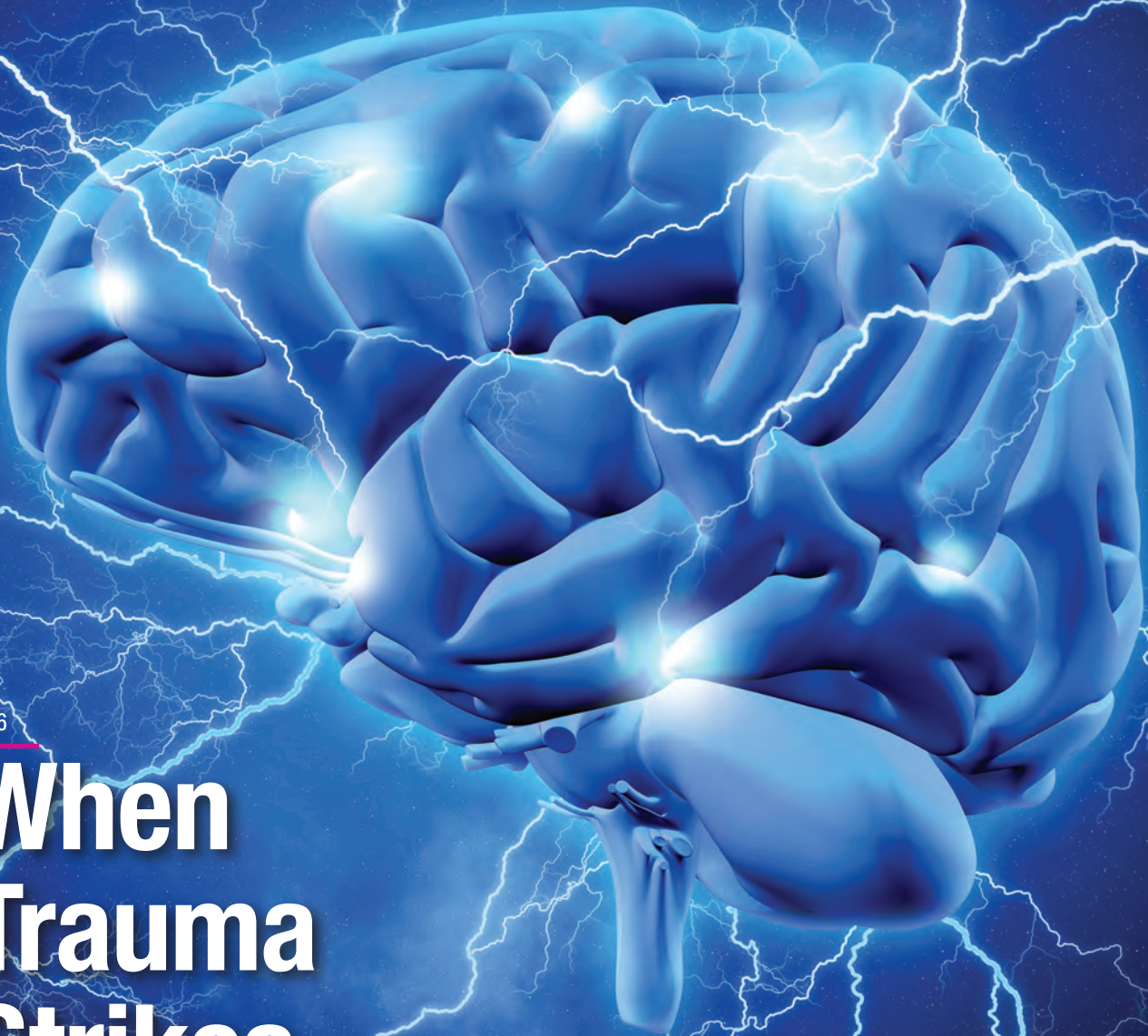


SUMMER 2016


MEDICAL
COLLEGE
OF WISCONSIN
A Healthier Future
Starts Here

MCW

magazine



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When Trauma Strikes Brain Injury Research, Prevention & Care

P 8

From Discovery to Diploma

P 22

Bone Marrow Transplant Physician
Gives Bella Hope for the Future

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LEADERSHIP MESSAGE

Commencement Celebrates Medical Education "Firsts"

On May 20, we were honored to grant medical degrees to 199 medical students and advanced degrees to 77 graduate students. We have shared our knowledge with these special individuals, mentored them, guided them, counseled them and provided them with an excellent educational foundation. We have learned a great deal from them as well: they push us to be at the top of our game and ask insightful questions which stretch our expertise.

MCW has a proud legacy of innovation in education, and our 2016 Commencement ceremony celebrated several medical education "firsts" – including the graduation of the first class of medical students to have experienced four full years of the Discovery curriculum, and the first class of Master's degree students from the Medical Physiology program.

The hallmarks of the Discovery curriculum, launched in August 2012, are earlier integration of clinical experience for medical students, a year-long foundational program, a year of systems- and symptom-based units of education to ensure grounding in the basic sciences, and Scholarly Pathways which allow students to individualize their medical training while working with peers and faculty mentors (*read more about this innovative curriculum on page 8*).

The nine-month Medical Physiology program, which launched in August 2015, helps undergraduates strengthen their academic record for medical school applications while also providing a basis of skills and knowledge for medical and scientific careers. Medical Physiology students are integrated into MCW's first-year medical student curriculum by taking three courses along with the medical students. The program's first graduating class included seven students, although the goal is to increase enrollment to 30 students.

Our graduates are poised to enter complex, evolving and exciting healthcare, biomedical research and educational environments – which will require collaboration, collegiality, innovation, a continued thirst for learning, leadership, courage and a humanitarian approach to their careers. I firmly believe the lessons they have learned at MCW will serve our graduates well as they forge their careers and succeed with their ambitions and goals.

Joseph E. Kerschner, MD '90, FEL '98

Dean, School of Medicine
 Executive Vice President

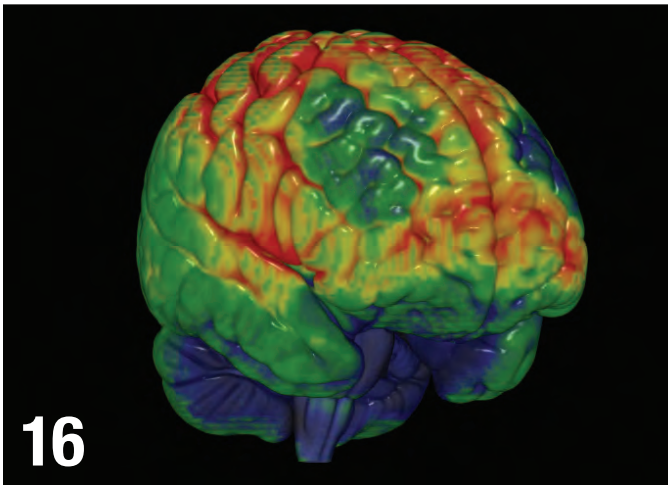
"I firmly believe the lessons they have learned at MCW will serve our graduates well as they forge their careers and succeed with their ambitions and goals."



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ON THE COVER: The human brain has been called “the most complex object in the known universe.” While many diseases and conditions affect the brain, among the most widespread across all age groups is traumatic brain injury (TBI). The consequences of TBI can impact all aspects of our lives, including our personalities. This is the primary reason that TBI is a vital area of focus for MCW and its research and clinical partners.



Our Alumni Association Then and Now...



The Medical College of Wisconsin/Marquette Medical Alumni Association has a storied history which traces back to 1925. Initially, the Alumni Association was established as the Marquette Medical Alumni Association, a branch of Marquette University's General Alumni Association. In 1967, when Marquette ended its relationship with the medical school, the Alumni Association Board of Directors established an independent organization. Alumni from the Wisconsin College of Physicians and Surgeons, the Marquette University School of Medicine and the Medical College of Wisconsin were united under the Association's new configuration. In 1996, our Association adopted its current moniker, "MCW/Marquette Medical Alumni Association," transitioned to a non-dues organization and opened its membership to include ALL alumni of the Medical College of Wisconsin.

Today, the Alumni Association represents nearly 17,000 Medical/Graduate School and GME alumni, and aspires to once again transform itself to increase support to its members and the ever-evolving institution. ■



MCW/Marquette Medical Alumni Association Board of Directors, 2016-2017

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- Rory R. Wright, MD '88, GME '94

Student Representatives

- Rebecca Holme - **Graduate Student Association**
- Enio Perez - **Medical Student Assembly**

Highlights From Dr. Bear's Presidency

Brian J. Bear, MD '84, GME '89, completed his term as president of the MCW/Marquette Medical Alumni Association. He shared with *MCW Magazine* highlights from the year:

1. **Initiated Alumni Association's support of two major scholarship fundraising initiatives:** the *Lesley A. Mack Endowed Scholarship Fund* and the *William A. Schultz Endowed Scholarship Fund*.
2. **Surveyed alumni** in regard to current and future engagement opportunities.

3. **Advanced Alumni Association into the "digital realm":** first board meeting streamed live and groundwork laid for online directory (*expected to launch in the late summer or early fall*).
4. **Prioritized student support initiatives and advocated for the Alumni Association** to play a role in the preceptorship program, as well as in experiential learning opportunities.
5. **Recruited Alumni Association's new executive director,** Seth Molloy Flynn.



Outgoing Alumni Association president, Dr. Brian Bear, welcomes incoming president, Dr. Marie Nakata.

Photo courtesy of Jeff Zmania



ALUMNI ASSOCIATION PRESIDENT'S MESSAGE

MARIE L. NAKATA, MD '89, GME '93

“Listen to your patient; he is telling you the diagnosis,” professed Sir William Osler, MD, the father of modern medicine. As a physician, these words are essential. I shared them with our graduating students during this year’s Commencement Week festivities. Our students undoubtedly have heard them many times in the past few years. This quote truly resonates with me, as I believe it offers something important for all alumni – regardless of degree. We all dedicate our lives to science and medicine. It’s a curiosity that burns within us and motivates us.



Now is the time for us, as an Association, to listen to our alumni. We hope you’ll tell us what you want and need from *your* Association.

I have often thought about my presidential priorities. As president, I plan to focus on advancing volunteer and financial support of MCW students, initiating a strategic planning process and re-envisioning the Association’s engagement activities. **These initiatives will not solely be the work of the Alumni Association Board of Directors; rather, it is our hope that all alumni will play a role in defining the Association’s identity.**

It is not surprising that these priorities are very much in line with those of past president, Dr. Brian Bear. He set a precedent that president-elect Dr. Neil Guenther, members of the Alumni Association Executive Council and I believe demonstrates a desire to progress into a new era for the Association. It is a great honor to be asked to serve as president. Brian, however, is a tough act to follow! I thank him for his leadership, guidance and relentless pursuit of bringing about positive change. ■

Are you looking for some way to connect with current MCW students but aren't sure who to contact? Look no further! Contact Alumni Association executive director Seth Flynn at sflynn@mcw.edu or (414) 955-4780.



A reception and banquet for alumni, faculty, spouses and friends was held at the hotel InterContinental Milwaukee on Friday evening, April 29. The reception kicked off the Alumni Reunion Weekend. Additional photos and information about the Weekend can be found on pages 28-31.



Photos courtesy of Jeff Zmania



To see award recipient profiles, visit mcw.edu/2016reunion

STAT REPORT



Photo courtesy of Jeff Zmiana

Founding Dean Installed for MCW School of Pharmacy

MCW leaders celebrate the installation of Dr. MacKinnon: (l-r) Ravindra P. Misra, PhD, dean, Graduate School of Biomedical Sciences; George E. MacKinnon III, PhD, MS, RPh, founding dean, School of Pharmacy; John R. Raymond, Sr., MD, president and CEO; and Joseph E. Kerschner, MD '90, FEL '98, dean, School of Medicine and executive vice president.

George E. MacKinnon III, PhD, MS, RPh, was installed as the founding dean of MCW's School of Pharmacy on April 5.

Dr. MacKinnon was appointed to the position by John R. Raymond, Sr., MD, MCW's president and CEO, in August 2015 and assumed the title of founding dean-elect so that he could begin to work immediately with accrediting bodies for schools of pharmacy. Dr. MacKinnon's official start date was October 1, 2015.

"Dr. MacKinnon is the perfect individual to serve as founding dean for the MCW School of Pharmacy by virtue of his distinguished career as a leader in the field of pharmacy education," Dr. Raymond remarked during the installation ceremony. "Dr. MacKinnon's extensive experience and expertise is helping drive the vision we have for our School of Pharmacy, as well as meet our end

goal of training highly qualified pharmacists who will provide extended services in medication monitoring, immunizations, health screenings, chronic disease management, acute ambulatory care and specialty pharmacy care."

"We truly have a once-in-a-professional-lifetime opportunity here at MCW, and we intend to maximize it," Dr. MacKinnon shared. "The MCW School of Pharmacy will fundamentally change the education of Doctor of Pharmacy students and advance the profession to impact patient care in the State of Wisconsin and beyond. Our intentions are not only to produce the pharmacy graduate of the future, but also to create – in conjunction with our medical colleagues, other healthcare providers and institutions – practice models and teams of the future that appropriately leverage the role of the pharmacist to achieve better health outcomes in patients." ■

New Psychiatry Residency Programs Accredited

The Accreditation Council for Graduate Medical Education (ACGME) has given initial accreditation to new MCW four-year psychiatry residency programs in Central and Northeastern Wisconsin. These new programs will train three residents per year in Central Wisconsin and four residents per year in Northeastern Wisconsin.

Planning for the new psychiatry residencies, which will help alleviate a critical shortage of mental health professionals in rural areas of the state, began in the spring of 2013. Faculty members from MCW's department of psychiatry and behavioral medicine and representatives from the Clement J. Zablocki VA Medical Center helped develop a proposal that ultimately received financial support from the US Department of Veterans Affairs for the addition of 10 new training slots for mental health professionals in Northeastern Wisconsin – including seven residency positions to train psychiatrists. The Milo C. Huempfer VA Clinic in Green Bay, which is managed by Milwaukee's Zablocki VA, is providing space and infrastructure support for seven of the 16 psychiatry residents in Northeast Wisconsin.

