A Healthier Future Starts Here

The Faces of MCW
A Healthier Future Starts Here: The Faces of MCW

I n 2015, the Medical College of Wisconsin (MCW) continued to grow, evolve, innovate, train the next generation of physicians, scientists and healthcare leaders, accelerate the pace of discovery, and find ever greater success in caring for and treating patients.

Our main campus may be situated in Milwaukee, but our reach extends far beyond the boundaries of our local community. Our education programs have expanded to include medical school campuses in the Green Bay and Central Wisconsin areas, and Board approval for a new School of Pharmacy. Our medical school and graduate school alumni are taking their talents to serve medicine and science throughout the world. Our scientific discoveries have global implications for the development of life-saving therapies, and in many cases, already are recognized with the prestigious Carnegie designation. And our efforts to translate research discoveries into preventive, diagnostic and therapeutic interventions for patients are being validated and science throughout the world. Our scientific discoveries have global implications for the development of life-saving therapies, and in many cases, already are recognized with the prestigious Carnegie designation. And our efforts to translate research discoveries into preventive, diagnostic and therapeutic interventions for patients are being validated.

Donor support has absolutely been vital. Without it, we wouldn’t be able to do what we do.” — Dr. Susan Tsai

Philanthropy from the Pancreatic Cancer Program also supported Dr. Dawid and colleagues, who invented a molecule that inhibits tumor growth and metastasis of pancreatic and other cancers. The MCW team modified the protein so that it inhibits tumor growth instead; this led Dr. Dawid and Brian Volkman, PhD, professor of biochemistry, to found Protein Foundry LLC, which manufactures these and other protein molecules for research and clinical use.
When Tom R. Hodges, MD ’52, completed service in the US Navy, the GI Bill paved his way to a career as a physician along with millions of other veterans benefiting from the opportunity to complete their education. Today, he’s giving back to MCW medical students by establishing a scholarship fund to benefit the next generation of physicians and the patients they’ll serve.

“I came from a less-than-average income family, and I felt very honored and fortunate that I was able to take advantage of the GI Bill,” says Dr. Hodges, who entered general practice and was so jarring to me,” says Haberman.

In 2015, Dr. Hodges established a $400,000 scholarship fund to provide four $10,000 scholarships each year for the next 10 years. He hopes the awards inspire the dedication to patients and the medical field that motivated his decision to become a doctor.

The 2015 Hodges’ Scholars are Justin Bric, Holly Haberman, MPH, Travis Kuenmet and Jamie Schneider: All four medical students are currently in their final year at MCW, and each is excited about her/his prospects for residency and beginning to see patients.

Haberman certainly fits the bill. As an undergraduate health care volunteer in Cuzco, Peru, she watched in shock on her first day as medical staff rushed to treat an unconscious woman in the clinic’s triage area. “That experience was so jarring to me,” says Haberman.

Scholarships have played an important role in her medical education. “I was so excited to receive the scholarship. It’s a burden off my shoulder,” says Haberman, who plans to pursue family medicine.

Jamie Schneider, who worked as an engineer for 10 years before realizing her passion for working with patients, also is grateful for scholarship support. She hopes to work as an emergency medicine physician in a rural or semi-rural area after graduation.

For Dr. Hodges, the first recipients had a responsibility to the community. “We owe it to physicians and healers. We have a responsibility to the community to enhance the welfare of all,” says Melinda Stolley, PhD, the Cancer Center’s new associate director of prevention and control. “As one of the largest institutions in Milwaukee, we have a responsibility to the community to support students who are working as an emergency medicine physician in a rural or semi-rural area after graduation.

The Cancer Center recently created a community partnership board of representatives from more than 20 community organizations.

This past summer, the Cancer Center launched a new internship program focused on cancer disparities. Meanwhile, Dr. Stolley is dreaming up future initiatives. She plans to offer a “Cancer 101” seminar series to community organizations, hopes to get funding for a traveling mammogram van, and to develop a free/reduced fee colonoscopy program.

“We’re looking to develop additional community partnerships to provide better access to education around cancer prevention and control.”

Sharing that message is especially important in Milwaukee County, which has the highest incident rates of cancer and mortality in Wisconsin. And cancer and cancer-related mortality affect a disproportionate amount of African Americans locally.

“We know that people who come from underserved communities face issues such as access to care, poverty, segregation—all of which are associated with risk factors such as smoking, obesity and sedentary activity,” says Melinda Stolley, PhD, the Cancer Center’s new associate director of prevention and control. “As one of the largest institutions in Milwaukee, we have a responsibility to the community.

