

Annual Report 2017



MCW

**New Knowledge Can
Change Everything...**

a single life, an entire community, the future as we know it.

Thank You

To our many donors who are making possible a healthier future. See our 2017 Honor Roll of donors at mcw.edu/honorroll, available in early 2018.

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For more stories on how our knowledge is changing life, visit our website, knowledgechanginglife.com

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New Knowledge Can Change Everything

As 2017 draws to an end, we are pleased to review a year of significant achievements that continue to place the Medical College of Wisconsin at the forefront of academic medicine.

This fall, we launched a new initiative to help tell the stories of how our faculty, staff, students and alumni are generating the new knowledge that changes lives, and introduced a new tagline, **knowledge changing life**, to reflect our broad and deep impact on everyday lives. New knowledge can change everything: single lives, an entire com-

munity and the future as we know it.

The knowledge we are creating at MCW spans the entire healthcare continuum – from bench to bedside – and is helping to rewrite people's stories. In 2017, our achievements were numerous and impactful, from transforming medical education through our new School of Pharmacy and the creation of the Robert D. and Patricia E. Kern Institute for the Transformation of Medical Education, to collaborations that advance biomedical research and immunotherapy across a wide range of diseases, to forging trusted statewide



Message From Leadership

alliances that improve the mental health of Wisconsin citizens, to partnering with alumni-donors on planned gifts to buoy our institution. You can read more about how those accomplishments have the power to change the lives of individuals and whole communities in the subsequent pages of this Annual Report.

We are creating the knowledge that changes lives through biomedical research. By emphasizing scientific innovation, MCW consistently places among leading research institutions nationally receiving funding from the National Institutes of Health (NIH), and the School of Medicine's (SOM) research is recognized as a leading innovator improving health from the bench to the bedside. MCW's SOM receives more than 75 percent of all NIH funding in southeastern Wisconsin and institutionally invests in research, teaching, training and related purposes totaling about \$234 million in fiscal year 2017. In addition to the NIH and other federal research funding, this level of research excellence requires generous philanthropy and industry partnerships.

We are creating the knowledge that changes lives through training the next generation of physicians, scientists, pharmacists and other healthcare professionals. MCW continues to place its graduating medical students in outstanding residency programs, including MCW's own stellar programs which were characterized as the highest quality training programs in the country with 2016's Baldwin Award recognition. In 2017, we welcomed our first cohort of psychiatry residents in central and northeastern Wisconsin (ultimately increasing the number of psychiatrists being trained in Wisconsin by 40 percent) and recruited our first class of family medicine residents at Community Memorial Hospital.

We are creating the knowledge that



Photo courtesy of Jay Westhauser

(l-r) **Christopher P. Kops, CPA, MBA**, Executive Vice President for Finance and Administration and Chief Operating Officer; **Ravindra P. Misra, PhD**, Dean, Graduate School of Biomedical Sciences; **John R. Raymond, Sr., MD**, President and CEO; **Stephen Roell**, Chair, MCW Board of Trustees; **Joseph E. Kerschner, MD '90, FEL '98**, Provost and Executive Vice President and Dean, School of Medicine; **George E. MacKinnon III, PhD, MS, RPh**, Founding Dean, School of Pharmacy.

changes lives through clinical breakthroughs and specialty expertise that continually improves our ability to care for patients. Our nearly 1,700 physicians and more than 525 advanced practice providers are treating ever-increasing numbers of patients – totaling 530,000 annually and representing more than 2.4 million patient visits. A total of 439 MCW faculty physicians, representing 40 specialties and 400 subspecialties, were selected as *Best Doctors® in America* for 2017-2018. MCW physicians account for 45 percent of all Wisconsin physicians listed as *Best Doctors*. More *Best Doctors* practice at two of MCW's major teaching hospital affiliates, Children's Hospital of Wisconsin and Froedtert Hospital, than at any other hospitals in the state. In 2017, we continued to strengthen our clinical partnerships with Children's, Froedtert Health, the Zablocki VA Medical Center and BloodCenter of Wisconsin.

We are creating the knowledge that changes lives through interaction with

our communities through the Advancing a Healthier Wisconsin Endowment and many other programs with which we partner in communities in every county of Wisconsin. And we continue to create and expand pipeline programs that introduce younger students to potential careers in science and medicine.

