*MCW Celebrates 20<sup>th</sup> Anniversary of Blood and Marrow Transplant Clinical Trials Network*

*Will Reach 50-Year Milestone for Center of International Blood and Marrow Transplant Research in 2022.*

Twenty years ago, MCW received support from the National Institutes of Health to lead an effort to establish the Blood and Marrow Transplant Clinical Trials Network (BMT CTN) with the goal of translating impactful research in hematopoietic cell transplantation (HCT, a pillar of immunotherapy) into groundbreaking therapies to improve the lives of cancer patients across the country. Over the ensuing two decades, this network, which brings together leading cancer centers around the US, has launched more than 50 trials evaluating promising new therapies for blood disorders such as leukemia, lymphoma and multiple myeloma.

In 2022, MCW will celebrate 50 years as a global leader in HCT and cellular therapies, reflecting the creation of the Center for International Blood and Marrow Transplant Research – a research program with a database of more than 585,000 patients, a biorepository with specimens from more than 70,000 patients and a research staff of more than 200. This research collaboration between MCW and the National Marrow Donor Program/Be the Match continues to support the highest level of clinical, translational and health services research by scientists and physicians across the globe.

# Medical Scientist Training Program Celebrates Four Decades of Success

Bidding Adieu to Long-Time Director Dr. Joseph Barbieri, Professor of Microbiology & Immunology

**N**early 40 years ago, Bettie Sue Masters, PhD, the first female department chair (biochemistry) of MCW's predecessor institution, created the MD-PhD Program to support medical and research training culminating in receipt of both the MD and PhD degrees. The program's first two students matriculated in 1983, and from this beginning, the program has grown to almost 60 students – about 50 percent of whom are women.

David Warltier, MD '82, PhD '76, GME '88, served as MD-PhD director from 2000–2005. Since then, the program has been led by Joseph Barbieri, PhD, who served as associate director from 2000–2005. Dr. Barbieri announced in May 2021 that he would step down as Medical Scientist Training Program (MSTP) director when his successor is in place.

Under the directorship of Sidney Grossberg, MD, the application process to the NIH began for an MSTP-T32 training grant to support the development of a diverse pool of highly trained physician-scientist leaders to meet the nation's biomedical research needs. The inaugural MSTP grant was awarded to MCW in 2010 with renewals in 2015 and 2020.

In MCW's MSTP, students complete the first two years of medical school, then earn the PhD degree during approximately four years of research – followed by two years of clinical training to complete the MD degree. Most students apply for the MSTP before entering medical school.

"We look for students who have strong quantitative skills and significant research experience so they know research will be a component of their long-term studies," says Dr. Barbieri. "The success of our MSTP alumni in attaining NIH funding for their



Dr. Joseph Barbieri



Dr. Carlie Aurubin

research programs also has strengthened MCW's MSTP renewals."

About 10 percent of MCW's MSTP graduates have returned to the institution as faculty. Nicole Lohr, MD '06, GME '09, FEL '12, PhD '06, associate professor of medicine (cardiology), was pleased to join the MCW faculty following more than a decade of clinical and research training at the institution. "The MSTP is where MCW's strengths unite to form excellent physician scientists. I am proud to call myself an MSTP alumna because I was molded by the perfect combination of curious scientists and dedicated clinicians. Most importantly, I attribute my success to the program's innovative leaders, like Dr. Barbieri, who channel their creativity to help each student chart their path to successful careers. And their support of women physician-scientists reflects MCW's commitment to diversity and inclusion," she remarks.

During Dr. Barbieri's tenure as director – in addition to the receipt of three NIH MSTP-T32 training grants – the program has organized workshops for MSTP trainees to enhance their professional development, including writing and communication skills, and establishing formal activities to facilitate transition of trainees from graduate school to medical school clerkships.

Dr. Barbieri notes that since its inception,

MCW's MSTP has continued to rise in rank among the 50 programs nationwide.

Current MSTP student Carlie Aurubin, PhD '21, is in her third year of medical school. Her research interests include virology, immunology and cardiovascular biology, and she is a member of the lab of Vera Tarakanova, PhD, associate professor of microbiology & immunology. "I decided to pursue a career as a physician-scientist because it allowed

me to merge my two passions of scientific discovery and compassionate patient care. The MSTP has provided remarkable resources and opportunities that have fostered my growth as a scientist and a clinician," Dr. Aurubin says.

As Dr. Barbieri prepares to step down as MSTP director, he says he is most proud of the students, faculty and administrators with whom he has worked over the years. "I am especially proud of how our students have identified attributes they excel in and utilize these in their research and clinical careers," he says. "Our students are interested in curing as well as healing. They talk about medicine with the opportunity to cure a disease as well as to be able to heal a patient population." ■ – SARA L. WILKINS



Dr. Nicole Lohr at her medical school graduation in 2006, with her children, Christian and Emily.

# Preparing the Next Generation of Global Health Champions

**M**arc de Moya, MD, professor of surgery and division chief of trauma and acute care surgery at MCW, has forged connections across the world in support of global efforts to improve care in trauma centers. Among the locales in which he has developed and nurtured partnerships is Cuba, where he currently supports two projects that examine the emergency room culture at Calixto-Garcia Hospital in Havana. It's an effort he and others hope will improve health outcomes globally, especially in low-resource countries.

"Growing and developing long-term partnerships is an important part of what we do at MCW as a member of the global community, as well as a key component of academic medicine," says Dr. de Moya, who also is the Milton and Lidy Lunda/Charles Aprahamian Professor of Trauma Surgery at MCW.

The Cuban research projects are being led by MCW medical students who are participants in the school's Dr. Elaine Kohler Summer Academy of Global Health Research Program, for which Dr. de Moya serves as a mentor. This unique program (named for Elaine Kohler, MD, FEL '68, MCW associate professor of pediatrics from 1968-1981) encourages talented rising second-year medical students to enter the global health field. Over the course of the summer, students split their research experience addressing health disparities in Milwaukee and internationally with the faculty's global collaborators.

MCW medical student Celeste Pain is one of these scholars. Her research project focuses on integrating new technology in the emergency room to assist in trauma resuscitation. She is working to help staff implement technology created by T6 Health



*Dr. Marc de Moya (at left in sunglasses) and healthcare colleagues in Cuba, circa 2016.*

Systems, which developed medical systems that collect and analyze clinical data in real time. The system also helps healthcare facilities create standardized trauma protocols and provide prompts for decision-making to help guide the team.

"The technology is helping to create a digital registry and to do more research on how timing plays into outcomes and what interventions lead to better outcomes," Pain says. The goal is to improve health outcomes in the emergency room, she adds.

"We're introducing a new technology in a low-resource place, but also figuring out how to best improve the resuscitation strategies using the resources that they have," Dr. de Moya notes. Testing of that platform has been conducted in South Africa, Guatemala and elsewhere, but the hope is that by teaching the process in Cuba, which sends 36,000 healthcare workers abroad each year, the lessons learned could be applied across the globe.

Pain says that prior to this project, she didn't have much research experience, but she had a passion for global health and the Spanish language –

having worked in an emergency department in San Francisco's Mission District and at a rural clinic in Guatemala. She also coordinated a clinic for a nonprofit in Tijuana, Mexico, that works with refugees seeking asylum.

A second project supported by Dr. de Moya is working to improve the operating room culture of safety by improving communication and collaboration across disciplines. A first goal is to translate a particular training platform into Spanish, then to work with local nursing and surgeon champions to help develop a curriculum and implement a pilot of the program in Ecuador and Panama before using it in Cuba.

Dr. de Moya greatly appreciates the enthusiasm, energy and ideas that students have brought to the projects. He also takes seriously his responsibility to support those who will succeed the current champions of global health.

"These are the leaders of the future... and the work is important and needs to be sustainable. Cultivating their interest in global health is a really important part of being in a global community." ■

– MCW MAGAZINE STAFF

# Science Perseveres

Because knowledge changes lives

By Greg Calhoun

Science doesn't sleep. At any given moment, scientists somewhere in the world are eagerly pursuing new insight into the forces and phenomena that shape society and influence health. Only a catastrophic event can slow down the wheels of progress as they move forward in the global search for new knowledge.

The emergence and spread of the SARS-CoV-2 virus that created the COVID-19 pandemic led to just such a historically rare, deadly and disruptive event for humanity – one that continues to challenge us today. In the US and at the Medical College of Wisconsin (MCW), the need for physical distancing required leaders to shut down a significant amount of scientific experimentation in the spring and summer of 2020. This unprecedented step had not been required during prior national and international crises.