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In partnership with the Sixteenth Street Community Health Centers, Froedtert & MCW will invest $12 million to bring cancer services and clinical research to Milwaukee’s central city.

Spreading the Word about Cancer Prevention

Anne Quimby Mathias (far right), program manager for communications and community engagement with the MCW Cancer Center, and Dakota Berg (second from right), teacher at the Milwaukee High School of the Arts, engage in a dialogue with students about cancer prevention and healthy living.
New Treatments Offer Hope for Epilepsy

The unexplained fevers, rashes and strokes started when Andrew Schmitz was four years old. The resulting damage to his brain tissue triggered seizures — sometimes dozens a day. Genome sequencing would later reveal that Andrew had a rare syndrome called DADA2. But even after the strokes were under control the seizures continued, despite a regimen of four anti-seizure medications.

"Andrew was exhausted from both the meds and the constant activity in his brain. He would come home from school and just crash on the couch," says his mother, Paula. This summer, 10-year-old Andrew became one of the first patients at Children's Hospital of Wisconsin to undergo an innovative procedure — stereo-EEG.

"It's like he's catching up on lost time," says his mom. "It's really an amazing difference."

Another new surgical approach is stereotactic laser ablation (SLA), which delivers laser light directly into brain lesions, destroying the problematic tissue without damaging the area around it. Children's is one of a few centers in the nation — and the first in Wisconsin — to offer SLA surgery. "We've worked hard to stay on the cutting edge of what we can offer to patients and expand the armamentarium of what's available to treat epilepsy," says Dr. Leo, associate professor of neurosurgery and program director for Children's Neurosurgery Epilepsy Program.

Children's and Froedtert Hospital are both Level 4 Epilepsy Centers, the highest rating given by the National Association of Epilepsy Centers. The comprehensive clinical programs are further strengthened by MCV's traditional strengths in brain imaging using state-of-the-art structural and functional magnetic resonance imaging (fMRI) techniques. Magnetoencephalography is a more recent addition to the array of available diagnostic tools.

Anti-seizure medications usually are the first step, but they don’t work for approximately one-third of patients. "That's why we're excited about new ways of controlling seizures," explains Manej Raghavan, MD, associate professor of neurology who directs the Adult Comprehensive Epilepsy Center at Froedtert Hospital.

Earlier this year, Froedtert treated its first patient with responsive neurostimulation, which involves implanting a device on the skull that monitors seizure activity and then sends electrical impulses to disrupt seizures. "Patients who are chronically monitored with this device appear to see an improvement in seizures," Dr. Raghavan says. "There's a lot of excitement about what this could not only do for patients now, but what we can learn about these epileptic networks and ways to neuromodulate seizure activity going forward."

Research Holds Promise for Brain Conditions

Just as the Human Genome Project mapped our genes, the Connectome Project maps our brain's neural connections, measuring activity at thousands of locations in the brain every millisecond.

"The most exciting aspect of the project is it will give us a new way to look at the brain," says Jeffrey Binder, MD, professor of neurology. "The brain is the most complex organ in the body, with billions of neurons and trillions of synapses. New technologies are enabling us to measure how brain regions communicate with each other, their structural and functional connectivity, and how they oscillate together in terms of the activity."

Using Connectome methods, Dr. Binder and colleagues are developing new tools that could improve diagnosis and management of conditions such as epilepsy. "Their new four-year project, supported by National Institutes of Health (NIH) funding, is called the Epilepsy Connectome Project. "We hope at the end of the study to have much better methods of individualizing care for people with epilepsy, selecting medical versus surgical treatments," he says. "About one-third of patients with epilepsy don't respond well to treatment, and we think Connectome measurements will provide answers as to why not."

Dr. Binder also has received NIH funding for a long-term project to develop functional magnetic resonance imaging (fMRI) methods for guiding epilepsy surgery. The work could shed light on why some patients with epilepsy develop memory disorders and other cognitive difficulties after surgery — and help doctors better assess the risk beforehand. His lab also studies the basic science of human cognition — in particular language processing — which could have implications for dementia and other conditions.

Neuroscience research at MCV is extensive, encompassing many different disciplines. For example, Shi-Jiang Li, PhD, professor of biophysics and director of MCV's Center for Imaging Research, has used Connectome methods to study the science of human cognition — in particular language processing — which could have implications for dementia and other conditions.

