The Power of Partnerships: Improving Health for All

The Medical College of Wisconsin has been built on a legacy of partnership and collaboration. Creating and maintaining strong partnerships with healthcare organizations, academic institutions and government and community entities is a hallmark of MCW – and critical to our ongoing success and future growth.

Through our numerous collaborations, we are leveraging the complementary expertise of our partners to improve the health of our citizens and create value for the communities we serve.

We are very fortunate to have exemplary clinical partners – especially Children’s Hospital of Wisconsin, Froedtert Health and the Clement J. Zablocki VA Medical Center – who work with us to provide outstanding patient care, help create knowledge and provide the best in medical education through an innovative learning environment. Additionally, we are privileged to possess academic partners who help us build valuable programs and invest their resources to make us stronger together.

In fiscal 2016 (ended June 30, 2016) we and our partners realized many significant achievements together. In January, we marked our 70-year partnership with the Zablocki VA – one of the first of its kind in the US between a VA hospital and a medical school. Today, MCW faculty, staff and post-docs perform research at the Zablocki VA, which also houses a Translational Research Unit focusing on the medical issues effecting geriatric and veteran populations.

From late January-April, MCW and Discovery World sponsored Genome: Unlocking Life’s Code, which provided a hands-on learning environment that engaged our youth and stimulated interest in the science, technology, engineering and math (STEM) fields. In March, our Board approved the creation of a new Marquette University and MCW Department of Biomedical Engineering, which brings together the engineering education and research expertise of Marquette and the medical research, technology and clinical expertise of MCW.

On June 29, MCW’s Cancer Center participated in Vice President Biden’s Cancer Moonshot Summit. Our partners throughout the community joined with us, as solving the complexities of cancer requires the formation of new alliances to defy the bounds of innovation and accelerate the prevention, diagnosis and treatment of cancer.

During the past seven months, we have received initial accreditation for new four-year psychiatry residency programs in Central and Northeastern Wisconsin, and a new three-year residency program in family medicine in the Milwaukee area. These achievements reflect a multi-year collaboration among MCW faculty and staff, hospital/health systems and organizations around Wisconsin, and state and national government entities to providing lasting healthcare solutions as we train the next generation of providers.

Throughout this Annual Report we highlight individuals, teams and partners who are helping us improve the health of our communities today and preparing the healthcare leaders of tomorrow – as well as those who are positively impacted by our work.

Among our most valuable partnerships are those we possess with our donors and alumni. Your generosity enables us to provide a wide range of critical research, education and patient care programs.
Improving Outcomes for Childhood Cancers

It all happened so fast. Sixteen-month-old Joel Chmielewski woke with a low-grade fever and was pale and lethargic. His mother, Kay, took him to his pediatrician, sure that her youngest of three boys had picked up some typical playground virus. The pediatrician ordered a blood test and was back 10 minutes later with terrifying news: Joel had cancer.

“You need to go to Children’s Hospital right now. They’ll be waiting for you,” he told her.

And so began the Chmielewskis’ journey with acute lymphocytic leukemia – a journey all too familiar to families of the 5,000-plus children who have been treated at Children’s Hospital of Wisconsin MACC Fund Center for cancer and blood disorders since the program began in 1980. Although Joel’s leukemia is considered high-risk, most children like him are cured.

“With current therapies, we cure the majority of childhood cancer, and progress in pediatric leukemia is one of the greatest success stories in medicine,” says Joel’s doctor, Paul Harker-Murray, MD, PhD, a hematologist/oncologist at Children’s and an assistant professor at the Medical College of Wisconsin. “Leukemia was nearly uniformly fatal in the 1960s, and now, cure rates for some subsets of patients exceed 95 percent.”

This success wouldn’t be possible without academic medicine leading game-changing research and the philanthropy that supports it. The MACC Fund, which celebrated its 40th anniversary this year, has raised more than $57 million for pediatric cancer and blood disorder research in Wisconsin. Philanthropy also helped Children’s open a new, state-of-the-art MACC Fund Center clinic and Northwestern Mutual Day Hospital last year.