Concurrently, in May 2014, the Wisconsin Department of Health Services awarded MCW two grants of more than \$370,000 each to support the development of these new psychiatry residency programs. Additionally, more than \$3.3 million was awarded to six Wisconsin healthcare organizations by the State Legislature to help them establish the new residency training programs in their communities. MCW's School of Medicine and the VA provided additional matching funds to assist with the launch.

These new residency programs are

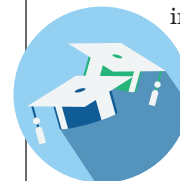
being sponsored by the Medical College of Wisconsin Affiliated Hospitals, Inc. (MCWAH), which, along with MCW's department of psychiatry and behavioral medicine, are responsible for ensuring that the programs meet all ACGME requirements. The department will provide leadership and mentorship to the residency program director, residency coordinator and faculty in the new residency programs. In addition, the curriculum will be bolstered through tele-education and sharing of current educational didactics from MCW's fully-accredited Milwaukee-based established psychiatry residency program. Tele-supervision also will be available if further supervisory resources are necessary.

Medical students enrolled in MCW's regional campuses will rotate their training through some of the same clinical sites where the residents will train, allowing the students the opportunity to work with residents. Further, these two new residency programs will increase the training of psychiatrists in Wisconsin by more than 40 percent. And MCW's department of psychiatry and behavioral medicine soon will be producing 62 percent of the state's annual new psychiatrists.

MCW is undertaking a number of extremely innovative endeavors in medical education. Nothing is more important to the health of the citizens of Wisconsin, however, than what has been accomplished in establishing these new mental health residencies attached to the regional campuses. If even one of the residents from these programs decides to stay and practice in the region where they train each year, MCW will dramatically change access to mental healthcare within a decade. ■

Marquette & MCW Biomedical Engineering Department Launches

The new Marquette University and Medical College of Wisconsin biomedical engineering department officially launched July 1 to bring together the engineering education and research expertise of Marquette and the medical research, technology and clinical expertise of MCW to provide an



inclusive education model for the next generation of engineers, scientists and physicians. Lars Olson, PhD, former interim chair of Marquette's biomedical engineering department, serves as interim chair of the new department.

The new department offers students the ability to participate in research such as imaging and instrumentation, orthopaedics and rehabilitation, neurosystems and neurorehabilitation, cardiovascular and pulmonary research, genomics, computational biology, bioinformatics, molecular imaging, cell and tissue engineering, drug discovery and technology development. The institutions are recruiting faculty with expertise in cutting-edge fields such as nanotechnology, and cellular- and molecular-level biomedical research.

Enrollment is expected to increase in the next several years, primarily in the Master's degrees and PhD programs – providing further opportunity for undergraduate and graduate students to advance their careers and make an impact on biomedical innovation. ■



Med School Class of '16 Celebrates Major Milestones

The Medical College of Wisconsin Medical School Class of 2016 celebrated two milestones in the spring: Match Day and the completion of the first four full years of the new Discovery curriculum.

Match Day 2016

While many individuals around the country were worrying about matchups on the college basketball court, a different kind of match – Match Day – occurred on March 18. On this particular Friday, more than 300 medical students and their families, faculty and staff packed into MCW's Alumni Center for Match Day.

This annual ritual is celebrated on the third Friday of March by every allopathic medical school in the US, during which graduating medical students learn where they have “matched” for their respective residency training programs. This is a rite of passage ingrained in every medical student’s mind, and is a day filled with anticipation, excitement, exhilaration,

friends, family, relief and many other emotions. After months of suspense and anticipation, at exactly noon Eastern Daylight Time, thousands of medical students all over the country began opening their envelopes and learning their residency matches. Just call this “March Madness, medical school style!”

As is the custom at MCW, Joseph E. Kerschner, MD '90, FEL '98, dean of MCW's School of Medicine and executive vice president, drew the first envelope, which bore the name of Heather Koch. She was very excited to have matched with her first choice – the Waukesha Family Medicine Residency Program (an affiliate of the Medical College of Wisconsin Affiliated Hospitals – MCWAH) at Waukesha Memorial Hospital.

At MCW, there also is a long-standing tradition of each student placing a \$1 bill in a container as they come to the podium to receive her/his Match envelope. These dollars are then given to the last student whose name is



called, as compensation for being the final person in the class to find out her/his future. This year, the final student was Justin Bric, who will undertake residency training in Orthopaedic Surgery through MCWAH.

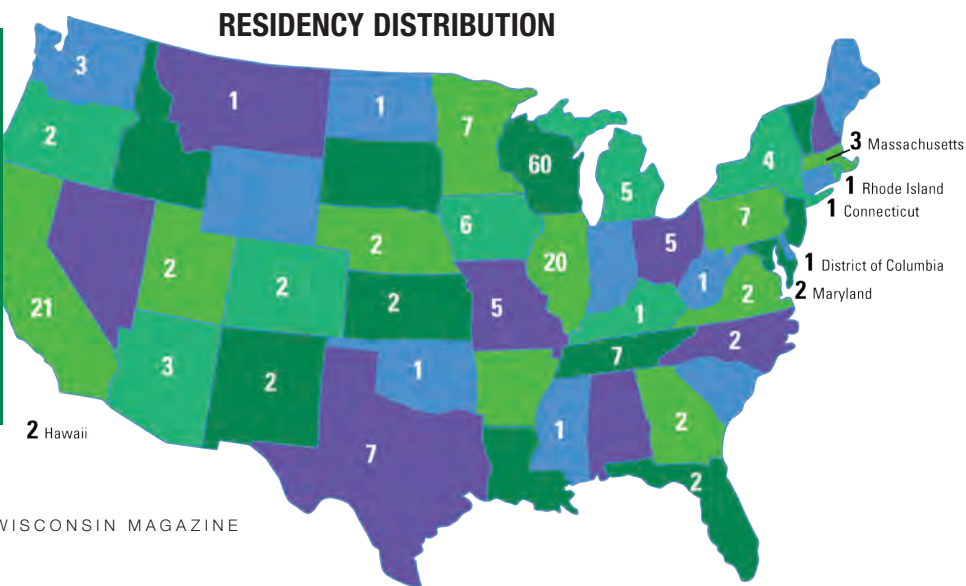
Discovery Curriculum

It's a lifelong journey of learning and Discovery – so said the message accompanying the naming of MCW's new Discovery curriculum, which launched in August 2012 with the matriculation of MCW's Class of 2016. On May 20, 2016, this first class of students to experience four full years of the Discovery curriculum received their medical degrees amid much celebration and optimism for the future.

The Discovery curriculum is contemporary, comprehensive and competency-based, with an integrated approach that melds basic science and clinical coursework with early and continuing clinical patient contact, peer-based small group interactions and opportunities for individualized

HIGHLIGHTS OF MCW'S 2016 MATCH:

- 97% Match rate
- 30% of the students will remain in Wisconsin for residency training
- Greatest percentage of specialties represented were: **Internal Medicine, Family Medicine & Pediatrics**





More than 300 medical students and their families, faculty and staff packed into MCW's Alumni Center for Match Day on Friday, March 18.

Photo courtesy of Sara Wilkins

pursuits. It offers a variety of learning modalities, including team-based learning, problem-based learning and self-directed learning – providing students with the multi-faceted skill set necessary to discover their respective roles in the future of medicine and encouraging medical students to think and act like physicians from “Day One” of their journeys at MCW.

When the Discovery curriculum launched in August 2012, it was the culmination of more than four years of planning by 100+ basic scientists, clinicians, students and staff to create an innovative program geared toward producing exceptional and compassionate physicians prepared to practice medicine in the 21st century.

The process was reflective of the value MCW places on faculty leadership and expertise, and underscores the true collaborative spirit of MCW. A pilot curriculum, in which 28 students participated, provided significant input into the development process.

During the first two years of MCW’s medical school, students are grounded in the Foundations of Basic Sciences through courses that introduce them to organ systems, symptoms and the pathophysiology of disease. They also begin Early and Continuing Clinical Experiences to develop the medical knowledge and clinical skills needed to care for patients – ultimately helping them to succeed at multiple milestones

throughout their medical school years and across their lifetimes. Each week throughout years 1-2, students have ample protected time for Independent Study. In years 3-4, students focus on clinical experiences while also incorporating basic sciences.

Through Scholarly Pathways, students are able to individualize certain aspects of their education as well as complete a scholarly project. Each of the Scholarly Pathways features two components. The first is a structured curriculum with a core set of competencies delivered through monthly workshops or core sessions. The second comprises flexible, experiential non-core activities in which each student is guided by a faculty advisor and his or her own individualized learning plan to apply the core concepts in a variety of settings. Current Scholarly Pathways include Bioethics; Clinician Educator; Global Health; Health Systems Management and Policy; Physician Scientist: Clinical and Translational Research; Physician Scientist: Molecular and Cellular Research; Quality Improvement and Patient Safety; and Urban and Community Health.

The dynamic approach of the Discovery curriculum cultivates students’ skills and interests into a passion for lifelong learning, inspires them to travel on a continuous path of exploration and discovery, and prepares them to become outstanding physicians and pioneering leaders. ■

– SARA WILKINS



To read more, visit mcw.edu/milestones



Photo courtesy of Jigy Westhauser

During the first two years of medical school, MCW students begin Early and Continuing Clinical Experiences to develop the medical knowledge and clinical skills needed to care for patients.



A. O. Smith Family's Legacy of Support

Family is at the heart of A. O. Smith's 34-year support of MCW and its Cardiovascular Center (CVC).

Lloyd B. (Ted) Smith, former A. O. Smith Corporation chair and CEO, joined the MCW Board of Trustees in 1972 because he saw the value the institution brought to the community and state. Soon after, he co-chaired a committee that raised \$17 million to move MCW from its downtown location to the Milwaukee Regional Medical Center campus. Two of his sons, Bruce and Roger Smith, now run the A. O. Smith Foundation and continue to support and stay involved with MCW as a way to honor their father's efforts. They have directed much of that support to the Cardiovascular Center in the hopes of finding a cure for what killed both of their parents.

"Bruce and I, like our Dad, are very impressed with the extensive value the Medical College of Wisconsin brings to the community in terms of research produced and new ideas generated – and it is important to us to follow in his tradition," says Roger Smith, Foundation board member. "Both my Dad and Mom had heart attacks, and we target the CVC to help find cures for heart disease, which impacts so many people and so many families."

The CVC is housed in part of the building constructed through their father's support.

A significant area of interest for the A. O. Smith Foundation is the Cardiovascular Center Board of Directors Seed Funds program. Seed funding is used by investigators during the earliest stages of scientific research and helps pay for laboratory supplies, specialized equip-

A. O. SMITH FAMILY SUPPORTS THE CVC

CVC BREAKTHROUGHS AND MILESTONES:

- CVC named a Specialized Center for Research on Hypertension by the American Heart Association – one of only four in the US
- One of the 20 medical schools in US to receive funding from the NIH's National Heart, Lung and Blood Institute
- Discovered substances produced by brain cells to trigger growth of new blood vessels – an important clue in how the brain combats the effects of stroke
- Mentored more than 220 postdoctoral trainees in the last decade
- Discovered critical link between kidney blood flow regulation and development of high blood pressure
- Developed techniques used during/after surgery, resulting in nation's best outcomes for a form of pediatric heart defect
- Home to 16 physicians named *Best Doctors in America*®

Established in 1992, MCW's Cardiovascular Center focuses on improving cardiovascular health in Southeast Wisconsin and beyond.

ment and the staff time needed to gather initial data that serve as the basis for competitive grant applications for long-term funding from the National Institutes of Health (NIH) or other extramural funding agencies.

Most recently, the A. O. Smith Foundation awarded a five-year grant to help create the A. O. Smith Fellowship Scholars Program. This unique program is designed to support

talented cardiovascular researchers and physicians in an innovative educational program that aims to provide mentoring, training, research support and the necessary resources to overcome the barriers that exist to launching and sustaining a successful research career.

"We are pleased to be able to support this groundbreaking educational program," says Bruce Smith, president of the A. O. Smith Foundation and new chair of the CVC Advisory Board. "Serving as a CVC board member, I have had the opportunity to hear firsthand from the doctors doing outstanding original research on heart and vascular disease. Many of these projects result in important findings, which are translated into everyday medical practice to heal and keep us healthy."

The A. O. Smith Foundation also funded the purchase of "Lucy," named after Ted Smith's wife. "Lucy" is an Agilent Technologies Liquid Chromatography/Mass Spectrometer (LC/MS), a sophisticated piece of test equipment that analyzes a large range of chemical compounds in biological samples. "Lucy" recently was retired after decades of service assisting researchers from many MCW departments.

"We continue to value the research being conducted at MCW to develop new drugs and new procedures to help save lives," adds Roger Smith. ■

– ANTHONY BRAZA

(l-r) Roger Smith and his brother, Bruce Smith, visit the cardiovascular research laboratory of Dr. David Gutterman at the Medical College of Wisconsin. A plaque commemorating the A. O. Smith Foundation's support hangs outside the entry door to the lab.



Photo courtesy of Gary Porter

“We are extremely grateful to the A. O. Smith Foundation for its long-term support of the CVC.”

— Ivor J. Benjamin, MD, director, MCW Cardiovascular Center

L.B. Smith raised money to help construct a new building for MCW.
(shown here upon completion)



FRIENDS OF MCW TIMELINE

FIRST DECADE

1969 Friends of MCW founding member; gift cart service; TV rental

1970s First Lamplighter Ball; Annual Benefit Concerts

1979 First gift shop opens

SECOND DECADE

1980s Focus on children: car seat safety; rental; helped lobby for state law

1981 First annual dinner for student and resident spouses

1982-91 Las Vegas, Mardi Gras, Casino Night fundraisers

1984 Cookbook (2,000 copies sold in 6 years); History of Medicine Room renovation

1985-86 Docent program; student snack days

THIRD DECADE

1990 First Thanksgiving Dinner

1991 First scholarship for academic excellence

1992 Mystery Theatre performance

1993 Second gift shop opens

1994 Third gift shop opens; \$131,000 to MCW

1996-97 Friends Endowment Fund reaches 50% of goal at \$100,000

1999 Friends' Café opens

VERA'S ACHIEVEMENTS

1988 President of Friends of MCW

2004 Zeit Fellow

2005 Honorary Alumna

2015 Secretary of Friends of MCW

FRIENDS OF MCW EXECUTIVE COMMITTEE, 2016-2017

President Renee Hill

Past-President Susan Barnes

Vice President Christine Schaefer

Secretary Gail Schemberger

Treasurer Margaret Haagensen

Vera Wilson's support of MCW and WBCS, Inc. (Wisconsin Breast Cancer Showhouse) has spanned nearly four decades, enabling her to interact with countless students, staff and faculty members.