Despite these circumstances and obstacles, MCW scientists have persevered. They have shown the ability to adapt and be both safe and productive as understanding of the COVID-19 pandemic and institutional policies evolved, and as vaccines became available to aid in the recovery of the research mission. MCW research administrators have pushed forward on important improvements to scientific infrastructure while investigators have continued to advance their experiments. The determination of all

during a very difficult time continues to sustain MCW's growth as one of the nation's leading centers for innovation and discovery.

## Hibernation and Recovery

MCW shut down most labs and studies in late March 2020.

"I vividly remember leaving on the last day the research enterprise was open," recalls Cecilia "Cece" Hillard, PhD '83, G. Frederick Kasten, Jr. Endowed Chair in Parkinson's Disease Research, professor of pharmacology and toxicology, associate dean for research and director of MCW's Neuroscience Research Center. "We called it hibernating the labs – and it definitely felt like entering hibernation. It was eerie, incredibly quiet and, honestly, quite chilling. And we didn't know when we'd be back."

Dr. Hillard and other leaders in the research mission immediately went to work creating new health and safety guidelines that could support a gradual return from hibernation and a progressive increase in research activity over time. MCW began an initial phase of limited laboratory research activity in May 2020, which included guidelines such as limiting the number of people in laboratories and requiring physical distancing, facial coverings and decontamination of workspaces and shared equipment.





In June 2020, MCW began to allow the resumption of a select number of clinical trials and other human subjects research studies. Throughout the summer and fall, the institution moved through several phases of increasing laboratory and clinical research levels so that health and safety could be assessed at each stage of the plan.

“Looking back, I continue to believe we recovered about as well as we could have given what we knew,” says Ann Nattinger, MD, MPH, Lady Riders Professor of Breast Cancer Research at MCW, associate provost for research and professor of medicine. “The vaccine helped us accelerate our reactivation and running our own vaccination clinic enabled our scientists and support staff to get vaccinated as soon as it was possible within the state’s guidelines.” Dr. Nattinger shares that everyone in the research mission felt better about being on the Milwaukee campus after this step, and it allowed MCW to provide more flexibility to investigators to staff their labs. Clinical research teams also were able to increase the pace of experimentation.

### Adapting in the Labs

Initially, MCW’s lab-based researchers largely turned their focus to what they could accomplish through virtual work. This included writing and submitting manuscripts to scholarly journals and proposals for grants and other funding opportunities using data they had generated before the pandemic. Labs also invested additional time in reviewing and discussing scientific literature to continue furthering the education and career development of postdoctoral fellows and graduate students.

“People could have allowed fear and frustration to prevent them from doing their best work,” notes Dr. Hillard. “Instead, our investigators and their teams rallied around each other and found every possible way to make meaningful contributions.”

As MCW policies for the research mission evolved during the pandemic to allow labs to run experiments by spreading out workers over multiple shifts, scientists found that MCW’s Biomedical Resource Center was ready to help them restart paused projects or jump-start new ones. The center’s technicians and veterinary staff worked tirelessly to sustain a high-quality animal research environment with state-of-the-art animal husbandry and veterinary medical care.

“I’m really proud of the ingenuity and hard work that has been evident in the labs,” adds Dr. Nattinger. “Everyone has adjusted and found ways to move their research forward. Recently, we’ve seen a substantial increase in applications for external research funding. All of these submissions require preliminary data, so it is clear to me that individuals have found ways to adapt and successfully complete important experiments.”

### From Bench to Bedside

From the earliest meetings about how to handle MCW clinical research during the pandemic, leaders agreed that some studies needed to continue with protections for patients, research personnel and healthcare staff.

“In the Cancer Center, we focused on Phase I trials, which test new, promising treatments for people who have no other

therapeutic options,” says James “Jim” Thomas, MD ’91, PhD ’89, GME ’95, professor of medicine (hematology and oncology) and associate director of translational research for the MCW Cancer Center. To be able to offer these and other studies determined to be essential, Dr. Thomas and his colleagues developed modified protocols to minimize the risk of any additional COVID-19 exposures. This included having clinical research coordinators work remotely on the informed consent process with patients over the phone or through videoconferencing prior to a healthcare professional obtaining the final signature, reducing the need for extra people in patient rooms.

“We now have an electronic regulatory system that has improved the speed and efficiency of our consent and compliance processes while reducing some of the need for in-person interactions that have to be as limited as possible during a pandemic,” comments Dr. Thomas. He believes this system and other new practices and innovations that began as pandemic adaptations will help MCW grow clinical research moving forward.

“After initially consolidating to only the most essential trials, as the pandemic went on and policies changed, we developed an evaluation process for determining which additional trials could resume or begin at each stage of recovery,” says Dr. Thomas. This reactivation process was completed when the current recovery phase began in May 2021, under which all clinical research projects can proceed with team members

*Continued on page 16*

following MCW and clinical location guidelines for preventing COVID-19 transmission.

“While COVID-19 certainly affected our plans and pace of growth for a time, it also has revealed the heroic character of everyone who has stepped up to keep clinical research open as a unique resource for our community,” notes Dr. Thomas. “We truly are one of the pivotal clinical research entities in the Midwest, and we plan to keep growing and improving so we can provide more patients with the best and most innovative care.”

### Scientists Engaging with Communities

Community-engaged researchers at MCW initially focused on listening to their partners at a wide variety of government agencies and nonprofit organizations to understand how priorities were changing in response to the COVID-19 pandemic.

“Early on, many of our partners significantly shifted their focus to basic needs, so we rolled up our sleeves and joined them,” says Staci Young, PhD, MCW’s interim director for community engagement, interim senior associate dean for community engagement, associate professor of family and community medicine and director of the Center for Healthy Communities and Research. “We worked on providing food, diapers and other necessities, including figuring out how to produce facial coverings at scale and distribute them *en masse* to organizations and community members.”

Dr. Young notes that a core value of community-engaged research is to be nimble and responsive to changing needs, and that the COVID-19 pandemic crystallized the importance of this tenet. One area of need Dr. Young quickly discovered was related to Wisconsin’s safety net clinics.

“Some clinics were concerned about closing, as they didn’t have the resources to provide telehealth services,” adds Dr. Young. She garnered funding from the Advancing a Healthier Wisconsin Endowment at MCW to work with the Wisconsin Association of Free and Charitable Clinics to develop a telehealth platform that would work for safety net clinics and their patients.

“For me, this was about access to care,” remarks Dr. Young. “Without these safety net clinics, the only alternative for many patients would be to turn to



already overburdened hospital emergency rooms.” Dr. Young and her team worked with telehealth vendor Updox to build a statewide telehealth network supported by enhanced infrastructure and training at the 41 participating free and charitable clinics. These clinics had delivered more than 4,300 telehealth patient visits by May 2021.

As Dr. Young and her MCW colleagues continue to work with community partners on regional and statewide priorities related to the COVID-19 pandemic, she also is looking ahead to what the future may bring for MCW’s community-engaged researchers. Fortunately, she sees some hopeful signs.

“There are more scholarly activities and grant proposals going out as of late. Some community events are happening with the appropriate safety precautions, which has been very encouraging to see. And there is definitely an increase in momentum for moving both longstanding and newer work forward with our partners,” says Dr. Young.

### Growing to Accelerate Discovery

Fortunately, because of the resilience and adaptability of MCW scientists, the challenges of the COVID-19 pandemic have not altered the institution’s trajectory of growth as a center for research in Wisconsin and beyond. The total amount of funding garnered by MCW scientists over five years from federal, private industry and other external sources has increased

by nearly 50 percent, from \$158.2 million to \$235.9 million. This includes an institutional record of \$122.6 million from the National Institutes of Health (NIH) in funding that MCW researchers earned for federal fiscal year 2020.

In addition, MCW ranks in the top third of all US medical schools for NIH research support. This increasing support helps equip MCW investigators with the resources

## Research Cores and Shared Services

Research cores and shared services are important components of MCW’s collaborative research ecosystem. Whether the focus is on sharing blisteringly fast supercomputers or structural biochemistry expertise, grouping specialized technology and knowledge into designated research cores and shared services provides greater access to these resources for labs and clinical investigators throughout MCW. Currently, MCW offers dozens of research cores and shared services in areas ranging from bioinformatics to cellular physiology, imaging and protein chemistry.



needed to be pioneers in their fields of expertise, including using the latest technical innovations to accelerate the process of discovery. This growth also is reflected in MCW's clinical research portfolio. MCW has the largest clinical research enterprise in Wisconsin and has more than doubled its clinical trial revenue since 2014.