Joel’s family chose to participate in a clinical trial that adds two additional medications to conventional therapy. “They’re constantly developing new trials, trying to make chemotherapy shorter and less toxic,” Joel’s mother says. “The only reason why we have these protocols that can save our children’s lives is because people tried things, and if we can be a small part of improving treatment for other kids, why wouldn’t we?”

Although Joel experienced some side effects of therapy, including a severe skin ulcer and a life-threatening allergic reaction, his leukemia was no longer detectable in his bone marrow after the first month of treatment. Now three years old, he is still in remission and is completing a three-and-one-half-year treatment to prevent the leukemia from returning.

Joel, a fun-loving, feisty kid who loves Teenage Mutant Ninja Turtles, takes his monthly maintenance chemotherapy in stride.

“He doesn’t remember a life without cancer treatment. That’s kind of bitter-sweet to me,” his mom says. “But it has also given our family instant perspective and an appreciation for anyone fighting a battle of his or her own.”
When 42-year-old Dawn Revels of Brandon, Wis., arrived at Froedtert & the Medical College of Wisconsin in July of 2015, she was very sick. She had serious liver failure and was placed on the liver transplant list. But extensive testing at Froedtert Hospital revealed that her liver issues actually were caused by heart failure that deprived her liver and other organs of vital oxygen. Once Revels received a ventricular assist device (VAD) (also known as a heart pump), her liver issues were resolved.

“In her case, the diagnosis was missed before she came to us,” says Asim Mohammed, MD, an advanced heart failure and transplant cardiologist and assistant professor at MCW. “I think the biggest advantage Mrs. Revels had by coming to Froedtert was not only that we were able to identify her problem, but that we were able to help her recover when she was very, very sick. When you’re that ill you really need to be at a quaternary care center such as Froedtert & MCW. She probably would have died at another hospital.”

Revels’ case also was unusual because her heart failure was most likely caused by a viral infection in her heart – and then she developed valve problems that exacerbated the heart failure, Dr. Mohammed explains.

“I knew I had a heart murmur, but I was able to live a normal life until 2015, when all of a sudden I couldn’t breathe,” Revels shares. “It happened so fast.”

Although the heart pump solved her liver issues, it wasn’t an easy process. “She had a very rocky post-operative course and was in the ICU for months. At one point she couldn’t even move because she was so sick,” says Dr. Mohammed.

“Those four difficult months while she was cared for by MCW physicians at Froedtert Hospital now seem like a blur to Revels, but she’ll never forget the staff,” he adds.

“If anyone has a heart condition, that’s the place to go,” Revels remarks. “F&MCW feels like my second home, and I love going back there to see everyone.”

In fact, Revels is a trained peer mentor with the VAD Program and now supports another patient who recently had a heart pump implanted. “I help her through some of the struggles, and I think maybe that’s why God put me through what I went through,” Revels says.

Although Revels is doing well now, the pump is only a temporary measure until she can receive a heart transplant. “It could be any day – as soon as she gets a donor,” Dr. Mohammed says. “But she’s doing very well. She’s gone back to doing everything she enjoys and has an excellent quality of life. For us to be able to help her recover and have her home enjoying life with her kids and grandchild is immensely satisfying.”
Understanding Alzheimer’s Disease Through Brain Imaging

Alzheimer’s disease is insidious, slowly changing the brain one to two decades before dementia symptoms become obvious – and it’s irreversible. That makes it all the more vital to discover a way to prevent the disease.

The Alzheimer’s Disease Connectome Project (ADCP) seeks to do just that. The Medical College of Wisconsin is a co-investigator on a recent four-year, $5.5 million grant from the National Institutes of Health’s National Institute on Aging.

The study is a major part of a national effort to use the Connectome approach, which maps the brain’s neural connections, to better understand how the neural pathways operate in normal human brain functions and brain disorders.