In 2018, the Medical College of Wisconsin will celebrate 125 years as a cornerstone institution in the region and the state. We hope that you will join with us as we commemorate our storied past and look forward to our exciting and innovative future!

For the past 125 years it has been the generosity and investment of our supporters and community, the excellence, energy and innovation of the people at MCW, and the contributions of our partners which have propelled us to create the knowledge that is changing lives in education, research and patient care. Thank you for helping the Medical College of Wisconsin to pioneer pathways to a healthier world!

“I joined the inaugural class of the MCW School of Pharmacy because I wanted to make a difference in someone’s life... we’re here to help people.”

– Jennifer Polenska, member of the Class of 2020

“The new School of Pharmacy is transforming and reshaping how pharmacists contribute to healthcare.”

– George E. MacKinnon III,
PhD, MS, RPh, founding dean,
MCW School of Pharmacy



Every day across MCW, our faculty and staff play essential roles in transforming health. In particular, we have focused on the transformation of medical education, beginning with the creation of our two regional medical school campuses in 2012; our inaugural class at MCW-Green Bay will graduate in June 2018.

In August 2017, we welcomed the inaugural class of MCW's School of Pharmacy following more than three years of discussion and planning. The

new School of Pharmacy is transformative in reshaping how pharmacists contribute to healthcare. The role of the pharmacist is evolving dramatically to alleviate the increasing demands on our healthcare system, meet the needs of patients and help them improve their quality of life. Thus, we are committed to training pharmacists to become members of interprofessional medical teams as well as advocates serving the needs of patients by providing preventive services, ensuring medical adherence and elevating the level of care for those dealing with chronic disease or in need of acute care.

MCW is one of the few pharmacy schools in the country offering the Doctor of Pharmacy degree in three versus four years. Our innovative program provides early and extensive exposure to a variety of clinical settings and world-class research in specialties such as precision medicine, pharmacogenomics, cancer and psychiatry. Our graduates will have the knowledge and skills to practice at the top of their license, allowing them to fulfill all aspects of the expanding role of the pharmacist. They will be able to work directly with patients who appreciate the convenience and effectiveness of engaging with their pharmacist for primary care services and health management, and will be part of a team of healthcare professionals working to improve the effectiveness and efficiency of patient care in clinical and residential settings.

MCW also is undergoing meaningful transformation within the medical education model. The most recent milestone on our journey to lead the way in transformational healthcare education was the establishment in June 2017 of the Robert D. and Patricia E. Kern Institute for the Transformation of Medical Education (the Institute). The Institute is supported by an exceptionally generous gift of \$37.8 million – the largest individual non-corporate gift ever given to MCW – by the Kern Family and The

“The opportunity to work collaboratively to improve education and train the next generation of physicians is a once-in-a-lifetime opportunity.”

– Susan Cox, MD, executive vice dean of academics and chair of medical education, Dell Medical School at the University of Texas at Austin

Kern Family Foundation. Additionally, Stephen and Shelagh Roell provided a generous gift to establish the Stephen and Shelagh Roell Endowed Chair of the Institute for the Transformation of Medical Education.

The Institute, in partnership with a new National Transformation Network (NTN) – which brings together the strengths of seven medical schools – is leading a movement to transform medical education across the continuum from pre-medical school to physician practice, called *MedEdNext*. The NTN, comprising the Geisel School of Medicine at Dartmouth; Mayo Clinic Medical School; MCW School of Medicine; University of California – San Francisco School of Medicine; University of Texas at Austin Dell Medical School; University of Wisconsin School of Medicine and Public Health; and Vanderbilt University School of Medicine, is a key driver for identifying and speeding innovations into educational practice.