"I'm not surprised we've been this successful," says Dr. Hillard. "We have the right ingredients in terms of the talent of our research faculty members and our collaborative culture. Our people really drive team science forward, which delivers the best results."

### Enhancing Research Infrastructure

To continue to support and propel growth in its research mission, MCW is renovating and preparing for the construction of new facilities that will provide the necessary infrastructure for tomorrow's discoveries. The renovation of the 45-year-old Basic Science Building (BSB) began in September 2018. In addition to modernizing the BSB, a major goal is to develop an open laboratory environment that encourages and facilitates better connectivity among labs to increase collaboration and interdisciplinary discovery. In June 2019, renovations on the second floor were completed. By July 2019, the department of microbiology & immunology moved into its new home in the BSB and became the first department to occupy renovated space. Construction on the fourth floor also is complete, and renovations are in progress on the fifth floor. Work on the sixth floor will follow once the fifth floor is completed.

In addition to renovating the BSB, MCW continues planning for construction of a new cancer research building on its Milwaukee campus. This investment reflects MCW's long-term commitment to leading cancer research and treatment for the people of Wisconsin – a priority that has garnered support from the state. In 2019, Wisconsin Governor Tony Evers and the State Legislature committed a \$10 million State Building Commission grant within the 2019–2021 biennial state budget toward a cancer research building for MCW. When complete, the building will be Milwaukee's only research facility dedicated to cancer and will support scientists and physicians advancing research that addresses the unique cancer burden in southeastern Wisconsin and beyond with the ultimate goal of improving clinical outcomes for all patients. *(See related story on pages 10–11.)*

MCW has selected CannonDesign as the design partner for the cancer research building. The firm's award-winning team of planners, advisors, architects and specialized laboratory designers has worked with numerous top-tier cancer centers designated by the National Cancer Institute. The design phase for the building began in fall 2021 and will continue into 2022.

"By investing in our research infrastructure and talent, MCW is accelerating the translation of research discoveries into improved patient care, resulting in better health outcomes for our communities," says Joseph E. Kerschner, MD '90, FEL '98, provost and executive vice president, and the Julia A. Uihlein, MA, Dean of the MCW School of Medicine. ■

## School of Medicine Research Strategic Plan

The 2025 School of Medicine Research Strategic Plan was approved by the MCW Board of Trustees in June 2019 to provide a focused effort on growing the research enterprise.

This decision was reached following extensive work by the research planning team and external experts to synthesize qualitative information from interviews and focus groups with leaders, partners and scientists, as well as quantitative analysis of MCW's research enterprise and national strategic funding priorities.

At that time, a \$300 million academic quasi-endowment was established so that its earnings could help support the growth of the research enterprise guided by the Research Strategic Plan.

To facilitate the implementation of the plan, faculty and staff workgroups were established to gather additional data and generate recommendations for investment and programmatic improvements related to the plan's focus areas of research culture, data science, neurosciences, cardiovascular disease and cancer.



# Exemplifying the Spirit of Innovation

## Gifts from the Daniel M. Soref Charitable Trust Advance Neurological Discovery

For every significant advancement in the arts or sciences, there is an honor roll of individuals whose vision and contributions preceded the breakthroughs of succeeding generations. “If I have seen further,” Isaac Newton wrote in a 1675 letter to a fellow scientist, “it is by standing on the shoulders of giants.”

This axiom is particularly true in medical research, where a single discovery can lead to an accumulation of new knowledge across several disciplines. It is that work – the achievements of those giants – that drives the innovations we see today in diagnosing, treating and curing diseases and injuries.

The late Daniel M. Soref exemplified this spirit. The Daniel M. Soref Charitable Trust, founded after his death in 2001, has had a significant impact on the scientific, educational and cultural landscape



*Daniel M. Soref, circa late 1950s*

of southeastern Wisconsin – and is leaving a legacy that will benefit the community for years to come.

Born in 1930, Soref was involved in the family business, Milwaukee’s Master Lock Company, serving as secretary of the company. The Soref families were among the founding families of Master Lock Company. Daniel Soref’s uncle, Harry E. Soref, was the inventor of the “lock” and Daniel’s father, Samuel M. Soref, was board chair.

Since his death from complications of Alzheimer’s disease, the Daniel M. Soref Charitable Trust has made significant contributions to advance neurological research with the aim of improving care for patients with disorders such as Alzheimer’s, Parkinson’s disease and multiple sclerosis.

For the past two decades, contributions from the trust have supported work at MCW and Froedtert Hospital (Froedtert) that is pushing the boundaries of neurological discovery through research projects and programs that ground clinicians and scientists in the neurosciences.

One of the trust’s earliest contributions established the Daniel M. Soref Clinical Neuroscience Fellowship for physicians and researchers working at MCW and Froedtert. The gift allows fellows to pursue new research, work with senior physician scientists and prepare findings for presentations at national conferences – a major source for disseminating new scientific knowledge.

“The Daniel M. Soref Clinical Neuroscience Fellowship provides an outstanding opportunity to earn valuable research experience in a field that is really in

need of ongoing investments to train new specialists and scientists,” says Ann Helms, MD, MS, professor and interim chair of the MCW department of neurology. “The fellows advance the field during their tenure and often go on to serve as leaders in their respective disciplines.”

Not only does Dr. Helms see the impact the fellowship program has from her vantage point as a faculty leader, but she also had direct experience as the inaugural Daniel M. Soref Clinical Neuroscience Fellow.

“Receiving the fellowship award at that stage of my career as a physician and researcher was an important step in shaping my career as an academic today,” says Dr. Helms. “Research experience is critically important to all in academic medicine who wish to develop and provide innovative care, teach the next generation of physicians and researchers, and work in an environment of scientific inquiry.”

The opportunities for the current generation of Daniel M. Soref Neuroscience Fellows are just as critical in advancing science and clinical care.

The most recent Soref Fellow is Jessica Pommy, PhD, MS, whose research focuses on dementia – particularly on initiatives related to improving early diagnosis.

Dr. Pommy is an expert in cognitive neuroimaging analysis, a technology which gives scientists and clinicians detailed images of brain activity. Her work is aimed at assessing patients who are showing signs of mild cognitive impairment, which is often a precursor to other neurodegenerative conditions such as Alzheimer’s disease. If successful, this



*Daniel M. Soref, circa 1968*

research could improve predictions of which patients might be at risk of experiencing further cognitive decline. Diagnosing patients at this stage of disease progression is a key priority for researchers and clinicians who are working to understand how Alzheimer's disease develops and spreads in the brain.

"These studies can help us identify early predictors of cognitive decline, which potentially can point to new treatment targets for patients with mild cognitive impairment," Dr. Pommy says. "With earlier interventions, one hopes to slow neurodegenerative disease processes before symptoms are impacting a patient's daily life."

The promise that imaging holds for understanding a broad range of diseases and injuries also led to a significant gift that established the Daniel M. Soref Imaging Research Facility. Work by researchers using the imaging technology housed at the facility covers a broad area of exploration including cardiovascular imaging, which can be used in early detection of several disease states such as cardiomyopathies, heart failure and coronary artery disease.

Technology at the facility also gives physicians the ability to apply innovative imaging techniques to diagnose and monitor individual patients with a variety of neurological and psychiatric disorders, including brain tumors, stroke, epilepsy, drug abuse and Alzheimer's disease.

The gift was divided between an endowed fund and a current use fund that supports maintaining the in-use high-quality imaging equipment, as well as individual research projects led by physicians and scientists.

Kevin Koch, PhD, professor and co-vice chair of research in the MCW department of radiology and director of the Center

"Receiving the fellowship award at that stage of my career as a physician and researcher was an important step in shaping my career as an academic today."

– Dr. Ann Helms

for Imaging Research, is grateful for the investments received through the Daniel M. Soref Charitable Trust.

"With these contributions, we have the ability to compete with other programs around the country that are focused on an array of disease states, including projects that are advancing medical discovery in the fields of cancer and the neurosciences," Dr. Koch shares.