Using cutting-edge functional MRI technologies – developed in part at MCW – the project will use brain imaging in 300 elderly individuals to show how the brain functions with mild cognitive impairment and Alzheimer’s-related dementia. Although the Connectome approach has been used briefly with Alzheimer’s previously, improved spatial and temporal resolutions will allow this study to more comprehensively characterize the disease.

“We can navigate the brain in a way that was never before possible,” says co-principal investigator Shi-Jiang Li, PhD, professor of biophysics and past director of the Center for Imaging Research at MCW. “These efforts and collaboration will accelerate research progress in transferring our understanding of the human brain connections for prevention, diagnosis and treatment in Alzheimer’s disease.”

The ADCP study could help by identifying markers of the disease in its earliest stages. “Also, the findings can stage disease risks and predict disease progression for individual subjects so that treatment therapy and response can be more personalized,” Dr. Li explains.

The project includes researchers from MCW’s biophysics, neurology, radiology, and psychiatry and behavioral medicine departments, including co-investigators Piero Antuono, MD, GME ’83; Malgorzata Franczak, MD, GME ’98; Joseph Goveas, MD; and Andrew Nencka, PhD ’09.

“Alzheimer’s disease is one of the great challenges in the first quarter of the 21st century, not only in terms of the clinical burden to families and society, but also scientifically to unveil the mystery of the human mind and behaviors,” Dr. Li says. “So collaboration and partnership are the only efficient ways to face the challenge and innovately develop prevention and treatment strategies.”

“Shi-Jiang Li, PhD, is part of a team using cutting-edge functional MRI technologies to study how the brain functions with mild cognitive impairment and Alzheimer’s-related dementia.
First-year medical students (foreground, l-r) Lindsay Howard and Matthew Weber, and (background, l-r) Victoriana Schwartz and Bellony Nzemenoh, gather in MCW’s Learning and Skills Classroom to study and discuss coursework.

“...I have deep roots at the Medical College of Wisconsin,” says retired obstetrician-gynecologist Robert D. Schmidt, MD, GME ’62. Those roots were first planted in seventh grade, when he decided to follow in the footsteps of his uncle, Armin Steckler, MD, a family practice surgeon and 1927 alumnus of the Marquette University School of Medicine, which was MCW’s predecessor. Those roots led Dr. Schmidt to join his uncle’s alma mater for his residency in obstetrics and gynecology. Now those roots are branching out to support future physicians through the Dr. Robert D. Schmidt and Mrs. Patricia A. Weber-Schmidt Endowed Scholarship Fund.

Dr. Schmidt and his wife, a former OB nurse, established the fund earlier this year. “We know medical school is very expensive, and we want to support students any way we can,” Dr. Schmidt says.

The Schmidts also support other educational causes, but they felt it was important to give back to the institution that helped launch Dr. Schmidt’s career as well as his beloved uncle’s. They will add to their fund over the next several years and also have included MCW in their estate plans. And as their fund generates scholarship awards, they’ll have another way to stay connected to MCW and watch the impact of their gift grow. Donors who establish endowed scholarship funds receive an annual impact map that shows where current and former scholarship recipients are working across the country, and in which specialties.

The Schmidts also have engaged their four children, six grandchildren and two great-grandchildren in their philanthropic mission. In lieu of Christmas and birthday gifts, they’ve asked their family to donate to the endowed scholarship fund at MCW. “They’ve all been very receptive to that idea, and it teaches the next generation about the importance of giving as well,” says Mrs. Weber-Schmidt.

For more information on endowed scholarships, please contact Angela Nelson, senior director of development and alumni giving, at (414) 955-4708 or annelson@mcw.edu.
Family Gift Supports Breast Cancer Research

The Medical College of Wisconsin, Richard and JoAnn Duffey, and Carol Williams, PhD, professor of pharmacology and toxicology, all share a passion for finding improved treatment options for patients with breast cancer. In recognition of Richard and JoAnn’s philanthropic efforts – which include hosting the annual Kathy Duffey Fogarty Tee Up for a Cure Golf Outing with the Wisconsin Breast Cancer Showhouse, Inc. – MCW established the Kathleen M. Duffey Fogarty Eminent Scholar in Breast Cancer Research. The golf outing and Eminent Scholar designation are named in memory of one of Richard and JoAnn’s daughters, Kathleen Duffey Fogarty, who passed away from breast cancer in 1997. MCW awarded this new Eminent Scholar designation – which supports the scientific progress of a leading breast cancer researcher – to Dr. Williams.