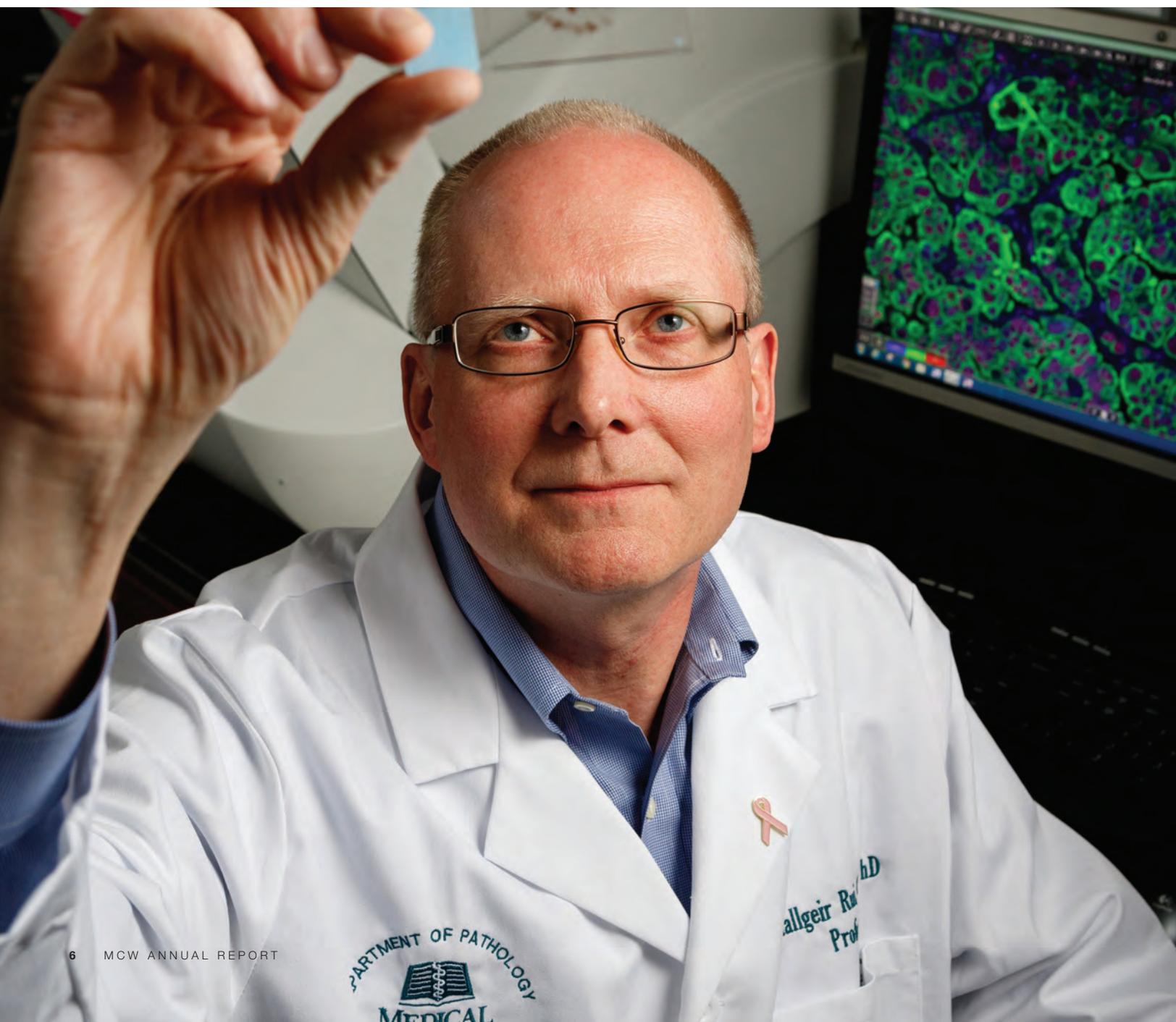
The Kern Institute at MCW will redefine medical education through the development of the Triple Aim for Medical Education, which will focus on character, competence and caring in physician education and training. The Triple Aim for Medical Education parallels and complements the Triple Aim for Health Care – better care, better value, better health – and will allow MCW to set a new standard for medical education.



Photo courtesy of Jeff Zmania

“This collaborative project will really expand our ability to profile the molecular features of ER-positive breast cancer, as well as to find better ways to treat it.”

– Hallgeir Rui, MD, PhD, the Wisconsin Breast Cancer Showhouse Endowed Professor of Breast Cancer Research



In January 2017, a team of physicians and researchers including principal investigator Jeffrey Medin, PhD, MACC Fund Professor in the department of pediatrics at MCW, is believed to be the first in the world to have used gene therapy to treat a patient with Fabry disease, a rare inherited enzyme deficiency that can damage major organs and shorten lifespan. People with Fabry disease have a gene called GLA that doesn't function as it should; as a result, their bodies are unable to make the correct version of a particular enzyme that breaks down a fat called Gb3. A buildup of Gb3 can lead to problems in the kidneys, heart and brain.