In addition to the gifts supporting science, the breadth and depth of contributions from the Daniel M. Soref Charitable Trust to more than 70 grantees has bolstered the civic, educational and cultural life of Milwaukee. Together with gifts advancing the neurosciences, this broad support reflects the values and deep commitment of the Daniel M. Soref Charitable Trust in building a strong and healthy community.

And they also represent the vision Daniel M. Soref had for leaving a giant-sized legacy that is benefiting all of us. ■

– JOHN MCGREEVY



# A New Key to Brain Surgery

Receiving a diagnosis where brain surgery is a part of the treatment plan can be one of the most terrifying moments of a patient's life. A thousand different images of panic, and even hopefulness of a healthy outcome, may flood their mind. Yet it is in these swirling and emotional moments when Nathan Zwagerman, MD, director of pituitary and skull base surgery at MCW, often meets his patients for the first time.

"Every patient I meet is scared," says Dr. Zwagerman. "There is fear with diagnosis and seeing an MRI with a lesion on it. But my focus is on patient outcomes and laying out a plan for them so they understand what their path is going to look like."

Dr. Zwagerman specializes in skull-base surgery, which addresses tumors around the head band area, typically working between the bone and brain as well as in the fluid-filled spaces within the brain. Patients, often fearing the worst when imagining brain surgery, may be surprised to learn they could be a candidate for a novel and less invasive surgical approach called "keyhole surgery." Keyhole surgery uses smaller, more direct, nontraditional pathways to perform brain surgery – such as the nose, a crease in the eye, or behind the ear. This can have an immense impact on recovery time and overall response to tumor removal.

"Keyhole surgeries are small approaches to get to a very deep area of the brain. What makes it challenging is that we use different tools to do this," Dr. Zwagerman remarks. "Traditionally, neurosurgery is done with a microscope, shown in 3D, but you need a wider entry point for that tool to work. For keyhole surgeries we use endoscopes, which provide a wider view from a smaller entry space, but are shown in 2D, and that can be difficult."

A very limited number of neurosurgeons specialize in this method, which, according to Dr. Zwagerman, is due in large part to the technical difficulty. Dr. Zwagerman, however, has performed more than 500 keyhole brain surgeries during his career.

Dr. Zwagerman says compared to a craniotomy, keyhole surgery patients tend to heal faster and have a shorter hospital stay. The less-invasive approach has cosmetic benefits as well. "Day one after keyhole surgery, patients can look in the mirror and see themselves. They don't see a shaved head or a scar, and they don't necessarily look like they've just had a big surgery," Dr. Zwagerman notes.

Due to the involved nature of keyhole surgeries, Dr. Zwagerman works closely with a comprehensive team at MCW, including otolaryngologists, otologists, oculoplastic surgeons and endocrinologists. This comprehensive approach allows each team member to provide their area of expertise, leading to better outcomes.

"This is a paradigm shift, allowing our teams to find new corridors, improve our tools, and better our understanding of brain anatomy and neurosurgery as a whole," Dr. Zwagerman says. "The standard for brain surgery used to be big operations and craniotomies, but now in some cases we can provide options that critically alter how a brain tumor diagnosis impacts a patient's life."

Dr. Zwagerman and his team in the department of neurosurgery are uncovering new findings through research in robotics, tumor genetics and through MCW's tumor bank. Dr. Zwagerman is passionate about continuous improvement of his craft, including keyhole surgery, as a means to find better ways to take care of people.

"We are hoping to establish a skull-base fellowship here at MCW," notes Dr. Zwagerman. "There are more than 3,000 neurosurgeons across the country, but so few of us know how to do keyhole surgery. Specialized training will help us provide a full range of options to patients." ■ – HANNAH THULIN



(l-r) Dr. Nathan Zwagerman and Dr. Christopher Michael Long perform a transnasal keyhole surgery.

# Alumna Advances High-Value Care for Breast Cancer Patients

Rachel Adams Greenup, MD '04, GME '11, MPH, associate professor of surgery (oncology), chief of breast surgical oncology and health services researcher at the Yale School of Medicine, is working to better understand and provide high-value cancer care.

"I really became interested in resource allocation because my late father, Mark B. Adams, MD, MS '77, GME '78 [former MCW chair of surgery from 2003–2007], was a liver transplant surgeon at MCW and Froedtert Hospital, and when we were kids, we talked about health equity and resource allocation in that context," Dr. Greenup explains. "When I started caring for cancer patients, I recognized that there was a gap between the care delivered to those who could pay for it and the care delivered to those who couldn't."

She also recognized that patients and their families face more than a financial burden when it comes to a cancer diagnosis.

"As clinicians, we talk to patients about their final outcomes and generally give guidelines around the treatment experience, but what happens outside the clinical setting also is impactful to patients' lives," Dr. Greenup notes. "This includes the number of appointments, the driving back and forth from the hospital, childcare, breaks in their employment, hours in the waiting room and what they pay for care."

So Dr. Greenup decided to ask the question: "If we were providing more authentic and transparent information around what different treatment options look like – and what the full burden of care entails – would patients make different decisions?"



"When I started caring for cancer patients, I recognized that there was a gap between the care delivered to those who could pay for it and the care delivered to those who couldn't."

– Dr. Rachel Adams Greenup

And she's getting attention for her work. In 2016, Dr. Greenup received the National Institutes of Health *Building Interdisciplinary Research Careers in Women's Health Award* to evaluate how financial costs and burden relate to preference-sensitive decisions for breast cancer surgery. And in 2017, she was named a Healthy Policy Scholar by the American College of Surgeons and the American Society of Breast Surgeons.

"In post-treatment surveys, women unanimously said that they wished they had known in advance more about the cost and burden of their care, and they felt like this was not communicated," Dr. Greenup shares.

Dr. Greenup hopes her research will show that providers and health systems need to find a way to communicate the full burden of care in a way that works better for patients so that they can truly understand the impact it will have on their day-to-day lives.

Dr. Greenup credits MCW with preparing her to be both a surgeon and a leader.

"I think the medical school does an incredible job training future leaders in clinical and academic medicine," she says. "We learn very early that high-quality care is provided across many settings, and that was one of the reasons Yale recruited me. MCW functions in a VA health system, a tertiary care academic hospital, a children's hospital and several affiliated private hospitals. And you can't lead in academic surgery if you are not, first and foremost, a surgeon."

Dr. Greenup is very proud of her MCW education, and while she had many mentors there, she wanted to recognize the person who prompted her to pursue breast surgical oncology: Alonzo P. Walker, MD (now an emeritus professor of surgery), who established and led the Froedtert & the Medical College of Wisconsin Breast Care Clinic and helped to develop the MCW Multidisciplinary Breast Care Program.

"He treated every patient in front of him like they were the only patient in the hospital," she recalls. "He had extraordinary integrity, and he was an excellent teacher and role model."

And then, of course, there was her father: "My dad was the best. He was the reason I became a surgeon." ■

– KARRI STOCK

# NEWS

## FOR ALUMNI

### Looking Forward to my Year as President

As I look to the next year as president of the Medical College of Wisconsin/Marquette Medical Alumni Association, I do so with a feeling of gratitude and respect for the institution where I began my medical training. I have remained connected to MCW's alumni, students and faculty in a variety of roles, and this lifetime engagement has truly enhanced my time as a physician. I would like to thank Matthew I. Goldblatt, MD '97, GME '04, for his exceptional leadership as president of the Alumni Association over the past year, as well as each member of the board.



"We look forward to expanding opportunities for alumni to engage with MCW through activities, mentoring and learning, as well as volunteer and philanthropic initiatives."

— Dr. George M. Lange

Facing a global pandemic has been a humbling experience, and it reminds us all that it is an extraordinary time to be a healthcare provider. MCW's mission as a leader and innovator in the education and development of the next generation of physicians, scientists and pharmacists has never been more important.

Meeting with MCW leadership is critical to the Alumni Association's success, so we appreciate time shared with President Raymond, Provost Kerschner and Deans Misra and MacKinnon to update our board on MCW and how the institution is advancing science and improving the health of the communities we serve.

We look forward to expanding opportunities for alumni to engage with MCW through activities, mentoring and learning, as well as volunteer and philanthropic initiatives.

For the first time, MCW's 8<sup>th</sup> Annual Professionalism Week: *Adapt and Evolve – Reimagining our Work Together* was offered to all MCW alumni through our Alumni E-Newsletter.

We realize that in-person interactions and networking are highly valued. Thus, it is our goal to provide MCW alumni with opportunities to gather face to face in 2022. Please watch for information on Reunion Activities by Class.