The Eminent Scholar designation is the highest award for distinction in academic achievement in MCW’s School of Medicine.

“We are really delighted to be part of the community of researchers, clinicians and community members working to find new treatments for breast cancer,” Richard Duffey says.

Dr. Williams conducts basic and translational research focused on reducing breast tumor growth and metastasis. She discovered that breast cancer cells make an unusually high amount of a protein called SmgGDS. Her studies indicate that SmgGDS interacts with a group of enzymes known as “small GTPases” inside breast cancer cells.

Mutations in these enzymes can lead the cells to proliferate at an abnormally swift rate and ignore biological checks and balances against disproportionate growth. Interacting with the SmgGDS protein makes this problem worse as it increases the activity level of the mutated small GTPase enzymes. This enables breast cancer cells to even more rapidly multiply and form tumors. Dr. Williams and her research team have found that elevated levels of SmgGDS in tumors correlate with worse clinical outcomes.

Dr. Williams and her laboratory have a goal of identifying compounds that stop SmgGDS from interacting with small GTPases, as these compounds are likely to inhibit the functions of SmgGDS in breast cancer cells and reduce cancer cell multiplication and tumor formation. As these compounds are identified, they will be tested to determine if they can be developed into chemotherapeutic drugs.

“We are especially proud to support the work of Dr. Carol Williams, who is one of this country’s distinguished cancer researchers,” Richard Duffey remarks. “I am very honored by the Eminent Scholar designation,” Dr. Williams adds. “And I am grateful for passionate donors such as the Duffeys who help MCW and the MCW Cancer Center continue to push forward in pursuit of better treatments.”
The community is used to cheering the Green Bay Packers on to victory, and now the Green Bay Packers Foundation is rallying support around a different sort of goal: training the next generation of community physicians.

The Foundation is matching up to $250,000 in community gifts for scholarships at the Medical College of Wisconsin-Green Bay. The first four recipients of the Green Bay Packers Foundation and MCW-Green Bay Champions Scholarships are second-year students Julia Rose Shariff and Ryan Berns, and first-year students Lauren Thomas and Erica Kleist.

“I think this scholarship symbolizes everything we’re trying to accomplish with the Green Bay campus – and you can see that the community, including the Packers, are excited about it,” Thomas says. “It shows that they recognize the importance of primary care physicians, and it feels like they’re supporting not only us personally, but also supporting Green Bay and Wisconsin as a whole.”

Kleist, who is from the Green Bay area originally, says the $5,000 scholarship feels like a gift from her hometown. “Getting this scholarship really solidified why I want to be a part of the Green Bay community, not only as a citizen but as a physician,” she says. “This scholarship brings me one step closer. It’s why I want to call Green Bay my home – because there’s so much support here.”

The Packers Foundation has been a major supporter of MCW-Green Bay; in 2013 it gave an inaugural grant to develop the campus’s innovative, accelerated three-year curriculum.

“We think MCW-Green Bay is going to have a significant impact,” Green Bay Packers president and CEO Mark Murphy said when the scholarship was first announced. “It is hard to imagine anything that will have a bigger impact on our community over the next five to ten years.”

Thomas, who originally is from Waunakee, Wis., selected MCW-Green Bay because of its distinctive approach and commitment to educating providers for underserved communities. “I really like MCW-Green Bay’s focus on training community physicians – being that doctor you see at the grocery store who everybody knows. That’s who I want to be,” she says. “To be able to do that in three years instead of four also is exciting. It’s a totally different medical school experience.”
How do you put an eighth-grader from a diverse background on the path to a career in medicine – and then hope that path leads to a future in Wisconsin? That’s the mission of StEP-UP: Student Enrichment Programs for Underrepresented Professions in Medicine, a new pipeline program supported by a five-year grant from MCW’s Advancing a Healthier Wisconsin Endowment.