In the trial, researchers collected a quantity of a Fabry patient's own blood stem cells, then used a specially engineered virus to augment those cells with copies of the fully functional gene that is responsible for the enzyme. The altered stem cells were then transplanted back into the patient. Dr. Medin, who joined MCW in fall 2015, began the background studies more than 20 years ago that eventually led to this trial.

The Power of Philanthropy

Philanthropy is a critical component to advancing the generation of new knowledge in research, education and patient care, and directly impacts the health of our communities.

Since 1988, the Wisconsin Breast Cancer Showhouse (WBCS) has raised almost \$6.2 million for breast cancer and prostate cancer research. The work of Drs. Hallgeir Rui and Carol Williams has received significant financial support from organizations such as WBCS and individuals such as Robert F. Sobczak, who established a research fund in memory of his wife, Nancy.

The MACC Fund has donated nearly \$43 million to MCW in the past 40 years to support pediatric cancers and blood disorder research, including Dr. Jeffrey Medin's endowed chair.

Photo courtesy of Jay Westhauser

“This experimental trial marks a major step forward in treating inherited genetic diseases in adults. It is very promising that we were able to engineer the complex logistics of such a trial and that the procedure itself seems to have been well-tolerated.”

— Jeffrey Medin, PhD, MACC Fund Professor

Every week, nearly 20 MCW researchers gather to share their latest research developments and ideas regarding one goal: fighting breast cancer. The collective brainpower of these individuals – MCW's Breast Cancer Biology Research Group – is paying off in the form of new collaborations and advances. The Group, co-directed by Hallgeir Rui, MD, PhD, the Wisconsin Breast Cancer Showhouse Endowed Professor of Breast Cancer Research and associate director of basic science and shared resources for the MCW Cancer Center, and Carol Williams, PhD, the Kathleen M. Duffey Fogarty Eminent Scholar in Breast Cancer Research and professor of pharmacology and toxicology, recently applied for a \$10 million National Cancer Institute grant to continue

their synergistic study of estrogen-receptor-positive (ER-positive) tumors. What they learn about the biochemical pathways in ER-positive tumors could apply to many other types of cancers.

Dr. Rui's lab recently genetically engineered a mouse hormone profile that much more closely resembles the hormone profile of women, which is key to better understanding growth and responsiveness of hormone receptor-positive breast cancer to various treatments. Another promising area of research is immune-based therapy, which involves mobilizing the immune system of patients to attack cancer cells. While drugs can be used to shrink the tumor, it would be very important for the immune systems of patients to kill the cancer cells.

“We are very excited to offer CAR-T cell therapy to eligible patients and to explore immunotherapy treatments for other cancers.”

— James Thomas, MD '91, GME '95, PhD '89, associate director of translational research and medical director of the MCW Cancer Center Clinical Trials Office

A new immunotherapy trial at MCW will evaluate an innovative processing method to create CAR-T cells and determine the safety of using these cells in patients with B-cell lymphoma. This first CAR-T modified gene therapy study at the MCW Cancer Center was open to enrollment in late 2017.

Nirav Shah, MD, MSHP, assistant professor of medicine (hematology/oncology), is the trial's principal investigator. This trial also is unique in that it tests a self-contained, on-site platform from the Prodigy Company, which means that each patient's cells are modified on-site and at the point of care for patients. This trial is the first that MCW has opened to study CAR-T cell immunotherapy.

“MCW’s partnership with lawmakers, communities and the healthcare industry has been a tremendous asset.”

— Scott Walker, Governor of Wisconsin

On November 5, 2017, the Medical College of Wisconsin was recognized as a Finalist for the Association of American Medical Colleges’ prestigious *Spencer Foreman Award for Outstanding Community Service*, which spotlights members with long-standing major institutional commitment to addressing community needs. It recognizes exceptional programs that go well beyond the traditional role of academic medicine to reach communities whose needs otherwise are not being met. Each year, two Finalists are named along with the recipient.

