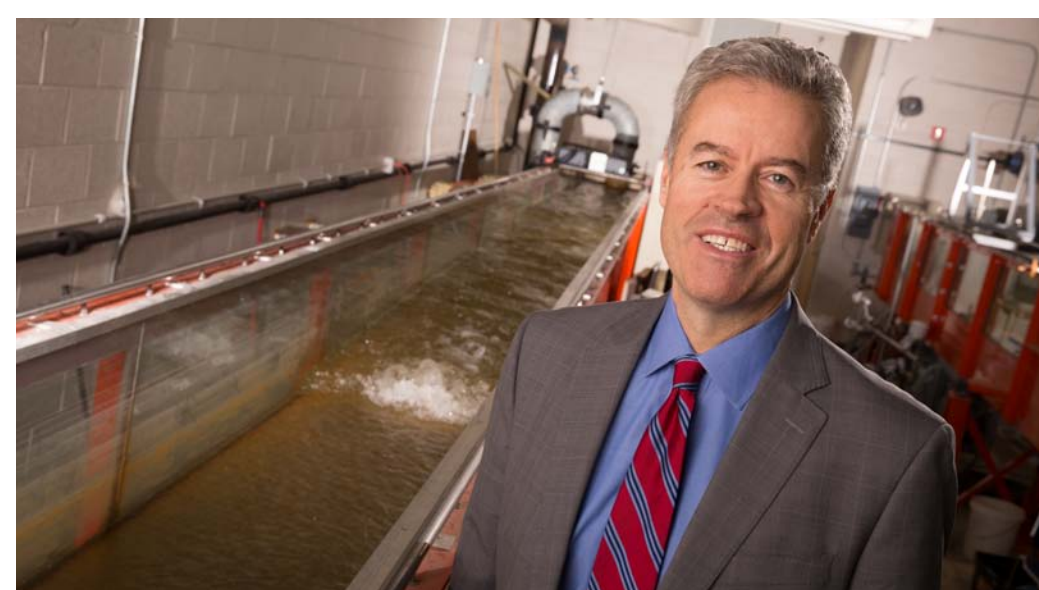




# 2017 ANNUAL REPORT



Chancellor Mone & Elmer Moore, Jr. (ScaleUp MKE)

## WELCOME MESSAGE | CHANCELLOR MONE

The University of Wisconsin-Milwaukee is reshaping our region through innovative research. Over the last decade, the UWM Research Foundation has provided our faculty, staff, and students with programming, partnerships, and resources that have had a powerful impact and contributed to UWM's continued success. We are proud to highlight this innovative work, and those talented individuals who make it possible, and we extend our deepest gratitude to the partners that have strengthened these efforts.

A handwritten signature in black ink that reads "Mark A. Mone".

Chancellor Mark Mone, UW-Milwaukee



// **THE UWMRF** HAS BUILT THE  
INFRASTRUCTURE TO DRIVE  
**RESEARCH, INNOVATION, &  
ENTREPRENEURSHIP** AT UWM.

- **CHRIS FIASCA**  
UWMRF CHAIR

## **UWMRF** BOARD OF DIRECTORS

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*Retired Obstetrician/Gynecologist  
Aurora Healthcare*

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### **Gregg Tushaus - Vice Chair**

*Senior VP & CIO / President  
Corporate Central Credit Union / Emergifi*

### **Tom Watson - Secretary**

*VP & Technical Fellow  
Johnson Controls, Inc. Powertrain & Vehicle Systems*



Drs. Kris O'Connor (left) & Brian Armstrong  
Metria Innovation Inc.



Amanda Springob  
UWM Innovation Expo



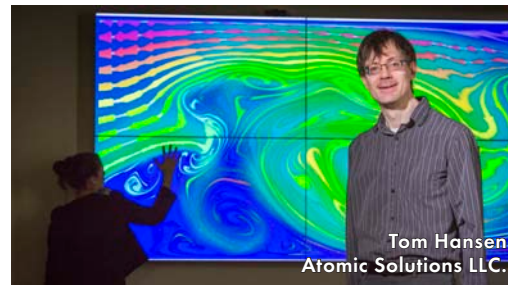
Dr. Paul Roebber  
Catalyst Grant Winner

## UWMRF PROGRAMS

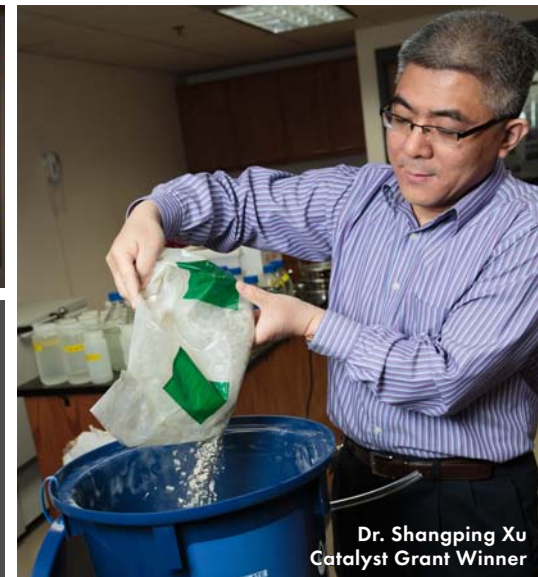
The UWM Research Foundation (UWMRF) evaluates and protects the commercial potential of UWM research through management of intellectual property, including patents and copyrighted works. Our UWMRF staff builds and delivers programs that cultivate innovation – including the UWMRF Catalyst Grant Program, the Lubar Entrepreneurship Center (LEC) Ideas Challenge programming, and the Innovation Corps™ (I-Corps) Program, funded by the National Science Foundation (NSF). UWM's faculty and students play an important role in strengthening the Milwaukee economy and through the UWMRF Catalyst Grant Program, researchers have been awarded more than \$4 million and yielded \$16 million in follow-on funding.