“Our medical school classes are not truly representative of the society we live in,” notes Jose Franco, MD ’90, GME ’93, FEL ’95, associate dean for educational improvement and StEP-UP’s principal investigator. “Here in Milwaukee, the community is actually quite diverse, and we have a lot of challenges and health disparities. And I think sometimes patients’ needs are better understood by someone who grew up in that community.”

Many students from diverse backgrounds express an interest in medicine and in staying in their communities to “give back” when their education is completed. To foster those dreams and turn them into reality, StEP-UP targets high-potential middle, high school and college students from Wisconsin, particularly the Milwaukee area.

The StEP-UP team met with area college administrators and Milwaukee Public School teachers to learn about the barriers that keep underrepresented students from applying to medical school. The partners reported that many students struggle with science and math, lack exposure to mentors in the field, and don’t think that medical school is within their reach financially.

Starting in early 2017, MCW will host quarterly weekend programs for 50-65 StEP-UP participants. “We want them to come to MCW to meet people and forge relationships,” Dr. Franco says. In addition to a science enrichment curriculum, the program will address practical skills, such as test-taking strategies and how to apply to medical or graduate school. Current MCW students will visit area schools to share their experiences, and MCW students and faculty will serve as mentors.

“We’re going to give those students the test-taking skills, the mentorship and the other tools they need to be strong candidates for medical or graduate school,” Dr. Franco says. His dream: that some of those eighth-graders will one day join MCW’s faculty.

“This is our long-term plan,” he notes. “StEP-UP provides us with the resources to build the infrastructure. We’ll see some gains early on, but the true benefits will not be visible for years to come.”

“Although we have additional work to accomplish to ensure diversity in our physician workforce, bringing additional diversity has been a focus in the MCW School of Medicine (SOM) for the past five years, and we have substantially increased the number of underrepresented in medicine students matriculating at MCW during this time,” notes Joseph E. Kerschner, MD ’90, FEL ’98, Dean of the SOM and Executive Vice President of MCW. “We are fortunate to have resources from the Advancing a Healthier Wisconsin Endowment to catalyze the work of StEP-UP.”

“We are fortunate to have resources from the Advancing a Healthier Wisconsin Endowment to catalyze the work of StEP-UP.”

Dr. Joseph E. Kerschner
Finance Report

Revenues*

Fiscal year ended June 30, 2016

<table>
<thead>
<tr>
<th>Source</th>
<th>Total All Funds ($ in millions)</th>
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</thead>
<tbody>
<tr>
<td>Clinical revenue**</td>
<td>759.5</td>
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<tr>
<td>Grants and contracts</td>
<td>148.5</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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<tr>
<td>Other</td>
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<tr>
<td><strong>Total revenues</strong></td>
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</tr>
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* Excludes nonoperating revenue and expense, including realized and unrealized gains and losses on investments.

** Includes adult and pediatric revenues.

Revenues Fiscal Year 2016

- Clinical revenue** – 74%
- Grants and contracts – 15%
- Tuition and fees – 4%
- Other operating – 4%
- Salaries and fringe benefits – 76%
- Supplies and expense – 20%
- Research, Teaching and Training – 92%
- Contributions – 1%
- Investment income – 2%
- Other – 4%
- Contributions – 1%
- Investment income – 2%
- Tuition and fees – 4%
- Other operating – 4%
- Salaries and fringe benefits – 76%
- Supplies and expense – 20%
- Research, Teaching and Training – 92%
- Contributions – 1%
- Investment income – 2%
- Tuition and fees – 4%