Alumni can make a difference for learners – from supporting the Annual Fund for Excellence and scholarship initiatives to providing meaningful and practical career guidance through our Mentor Connections on [mcwengage.com](http://mcwengage.com). Each of us have had experiences that today's students can learn from – and perhaps even smile about. Recently, I posted on ENGAGE an early patient encounter I had when I was a medical student. I invite all of you to register, check out my post and add your own.

In October, we were able to recognize remarkable individuals during our virtual award recognition event who earned Alumni Association awards. In addition, we welcomed new alumni leadership to the board of directors. Please begin to think about recognition for 2022, as the Alumni Association award nominations are due on December 31, 2021.

Your partnership in the work we do is deeply appreciated! ■



#### Call for Alumni Award Nominations

Please submit your nominations for the 2022 Alumni Association awards online at [www.mcw.edu/alumniawards](http://www.mcw.edu/alumniawards) no later than **December 31, 2021**.

# Alumni Association Awards

## DISTINGUISHED SERVICE AWARD

**E. CHRISTOPHER ELLISON, MD '76**



Dr. Ellison is the Robert M. Zollinger Professor of Surgery Emeritus at The Ohio State University (OSU). He served as interim dean of the College of Medicine from 2014-2016 and chair of surgery from 2000-2013. He also was a founding member and president and CEO of the OSU Physicians Practice. Dr. Ellison's career also has been marked by outstanding leadership at the national level in the field of general surgery. ■

## GRADUATE SCHOOL ALUMNUS OF THE YEAR

**MATTHEW R. HODGES, PHD '04**



Dr. Hodges is an associate professor in MCW's department of physiology, director of graduate studies in physiology and principal investigator of the Hodges Lab, which is dedicated to understanding how our brains unconsciously control breathing in health and disease conditions. Dr. Hodges has advised more than 90 students/trainees and is a member of MCW's Society of Teaching Scholars. ■

## HUMANITARIAN AWARD

**MARK L. HARLOW, MD '86, GME '91**



Dr. Harlow is the chief medical officer for the Oyate Health Center in Rapid City, S.D., which is dedicated to improving healthcare for Native Americans in a four-state area. He also has significant involvement in community outreach, including many years of service to the Pine Ridge Indian Hospital and the Cornerstone Homeless Mission. During the COVID-19 pandemic, Dr. Harlow set up vaccination clinics and stepped in to take care of those who had nowhere to go while battling the virus. ■

## HONORARY ALUMNUS

**RAVI P. MISRA, PHD**



Dr. Misra, who has served as dean of MCW's Graduate School of Biomedical Sciences since 2010 and professor of biochemistry, joined MCW in 1993. Dr. Misra has significant involvement in nearly all aspects of MCW's graduate education as well as extensive participation in medical education. He also has been instrumental in developing joint programs with the MCW School of Medicine and neighboring institutions, and is responsible for the MCW Office of Postdoctoral Education and Career Development. ■

## MEDICAL SCHOOL ALUMNA OF THE YEAR

**ELIZABETH DAVIES, MD '95, GME '98**



Dr. Davies is dedicated to serving the Waukesha and Milwaukee community as a family practice physician at ProHealth Medical Group Clinic located in Waukesha and through her volunteer work as the medical director and physician at St. Joseph's Free Clinic (now known as the Waukesha Free Clinic at Carroll University). For 25 years Dr. Davies's volunteerism has been focused on the healthcare needs in her community, especially in support of the health and well-being of uninsured, underinsured and low-income friends and neighbors. ■

# Newly Elected Alumni Association Board of Directors



**ROBERT E. BECKER, MD '19**



**RACHEL A. GREENUP, MD '04, GME '11, MPH**



**CANDICE S. KLUG, PHD '99**

View our entire board of directors at [www.mcw.edu/alumni](http://www.mcw.edu/alumni).

# Members of the Class of 1971



- |                           |                            |                           |                                 |
|---------------------------|----------------------------|---------------------------|---------------------------------|
| Sister Mary V. Annel, MD  | Joseph J. Goodman, MD      | Jack G. Kartel, MD*       | James P. Quenan, MD             |
| Paul S. Annis, MD         | Sheldon H. Gottlieb, MD    | Henry M. Katz, MD         | Thomas J. Ravasz, MD*           |
| Bruce D. Bellin, MD       | Joel C. Grinolds, MD*      | Mathew J. Kelly, MD       | James M. Raveret, MD            |
| David N. Bellis, MD*      | Douglas W. Hacking, MD     | Alan R. Kohlhaas, MD      | Thomas A. Reilly, MD            |
| John T. Bjork, MD         | Margarethe H. Hagemann, MD | John C. Korenic, MD*      | James E. Repnik, MD             |
| Mel I. Blaustein, MD      | Cecil J. Haggerty, MD      | John M. Kraft, MD         | Thomas J. Richer, MD            |
| Frederick L. Bloom, MD    | James J. Hamilton, MD      | Lincoln Krochmal, MD      | Thomas W. Schueppert, MD        |
| James F. Byrne, MD        | Gerald A. Hanson, MD       | William S. Lambert, MD*   | Ronald M. Shansky, MD           |
| Stephen W. Carpenter, MD  | Michael J. Hartman, MD     | William M. Mahony, MD     | Steven P. Shelov, MD            |
| James M. Cervenansky, MD  | Lawrence P. Heiny, MD      | Arthur S. Marquis, MD     | David J. Smith, MD              |
| Edgar W. K. Cheng, MD     | Edward A. Helman, MD       | Wallace W. Marsh, MD      | John R. Stamm, MD               |
| Richard W. Cherwenka, MD  | Philip J. Hinton, MD*      | Barry A. Maxfield, MD     | Lewis H. Stocks, MD*            |
| Michael A. Cicero, MD     | James L. Holden, MD        | James F. Mayr, MD         | Cornelius J. P. Sullivan, MD*   |
| Charles P. Clericuzio, MD | Terry A. Hollenbeck, MD    | Charles B. McCanna, MD    | Paul R. Swartwout, MD*          |
| James A. Davidson, MD     | Winston N. Hollister, MD   | Raymond J. McDermott, MD* | Donald L. Sweet, MD             |
| David G. DeCock, MD       | David R. Holmes, Jr., MD   | Raymond J. McDonald, MD   | Peter P. Sylvester, MD          |
| Timothy J. Devitt, MD     | Suzanne J. Hoodecheck, MD  | William W. Merrill, MD*   | Joseph E. Trader, MD            |
| Mary Anne Doherty, MD*    | Richard J. Hopkins, MD*    | Alexander K. Mihali, MD   | Elizabeth Tucker Sanfelippo, MD |
| Jeffery M. Domnitz, MD*   | John T. Horney, MD*        | Richard M. Mucci, MD      | F. Michael Walsh, MD            |
| David J. Dwyer, MD        | Ronald T. Inden, MD        | W. Scott Nekrosius, MD    | James R. Warsh, MD              |
| Charles A. Errico, MD     | Leon J. Jackson, MD        | Thomas E. Palmer, MD      | William S. Wilke, MD            |
| Samuel Frumkin, MD        | Richard A. Janson, MD      | Rodrigo R. Panares, MD*   | Thomas J. Wilson, MD            |
| Robert G. Gagliano, MD    | David W. Jaskar, MD*       | Richard A. Patt, MD       | Lance K. Wozniak, MD*           |
| Jeffrey A. Gahr, MD       | Edward J. Johnson, MD*     | Gordon A. Paul, MD        | Mark N. Zacks, MD               |
| Charles E. Gessert, MD    | Lilli Kalis, MD*           | William E. Pazdral, MD    | David J. Zeps, MD               |
| Stephen L. Goldman, MD    | David E. Kaproth, MD       | Carl P. Poley, MD         |                                 |

*Deceased \**



# Adapting Over a Lifetime as a Clinician, Educator and Leader

One thing Elizabeth Tucker Sanfelippo, MD '71, GME '74, FEL '87, has noted during her 50 years as a physician is that adaptability is important.

“Many members of our class made their careers in fields that weren’t invented at the time we left medical school,” says Dr. Sanfelippo. She served a residency in internal medicine and practiced for 10 years, then started an allergy fellowship and practiced in that field for seven years. In 1994, Dr. Sanfelippo joined the burgeoning specialty of hospital medicine – a setting where she could care for acutely ill patients. She also maintained a part-time allergy practice until 2012.