The Award recognized MCW as a trusted partner who has responded to the state’s shortage of mental health providers with a multifaceted strategy that includes telepsychiatry programs, programs targeted to enhance the physician workforce, and support of community-based initiatives.

With the help of statewide partnerships and MCW’s Advancing a Healthier Wisconsin Endowment (AHW), MCW has created several mental health referral and e-medicine programs, including the Charles E. Kubly Child Psychiatry Access Project, which has served more than 125,000 Wisconsin kids, and the Periscope Project for pregnant and postpartum women, which builds capacity to effectively manage and coordinate care for perinatal patients with psychiatric and behavioral health conditions. In addition to patient and provider consults, these

programs include clinician education sessions to enhance the confidence of local primary care physicians in their diagnosis and treatment decisions.

“The Child Psychiatry Consultation Program has been a wonderful resource to me as a primary care provider. The ability to have direct access to psychiatrists has helped me to treat and give resources to children I normally wouldn’t have been able to help,” notes Renee Szafir, MD ’11, GME ’14, pediatrician at Children’s Hospital of Wisconsin

“The Periscope Project is a unique opportunity for community clinicians to access the expertise of MCW maternal mental health specialists,” says Pamela Wilson, MD ’99, GME ’02, medical director of Milwaukee’s Sixteenth Street Community Health Center.

MCW also worked with state government and clinical partners to establish rural psychiatry residencies to train psychiatrists who will practice in rural communities. This effort to enhance Wisconsin’s rural physician workforce is shared by MCW’s new undergraduate medical education campuses in Green Bay and Central Wisconsin. These MCW-led programs supplement community-led efforts in 22 counties to enhance behavioral health, supported through AHW.

MCW is the only medical school to have been recognized among the top three institutions for the *Spencer Foreman Award* more than once in the past 11 years – as we were the recipient of the inaugural Award in 2007.



Photo courtesy of Jeff Zmianka

Through the Periscope Project, Himanshu Agrawal, MD, MCW assistant professor of psychiatry and behavioral medicine, is able to engage in subspecialty teleconsultations with a perinatal psychiatrist to better care for his pregnant and postpartum patients.

Donor Impact

Michael Kubly, MD ’63, and his wife, Billie, have been long-time supporters of promoting mental health awareness in the community and have donated generously in support of the Charles E. Kubly Child Psychiatry Access Project – a partnership between the MCW department of psychiatry and behavioral medicine and Children’s Hospital of Wisconsin. The project provides mental health awareness training for primary care providers at clinics and consulting services that cover the diagnosis and treatment of children with mental health disorders.

“I truly am grateful for the faculty who set me on a path for a wonderfully rewarding career.”

– Monica Buckley Spaulding, MD '66

Roland Buckley, MD '31, was a devoted alumnus of Marquette Medical School (MCW's predecessor institution). So, after he died, his daughter, Monica Buckley Spaulding, MD '66, decided it was only logical to use the stock she inherited from her father to fund a Charitable Remainder Trust that would benefit their shared and deeply valued alma mater.

“He absolutely loved the school,” says Dr. Spaulding, a retired medical oncologist in Buffalo, New York. “And I think it's important to support educational institutions. Most physicians have done very well with the training that they received in school. The Medical College of Wisconsin may have a different name now, but it has continued the tradition and is a far better school than it was when we graduated.”

Academic medicine always has been close to Dr. Spaulding's heart. She spent 30 years as a professor of medicine at the State University of New York at Buffalo in addition to her role as chief of oncology for the Veterans Administration Medical Center of Western New York. “I'm so impressed with what's gone on at MCW because I know how difficult it is to do innovative education and change things – and MCW has done such a fabulous job of it,” she notes. “The research program they've established is so tremendous.”

Dr. Spaulding's extended family also has benefited from MCW's culture of excellence and innovation. “I've had two relatives in Wisconsin who've had life-threatening illnesses, and the care that they've received at Froedtert &



Photo courtesy of Jeff Zmiana

Monica Buckley Spaulding, MD '66, attended her 50th class reunion and MCW's Commencement Ceremony in 2016.

the Medical College of Wisconsin was incredible,” she remarks.

Instead of earmarking her trust for a particular purpose, Dr. Spaulding elected to keep it flexible for MCW's greatest needs. “I hope to see MCW continue its innovative and imaginative development of programs, and I trust that the institution will use my gift wisely.”