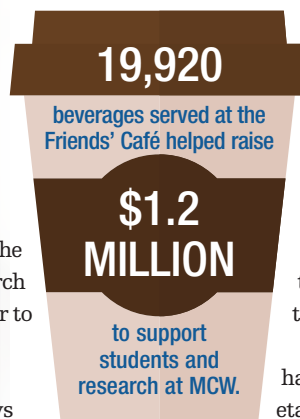
Vera Wilson: A Force Behind the Friends of MCW

Vera Wilson has given many hours to MCW over the past 36 years and loved every minute. Her efforts with the Friends of the Medical College of Wisconsin and WBCS, Inc. (Wisconsin Breast Cancer Showhouse) have contributed to the funding of numerous scholarships for medical and graduate school students, and the raising of nearly \$6 million for cancer research and an endowed chair. They also enabled her to interact with many students and faculty.

"I love being around the students and getting to know and interact with them," says Vera, who, as part of her volunteer efforts with MCW, served as director of the Friends' Café for 16 years before it closed in 2015. "When a new student came into the Café, I always would ask where they were from. One from California introduced his entire family to me when they came for his White Coat Ceremony, and they continued to visit the Café whenever in town. I've met many students' boyfriends, girlfriends, parents and spouses."

Vera and her husband, J. Frank Wilson, MD, Bernard & Miriam Peck Family Professor of Radiation Oncology, director emeritus of the MCW Cancer Center and former chair of radiation oncology, moved to Wisconsin in 1975 – and around 1980, Vera decided to volunteer full-time. Some of her early volunteer efforts included taking photos of babies in the neonatal clinic, renting TVs to patients in the birthing center, and running the gift shop in the old County Hospital. This last effort required Vera to negotiate the contract and market the shop. There were other efforts and events along the way, but some of them at the affiliate hospitals were handed off in 1999 so Vera could run the Friends' Café.

MCW's Health Research Center opened that year, and Vera worked with then-MCW president and CEO T. Michael Bolger, JD, and Michael J. Dunn, MD, dean of the MCW School of Medicine, to secure a space in the new building for a Café that would return 100 percent of its profits back to the institution. Vera worked hard to obtain the space for the Café, and put in more than 40 hours per week for the next 16 years to ensure its success. Her time was spent purchasing merchandise for the Café, creating



displays, purchasing supplies, working behind the counter and scheduling other volunteers who helped staff it.

"We had so many amazing volunteers who stepped up to staff and run the Friends' Café as smoothly as possible," Vera shares. "I am proud to have gotten to know so many hard-working people who came together to help MCW, and, more specifically, to help the students."

Since its inception, the Friends of MCW has contributed more than \$1.2 million in monetary gifts and equipment to MCW and its affiliates. In 2014-2015, the Friends provided roughly \$53,500; this included two partial scholarships for medical students (totaling \$26,000) as well as about \$27,500 for senior service awards, dissertation awards, summer research fellowships and travel awards for students. The Friends also will be lending support to MCW's regional medical school campuses. As a result of the efforts of the Friends' Café and other fundraising endeavors, the Friends of MCW is building a \$1 million scholarship endowment.

Vera also is on the Board of Directors of WBCS, Inc., which, since 1998, has donated more than \$5.8 million to fund research and endow the WBCS Breast Cancer Research Endowed Chair at MCW. She is thankful her children and husband have been so supportive of her efforts over the years, and hopes she was able to convince others to volunteer for MCW. "It is incredibly gratifying to make it easier for others to pursue their dreams, and it can be fun and enriching," Vera remarks. "Find something that drives your passions, commit the hours – and you will reap enormous benefits from helping others."

For her efforts throughout the years, the MCW/ Marquette Alumni Association named Vera an *Honorary Alumna* in 2005.

When not volunteering at MCW, Vera likes to read, do puzzles, go on walks with her friends and volunteer at other organizations. ■

– ANTHONY BRAZA

For more information or to join the Friends of MCW, contact Renee Hill, president, at (414) 955-4102 or Friends@mcw.edu.

Photo courtesy of Jeff Zmania

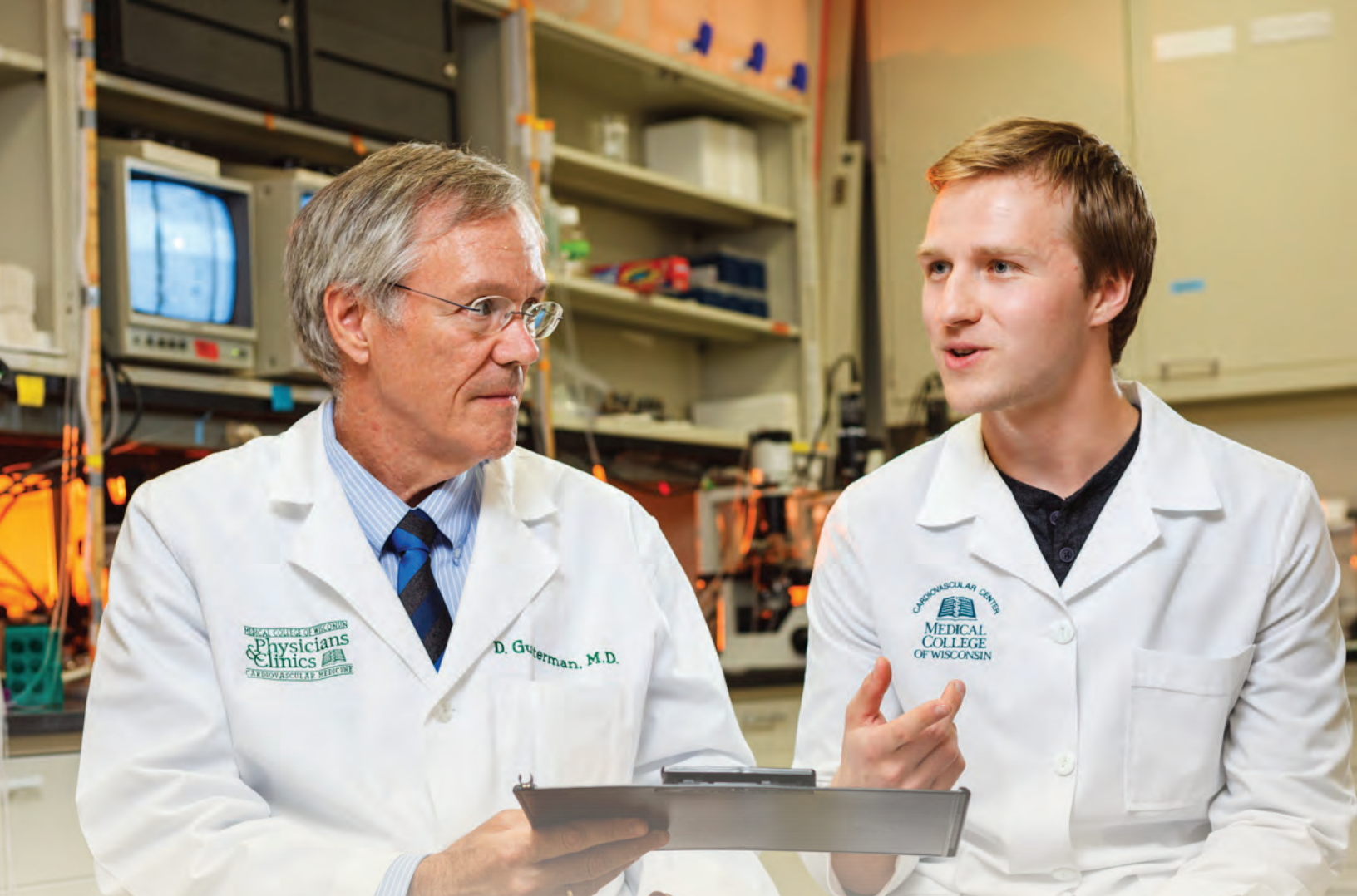


Photo courtesy of Jay Westhauser

Exciting Journey from Exchange Student to Grad Student

TOP: MCW graduate student Dawid Chabowski, a native of Poland, works in the laboratory of Dr. David Gutterman researching the regulation of blood flow.

RIGHT: Photographs taken by Dawid focus on individuals doing what they love.

After a year in a foreign exchange program that brought him from Warsaw, Poland, to La Crosse, Wis., Dawid Chabowski's host family invited him to stay in the US to finish high school. For Chabowski, now a fourth-year PhD student at MCW, the offer was as unexpected as it was life-changing.

"It was just supposed to be a year in the US, absorbing the culture and learning English, and then this happened," Chabowski says. "It was fantastic – the offer of a lifetime."



DISCOVERY | SCHOLARSHIP

The only obstacles were paperwork and timing, as Chabowski had to leave the US for a year while his host family and school made the necessary

arrangements. Just as he had leapt at the opportunity given him by his host family, Chabowski treated the year as a chance to undertake cultural and personal exploration. This meant moving to Cadiz, Spain – even though he did not speak Spanish.

“I made the most of the transition year in Spain by going to school, learning the language and experimenting with photography,” Chabowski shares. There, he developed a passion for photographing people doing what they love, with a particular focus on action sports athletes and musicians.

Chabowski returned to the US for his senior year of high school and took evening classes in order to graduate with his peers, which would enable him to enter college and search for the type of vocation he had captured in others with his camera. Similar to his host family’s offer, this, too, would turn out to be a surprise.

“I had disliked chemistry in high school,” Chabowski remarks, “but a college professor completely reframed chemistry and the sciences for me. He made it about asking challenging questions and using the scientific method to uncover the laws of nature. I was hooked.”

Focusing on a career in science as a biology major, Chabowski discovered that it would be difficult for him to gain the laboratory experiences needed to enter an advanced-degree program. As a foreign student, Chabowski was not eligible for paid summer research internships. The liberal arts school he attended in Minnesota had a life science program focused on teaching, but with few basic science labs.

Chabowski navigated this challenge by embracing unconventional opportunities to gain experience in healthcare and

“One of the best ways to grow is by experiencing other cultures”

– Dawid Chabowski,
MCW graduate student

the research process. He shadowed physicians and physical therapists as a volunteer, and constantly asked them about what was new in their fields of expertise.

“I think I probably annoyed them at times with my inquiries, but I learned a lot both from those conversations and observing clinical care,” Chabowski notes. He used that knowledge and experience to land a spot in the Mayo Innovation Scholars Program. Chabowski spent six months on one of several interdisciplinary teams of Minnesota students working on projects in science, medicine, intellectual property, marketing and business development.

“It was an excellent experience that culminated in a capstone presentation at Mayo Clinic,” Chabowski says. After graduation, he spent eight months at Wake Forest University in Winston-Salem, N.C., conducting basic science and clinical research while applying to graduate school.

Chabowski learned about MCW from Paul Steingraeber, MD ’73, and Gary Poehling, MD ’68, PhD, friends of his host family.

“I came from a small school that fostered community, and I really loved that MCW had that same sense of community collaboration,” Chabowski shares. “It was a bonus that it was close to my American family’s home.”

Chabowski has just completed his second year in the lab of David D. Gutterman, MD, Northwestern Mutual Professor of Cardiology at MCW.

“Dr. Gutterman’s research into the regulation of human blood flow appealed to me,” Chabowski says. “I see him as a great mentor and scientist, and have found that at MCW, the doors of collaboration are always open.”

Chabowski’s research focuses on the network of the body’s tiniest blood vessels, which are responsible for regulating blood flow to the organs, particularly the human heart. This field of study, known as microcirculation, has important health implications.

“Microvascular dysfunction is considered a precursor to large vessel diseases such as atherosclerosis,” Chabowski remarks. His goal is to better understand the mechanisms by which microvessels regulate blood flow in health and disease.

In addition to his work in the lab, Chabowski has taken the guidance he has received from Dr. Gutterman and others to heart.