Dr. Sanfelippo began as a hospitalist when the specialty program at St. Joseph’s Hospital in Milwaukee was launched. She then worked as a hospitalist in temporary roles, starting up programs at medical centers. Dr. Sanfelippo practiced as a hospitalist until 2020, most recently holding positions in Green Bay, Wis., at St. Mary’s and St. Vincent Hospitals.

Throughout her career, Dr. Sanfelippo has maintained a focus on medical education. She began working with medical students teaching physical diagnosis during her fellowship – which continued throughout her hospitalist years. At St. Joseph’s, Dr. Sanfelippo served as an attending physician and twice received the *Golden Apple Award* from junior MCW medical students who were completing their rotations there. When MCW-Green Bay opened, Dr. Sanfelippo mentored students rotating through hospital medicine and evaluated exams in physical diagnosis. This year, Dr. Sanfelippo became the co-chair of the Continuous Professional Development Year 1 (CPD1) course at MCW-Green Bay, along with Joseph Kellner, MD. She also served nine three-year terms on the Wisconsin Medical Society Commission on Continuing Medical Education.



*Dr. Elizabeth Sanfelippo with her children and grandchildren in the summer of 2021.*

In 1967, when Dr. Sanfelippo began medical school, she was one of 18 women in the entire student body. “The six women in our class would likely have never met in other circumstances, but we all began the same journey,” says Dr. Sanfelippo. “Our experiences in medical school were more similar than disparate, and by graduation, a bond had been formed that has lasted over the years.” In 2017, Dr. Sanfelippo sponsored the white coats of six matriculating female students at MCW, in partnership with the Wisconsin Medical Society. She shared with them that this was a way to honor the six female students from the Class of 1971. All six students Dr. Sanfelippo sponsored graduated in 2021, coinciding with the 50th anniversary of the graduation of her 1971 Class. ■

– EMILY MARQUARDT

## Class of 1971 Community Service Awards

While the anniversary class was unable to hold an in-person reunion due to COVID-19, its members have continued to support the Annual Fund for Excellence or their class fund. Like many of her classmates, Dr. Sanfelippo has a passion for community service and its impact on both the students and the community. This shared interest led to the establishment of the Class of 1971 Community Service Endowment Fund in 2006, which provides a sustainable source of funding for the Class of 1971 Community Service Awards at MCW. Dr. Sanfelippo serves on the committee to review proposals from student organizations for their start-up community service projects.

The awards program has provided a great benefit to community partners and expanded the educational horizons of MCW students. In recent years, a wide range of student organizations’ projects have been funded, including the Hmong Health Project by the Asian Pacific American Medical Student Association (APAMSA); Granting Wishes, which helps victims of domestic violence and sexual assault in Central Wisconsin, sponsored by the American Medical Women’s Association; and secondary school science education by the STEM student group.

# ALUMNI NOTES

## 1970s



**Russell H. Wiesner, MD '75,** garnered the 2020 *Distinguished Service Award* from the American Association for the Study of Liver Diseases (AASLD).

He was credited for helping shape modern-day liver transplantation through his research into immunosuppressive agents and for contributing to the development and adoption of the Model for End-Stage Liver Disease (MELD) score as a major component of the US adult liver transplantation allocation and distribution system in 2002. In 2006, Dr. Wiesner received the AASLD *Achievement in Liver Transplantation Award*. He earned the *Lifetime Achievement Award* from the International Liver Transplant Society in 2008.

## 1980s



**Bruce H. Campbell\*, MD, GME '85,** published the book, *A Fullness of Uncertain Significance: Stories of Surgery, Clarity & Grace*, in September 2021. It is a collection of essays on many of

the lessons he learned from his patients and their families over the course of his 35-year career. The stories feature the places he has worked and the people he has worked with along the journey, as well as detail the influence that his coworkers' tales have had on his professional and personal life.



**Mark L. Harlow, MD '86, GME '91,** received the 2021 *COPIC South Dakota Humanitarian Award*. This award recognizes volunteer

medical services and contributions to the community by South Dakota physicians. Dr. Harlow is the director of the Oyate Health Network, which primarily focuses on providing healthcare for Native American patients and families in western South Dakota. He also is the board president for the Cornerstone Rescue Mission, which concentrates on the needs of individuals experiencing homelessness in the same region. He was recognized for advising Cornerstone and many other agencies and groups about preventing the spread of COVID-19, and for creating vaccination clinics to make vaccines available to underserved community members.



**Paul A. Larson, MD, GME '87,** received the *Gold Medal* of the American College of Radiology (ACR) in a virtual ceremony on May 16, 2021. The award recognizes life-

time contributions to the college and the profession of radiology. He joined MCW faculty members Drs. James Youker and J. Frank Wilson as recipients of the award. Dr. Larson is a former member of the ACR board of chancellors and vice president of the ACR. In August 2021, he began a second term as president of the board of trustees of the American Registry of Radiologic Technologists and became the first person in 40 years to

serve two terms in that role. He is a former president of the Wisconsin Radiological Society and a current member of the board of directors and executive committee of the Wisconsin Medical Society.

## 1990s



**Joseph S. Cheng, MD '94, GME '01, FEL '02, MS** received the 2020 *Distinguished Service Award* at the American Association of Neurological Surgeons meeting. Dr. Cheng

is the Frank H. Mayfield professor and chair of the department of neurosurgery at the University of Cincinnati College of Medicine and director of the neurosurgery spine fellowship program. Dr. Cheng's research interests include healthcare policy, outcomes science, spinal biomechanics and modeling, spinal deformity and minimally invasive spinal techniques.

## 2000s



**K. Jane Lee\*, MD, FEL '04, MA '05,** published the book, *Catastrophic Rupture: A Memoir of Healing*, in

September 2021. Dr. Lee has spent her career caring for children with a wide range of serious conditions and disabilities. When a complicated delivery left her second child with a severe brain injury, she found that her years of clinical experience were of little help to her as a parent. In the book, Dr. Lee

\* MCW faculty member

shares how she struggled to bond with and love her daughter and how she reconciled what was happening at home with her ongoing role as a physician to patients and families in similar circumstances. She also describes how she eventually shifted from the medical perspective of disability that sees an impaired body to the mother's perspective that sees the beauty and value in the person that is her child.



**William C. Thompson IV, MD '05,** was appointed by Arizona Governor Doug Ducey to Arizona's Telehealth Advisory

Committee. He will play a vital role in determining which telemedicine services are reimbursed by insurers throughout the state and in defining the best practice guidelines within telemedicine. Dr. Thompson is an interventional spine and pain medical specialist at The CORE Institute, which specializes in orthopaedics, neurology and physical therapy.



**Derrick R. Siebert, MD '08,** was recognized by the Wisconsin Medical Society with the *Kenneth M. Viste Young Physician Leadership Award*. He also was

appointed by Governor Tony Evers as a member of the Wisconsin Medical Examining Board. Dr. Siebert is a diagnostic and interventional radiologist with Radiology Associates of Wausau.

## 2010s



**Becky J. Buelow\*, MD '10, GME '12, FEL '15,** was promoted to associate professor of pediatrics (asthma/allergy and clinical immunology) at MCW, which she joined as

a full-time faculty member in 2015. After spending her first year caring for patients at the Milwaukee campus, she moved her clinical practice to the Fox Valley in 2016. Over the last five years, the allergy program at this location has continued to grow. Dr. Buelow has

expanded services to include allergen immunotherapy, biologic administration and oral food challenges. She also is active in medical education with the MCW-Green Bay campus, including serving since 2018 as the associate director of the Foundations of Clinical Medicine course.



**Dominique Carter, PhD '16,** started a new position as assistant director of agricultural sciences, innovation and workforce at the White House Office of Science and Technology Policy.

## Knowledge Changing Life Available for Purchase



*Knowledge Changing Life: A History of the Medical College of Wisconsin, 1893-2019*, written by MCW Chief Historian Richard N. Katschke, MA, was published recently. The 720-page book explores MCW's 125+ years of accomplishments, challenges and controversies, and serves as a comprehensive history not only of MCW, but also of Marquette University, Milwaukee County and Milwaukee's hospitals and healthcare facilities. It is available for purchase through the MCW online retail store at [mcw.edu/store](http://mcw.edu/store) for \$35.00 plus tax and shipping and at the Matthews Bookstore on the Milwaukee campus for \$40.00 plus tax. Questions? Contact [MCWmagazine@mcw.edu](mailto:MCWmagazine@mcw.edu).