Although Dr. Spaulding has not lived in Wisconsin for decades, she says that her philanthropy has helped her feel close to her alma mater and her former home. One recent highlight was returning to campus for her 50th

reunion and participating in the Commencement Ceremony for the Class of 2016. “I remember, as we joined the academic procession, having many flashbacks to those four years at the medical school – and feeling a sense of pride. I truly am grateful for the faculty who set me on a path for a wonderfully rewarding career, and supporting MCW is a great way to say thank you.”

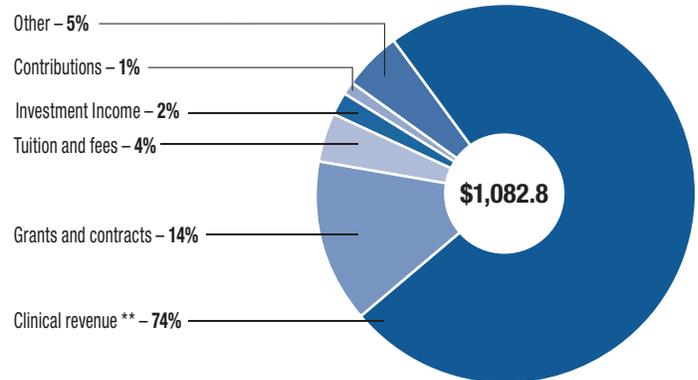
To learn how to leave a legacy that will rewrite someone's tomorrow, contact Stephen Davis, director of planned giving, at (414) 805-3308 or legacyinfo@mcw.edu.

Finance Report

Revenues*

Fiscal year ended June 30, 2017	Total All Funds (\$ in millions)
Clinical revenue**	\$803.9
Grants and contracts	152.5*
Tuition and fees	43.9
Investment income	18.7
Contributions	12.5*
Other	51.3*
Total revenues	\$1,082.8

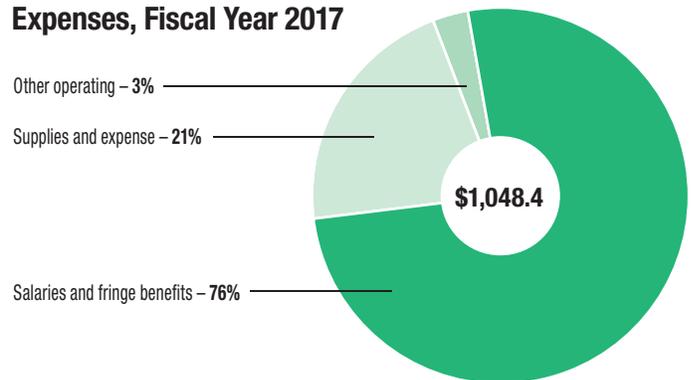
Revenues, Fiscal Year 2017



Expenses*

Fiscal year ended June 30, 2017	Total All Funds (\$ in millions)
Salaries and fringe benefits	\$797.1
Supplies and expense	215.0
Other operating	36.3
Total expenses	\$1,048.4
Excess of revenues over expenses	\$34.4

Expenses, Fiscal Year 2017

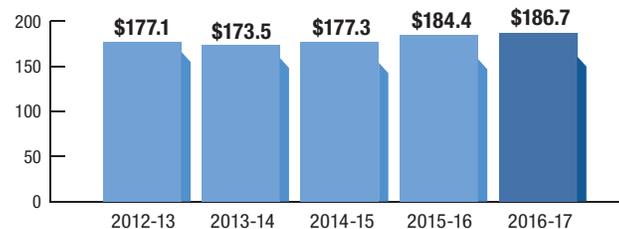


* Excludes nonoperating revenue and expense, including realized and unrealized gains and losses on investments.