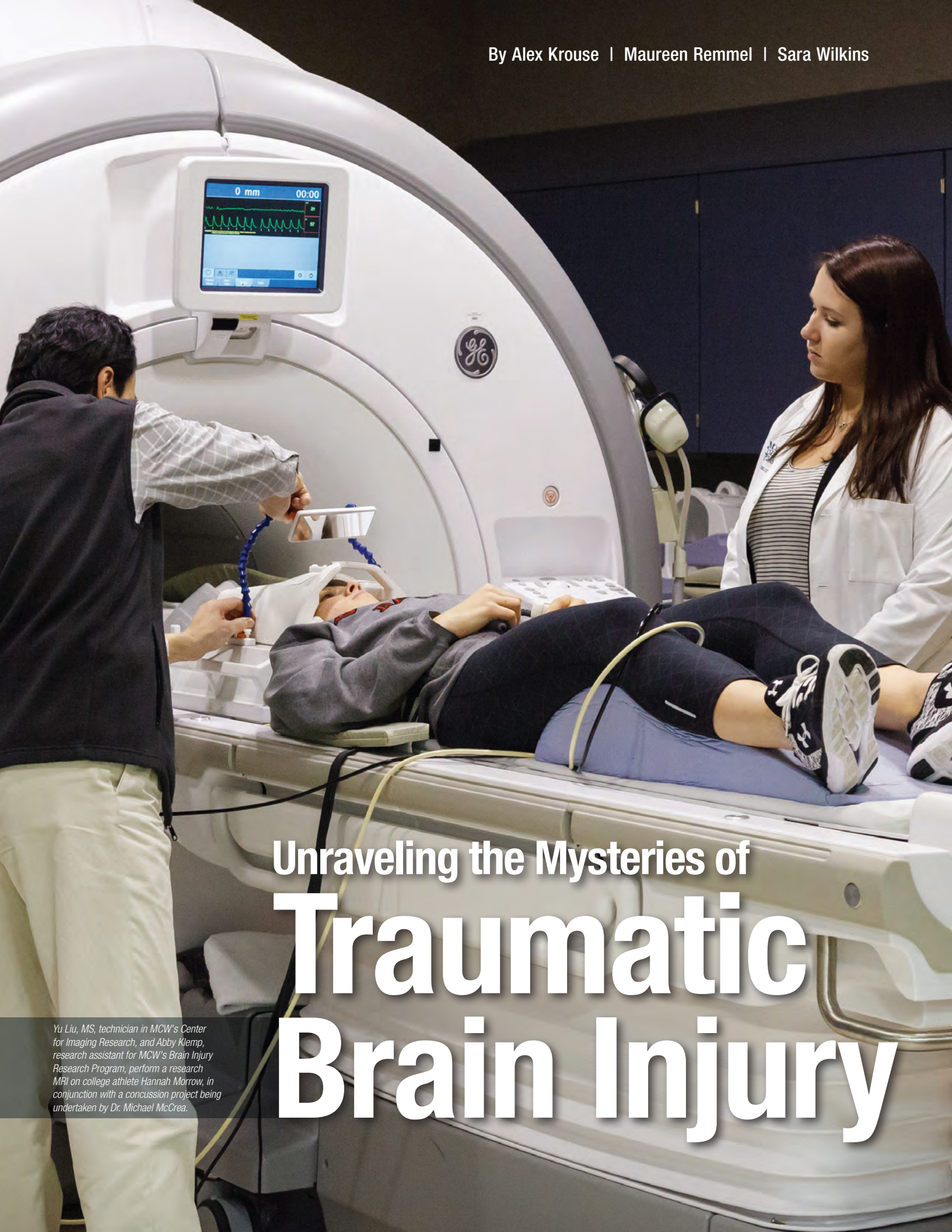
“What strikes me about mentors is that they do it altruistically,” Chabowski says. “So, I have tried to be mentor in return.” He has focused his efforts mostly in his native Poland, helping young people connect with opportunities to come to the US for school, jobs or internships. “One of the best ways to grow is by experiencing other cultures,” Chabowski adds.

Chabowski’s own journey to new cultures has aided him in his scientific endeavors. The very best investigators remain open to the possibility that nature operates differently than they predicted. “Great breakthroughs in science often come from unexpected outcomes,” Chabowski shares.

By embracing the unexpected, Chabowski has broken through many barriers to become a scientist and a mentor to those in his homeland who, too, yearn for a more fulfilling life. ■

– GREG CALHOUN





Unraveling the Mysteries of Traumatic Brain Injury

Yu Liu, MS, technician in MCW's Center for Imaging Research, and Abby Klemp, research assistant for MCW's Brain Injury Research Program, perform a research MRI on college athlete Hannah Morrow, in conjunction with a concussion project being undertaken by Dr. Michael McCrea.



**EACH YEAR,
TRAUMATIC BRAIN
INJURIES (TBI)
CONTRIBUTE TO
A SUBSTANTIAL
NUMBER OF
DEATHS AND CASES
OF PERMANENT
DISABILITY**

2.5 MILLION

PEOPLE ARE ESTIMATED TO SUSTAIN TBI EACH YEAR

50,000

OF THOSE PEOPLE DIE

280,000

OF THOSE PEOPLE ARE HOSPITALIZED

2.2 MILLION

ARE TREATED AND RELEASED FROM EMERGENCY DEPARTMENTS

30.5%

OF ALL INJURY-RELATED DEATHS IN THE UNITED STATES LIST TBI AS A CONTRIBUTING FACTOR

75%

OF TBI THAT OCCUR ARE CONCUSSIONS OR OTHER FORMS OF MILD TRAUMATIC BRAIN INJURY

5.3 MILLION

AMERICANS LIVE WITH TBI-RELATED DISABILITIES

Sources: Centers for Disease Control and the Brain Injury Association of America

Photo courtesy of Jay Westhauser

The human brain has been called “the most complex object in the known universe” – containing a hundred billion neurons and nearly a quadrillion connections between them.* It is the “command center” for the human nervous system, receiving input from the sensory organs and sending output to the muscles. Weighing approximately 3.3 pounds in adults, it is larger in relation to body size than the brain of any other animal.

While many diseases and conditions affect the brain, among the most widespread across all age groups is traumatic brain injury (TBI). When the brain is disrupted by traumatic brain injury due to outside force, the consequences can affect all aspects of our lives, including our personalities. This is the primary reason that TBI is a vital area of focus for the Medical College of Wisconsin (MCW) and its research and clinical partners in the Milwaukee area, including Froedtert Hospital, Children’s Hospital of Wisconsin and the Clement J. Zablocki VA Medical Center.

TBI kills brain cells and can create chemical changes in the brain. It also can cause seizures, fluid build-up around the brain and nerve damage. These changes can lead to memory loss, communication problems, inability to properly move certain body parts, paralysis and permanent changes in behavior, coma and death – depending on the severity of the injury. Brain injuries do not heal like other injuries. No two brain injuries are alike and the consequence of two similar injuries may be very different. Symptoms may appear right away or may not be present for days or weeks after the injury.

The severity of a TBI may range from mild (i.e., a brief change in mental status or consciousness) to severe (i.e., an extended period of unconsciousness or memory loss after the injury). Most TBIs that occur each year are mild and commonly referred to as concussions. From 2006-2016, the leading causes of TBI that resulted in visits to hospital emergency rooms were falls, unintentional blunt trauma (including sports injuries) and

motor vehicle crashes. TBI survivors can face effects lasting a few days to disabilities which may last the rest of their lives.

What follows is a glimpse into several endeavors being undertaken at MCW related to protecting against TBI and improving the recovery process when TBI occurs.

“Calling a Blitz” on Sport-Related TBI

What do you get when you combine a sports enthusiast with a neuropsychologist? Presenting Michael McCrea, PhD, one of MCW’s – and the country’s – leading experts on the acute and chronic effects of sport-related TBI.

Dr. McCrea, professor of neurosurgery and director of brain injury research at MCW, and a research neuropsychologist at the Zablocki VA, has been actively researching TBI for more than 22 years and is the principal investigator on several studies that use an array of technologies to research the natural course of clinical and neurobiological recovery after TBI.

Dr. McCrea currently leads the Advanced Research Core (ARC) of the National Collegiate Athletic Association (NCAA)-United States Department of Defense (DoD) Grand Alliance: Concussion Assessment, Research and Education Consortium (CARE

**MOST TBIs THAT OCCUR
ARE MILD, COMMONLY
REFERRED TO AS
CONCUSSIONS**

*Source: psychologytoday.com

THE LEADING CAUSES OF TBI:

40.5%

FALLS

19.0%

UNKNOWN/OTHER

15.5%

UNINTENTIONAL BLUNT TRAUMA

14.3%

MOTOR VEHICLE/TRAFFIC CRASHES

10.7%

ASSAULT

Source: Centers for Disease Control

CHILDREN UNDER 4 YEARS, ADOLESCENTS 15-19 YEARS & ADULTS 65 AND OLDER ARE MOST LIKELY TO SUSTAIN TBI

Consortium), a \$30 million initiative to study and prevent sport-related concussions and enhance the safety of student athletes, service members, youth sport participants and the public. According to the Centers for Disease Control, more than 300,000 sport-related TBIs occur each year in the US.

ARC, one of three arms of the CARE Consortium, conducts intensive research that includes advanced neuroimaging, biological markers and genetic testing to inform the neurological, biological, psychological and social understanding of sport-related concussion. To date, ARC has enrolled approximately 1,000 athletes and military participants in a baseline protocol and more than 150 athlete and military participants in a very detailed protocol – in addition to a clinical study with about 18,000 subjects.

“The CARE Consortium is the largest sport-related concussion study ever undertaken. We are in year two of a three-year study – and we estimate more than 1,000 concussed athletes will be studied by project’s end,” says Dr. McCrea. “Our goal is to examine the direct effects of concussion and exposure on brain structure and function as well as the natural timeline of neurobiological recovery. We want to better understand not only when the athlete is clinically recovered and ready to return to participation, but when the brain is physiologically recovered.”

In addition to the CARE Consortium, Dr. McCrea recently began a study of former NCAA contact sport athletes who are 15 years removed from their playing days. He is evaluating their current health compared to the health of non-contact NCAA athletes from the same period to look at long-range neurologic health – expanding the perspective on concussion from being the study of the acute effects of and recovery from a singular event, to the potential long-term health effects along a life span with repeated concussion and impact exposure.

“As a scientist, the best you can ask for is that your work has some positive translational impact on how we take care of patients. Much of our research and published studies over the last 20 years have had a direct impact on international guidelines for diagnosis, assessment, management and return to play after concussion,” explains Dr. McCrea.

In addition to his research, Dr. McCrea served as a panelist on the 2008 and 2012 Zurich International Consensus Conference on Sports Concussion. He is board-certified in clinical neuropsychology and is the past president of the American Academy of Clinical Neuropsychology. He also serves on the National Football League’s (NFL) Head, Neck and Spine Committee, and is a neuropsychology consultant for the Green Bay Packers – among several MCW alumni connected to NFL teams (see sidebar on page 20).

“My intellectual and academic interest is in the neurosciences, but it is also no coincidence that I am a former athlete and sports enthusiast. The opportunity to dedicate my energy and interest in neurosciences to the sporting environment and athletes is a bit of a win-win. My laboratory is the competitive sporting environment, so it’s the best of both worlds,” says Dr. McCrea.

TBI: A Unique Challenge in Young Athletes

TBI also affects children and adolescents – and young athletes pose a unique challenge because their brains are still developing and may be more susceptible to the effects of concussion. Children’s Hospital of Wisconsin’s (Children’s) Sports Concussion Program, co-developed by Dr. McCrea and Kevin Walter, MD, GME ’01, MCW associate professor of orthopaedic surgery and program director of pediatric and adolescent primary care sports medicine at Children’s, provides interdisciplinary care from physicians, neuropsychologists, athletic trainers, a staff psychologist and physical therapists.

Dr. Walter co-authored “Sport-related Concussion in Children and Adolescents,” published in *Pediatrics* in 2010, and is co-editor of the *Pediatric Handbook of Concussion*. He is involved with national medical, community and coach education, sports medicine and concussion research, has provided medical coverage for a wide range of events, and has been a team physician.

“Concussion can cause symptoms that interfere with school, social and family relationships, and participation in sports,” Dr. Walter shares. “Recognition and education are paramount, because when a concussion is promptly identified and properly treated, full recovery is expected. Although

proper equipment, sport technique and adherence to rules of the sport may decrease the incidence or severity of concussions, nothing has been shown to prevent them. Appropriate management is essential for reducing the risk of long-term symptoms and complications.”

Concussion care at Children’s includes diagnosis via a comprehensive history and physical exam, neuropsychological evaluation, recommendations for additional treatment (such as physical therapy, cognitive-behavioral therapy and medication), assistance with return to learning and play, and, if warranted, discussion about retirement from contact/collision sports. Children’s performs comprehensive baseline concussion evaluation tests – including balance, eye movement and computerized testing – that measure verbal and visual memory, attention span, brain processing speed and reaction time. After an injury, another test can be done and compared to the baseline results, which helps Dr. Walter and his team improve concussion care and make “return-to-play” decisions.

“The goal of managing a young athlete with concussion is to hasten recovery by ensuring the athlete is aware of and avoids activities and situations that may slow recovery. It is important to stress to patients and their parents to allow adequate time for full physical and cognitive recovery, and to support them along the way,” Dr. Walter remarks.

The Relationship between TBI and Post-traumatic Stress Disorder

Providing psychological care to trauma patients – including those with traumatic brain injury – is a critical goal for clinical psychologist Terri deRoos-Cassini, PhD. Dr. deRoos-Cassini is an assistant professor of surgery (trauma & critical care) with expertise in health psychology and post-traumatic stress disorder (PTSD). Working alongside surgeons at Froedtert & the Medical College of Wisconsin, Dr. deRoos-Cassini provides inpatient and outpatient clinical psychological care to injured trauma survivors and conducts research on psychopathology and resilience following trauma that identifies neurological, biological and psychosocial markers for PTSD. Additionally, Dr. deRoos-Cassini and Dr. McCrea are co-directors of the MCW



Photo courtesy of Jeff Zmania

Injury Research Center’s Research Core.

It’s not just soldiers in combat who suffer from PTSD. Civilians, too, who encounter trauma, can develop PTSD – which can lead to severe mental health problems.

“PTSD is one of the strongest predictors of quality of life in trauma patients and ultimately creates a large health burden on society,” she says. Since PTSD can’t be diagnosed until 30 days after a trauma, Dr. deRoos-Cassini and Sadie Larsen, PhD, assistant professor of psychiatry and behavioral medicine, and staff psychologist at the Zablocki VA, are undertaking a pilot grant – via controlled clinical trials – to look at specific early intervention to reduce the risk of PTSD. This research is aimed at identifying those most at risk for psychological distress after trauma, so

Dr. Terri deRoos-Cassini utilizes biofeedback to help patients identify what elevates anxiety caused by PTSD. Here she places monitors on a patient’s fingers to assess stress levels that trigger changes in perspiration.

Photo courtesy of the Charlotte Observer



Two MCW Alumni among NFL's Top Docs

Two Medical College of Wisconsin alumni have the distinction of being recognized as the National Football League's best in caring for its athletes.

Robert Anderson, MD '83, FEL '89 (pictured above right), is the most recent recipient of the Jerry "Hawk" Rhea Award for Outstanding NFL Team Physician. Dr. Anderson, a Carolina Panthers team physician, received the honor earlier this year following the team's run to the Super Bowl.