**MCW MAGAZINE** wants news of your accomplishments and activities. We encourage you to send updates through ENGAGE, MCW's online platform for alumni. You also can send updates by email to [alumni@mcw.edu](mailto:alumni@mcw.edu).

# IN MEMORIAM

## 1950s

**Gerald R. Zupnik, MD '51,** of Mequon, Wis., died on August 17, 2021, at the age of 94. He operated a private practice as a general surgeon and was proud of his service in the US Army during World War II. He loved traveling, woodworking and reading. He is survived by his wife, Shella, two children and four grandchildren.

**Thomas F. McCormick, MD, GME '58,** of Milwaukee died on October 28, 2020, at the age of 95. He practiced anesthesiology for nearly 40 years, largely at what is now Ascension Columbia St. Mary's Hospital in Milwaukee. Dr. McCormick was a voracious reader. Survivors include his wife, Kathleen, five children and one grandchild.

## 1960s

**Thomas A. Quetel, MD '64,** of Morrisville, N.C., died on April 23, 2021, at the age of 82. He began his practice of obstetrics and gynecology at Knud Hansen Memorial Hospital in St. Thomas, US Virgin Islands, and was in private practice there for 11 years. Dr. Quetel and his family moved to Miami in 1980, where he took the position of director of the division of ultrasound services in the department of obstetrics, gynecology and reproductive sciences at the University of Miami Leonard M. Miller School of Medicine and Jackson Memorial Hospital. He held this directorship until he retired. Dr. Quetel enjoyed traveling abroad and was passionate about deep sea fishing. His biggest catch was a 372-pound blue marlin. Dr. Quetel is survived by his wife, Jane, and two children.

**James L. Kurowski, MD, MPH, GME '66,** of Steamboat Springs, Colo., died on

January 28, 2019, at the age of 78. He served as a public health officer in the US Public Health Service before embarking on a career in public health administration. He previously served as director of what is now the Bernard F. Gipson Sr. Eastside Family Health Center in Denver before being appointed by Mayor Bill McNichols in 1981 as head of Denver Health and Hospitals. He enjoyed teaching health policy in the University of Colorado system. He is survived by his wife, Dianne, four children and four grandchildren.

**Michael J. Holliday, Jr., MD '69,** of Timonium, Md., died on May 17, 2021, at the age of 77. As an otolaryngologist, Dr. Holliday served for more than four decades on the surgical faculty of the Johns Hopkins University School of Medicine. He was a founder of the Johns Hopkins Skull Base Tumor Center. Dr. Holliday was a pioneer in the field of neurotology, a specialty focusing on neurological diseases of the ear. He was considered one of the world's leading experts on acoustic neuromas, which are rare, benign tumors that can form on the nerve connecting the inner ear and the brain. He enjoyed being outdoors, especially fishing, hunting and boating. Dr. Holliday is survived by his wife, Maureen, four children and five grandchildren.

## 1970s

**Richard M. Panish, MD, GME '72,** of Clearwater Beach, Fla., died on February 16, 2021, at the age of 80. He practiced radiology in Milwaukee for more than 25 years before retiring to Florida. Dr. Panish was a lifelong learner who liked to travel internationally and enjoyed photography, cooking and cinema. He is survived by his wife,

Paulette, two children and nine grandchildren.

**Harrison W. Parker, MD, GME '74, FEL '76,** of Mequon, Wis., died on May 10, 2021, at the age of 77. He entered private practice as a gastroenterologist after completing his residency and fellowship training. Dr. Parker served as an associate professor at MCW and was a founding partner of Milwaukee GI Specialists. After being diagnosed with lymphoblastic leukemia at age 47, he was able to achieve remission and continue practicing medicine until his retirement in 2006. Dr. Parker was an avid golfer and participated in many medical mission trips to South America. Survivors include his wife, Susan, five children and 10 grandchildren.

**Thomas J. James, MD '77,** of Rockford, Ill., died on September 9, 2021, at the age of 70. He practiced medicine throughout Wisconsin in Cedarburg, Racine, Milwaukee, Burlington, Madison and, most currently, Beloit. Dr. James also previously practiced in South Carolina. He enjoyed traveling, antique shopping, theatre performance and spending time at the beach. He is survived by his wife, Kathryn, four children and six grandchildren.

## 1980s

**Glenda Morris Robinson, MD '81,** of Atlanta died on December 16, 2020, at the age of 68.

**Roger P. Kaminski, PhD '84, MS '80,** of Pleasant Prairie, Wis., died on July 7, 2021, at the age of 70. He was passionate about scientific discovery and served as director of research and development for multiple companies throughout his career. Dr. Kaminski left retirement to contribute to the development of a

COVID-19 vaccine. He was an avid woodworker who enjoyed creating figurines, clocks, ships and other projects with family members. Survivors include his wife, Linda, two children and seven grandchildren.

## 1990s

**David M. Brown, MD, GME '92**, of Sierra Vista, Ariz., died on December 25, 2019, at the age of 77. He practiced family medicine in Sierra Vista for more than 30 years. During his career, he served as chief of staff at what is now Canyon Vista Medical Center in Sierra Vista. Dr. Brown also operated his own medical practice and previously worked as an occupational physician at the Raymond W. Bliss Army Health Center in Fort Huachuca, Ariz. Dr. Brown is survived by his wife, Cheryl, two children and a grandchild.

**Herbert C. White, MD, GME '95**, of Wausau, Wis., died on April 15, 2021, at the age of 83. After practicing family medicine in the Milwaukee area for 30 years, Dr. White sought out additional residency training in psychiatry and behavioral medicine at MCW. After completing his residency, he moved to northern Wisconsin and practiced addiction medicine and psychiatry in Rhinelander and Ashland for 25 years. As a sports enthusiast, Dr. White enjoyed watching and playing football, hockey and lacrosse. He is survived by his wife, Ardis, three children, three grandchildren and two great-grandchildren.

**Kinga Cetera-Harmon, MD '96**, of Norfolk, Mass., died on September 12, 2020, at the age of 53. She loved being a doctor. Dr. Cetera-Harmon also adored animals, including her own dogs, horses and pigs. She enjoyed spending time in

nature and with friends. Dr. Cetera-Harmon is survived by her husband, Eric, and two children.

## 2000s

**Michael M. Yeboah, MD, PhD, GME '06**, of Mequon, Wis., died on January 2, 2021, at the age of 51. He joined MCW's faculty in 2014 as a member of the division of nephrology in the department of medicine. He developed a clinical and research focus on acute kidney injury and hepatorenal syndrome. Dr. Yeboah was a recipient of the MCW department of medicine's *Jacob Lemann Jr., MD Clinical Scientist Award* and recently had been awarded a KL2 career development award from the Clinical and Translational Science Institute of Southeast Wisconsin. Dr. Yeboah is survived by his wife, Eunice, and three children.

## Special Remembrances

**Robin L. Curtis, PhD**, of Brookings-Harbor, Ore., died on May 9, 2020. He was a neuroscientist and served on the faculty of MCW and its predecessor institution for 38 years. Dr. Curtis achieved the rank of professor and successfully garnered a multitude of research grants to support his scientific pursuits. He also won multiple awards for outstanding teaching. He retired to southwest Oregon's coast to enjoy its natural beauty with his family. He continued to enjoy science, philosophy and other subjects throughout retirement. Survivors include his wife, Sheila, two children, four grandchildren and two great-grandchildren.

**Glenn A. Meyer, MD**, of Dousman, Wis., died on July 26, 2021, at the age of 87. He completed his residency in neurosurgery at what is now the University of Wisconsin School of Medicine and Public Health before being drafted into the US Army during the Vietnam War. Dr. Meyer served at Walter Reed National Military Medical Center in Bethesda, Md., and for three years at what is now WellSpan Gettysburg Hospital in Gettysburg, Pa. He discovered his passion for academic medicine while conducting research at Walter Reed. After three years as a faculty member at the University of Texas, Dr. Meyer joined Dr. Sanford Larson at MCW as founder of the department of neurosurgery. He became a pioneer of microneurosurgical techniques, a prolific physician-scientist and served on key committees that contributed to the creation of the Milwaukee Regional Medical Center campus. Outside of the operating room, Dr. Meyer loved working on his farm. He is survived by his wife, Tizza, three children, six grandchildren and one great-grandchild.