Expenses*

Fiscal year ended June 30, 2016

<table>
<thead>
<tr>
<th>Source</th>
<th>Total All Funds ($ in millions)</th>
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<tr>
<td>Salaries and fringe benefits</td>
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<td>Supplies and expense</td>
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<tr>
<td>Other operating</td>
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<tr>
<td><strong>Total expenses</strong></td>
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<td>Excess of revenues over expenses</td>
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Externally Funded Sponsored Programs

July 1, 2011 to June 30, 2016

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<td>15-16</td>
<td>$161.4</td>
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</table>

Externally Funded Expenditures by Purpose Fiscal Year 2016

- Research, Teaching and Training – 92% ($148.0)
- Community/CME – 8% ($13.4)

<table>
<thead>
<tr>
<th>Year</th>
<th>Externally Funded Expenditures ($ in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Research, Teaching and Training – 92% ($148.0)</td>
</tr>
<tr>
<td></td>
<td>Community/CME – 8% ($13.4)</td>
</tr>
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</table>

$161.4
MCW-Central Wisconsin Opens

The latest milestone in MCW’s years-long journey to expand its medical school into several regions around the state was celebrated in July 2016 with the matriculation of the first class of 26 students at MCW-Central Wisconsin.

New Residency Programs Accredited

The Accreditation Council for Graduate Medical Education (ACGME) gave initial accreditation to new MCW four-year psychiatry residency programs in Central and Northeastern Wisconsin. Froedtert & MCW Community Memorial Hospital’s Family Medicine Residency Program also received initial accreditation from the ACGME.

MCW Receives $6.8 Million to Prevent Spine and Brain Injuries

MCW has received a five-year, $6.8 million grant from the US Army Medical Research and Materiel Command to research neck, spine and brain safety in the military. The grant was awarded to the MCW department of neurosurgery with Narayan Yoganandan, PhD, professor of neurosurgery, as the principal investigator; and Frank Pintar, PhD, chief of research and professor of neurosurgery, as the co-principal investigator.

Residency Program Garners Inaugural DeWitt C. Baldwin, Jr. Award

The Medical College of Wisconsin Affiliated Hospitals was named as the inaugural recipient of the ACGME and Arnold P. Gold Foundation DeWitt C. Baldwin, Jr. Award in the “large program” category. The award recognizes programs that are exemplary in fostering a respectful, supportive environment for medical education and the delivery of patient care.

New Era for Biomedical Engineering

The Marquette University and MCW department of biomedical engineering has launched and recruitment of a permanent department chair is underway. It will offer undergraduate, master and doctoral degree programs.

Adult Practice Quality Ranks in Top Four in US

Froedtert & MCW Froedtert Hospital was named as one of the top four performing academic medical centers in the country by Vizient — winning a Bernard A. Birnbaum, MD, Quality Leadership Award.

Strategic Investment in Wisconsin Behavioral Health

The Advancing a Healthier Wisconsin Endowment committed nearly $20 million to an initiative intended to generate statewide, community-based advances in behavioral health. The funding will be awarded over eight years to 10 community coalitions across 26 counties, involving more than 120 partner organizations.

Ten Pediatric Specialty Programs Rank in Top 50 in US

US News & World Report ranked Children’s Hospital of Wisconsin within the nation’s top 50 in all 10 pediatric specialties that the publication reviews in the 2016-17 Best Children’s Hospitals rankings. This ranking is just one of a number of awards that recognizes Children’s among the top children’s hospitals in the nation.

New Leadership Appointments

Gregory M. Wesley has been named Senior Vice President, Strategic Alliances and Business Development. He will act as a key strategic leader, ambassador and advisor, with responsibility for the execution of MCW’s strategic initiatives through partnerships. C. Greer Jordan, MBA, PhD, has been named Chief Diversity and Inclusion Officer to provide vision, management and strategic planning for diversity and inclusion initiatives.

MCW Honor Roll

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
THINKING ABOUT MAKING A GIFT OR PLEDGE?

Thank You
To our many donors who are making possible a healthier future. See our 2016 Honor Roll of donors at mcw.edu/honorroll

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