That was just five years after MCW classmate and alumnus Patrick McKenzie, MD '83, GME '88 (pictured below), earned the same award as team physician for the Green Bay Packers after their Super Bowl championship season in 2010-2011 – when the Packers had the longest injured reserve list in the league.

Orthopaedic surgeons by trade, both MCW alumni promote the overall health and safety of the players on their teams and consult on a myriad of injuries. Occasionally they must deliver the bad news to coaches that a player will have to miss time on the field.

Dr. Anderson is a founding member of OrthoCarolina's Foot & Ankle Institute in Charlotte, North Carolina, and past president of the American Orthopaedic Foot and Ankle Society. In addition to his service with the Carolina Panthers, Dr. Anderson is a consultant to numerous collegiate and professional sports teams.

Dr. McKenzie specializes in sports medicine, arthroscopy and ligament reconstruction at Bellin Health Sports Medicine and Orthopaedics in Ashwaubenon, Wisconsin. He currently is the medical director for the Green Bay Packers and team physician for the University of Wisconsin-Oshkosh.

The award, now in its 20th year, is named after Jerry Rhea, head athletic trainer for the Atlanta Falcons from 1969-1994 and assistant to the Falcons' president from 1994-2001. Rhea also has served as president of the National Athletic Trainers Association, which hands out the award.

– John Burlingham

Photo courtesy of the Milwaukee Journal Sentinel



that services can be targeted to prevent chronic psychological issues.

When mild brain injury is present, Dr. deRoon-Cassini screens patients for signs of PTSD, depression, loss of memory and/or loss of consciousness. In cases of moderate to severe TBI, Dr. deRoon-Cassini is more likely to intervene with family members rather than the patient to ascertain how everyone is dealing with things.

She also is doing important research with trauma survivors who are screened for possible PTSD at Froedtert Hospital. For those patients with immediate PTSD after injury, Dr. deRoon-Cassini will talk with them about why PTSD occurs and what it means to be in a state of hyperarousal. "Trauma is all about spontaneous loss of control," Dr. deRoon-Cassini says, "and the natural response is to avoid these types of behaviors. We help patients identify methods of non-avoidance to keep them more in control – described as 'exposure-based intervention.'"

Additionally, she staffs an outpatient clinic in which she usually undertakes 12-15 follow-up sessions with trauma patients suffering from chronic PTSD, some of whom have experienced a mild TBI (mTBI). As part of her therapy, Dr. deRoon-Cassini utilizes biofeedback to help patients identify what elevates anxiety. Rapid heartbeat and perspiring skin provide excellent clues. "Brain injury can make PTSD worse, as it is physically stressful for patients with brain injuries who are attempting to recover from trauma," she adds. She shares that some brain injury – not PTSD-related – nonetheless results in cognitive challenges. "These patients are very frustrated and are approaching TBI symptoms in a different way. Getting rid of their anger may make some of these symptoms lessen."

About 30 percent of trauma patients who come through the emergency room and then are admitted to the trauma unit have some sort of TBI. "Research locally and nationally suggests that mTBI and PTSD are correlated," Dr. deRoon-Cassini says.

Dr. deRoon-Cassini also is investigating the neurobiological characterization of PTSD and is co-director of the Milwaukee Trauma Outcomes Project. The project began with members of the Clinical and Translational Institute of Southeast Wisconsin (CTSI) and Christine Larson, PhD, associate professor of psychology at the University of Wisconsin-Milwaukee, who is working to prospectively predict post-traumatic stress using multilevel assessments of acute trauma survivors.

Through an NIH grant, Drs. Larson and deRoos-Cassini are studying how increased amygdala activation significantly predicts the risk of PTSD at six months post-TBI. (The amygdalae are two groups of nuclei located deep within the temporal lobes of the brain which have been shown to perform a primary role in memory, decision-making and emotional reaction.) "Low activation of the prefrontal cortex also increases risk for PTSD, as the connection between these structures is poor," Dr. deRoos-Cassini says.

A Unique Approach to Studying Concussion

Lindsay Nelson, PhD, MCW assistant professor of neurosurgery and neurology, is taking a unique approach to studying concussions. In a recently published article in *Neurology*, she shared her research on athletic concussions to determine how pre-existing conditions impact the recovery process. She partnered with 13 high schools and colleges to analyze about 2,000 athletes (127 of whom received concussions), recording factors such as injury history, physical activities and psychological conditions. They were then monitored throughout the sports season, with special attention given to each individual encountering a sport-related concussion.

The results showed that most of the participants who experienced a concussion exhibited symptoms lasting about five days. A patient's pre-injury mental health – specifically, pre-existing psychosomatic symptoms or pain triggered by mental distress – was more likely to impact recovery time. "How people experience the symptoms of concussions and how they perceive symptoms in general, as evidenced by psychosomatic symptoms, were demonstrated in this study to clearly influence the amount of time needed to recover from a concussion," says Dr. Nelson.

"This correlation between pre-injury somatic symptoms and concussion recovery often has been posed by researchers. There has never been a study to definitively establish this relationship, however," Dr. Nelson remarks. In the future, she hopes to investigate the factors and activities that can predict a patient's ability to recover from a concussion, both before and after the injury. ■



To read more, visit mcw.edu/brain



(Front, l-r) Dr. Lindsay Nelson, principal investigator for MCW's Brain Injury Research Program (BIRP), shares information from the STAC application with Jen Hill, MA, program manager for the BIRP. (Back, l-r) Robyn Furger, MA, and Ashley LaRoche, research coordinators for the BIRP.

Photo courtesy of Jay Westhauser

STAC Application

Advances in technology are currently underway at MCW to help make Dr. Lindsay Nelson's desired research a reality. In 2016, a team comprising MCW researchers Adam Pfaller, Jen Hill, Ashley LaRoche and Robyn Furger, and Drs. Nelson and Michael McCrea launched the Symptom Tracking App for Concussions (STAC), a free smartphone application with functionality to help athletes, parents and coaches manage concussions. The impetus for the app came in early 2013 from Pfaller, a research assistant in the Brain Injury Research Program and high school football coach. "During my time as a coach, the concussion issue was becoming more prevalent. The idea for the app was to provide an easy way to have the concussion protocol at the fingertips of the individual so that athletes and their coaches could closely monitor injuries," he shares.

Pfaller and his team set out to make the app a reality by submitting their idea to MCW's 2015 *Mobile App Challenge*, a partnership with the University of Wisconsin-Milwaukee's App Brewery. Due to Pfaller's vision for a simple interface and its

practical functionality, STAC was among three winners of the *Challenge*. The STAC app officially launched in early 2016, and has since garnered significant interest from youth sports teams. STAC provides an easy way to administer a baseline assessment prior to the beginning of a sports season, with the ability to run through a symptom checklist when a concussion is suspected. It enables athletes to track their symptoms during recovery benchmarked by their previous responses.

The assessment tool used in the app is derived from the SCAT3 symptom checklist, a protocol developed by Dr. McCrea and other head injury experts during an international concussion conference in 2013. The checklist serves as the standard protocol to effectively and objectively track symptoms of a concussion. "While STAC is a great way for individual athletes to better manage their head injuries, we see this as just phase one of our goals," says Hill, program manager of brain injury at MCW. "We ultimately would like to see the app take on more clinical and research functions." — Alex Krouse



Bone Marrow Transplant Physician Gives Bella Hope for the Future

Her million-dollar smile and shining hazel eyes say it all: “Today, I feel amazing!”

Nine-year-old Isabella (Bella) Rodriguez, once a vivacious and active older sister to Sophia and Lynae, was lethargic, weak and losing weight in the summer and fall of 2014. She was bruising easily and her body was covered in a rash of small pinpoint red marks. Her mother, Cristin, and father, Peter, a captain in the Marine Corps, were very concerned.

Months of testing at All Children’s Hospital in St. Petersburg, Florida, had revealed a diagnosis of aplastic anemia, a life-threatening condition in which the bone marrow (the soft tissue in the center of bones that is responsible for producing blood cells and platelets) does not make enough blood cells. From November 2014–March 2015, Bella was in and out of the hospital and receiving blood transfusions. But she wasn’t getting any better, and the transfusions were losing their effectiveness. It was a race against the clock to save Bella’s life.

Peter and Cristin turned to the internet to research the disease and find the experts.

An online video featuring David A. Margolis, MD, GME ’92, FEL ’95, professor of pediatrics (hematology/oncology/

BMT), associate chair, interim division chief, and program director, Children’s Hospital of Wisconsin (Children’s) Bone Marrow Transplant program, popped up almost at once. The Rodriguezes were immediately taken with Dr. Margolis’s articulateness and intellect. They reached out via email, “and Dr. Margolis called me within 30 minutes of receiving my inquiry,” Peter remarks.

Dr. Margolis served a residency in pediatrics at MCW from 1989–1992, and from 1992–1995 was a fellow in pediatrics specializing in hematology and oncology. Concurrently, from 1993–1999, he was a postdoctoral trainee in the molecular genetics lab of Jack Gorski, MD, PhD, in the BloodCenter of Wisconsin.

Dr. Margolis’s most essential role is that of a bone marrow transplant physician. He treats children with cancer and/or blood marrow disorders – generally those with acute leukemias, aplastic anemia and sickle cell anemia. His patients are referred to him from all over the country.

A bone marrow transplant (also called a “blood stem cell transplant”) is a procedure to replace damaged or destroyed bone marrow with healthy bone marrow stem cells (immature cells in the bone marrow that give rise to all of one’s different blood cells).



Dr. David Margolis discusses Bella’s progress with Bella and her father, Peter Rodriguez.

Photos courtesy of Jay Westhauser

Before the transplant, chemotherapy and sometimes radiation therapy are given. During the transplant, the stem cells are delivered into the patient’s bloodstream through a central venous catheter (similar to getting a blood transfusion). The stem cells then travel through the blood into the bone marrow. There are two kinds of bone marrow transplants: autologous (the patient is also the donor) or allogenic (the donor is a different person). There are three sources of blood stem cells: bone marrow, umbilical cord blood and mobilized blood stem cells from peripheral blood. It takes about six months to a year for the immune system to fully recover from this procedure.

Dr. Margolis doses potentially lethal chemotherapy and also juggles complications and

side effects. His team performs 35–45 bone marrow transplants per year, and he sees many of these patients. The average length of hospital stay is 40 days. Dr. Margolis is especially proud to have been one of the first physicians to institute team-based rounds with his patients.

Bella, Peter and Cristin flew up to Children’s in April 2015, where Dr. Margolis and his team performed a full range of tests and discussed in detail the suggested treatment. Within a week the entire family had relocated to the Milwaukee area to pursue treatment for Bella, which was possible because the Marine Corps gave Peter a temporary assignment at the local recruiting station.

Bella was hospitalized for five days and immediately



FAST FACTS:

- Dr. Margolis and his team perform 35-45 bone marrow transplants per year
- Two kinds of bone marrow transplants: autologous and allogenic
- Average hospital stay is 40 days

began her immunosuppressant therapy, during which medicines suppressed her immune system and allowed the bone marrow to once again make healthy blood cells. Her recovery has been better than expected. “Dr. Margolis calls Bella ‘the poster child for immunosuppressive therapy,’” Peter notes.

“Dr. Margolis is very smart and caring, and goes out of his way to help patients and their families. I really like his philosophy of treating patients, especially his honesty. He has a great staff, which is why we continue to come to Children’s for follow-up visits,” Peter adds.

“I see myself as the captain of the ship,” Dr. Margolis remarks. “We have a great team of physicians, nurses, nurse practitioners and psychologists, and our advanced practice providers allow me to multi-task. I think of us as a private-practice model in an academic setting, as we are academic – yet our patients always know they can rely on their primary physicians.”

Dr. Margolis attributes his success to his mentors, including James Casper, MD, GME ’72, FEL ’74, and Bruce Camitta, MD – both of whom are MCW professors of pediatric hematology/oncology; Dr. Jack Gorski; and retired Cancer Center associate director of research resources, Robert Truitt, PhD (“who, along with Dr. Gorski, taught me how to be a laboratory scientist”). Dr. Margolis also cites the positive influence of Robert Kliegman, MD, professor and chair emeritus of pediatrics, as well as Dr. Margolis’s wife and parents. “My mentors taught me that each individual on this campus makes a difference. That’s what an academic medical center should be doing.”

Dr. Margolis also acknowledges the integral role that the MACC (Midwest Athletes Against Childhood Cancer) Fund has played in his success. The MACC Fund is the single largest private donor to MCW and the largest organizational donor to Children’s – having provided more than \$47 million since 1976.

Dr. Margolis is optimistic that Bella will not have to undergo a blood stem cell transplant, but in case she were to need one, the Rodriguezes’ infant son, Peter Jr. (PJ), born in July 2015, is a perfect match.

During a recent checkup with Dr. Margolis, Bella is painstakingly drawing a turtle with crayons on a white piece of paper. Soon, the turtle is resting on a gently sloping hill beside a small lake – and by the end of the visit, a big yellow sun is spreading its warmth on the turtle below. Bella’s simple drawing, in actuality, is a microcosm for her patient experience.

Although slow, the turtle – like Bella – is making steady progress, and the promise of a new and beautiful day gives it the strength to continue. ■ – SARA WILKINS



To read more, visit mcw.edu/bonemarrow



MCW “DRIVES” Interest in Health Research Among Students

“A healthier future starts here” is not just a tagline underneath the Medical College of Wisconsin logo. Rather, it serves as a guiding principle underlying the mission to lead the charge in improving health today and into the future. One need look no further than MCW’s new DRIVE program for illustration.

DRIVE (Delivering Research Innovation via Experience) pairs MCW scientists with high school students at the Milwaukee Academy of Science (MAS) and the High School of Health Sciences (HS2) in the Kettle Moraine (Wis.) School District to engage in public health research. The program, created and sponsored by MCW, enables these students to identify a public health issue in the Milwaukee community, conduct scientific research on the issue, and draft a project proposal for possible submission for grant funding.