**Randle Pollard, MD, GME '58**, of Milwaukee died on October 13, 2021, at the age of 96. He was the first African American resident at MCW's predecessor institution and the first African American urologist to practice in the Milwaukee area. Dr. Pollard served as president of the Cream City Medical Society and was a clinical professor of urology at MCW. In 2002, he established the *Randle E. Pollard, MD, FACS, GME '58, Endowed Urological Prize* at MCW, which is awarded annually to a fourth-year medical student who displays an interest and aptitude in urology. Dr. Pollard loved listening to jazz, often taking trips with friends to Kansas City and New Orleans to attend live performances. Survivors include his wife, Mildred, and four children.

# Change Agent – Cheryl L. Stucky, PhD



Cheryl L. Stucky, PhD, is the Marvin Wagner Professor of Cell Biology, Neurobiology and Anatomy, and director of MCW's Pain Division Research Center.

## What Drives You?

I am driven by the differences between my patients and trainees, and the different types of people I get to encounter. I also am passionate about building all areas of neuroscience at MCW. I'm co-leading the Neuroscience Strategic Plan with Dr. Mike McCrea, and have truly enjoyed working with him and a team of neuroscientists.

## What Has Been the Highlight of Your Career?

The highlight of my career is being able to train students in lab. I am passionate about our trainees and lifting up our next generation of neuroscience and pain researchers, as well as all trainees in research and academic medicine.

## What Do You Still Hope to Accomplish Over Your Career?

I would like to make amazing discoveries that target pain relief in order to make a difference. About one in three individuals in the US will suffer from chronic pain at some point, and about 40 million of these people will have severe pain. If there's an effective way to help patients, it could change the lives of every one in three individuals in this country.

## What Would You Like Your MCW Legacy to Be?

Generally, I want my legacy to leave the world a better and more positive place. For my MCW legacy, I hope that I can bring the ability to garner human tissue samples for use in neuroscience research. I'm passionate about accessing human tissue samples for research to make translational advances in pain research and bring new therapeutics into the clinic.

## What One Piece of Advice Would You Like to Share With Your Colleagues?

Don't quit. Things get hard and you might want or have to change directions, but it will always work out. There will always be other opportunities available for you to succeed and excel in something you love. I cherish being positive and optimistic, and I encourage my colleagues to do the same.

**D**r. Stucky is a top pain researcher with her own lab, which focuses on studying the molecules responsible for touch and pain.

She joined MCW in 1999 and served as director of MCW's Neuroscience Doctoral Program from 2010-2021. She also is a member of MCW's prestigious Society of Teaching Scholars.

A large area of research focus in the Stucky Lab is on the receptor proteins TRPA1 and TRPV1. Dr. Stucky has shown that these proteins are a large factor in the development of hypersensitivity to sensory pain. The goal of this research is to block the expansion of the pain signal without blocking the direct sense of touch. In addition to Dr. Stucky's work on touch hypersensitivity, she has conducted substantial study into the causes of acute and chronic pain in patients suffering from sickle cell disease.

Dr. Stucky has published more than 85 articles, original papers, book chapters and reviews, and has presented at approximately 135 local, regional, national and international lectures and workshops. She is the recipient of two National Institutes of Health R01 grants, has served on many scientific study sections and editorial boards, and received MCW's *Woman Pioneer in Research Award* in 2014. ■

– ELIZABETH KARNOWSKI

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*Change Agent highlights a Medical College of Wisconsin faculty or staff member who has had significant impact on the institution's mission to be a leading innovator in transforming healthcare and advancing the health of our communities.*

# Finance Report

## Revenues\*

Fiscal year ended June 30, 2021	Total All Funds (\$ in millions)
Clinical revenue**	\$948.5
Grants and contracts	197.2
Tuition and fees	62.8
Investment income	14.3
Contributions	15.0
Other	75.1
<b>Total revenues</b>	<b>\$1,312.9</b>

## Expenses\*

Fiscal year ended June 30, 2021	Total All Funds (\$ in millions)
Salaries and fringe benefits	\$999.0
Supplies and expense	224.8
Other operating	46.0
<b>Total expenses</b>	<b>\$1,269.8</b>
<b>Excess of revenues over expenses</b>	<b>\$43.1</b>

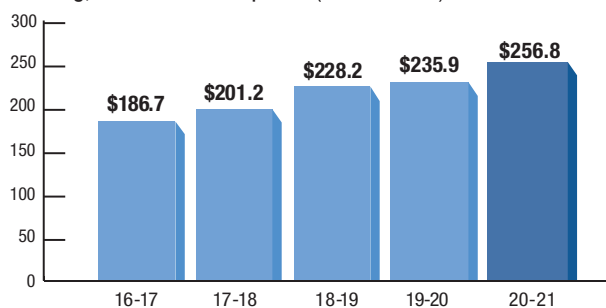
\* Excludes nonoperating revenue and expense, including realized and unrealized gains and losses on investments.

\*\* Includes adult and pediatric revenues.

## Externally Funded Expenditures\*\*\*

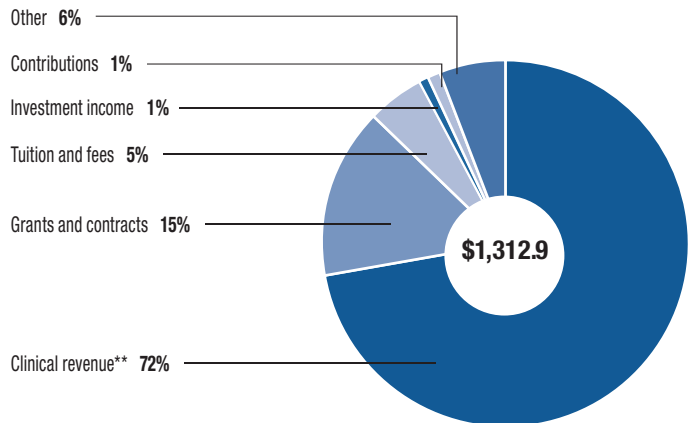
July 1, 2016 to June 30, 2021

Total Externally Funded Expenditures for Research, Teaching, Training, and Related Purposes (\$ in millions)

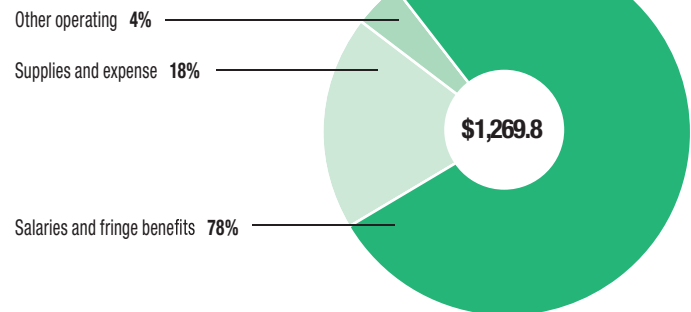


\*\*\* Expenditures relate to multiple revenue sources, including Grants and contracts, Contributions and Other.

## Revenues Fiscal Year 2021

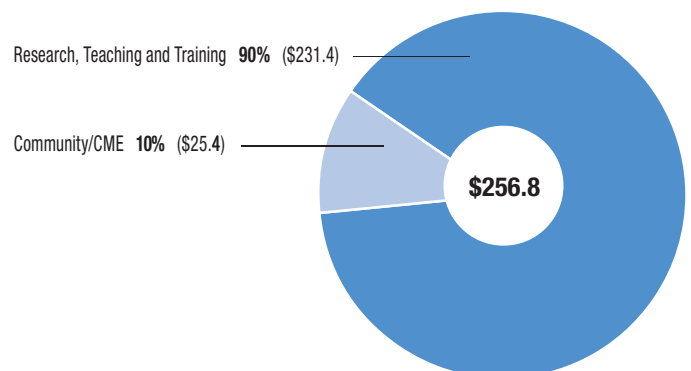


## Expenses Fiscal Year 2021



## Externally Funded Expenditures by Purpose Fiscal Year 2021

(\$ in millions)





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## You Can Be the Difference.

By making a gift to MCW's Annual Fund for Excellence, you are helping to provide critical scholarship funds to the next generation of physicians and researchers, support life-changing research that helps our physicians fight the most complex diseases, deliver the best patient care in the region and make our communities healthier for all.

Join us in making a difference by giving to MCW's Annual Fund for Excellence. Make your gift by December 31, 2021 and be the difference in transforming healthcare. For more information about the Annual Fund for Excellence, visit [mcw.edu/annualfund](http://mcw.edu/annualfund).