** Includes adult and pediatric revenues.

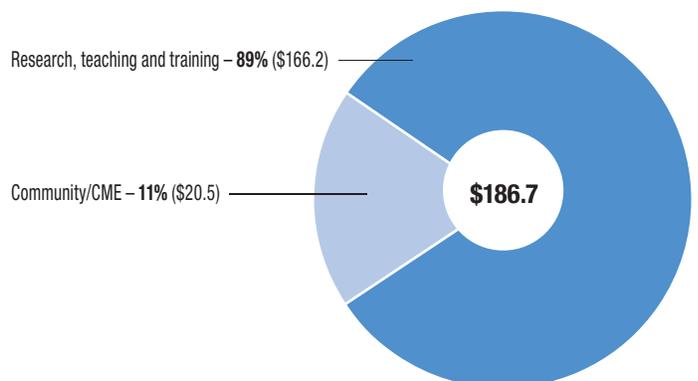
Externally Funded Expenditures***

July 1, 2012 to June 30, 2017
Total Externally Funded Expenditures for Research, Teaching, Training, and Related Purposes (\$ in millions)



Externally Funded Expenditures by Purpose, Fiscal Year 2017

(\$ in millions)



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

2017 Facts & Highlights

NEW LEADERSHIP

Leonard Egede, MD

Director, Center for Patient Care & Outcomes Research

Barclay Ferguson

Chief Financial Officer

Kurt A. Janavitz, MBA

Senior Vice President, Healthcare Partnerships & Strategy

C. Greer Jordan, MBA, PhD

Chief Diversity and Inclusion Officer

John R. Kirby, PhD

Chair, Microbiology & Molecular Genetics

Shekar Kurpad, MD, FEL '01, PhD

Chair, Neurosurgery

Cheryl A. Maurana, PhD

Founding Director, Robert D. & Patricia E. Kern Institute for the Transformation of Medical Education

Jonathan S. Marchant, PhD

Chair, Cell Biology, Neurobiology & Anatomy

John R. Schreiber, MD, MPH

CEO, Medical College Physicians
Senior Associate Dean, Clinical Affairs – Adult Practice

Raul A. Urrutia, MD

Director, Genomic Sciences & Precision Medicine Center

PROMOTIONS

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

has assumed an expanded role as Provost of MCW. He continues to serve as Executive Vice President of MCW and Dean, School of Medicine.

Christopher P. Kops, CPA, MBA, has been promoted to Executive Vice President for Finance and Administration and Chief Operating Officer.

John T. (Jack) Newsome, MBA, JD, has been promoted to Senior Vice President and General Counsel.



Photo courtesy of Jay Westhauser

Members of the Robert D. and Patricia E. Kern Institute for the Transformation of Medical Education and the National Transformation Network, along with endowed chair donors Stephen and Shelagh Roell and James Rahn, president of The Kern Family Foundation, celebrate at the June 2017 launch event. See more on page 5.

MCW is...

- Wisconsin's largest private research institution
- largest NIH grant recipient in SE WI: **75% of all NIH funding**
- **top 6% of all research institutions in the world** for publications and citations
- **leading innovative medical education with a 3-year medical school** to get students into practice faster and **with 25% less debt**
- driving a **40% increase in psychiatrists in Wisconsin**
- founder of the Kern Institute with a national network of partners to transform US medical education
- **partnered with Children's Hospital of Wisconsin** (named one of the best by *US News & World Report*)
- **top-performing academic medical center with Froedtert Hospital** (#3 for quality in US)
- investing **\$20M in behavioral health resources** through Advancing a Healthier Wisconsin
- **training pharmacists to play essential roles** on care teams
- a **national leader in neurosciences research and genomics**
- **world's largest repository for marrow transplant data**

MCW has...

- an **\$8B economic enablement impact on Wisconsin** (with partners)
- **largest specialty physician practice in Wisconsin**
- **37 pipeline programs engaging youth** in STEM
- invested **\$10M in HIV prevention** strategies
- **300+ community partners** across Wisconsin
- **trained 49% of Wisconsin's practicing physicians**
- **almost half of Wisconsin's Best Doctors® in America**
- **20% of our physicians treating veterans** at the Zablocki VA
- **educated 4,783 Wisconsin students** over 10 years
- **hired nearly 10,000 faculty & staff from metro Milwaukee** over 10 years
- **attracted more than 7,000 faculty, students and leaders from outside metro Milwaukee** over 10 years
- received **more than \$1.47B in research funding** over 10 years
- **17,600 alumni; 5,800 employees; 1,300 students; 890 residents and fellows**

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Thank You

To our many donors who are making possible a healthier future. See our 2017 Honor Roll of donors at mcw.edu/honorroll, available in early 2018.



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