The overarching goal of the partnership is to connect students with tangible scientific work and authentic educational experiences that highlight a path to postsecondary education and career training. DRIVE also allows students to address issues of genuine concern in their communities by using scientific research and methodology. “DRIVE speaks to the heart of MCW – investing in our young people to ensure a healthier future for our community. Connecting kids directly with researchers and physicians is one of the most effective means to build confidence, skills and interest in science and medicine,” says John R. Raymond, Sr., MD, president and CEO of MCW.

From September 2015-June 2016, student groups met at MCW every other Thursday to work on their respective projects under the supervision of MCW advisors. During their meetings, the students are encouraged to utilize MCW resources and laboratories, and to collaborate with MCW faculty and staff to enhance their research projects.

By the conclusion of the academic year-long program, each group is required to submit a project proposal, craft a blog post outlining their respective projects, and create a poster board display centered on their research findings. Some groups have taken their projects further – creating phone apps, writing grant proposals and initiating submissions for peer-reviewed publications.



DRIVE demonstrates to students that careers in research, medicine or public health are attainable, inspiring and rewarding. “This is the first time I ever have undertaken a full scientific experiment,” remarks Deron Jackson-Pugh, a MAS junior. “After going through this process, I now have an interest in becoming a scientist and to continue scientific research.”

The program also fosters collaboration among students from different backgrounds to encourage the exchange of thoughts and ideas encompassing a variety of perspectives. Each research group comprises students from both MAS and HS2, along with a student mentor to provide expertise and counseling for the project.

An important aspect of DRIVE involves the oversight of a mentor (who also is a researcher at MCW) who guides the students and provides advice on the best way to approach their respective topics. The mentor does not take over the project. Rather, she/he answers questions and/or provides advice regarding where to obtain the necessary resources for experimentation. “DRIVE is an



MCW graduate student Kristen Westdorp (at left) provides academic mentorship to DRIVE students (l-r) Norbriana Payne, Corshay Burnell, Jerad Grewe and Hannah Fenelon.

Photo courtesy of Jay Westhauser

excellent program to get high school students' feet on the ground," shares Abigail Hodges, MCW research technologist and DRIVE mentor. "Instead of taking a theoretical look at science, it's something that is experimental, actual and tangible. The students can think through scientific processes and have them mean something."

One of the meaningful projects devised by the students includes providing resources to encourage the public to compost their garbage rather than using a landfill.

"We are trying to influence composting in communities in the area," notes MAS student Quintien Tyra. "The goal is to be able to provide information to help bring composting to the forefront of people's minds and to help build enthusiasm for the practice." He and his teammates are working to partner with composting services in Milwaukee to assist in the creation of a policy to effectively implement commercial composting in the area.

Another DRIVE project is an app seeking to make dining out safer for those with food allergies. The app addresses the concern that there is not enough informa-

tion on food safety for those with food allergies within the community. "We need to be able to make the City of Milwaukee safer for those with strict dietary restrictions trying to dine out," said Hannah Fenelon, a student at HS2 working on the project.

The student group has been in talks with several restaurant groups in the Milwaukee area to collaborate on an app that can help guide people toward safer dining options.

The success of the program is quite evident. "In just a few short months, we have witnessed a blossoming of the students engaged in DRIVE. Their enthusiasm for learning has skyrocketed – and more so, they have made lasting friendships and connections across the city," notes Mike Jones, chair of the MAS Board of Directors.

Regardless of whether the projects result in grant funding and implementation, the DRIVE toward a healthier future looks considerably brighter with this new program. ■

– ALEX KROUSE



To read more, visit mcw.edu/hdrive



Regenerating the Human Esophagus

MCW doctors use novel approach to successfully regenerate a human esophagus within the patient's body

Results of a groundbreaking medical procedure by Medical College of Wisconsin (MCW) physicians could impact the future treatment of patients requiring esophageal surgery for cancer, birth defects or trauma. As reported in *The Lancet*, for the first time in a human, MCW physicians – led by Kulwinder S. Dua, MD (professor of medicine and pediatrics, gastroenterology section chief at the Clement J. Zablocki VA Medical Center, director of the MCW Advanced Endoscopy Fellowship Program, and director of the



Dr. Kulwinder S. Dua

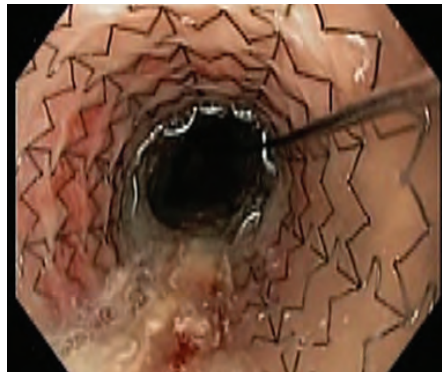
advanced endoscopy program at Froedtert Hospital) – successfully repaired and regenerated a damaged esophagus that was still inside the patient.

The 24-year-old patient, who was in a car accident years earlier, was admitted to Froedtert unable to swallow due to a severely damaged pharynx and upper esophagus caused by a life-threatening infection. Although it was possible to surgically repair some of the pharynx, the patient had a nearly two-inch defect in his esophagus that was too large to repair with conventional surgery.

After exhausting all standard options to repair the defect, Dr. Dua and his team, which included Walter J. Hogan, MD '58, GME '62, FEL '64,

For more information or to contribute to this research, contact Michelle DuBord, major gifts director for the Digestive Disease Center and the Cardiovascular Center, at (414) 805-3066 or mdubord@mcw.edu.

For more, visit mcw.edu/esophagus



Three self-expanding metal stents were placed within the patient's esophagus to bridge the damaged section and maintain its shape.

professor of medicine and radiology, and Mario Gasparri, MD '93, FEL '01, professor of cardiothoracic surgery, treated the damaged organ by stimulating regeneration while maintaining the organ's normal shape.

Based off of regenerative medicine techniques which, to date, had only been used in animal models, the doctors used FDA-approved, self-expanding metal stents to bridge the damaged segment of the esophagus and maintain its shape. The defect with the stent was then covered with donated, FDA-approved human skin tissue matrix which attracted stem cells and provided signals to the local and migrant cells to organize into structural and functional units. The defect was then sprayed with platelet-rich plasma extracted from the patient's own blood, which provided growth factors that attract stem cells and stimulate regeneration.

After initially refusing to remove the stents for fear of developing a leak or a stricture, the

patient finally agreed to removal after four years. Endoscopy, biopsy, endoscopic ultrasound and esophageal pressure studies showed the esophagus had regenerated and was functioning normally. Because of the delay in stent removal, however, it was not possible to determine exactly how long the esophagus took to regenerate.

As regenerative medicine advances, several researchers have reported successful regeneration of the esophagus in animals. Still, no study has yet involved a human patient where a long-segment full-thickness defect of the esophagus was repaired using the techniques so far validated only in animal models.

Dr. Dua cautions that use of this procedure in routine clinical care is still a long way off, as it requires rigorous assessment in animal studies and phase 1 and 2 clinical trials. He also acknowledges there are still many unknowns about the process and emphasizes that it only has been used on a single patient to date.

"This is a clinical observation and not a recommendation for mainstream use. Typically we go from the bench to the bedside. Based on observations from this case, we are going from bedside to bench," he adds. "With publication in *The Lancet*, there may be many researchers around the world who want to replicate this work. I want

that to happen. I want this science to be on a fast track no matter where it is done. Here at MCW, however, we will first have to secure funding to do bench studies." ■

– MAUREEN REMMEL

"Typically we go from the bench to the bedside. [In this case] we are going from bedside to bench."

– Dr. Kulwinder S. Dua



A Rewarding Life

Gift to honor 27 deceased classmates is one way Dr. Beaumier gives back

John Beaumier, MD '57, was raised in an era when, for many folks, a handshake and a verbal agreement were as good as a signed contract. That's why the retired orthopaedic surgeon had no problem making a sizeable contribution over the telephone to the *Class of 1957 Endowment Fund* at the Medical College of Wisconsin. The occasion was his 50th class reunion in April 2007, for which Dr. Beaumier gifted a set dollar amount for each of his 27 classmates who had predeceased him. He humbly asked that the exact amount of the gift not be revealed in this article.

What has been revealed, however, through comments here and there, is the inspiration for all of Dr. Beaumier's philanthropy. Remarks such as, "People have been very good to me...Those were good years...I have lots to be thankful for...God's been good to me, there's no doubt about that."

For a man who's done so much for so many people over the years – as a physician and an alumnus – Dr. Beaumier is grateful for a great many things. Not the least of which is his time at the Marquette University School of Medicine, the predecessor to MCW. "My wife, Mary Jane, and I both loved our time in Milwaukee," he says, noting that he met her at Marquette.

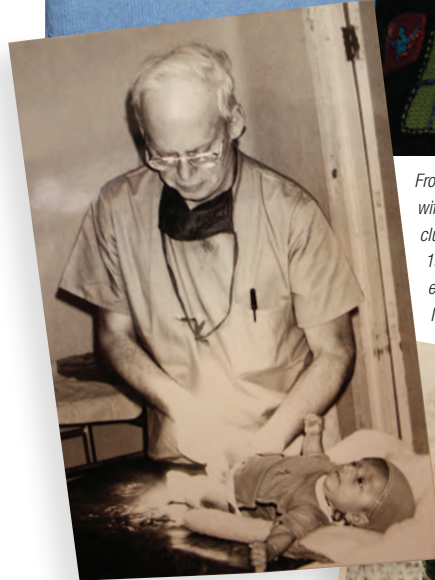
An altogether different "Marquette connection" is with the city in Michigan's Upper Peninsula, where Dr. Beaumier earned his bachelor's degree in biology at Northern Michigan University (NMU). "The football coach opened his arms to me, and I had great years there," he remarks. Ultimately, Dr. Beaumier made a major gift to establish the Beaumier Alumni Welcome and Upper Peninsula Heritage Center on the NMU campus, which opened recently. "That [alumni center] has been my dream for quite a number of years," he says.

After earning his MD, Dr. Beaumier served in the Navy from 1957-1962, completed his residency at the Mayo Clinic, and worked for four years at Wisconsin's Marshfield Clinic before being recruited by fellow Marquette grad, John McLeod, MD '47, to The Orthopaedic Clinic in Grand Forks, North Dakota. "John was a wonderful guy, and I learned a lot from my 25 years in private practice," says Dr. Beaumier.

Among his many memorable orthopaedic cases was a 17-month-old girl with a congenital dislocation of both hips. Using a procedure involving weights on both legs and subsequent surgery and casting, Dr. Beaumier managed to correct the condition. "It was something I hadn't attempted before," he shares. "Then I didn't see her for nearly 17 years, until she was a senior in high school, and her mother brought her



Photos courtesy of Dr. John Beaumier



From top to bottom: Dr. Beaumier and his wife, Mary Jane; Dr. Beaumier places a club-foot cast on a Bengali infant during his 1988 humanitarian trip to Bangladesh; his early-1950s player portrait from Northern Michigan University.



back. An X-ray was taken that day and both of those hips were beautiful. I presented that case to the residents when I was at Mayo and to the residents in Milwaukee."

Dr. Beaumier encountered a similar scenario when he returned to the Mayo Clinic in 1993 to close out his professional career. During his years in North Dakota, he'd performed an emergency decompression surgery on the upper leg of a high school football player to relieve what's known as compartment syndrome following an injury. "There was a write-up on new arrivals at Mayo," Dr. Beaumier notes. "I get a call, pick up the phone, and it was this kid. He was now an engineer at Mayo, and he remembered me very well. That day, I must admit, was very rewarding." ■

— JOHN BURLINGHAM

Explore ways to leave your legacy through an MCW class fund by contacting Angela Nelson, senior director of development and alumni relations, at (414) 955-4708 or annelson@mcw.edu.



To read more, visit mcw.edu/beaumier

2016 Alumni Weekend Celebration

A WHIRLWIND OF EVENTS HIGHLIGHTED
THIS YEAR'S GATHERING OF ALUMNI
(see next page for more)



Photo courtesy of Jeff Zmania





To see more photos, visit mcw.edu/2016reunion



'06



'76



'96



'86





2016 Alumni Weekend

The InterContinental Milwaukee hotel buzzed with excitement on Friday, April 29, as the Medical College of Wisconsin welcomed more than 300 alumni and their guests for the start of the MCW/Marquette Medical Alumni Association's 2016 Alumni Weekend.

The second day of the the Weekend opened with a brunch and symposium hosted by John R. Raymond, Sr., president and CEO of MCW, and Joseph E. Kerschner, MD '90, FEL '98, dean of MCW's School of Medicine and EVP. Attendees reflected on MCW's rich history and toasted to the future – a journey which includes MCW's new School of Pharmacy. George E. MacKinnon III, PhD, MS, RPh, founding dean of the School of Pharmacy, shared his vision for this exciting new educational program. In addition, recent alumna Susan Good, MD '16, shared her perspective on global health.

Following the brunch and symposium, tours were available for alumni who wanted to experience the MCW campus through the eyes of current students.

On Saturday evening, each class celebrated with their respective classmates at different venues throughout Milwaukee. ■

“I am thankful for the faculty, my classmates and the support of MCW alumni.”

– Scott Sandy, Class of 1981 scholarship recipient



Congratulations to the 2016 award recipients: (l-r) **Michael F. Nolan, PhD '75**, Graduate School Alumnus of the Year; **Karen J. Marcante, MD '80, GME '83**, Medical School Alumna of the Year; **John T. Bjork, MD '71, FEL '76**, Distinguished Service Award; **Anne T. Martinelli, MD '01**, Humanitarian Award; and **John R. Raymond, Sr., MD**, Honorary Alumnus. Not pictured: **Paul S. Pagel, MD '86, GME '90, FEL '94, PhD '94**, Medical School Alumnus of the Year.



To see more photos, visit mcw.edu/2016reunion





Class of 1966: Front row (l-r) Thomas J. Smith, Eugene M. Dagon, Monica B. Spaulding, William R. Grandolfo, Thomas J. O'Regan.
Middle row (l-r) Don R. Spiegelhoff, Donald P. Harrington, Ralph L. Klizer, John P. Grogan, J. Greg Fleming, Paul M. Fleming, Paul R. Miller.
Back row (l-r) Edmund M. Barbour, Donald J. Ruedinger, Richard H. Sieve, William P. Curran, John J. McDevitt, John W. McGrail, Robert O. Buss.