Michael McCrea, PhD, professor of neurosurgery and director of brain imaging research, and Shekar Kurpad, MD, PhD, professor and acting chair of neurosurgery, are engaged in cutting-edge research in pain, addiction, spinal cord injury and traumatic brain injury.

Dr. McCrea leads a number of large-scale brain injury research projects, most notably the Advanced Research Core (ARC) of the Concussion Assessment, Research, and Education (CARE) Consortium is a $28 million concussion study funded by the NCAA and Department of Defense) and a comprehensive study of brain injury and recovery in Milwaukee-area high school and collegiate athletes. "We are very proud of the fact that the research we've conducted over the last 20 years has had direct translational significance to how we diagnose, evaluate and manage individuals with traumatic brain injury," Dr. McCrea says. "As a scientist, there's nothing more rewarding than that."
Scholarship and Planned Gift Reflect Gratitude

William Woods, MD ’52, knew the meaning of hard work. An Army Air Corps veteran who was first exposed to the medical field during World War II, he enrolled at Marquette University after the war on the GI Bill. By then, he had married Esther, his high school sweetheart, and was a new father. It wasn’t easy.

“By the time he graduated from medical school, he had four kids,” recalls his son, William Woods, Jr. “He worked nights in factories to support his family while he was going to school, and he studied and attended classes during the day.”

That drive never left Dr. Woods, a father of eight who worked as a family doctor and surgeon in the Delavan, Wisconsin, area. Before emergency rooms and specialists were common, Dr. Woods did it all, performing surgeries, rushing to the hospital in the middle of the night, and toting his black bag on house calls. Over the years, he delivered more than 1,800 babies. “He loved what he was doing,” Woods, Jr. says. “He used to say he treated the skin and all of its contents.”

Woods eventually developed cancer, but before he died he and his family discussed their philanthropic plans. “He gave considerable thought to how he would pay back those institutions that helped him achieve the fulfillment he had experienced as a small town physician,” Woods, Jr. says. “He really wanted to establish a source of support for the upcoming generation of doctors, and it was important to him that it was a legacy gift.”

In 2013, Esther established the Mrs. Esther G. and Dr. William C. Woods Endowed Scholarship at MCW with a $50,000 gift, then continued to build it each year. When she died in March 2015, she left an estate gift of nearly $240,000—bringing the fund to more than $313,000.

“You need to have a plan in place, or after your death people won’t know what you wanted,” advises Woods, Jr. “This means not only having a plan, but communicating that plan to those who would be charged with carrying out those bequests. My dad had the foresight to do that.”

The first recipient of the Mrs. Esther G. and Dr. William C. Woods Endowed Scholarship is Andre Jacobsen, a second-year student considering a career in radiology or emergency medicine. “I was quite surprised and thankful because any support I receive for my medical degree is always very meaningful. I want to have an impact on patients’ lives, and I’m proud to have support from someone who worked so hard to care for his patients during his career.”

Translating Science to Benefit Patients

“I’ve been a big year for Stephanie Cossette,” Dr. Cossette, who specializes in obstetrics and gynecology, says. “It’s been such a great ride so far, and now I am taking new patients! It’s been a big year for Stephanie Cossette, PhD ’11, and a postdoctoral fellow at MCW, based at Children’s Hospital of Wisconsin Research Institute. She launched her own company, Angio360 Diagnostics, which is developing tools for early detection of solid tumors in people and pets. The cause is personal, as she lost her father to cancer and her mother is a cancer survivor.

Although this is Dr. Cossette’s first company, she and most of her Angio360 co-founders have worked closely with startups through MCW’s Postdoc Industry Consultants (PICO) program. “It’s been such a great ride so far, and we want to see where this goes,” says Dr. Cossette. “Ultimately our goal is to have an impact and help people.”

Angio360 is one of several startups translating science to industry to come out of MCW in the past few years. Others include Protein Foundry, Somna Therapeutics and TAI Diagnostics.

This fall, MCW received a five-year, $22 million award from the NIH to continue the work of the Clinical and Translational Science Institute of Southeastern Wisconsin, a consortium dedicated to speeding research from bench to bedside.

As MCW researchers translate discoveries into devices, drugs and treatments, they have a powerful proponent in William Clarke, MD, MSc, director of research commercialization. Dr. Clarke, who also is a pediatric anesthesiologist at Children’s Hospital of Wisconsin, spent 15 years working in industry, including as global director for research and development for a large biotechnology company. “Only a small minority of ideas meet a big enough medical need and are protectable and commercializable,” Dr. Clarke says. “The ones with the biggest potential will attract the most competition and will require the most money to develop.”