Class of 1991: Front row (l-r) Rose A. Franco, Hilary J. Webster, Edwin C. Coe, Connie L. Richter, Anhtu G. La, John M. Hawkins.
Middle row (l-r) Darrel K. Kerr, Timothy R. Kim, Bart J. Schmidt, Lisa W. Zetley, Claudia M. Hoyen, Kristine A. Romine, Philip I. T. Regala, Helen M. Arkema, Stephanie E. Bodes, Lonie R. Salkowski. **Back row (l-r)** Brad A. Richter, Michael J. Schwabe, Ricardo Puertas, Jasna Jevtic, Osep E. Amagan, James D. Thomas, Franz A. Keilhauer, Chris M. Zukowski.

Photos courtesy of Stacy Kaat, Gary Porter and Jeff Zmania



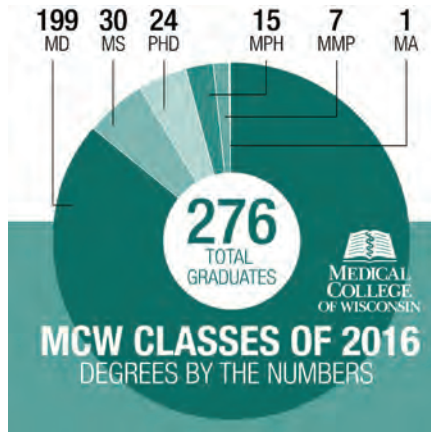


Commencement Honors Grads, Leaders

The Medical College of Wisconsin's 103rd annual Commencement exercises were held May 20 at the Milwaukee Theatre. MCW's Medical School and its Graduate School of Biomedical Sciences awarded a total of 199 MD, 24 PhD, 30 MS, 1 MA, 7 Master of Medical Physiology and 15 Master of Public Health degrees.

Gary H. Gibbons, MD, director of the National Heart, Lung and Blood Institute, received an honorary degree and delivered the Commencement address. MCW also bestowed honorary doctoral degrees on Ricardo Diaz; Timothy T. Flaherty, MD '59; and Michael Kubly, MD '63, and his wife, Billie.

Dr. Gibbons oversees an annual budget of more than \$3 billion and a staff of 917 employees. He is an elected member of the Institute of Medicine of the National Academy of Sciences and was selected to be a Robert Wood Johnson Foundation Minority Faculty Development Fellowship awardee.



Diaz serves as the executive director for the United Community Center (UCC), a comprehensive social service agency serving Milwaukee-area Latinos. The UCC is the 17th largest Hispanic non-profit in the country. Under his leadership, the UCC has undergone a number of expansions in the last 10 years. This includes the addition of a Latino Geriatric Center to serve older adults with Alzheimer's disease, a new elderly housing com-

plex and senior center in conjunction with the Housing Authority of Milwaukee. Diaz serves on numerous boards in the Milwaukee area, including the MCW Board of Trustees.

Dr. Flaherty, a retired radiologist, has been a strong advocate for MCW and has made exceptional contributions to the field of medicine through his professional and volunteer efforts at the local, state and national level. He currently serves as a member of the Wisconsin United for Health Foundation Board, which provides oversight of both MCW's Advancing a Healthier Wisconsin endowment and a similar endowment at the University of Wisconsin-Madison. He also was a Commissioner to the Joint Commission on Accreditation of Healthcare Organizations.

The Kublys have been a driving force behind helping individuals throughout Wisconsin with mental health issues receive the diagnoses and treatment they need. Their passion comes from the desire to build something positive to honor their son, Charlie, who took his life at age 28 after a lengthy battle with depression. Shortly thereafter, the couple founded the Charles E. Kubly Foundation to better the lives of those affected by depression by increasing public awareness of the disease, eliminating the stigma of it, and promoting improved access to quality mental health resources. They also endowed the Charles E. Kubly Chair in Psychiatry and Behavioral Medicine at MCW to support research into the nature, effects and treatment of depression, and they established the Charles E. Kubly Child Psychiatry Access Project Endowed Fund at MCW, which supports mental health awareness training for primary care providers. ■



Photos courtesy of Jeff Zimania

For more, visit mcw.edu/2016commencement

HAPPENINGS



Steve Cullen Healthy Heart Run/Walk – February 13, 2016

The 20th Annual Steve Cullen Healthy Heart Run/Walk was held on February 13, 2016, and attracted more than 700 participants and volunteers. The temperature at the starting line was 12 degrees, making the 2016 event the second-coldest in its two-decade history. Although a mere one degree warmer at the start in 2015, the winds were much calmer

this year – which significantly enhanced conditions.

The event raised a record \$43,000 for heart research for MCW's Cardiovascular Research Center. Of the total funds raised, \$25,000 will be allocated to the Steve Cullen Healthy Heart Scholar, Peter C. Frommelt, MD, interim chief and professor, MCW department of pediatrics (division of cardiology).

Women in Science Lecture Series

MCW's 10th Anniversary Women in Science Lecture Series kicked off on April 7, 2016, with presenting speaker, Cathy Jacobson, president and CEO of Froedtert Health, on "Healthcare State of the Union." Jacobson spoke about the current state of healthcare on a national level and how it impacts Froedtert & MCW, as well as the future of academic medicine connected to clinical care.

Aoy Tomita-Mitchell, PhD, MCW associate professor of surgery and cardiothoracic pediatrics, spoke on June 29, 2016, on "Genetic Research in Congenital Heart Disease: Understanding the Cause, Finding Treatments" – which is a major focus of her laboratory's research.

For more information on these events, contact Peggy LeBrun, director, volunteer and event fundraising, at (414) 955-4503 or plebrun@mcw.edu.

UPCOMING EVENTS

JULY

»DRIVE FORE A CURE
(MCW'S BLOOD CANCER PROGRAM)

DATE: JULY 25, 2016

AUGUST

»CVC GOLF CHALLENGE

DATE: AUGUST 1, 2016

»WBSCS EMMIE MIKULAY TEE UP FOR A CURE GOLF OUTING AND GALA DINNER

DATE: AUGUST 8, 2016

»WOMEN IN SCIENCE LECTURE SERIES

DATE: AUGUST 18, 2016

SPEAKER: EARNESTINE WILLIS, MD, MPH

»LPGA PRO-AM GOLF TOURNAMENT

(CROHN'S DISEASE & ULCERATIVE COLITIS RESEARCH)

DATE: AUGUST 22, 2016

SEPTEMBER

»ANNUAL RIDIN' TO A CURE MOTORCYCLE RIDE FOR BREAST CANCER RESEARCH

DATE: SEPTEMBER 24, 2016

STAY CONNECTED WITH MCW

We'd love to hear from you! We'll post your event comments and photos. Or, let us know what's coming up. Send your materials to MCWmagazine@mcw.edu.

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ALUMNI NOTES

1960s



Stuart D. Wilson*, MD '65, received the *Oliver Cope Meritorious Achievement Award* from the American Association of Endocrine Surgeons at its annual meeting held in April 2016, in Baltimore. Established in 1984, the *Oliver Cope Meritorious Achievement Award* acknowledges individuals whose contributions in the field of endocrine surgery as investigators, teachers and clinical surgeons go above and beyond their peers. It is the highest honor a member of the American Association of Endocrine Surgeons can receive. Dr. Wilson, a founder and past president of the Association, is only the eighth recipient of the award.

1970s

Clarence P. Chou*, MD '77, received the Wisconsin Medical Society's *Presidential Citation*. Dr. Chou serves as an associate clinical professor of psychiatry and behavioral medicine at MCW, and as a staff psychiatrist with the Milwaukee County Behavioral Health Division. Dr. Chou served the Wisconsin Medical Society as president in 2007 and 2008. He also served as a member of the Society's Board of Directors for 11 years, including as chair, vice chair and as a member of multiple committees, task forces and councils. In addition, Dr. Chou previously served as a board member and president of the Medical Society of Milwaukee County.

1980s

Paul F. Resnick, MD '82, joined MabVax Therapeutics Holdings, Inc., a clinical-stage oncology drug development company, as its vice president and chief business officer. He is responsible for corporate development, including working with large pharmaceutical and biotechnology companies on potential licensing and collaboration arrangements for products under development. Dr. Resnick has more than 20 years of industry experience as a biopharmaceutical executive in large pharmaceutical and public and private biotechnology companies.



Andrew J. Haig, MD '83, joined Mary Free Bed Rehabilitation Hospital in Grand Rapids, Mich., as vice president of accountable care and medical informatics. He is responsible for developing accountable care and value-based care strategies for the hospital's business and 26 network partners. Dr. Haig also is a volunteer faculty member at MCW.

Anne M. Hanneken, MD '84, was named *Distinguished Alumna of the Year* by the Marquette University Alumni Association's Department of Intercollegiate Athletics. Now a vitreoretinal surgeon and an associate professor of molecular and experimental medicine at The Scripps Research Institute in San Diego, Dr. Hanneken was the second woman in Marquette University's history to earn a varsity letter. She played on Marquette's men's tennis team one

year before the women's team was established.

Molly M. McMahon, MD, GME '84, was elected president of the Mayo Clinic physician staff and will become president of the American Society of Parenteral and Enteral Nutrition in 2017. Dr. McMahon practices endocrinology and serves as professor of medicine at Mayo Clinic in Rochester, Minn.

Barbara A. Hummel, MD '88, was installed as president of the Wisconsin Medical Society in April 2016. She has been a member of the Society's Board of Directors since 2007 and has served as an alternate delegate to the American Medical Association since 2009. Dr. Hummel, a board-certified family physician, runs a private practice in West Allis, Wis.



Jane M. Machi*, MD '88, GME '91, FEL '94, associate professor of pediatrics (emergency medicine) at the Medical College of Wisconsin, was appointed assistant dean of medical school admissions. In this new role, she will provide vision, guidance and direction to medical school recruitment and admissions.

1990s

Diane S. Book*, MD '91, received the 2016 *Alzheimer's Association Physician Award* at the 30th Annual Wisconsin Network Conference on Alzheimer's Disease and Related Dementias. She is co-founder of the Froedtert and MCW Stroke Program and specializes in

* MCW faculty member

** academic/clinical partner

cerebrovascular disorders and dementias including Alzheimer's disease and vascular cognitive disorders



Eric M. Dorn**, MD '96, GME '01, was inducted as a fellow in the American College of Radiology. He is a radiologist partner with

Wisconsin Radiology Specialists in Bayside, Wis., and a diagnostic radiologist at Community Memorial Hospital in Menomonee Falls, Wis., and Froedtert St. Joseph's Hospital in West Bend, Wis., as well as Columbia St. Mary's Ozaukee and Columbia St. Mary's Milwaukee Hospitals. Recognition as a fellow is one of the highest honors bestowed by the American College of Radiology.

David Gourlay*, MD '97, FEL '06, was appointed chief of the division of pediatric surgery and medical director of surgery at Children's Hospital of Wisconsin in Milwaukee. Dr. Gourlay is a lieutenant colonel in the US Army and has served four tours of duty in the global war on terrorism. He has received multiple commendation medals and also was presented with the American Red Cross Brave Hearts Award.

Clemma J. Nash, MD '97, joined Southwest Medical Associates Siena Health Center in Henderson, Nev. Dr. Nash specializes in adult medicine.

2000s

Cresta Jones*, MD '01, was incorrectly noted in the Winter 2016 issue of *MCW Magazine* as having joined Agnesian HealthCare. While Dr. Jones practices once a month at an MCW satellite clinic in Fond du Lac, Wis., she currently serves as assistant professor of obstetrics and gynecology at MCW and sees patients at Froedtert Specialty Clinics.

Jason Jarzembowski*, MD '02, PhD, was elected to serve a five-year appointment as the pathology discipline chair for the Children's Oncology Group, a National Cancer Institute-supported clinical trials group which is the world's largest organization focused exclusively on childhood and adolescent cancer research. Dr. Jarzembowski serves as associate professor of pathology at MCW and medical director of pathology and laboratory medicine at Children's Hospital of Wisconsin in Milwaukee.

Jonathan Fritz, JD, MS '06, was selected for TEDMED's next class of Innovation Research Scholars, where he will work with an interdisciplinary team to assess the scientific credibility of TEDMED's editorial initiatives. Fritz was selected to represent his perspective in the field of healthcare information technology due to his background in bioinformatics and law, as well as his experience with the development and commercialization of technology in healthcare and the life sciences.

Sachin Patel, PhD '04, MD '06, was named by President Barack Obama as one of the nation's 105 recipients of the *Presidential Extraordinary Early Career Awards for Scientists and Engineers*. Dr. Patel is an alumnus of MCW's medical scientist training program and currently serves as associate professor of psychiatry at Vanderbilt University School of Medicine. He conducts translational neuroscience research into central stress responses relevant to stress- and trauma-related psychiatric disorders.



MCW MAGAZINE wants news of your accomplishments and activities. Send updates to: Medical College of Wisconsin Office of Alumni Relations 8701 Watertown Plank Road, Milwaukee, WI 53226, fax at (414) 955-6699 or email alumni@mcw.edu.

IN MEMORIAM

1940s

Joseph M. Jauquet, MD '43, of Ashland, Wis., died on February 1, 2016, at the age of 98. He practiced medicine in Ashland for nearly 50 years. Dr. Jauquet is survived by his wife, Betty, nine children and 10 grandchildren.

Kiesl Kaufman, MD '46, of Mequon, Wis., died on January 7, 2016, at the age of 94. He is survived by three children, six grandchildren and four great-grandchildren.

Jay A. Larkey, MD '46, of Fox Point, Wis., died on February 14, 2016, at the age of 93. As an obstetrician and gynecologist, Dr. Larkey delivered more than 5,000 babies during his career. Survivors include his wife, Lois, three children and six grandchildren.

Richard K. Crissman, MD '48, of Caledonia, Mich., died on December 1, 2015, at the age of 90. He practiced as a general surgeon and served on the staff of St. Mary's Hospital in Grand Rapids, Mich., for almost 50 years. Dr. Crissman also was an accomplished musician, raiser of livestock and amateur comedian. He is survived by seven children and many grandchildren and great-grandchildren.

Anthony J. Pollock, MD '48, of Bloomington, Minn., died on January 18, 2014, at the age of 87. He served as staff psychiatrist at Minneapolis General Hospital's Outpatient Psychiatry Clinic (now known as the Hennepin County Medical Center) and was a faculty member at the University of

Minnesota Medical School. Dr. Pollock is survived by his wife, Helen, eight children, 15 grandchildren and one great-grandchild.

Gustavo A. Ramirez de Arellano, MD '49, of San German, Puerto Rico, died on December 23, 2014, at the age of 89. He served as chief of pathology at the San Juan VA Medical Center in Puerto Rico. Survivors include his wife, Margarita, daughter and grandson.

1950s

David V. Foley, MD '52, of Brookfield, Wis., died on April 10, 2016. He worked in private practice as an obstetrician and gynecologist. Survivors include eight children, 13 grandchildren and four great-grandchildren.

John J. McElwain, MD '53, of Stillwater, Minn., died on November 21, 2015, at the age of 90.

Richard F. Sorensen, MD '53, of Durham, N.C., died on April 24, 2015, at the age of 87. He practiced family medicine in West Bend, Wis., for more than 40 years and was an accomplished musician and dedicated birder and conservationist.

Nathaniel Robinson, MD '54, of Philadelphia, died on March 30, 2016, at the age of 90. He was the first African American alumnus of the MCW School of Medicine (then the Marquette University School of Medicine). In 2011, Dr. Robinson established the *Nathaniel M. Robinson, MD Endowed Scholarship Fund* at MCW to provide medical school scholarships to students from

diverse backgrounds. For the majority of his career, Dr. Robinson practiced internal medicine in Philadelphia.

Melvin Rotner, MD '54, of Escondido, Calif., died on March 21, 2016, at the age of 89. He served in the US Navy for 30 years, including as chief of urology at Balboa Naval Hospital in San Diego, before retiring and going into private practice. Dr. Rotner was a beloved husband of 67 years, a loving father to nine children, grandfather to 26, and great-grandfather to 17.

***Raymond C. Zastrow, MD '55,** of North Lake, Wis., died on April 28, 2016, at the age of 85. He had a 40-plus-year career in pathology at St. Michael Hospital in Milwaukee. He formerly served as president of the Marquette/MCW Medical Alumni Association, was a Walter Zeit Fellow, and was recognized as the *Alumnus of the Year* in 1995. Additionally, Dr. Zastrow served as president of the College of American Pathologists for two years and was named *Pathologist of the Year* in 1998. He is survived by his wife, Mary, four children, 10 grandchildren and one great-grandchild.

Clifford H. Starr, MD '56, of Wisconsin Rapids, Wis., died on February 29, 2016, at the age of 84. He received the *MCW/Marquette Medical Alumni Association Humanitarian Award* in 2012 for medical mission work he conducted with his wife, Nancy, a retired nurse. During 18 one-month visits to Guatemala, Dr. and Mrs. Starr cared for 800 patients. Dr. Starr is survived by his wife, six children, nine grandchildren and two great-grandchildren.

**MCW is grateful to these alumni for their Legacy Society membership.*

Bernard J. Klamecki, MD '57,

of West Allis, Wis., died on March 12, 2016, at the age of 83. He is survived by his wife, Ann, five children and seven grandchildren.

John R. Haselow, MD '58,

of Neenah, Wis., died on January 27, 2016, at the age of 86. His passions were medicine and fitness, the latter of which led him to complete two Ironman triathlons in Kailua-Kona, Hawaii, and also to selections for US National Triathlon team competitions in Australia and New Zealand. Survivors include his wife, Gloria, four children and six grandchildren.

Morton D. Scribner, MD '58,

of Arcadia, Calif., died on September 1, 2015, at the age of 85. He practiced dermatology and was an avid patron of the arts. Dr. Scribner is survived by four children and six grandchildren.

1960s

Robert G. Isom, MD '61,

of Oshkosh, Wis., died on February 6, 2016, at the age of 86. He practiced general surgery and vascular surgery in Oshkosh. Dr. Isom volunteered for many years at the on-site medical clinic for the community's annual Experimental Aircraft Association Convention. He is survived by his wife, Dorothy, three children and nine grandchildren.

1970s

John L. Schugt, MD '77,

of Lomita, Calif., died on February 19, 2016, at the age of 64. He practiced emergency medicine at Torrance

(Calif.) Memorial Medical Center. Survivors include his wife, Marjorie, six children and one grandchild.

1980s

Peter Sorini, MD '85,

of Butte, Mont., died on February 8, 2016, at the age of 56. He was a neurosurgeon and chief medical officer at Community Hospital of Anaconda, Mont. Dr. Sorini also was a colonel in the Army Reserves, performing surgeries in Iraq, Germany and Haiti, and had received a *Meritorious Service Award* from the US Army. He is survived by his wife, Stephanie, and three daughters.

1990s

Marcus E. Moseley, MD '96,

died on April 2, 2016, at the age of 48.

Tanya J. Robinson, MD, GME '99,

of Milwaukee, died on April 14, 2016, at the age of 44. She previously served as assistant professor of family and community medicine at MCW and on the board of directors for the YWCA's Global Career Academy. Survivors include her son, Zavier.

2000s

Anthony J. Sciorrotta, DO, MPH '00,

of Des Moines, Iowa, died on March 20, 2016, at the age of 63. He practiced medicine before transitioning into occupational medicine and was a devoted football coach. Dr. Sciorrotta is survived by his wife, Roxanne, three children and six grandchildren.

Other Special Remembrances

Coryce Haavik, PhD,

of Wauwatosa, Wis., died on February 18, 2016, at the age of 82. She was a former pharmacology and toxicology faculty member who held important leadership positions in MCW's research and graduate education missions. She is survived by three children and two grandchildren.



John Samuel Gould, MD,

of Vestavia Hills, Ala., died on September 29, 2015, at the age of 76. He served as chair of MCW's department of orthopaedic surgery for a decade beginning in

1986. Within his profession, Dr. Gould served at different times as president of the American Orthopaedic Foot and Ankle Society and the Clinical Orthopaedic Society. He is survived by his wife, Sheryl, four children and seven grandchildren.

Andrzej Jesmanowicz, PhD,

of Brookfield, Wis., died on May 15, 2016, at the age of 72. He joined MCW in 1984 and became a professor of biophysics. Dr. Jesmanowicz was a member of an MCW team that pioneered the development of MRI surface coils for use in diagnostic radiology. In recognition of his career contributions, he was awarded a fellowship by the International Society of Magnetic Resonance in Medicine, a professional scientific organization with more than 8,000 members. Survivors include his wife, Grazyna, son and grandson.

William B. Campbell, PhD



Photo courtesy of Jeff Zmiana

Dr. Campbell is an internationally renowned scientist and acknowledged world expert in the regulation of atrial pressure – with more than 30 years of experience in the field. His research has been documented in more than 300 peer-reviewed publications and book chapters, and his laboratory has been continuously supported by grants from the National Institutes of Health for the past 38 years.

Dr. Campbell has received numerous prestigious national and international awards for his investigations. Additionally, he has a large number of editorial responsibilities with a host of impressive journals and publications.

In 2013, Dr. Campbell received the Medical College of Wisconsin's *Distinguished Service Award* – the institution's highest faculty and staff honor. Dr. Campbell also was a recipient of the 2013 *Faculty Vitality Award*, which enabled him to spend six months working on research at Magdalen College, Oxford University. ■

– ALEX KROUSE

Dr. Campbell is the Florence Williams Professor of Pharmacology and Toxicology and chair of the department of pharmacology and toxicology at MCW.

What Drives You?

Like other biomedical researchers, I strive to discover missing pieces to the biological puzzle; this includes new mediators, receptors and insights into treatments. Ultimately, I am driven by my desire to contribute to improving human health.

What Has Been the Highlight of Your Career?

At a departmental level, one of the many highlights has been seeing faculty, fellows, staff and students succeed and develop in their careers. In my research career, I am most proud of the discovery of new pathways in blood vessels.

What Do You Still Hope to Accomplish Over Your Career?

With this new pathway discovery, we have been able to produce a series of compounds that can induce blood vessel dilation, lower blood pressure and protect organs from injury. In the future, I hope to develop these compounds into therapeutically useful drugs.

What Would You Like Your MCW Legacy to Be?

I hope to have my legacy reflect my efforts to make MCW better academically through recruitment, faculty development, research, teaching, being a team player and maintaining an institutional perspective.

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

US Army General Eric Shinseki said it best: "If you don't like change, you're going to like irrelevance even less." I believe that we need to welcome and contribute to change through innovation and research.

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.



A MOMENT IN HISTORY

Dr. Walter Zeit's Legacy Continues to Make an Impact

Nearly a century later, the legacy left by former associate dean Walter Zeit, PhD '39, remains vibrant today as it continues to enhance the Medical College of Wisconsin. Dr. Zeit matriculated at the Marquette University School of Medicine (MCW's predecessor) in 1920 and joined the anatomy department as a student assistant in 1921. During a career at MCW that spanned almost 60 years, Dr. Zeit instructed more than 4,500 medical students.

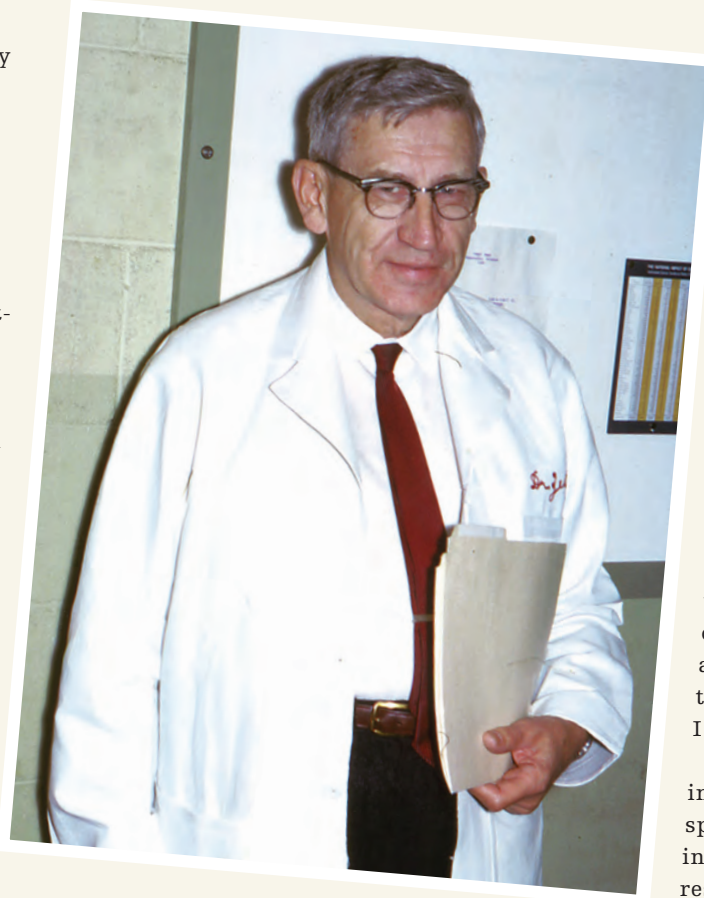
"Dr. Zeit was still teaching one class when I was a medical student," says William Listwan, MD '68, GME '74. "Not only was he a tremendous teacher, he also seemed to be a very kind man."

Dr. Zeit is remembered fondly for his teaching acumen, for providing personal attention to questions raised beyond the classroom, and for his research into nerve endings and the junction between nerve fibers and muscle tissue. Throughout his career, he had a front row seat to MCW's impressive growth.

"At the medical school at that time...in all the basic science departments, there were eight full-time salaried teachers," Dr. Zeit reminisced in a 1978 interview about his early medical school days. Today, MCW employs more than 1,600 faculty members to support the institution's expanded education, patient care, research and community engagement missions.

After Dr. Zeit retired, the late Derward Lepley, Jr., MD '49, formed the *Walter Zeit Fellowship* in 1980 to honor Dr. Zeit for his contributions to MCW.

"The *Fellowship* was created to recognize Dr. Zeit as someone who dedicated his whole career and gave so much of himself to MCW," Dr. Listwan shares. The *Walter Zeit Fellowship*, a donor society with more than 1,000 current members, has generously supported numerous programs at MCW for more than three decades. Beginning in 1987, the *Fellowship* began annual recognition of a senior student who



had displayed a commitment to leadership and service during medical school. Dr. Listwan is a longtime member of both the *Walter Zeit Fellowship* and its executive committee (on which he has served as chair for more than 10 years).

"It was a complete surprise when that letter came in the mail," recalls Lara Rosewicz, MD '15, recipient of the *Zeit Fellowship Leadership Award* in 2014. "The award was a very special highlight of my medical student career, and it was really wonderful to have my family there when I received it."

"I plan to continue the involvement that led to this special recognition by teaching medical students and residents in the future," Dr. Rosewicz adds. Like Dr. Zeit,

her mentors and role models were excellent educators.

Upon his retirement, Dr. Zeit commented, "It gratifies me to know that the school is in good hands and its future as a quality academic school is assured." The generous members of the *Fellowship* that bear his name help to ensure the future that Dr. Zeit envisioned. ■

— GREG CALHOUN

PHOTO:

Former associate dean, teacher and scientist, Walter Zeit, PhD '39, served MCW for more than half a century and inspired the *Walter Zeit Fellowship* donor society. (Photo courtesy of Thomas J. Russell, MD '62)

BECOME A MEMBER!

Contributions towards becoming a member of the *Walter Zeit Fellowship* may be designated for any purpose. For more information, please contact Angela Nelson, senior director of development and alumni relations, at (414) 955-4708 or annelson@mcw.edu.



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MCW is focused on clearly articulating our vision and value to the communities we serve and we greatly value your input. Please complete the self-mailer survey on our vision and brand (located inside this magazine, at center) or take the survey online: mcw.edu/survey

VISION + BRAND
EXPERIENCE

Thank You!