Dr. Clarke estimates that he has spent hundreds of hours working with Protein Foundry and at least a thousand hours assisting TAI Diagnostics, all at no cost to the companies. In addition, MCW allowed Protein Foundry to lease space on campus and TAI Diagnostics to lease MCW staff time — and many MCW faculty have mentored Angio360’s team.

It’s all part of MCW’s commitment to support entrepreneurial researchers. “This is an incredible strength in a very competitive talent market,” Dr. Clarke says. “It is all about retaining these world-class faculty.”
### Finance Report

#### Revenues Fiscal Year 2015

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<th>Item</th>
<th>Total All Funds ($ in thousands)</th>
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<tr>
<td>Clinical revenue**</td>
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<tr>
<td>Tuition and fees</td>
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<tr>
<td>Investment income</td>
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<td>Contributions</td>
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<td>Advancing a Healthier Wisconsin assets released from restriction</td>
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<tr>
<td>Other</td>
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<tr>
<td>Total Revenues</td>
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** Includes adult and pediatric professional fee and affiliate revenues.

#### Expenses Fiscal Year 2015

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<td>Supplies and expense</td>
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<td>Other operating</td>
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<td>Total expenses</td>
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<td>Excess of revenues over expenses</td>
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### Externally Funded Sponsored Programs

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<th>Total Externally Funded Expenditures by Purpose Fiscal Year 2015 ($ in millions)</th>
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<tr>
<td>2015</td>
<td>$175.1, $166.3, $159.7, $153.9, $158.2</td>
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### Externally Funded Expenditures by Purpose Fiscal Year 2015

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<th>($ in millions)</th>
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<tr>
<td>Fellowship and others</td>
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<tr>
<td>Teaching and training</td>
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<td>Community/CME</td>
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<td>Research</td>
<td>$166.3</td>
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<tr>
<td>Other</td>
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### 2015 News Highlights

**MCW-Green Bay Opens**

In early July, the Green Bay region welcomed Wisconsin’s first new medical school campus in more than 100 years. MCW-Green Bay’s inaugural class of 26 students includes 23 Wisconsin residents.

**MCW Receives $22 Million CTSA Renewal**

MCW was awarded a five-year, $22 million Clinical and Translational Science Award (CTSA) from the National Institutes of Health. This competitive grant renewal will fund the work of the eight regional organizations that make up the Clinical and Translational Science Institute of Southeastern Wisconsin (CTSII).

**MCW Establishes Office of Diversity and Inclusion**

MCW has enhanced its long-standing commitment to embracing and championing differences at all levels within the institution by establishing a formal Office of Diversity and Inclusion, reporting to the president.

**MCW Achieves Community Engagement Classification by Carnegie Foundation for the Advancement of Teaching**

MCW was awarded Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching in recognition of MCW’s community engagement practices. This classification recognizes institutions that document alignment among campus mission, culture, leadership, resources and practices that support noteworthy community engagement.

**MCW Receives $9 Million to Study Susceptibility of Diabetic Hearts to Injury**

MCW will study the mechanisms responsible for the susceptibility of diabetic hearts to cardiac injury with a five-year, $9 million grant from the National Institute of General Medical Sciences. Zeljko Bosnjak, PhD, professor of anesthesiology and vice chair for research, and professor of physiology, is the principal investigator on the award.

**MCW-Central Wisconsin Begins Recruiting Medical Students**

MCW-Central Wisconsin is now recruiting medical students for matriculation in July 2016, when the campus is expected to welcome its inaugural class.

**U.S. News & World Report ranked Children’s Hospital of Wisconsin among the nation’s top five children’s hospitals in the nation.**

**MCW Center for AIDS Intervention Research Funded through 25th Year**

MCW’s Center for AIDS Intervention Research (CAIR) received a five-year, $8.7 million grant renewal from the National Institute of Mental Health.

**MCW’s Cardiovascular Center, led by Ivor Benjamin, MD, is improving cardiovascular health in the region through innovative, cutting-edge research that is supported, in part, by meaningful grants from donors and government entities.**

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**MCW has established a School of Pharmacy in Milwaukee to train highly qualified pharmacists who can provide expanded services as part of a healthcare team.**

**MCW’s philanthropic donors sow the seeds for the future of healthcare. We are grateful for both those gifts and for your partnership:**

mcw.edu/honorroll
Thank You
To our many donors who are making possible a healthier future. See our 2015 Honor Roll of donors at mcw.edu/honorroll

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