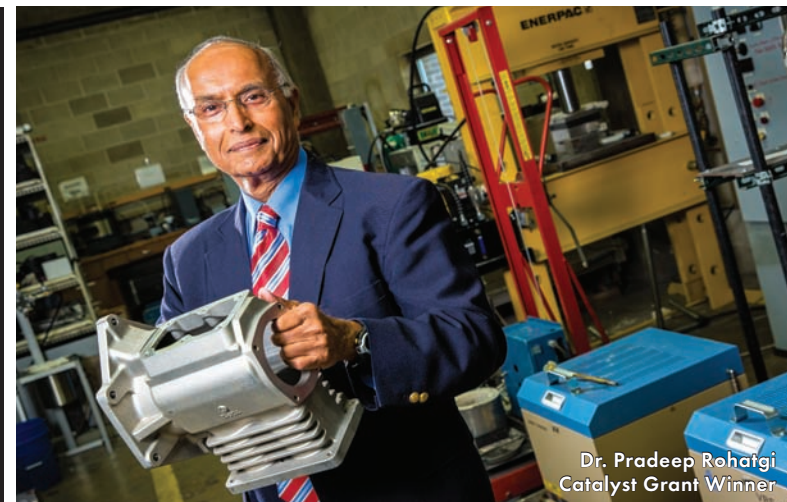
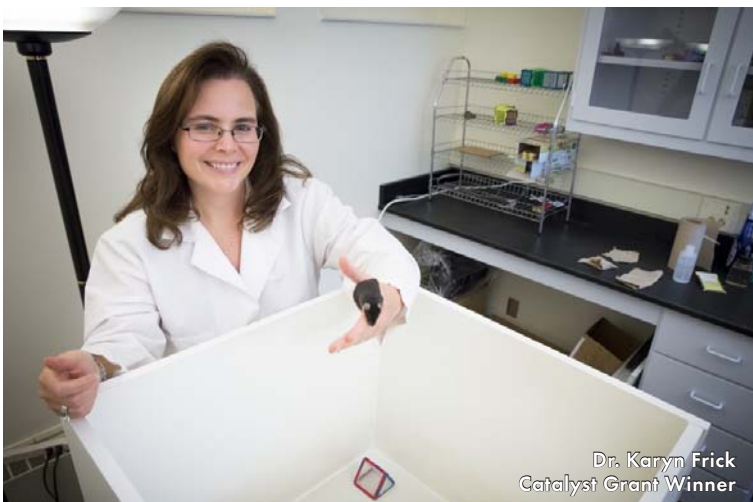
**\$59 MILLION**  
IN UWM RESEARCH EXPENDITURES



**56** ISSUED/ALLOWED  
**PATENTS**



**64** LICENSE/OPTION  
AGREEMENTS

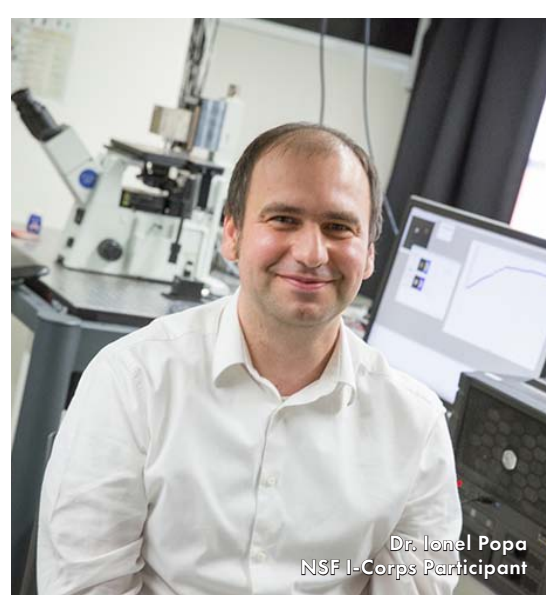




Ibi Opiyo  
InMed Health Navigation App



UWM Healthcare Innovation Hackathon



Dr. Ionel Popa  
NSF I-Corps Participant

## NSF I-CORPS™ PROGRAM

Researchers and students from five area universities participate in the NSF I-Corps Program to help explore market opportunities for their lab discoveries through proven “lean launch” methodology. Administered by the UWMRF, the I-Corps Milwaukee site has hosted 73 teams from UWM, Concordia University, Marquette University, the Medical College of Wisconsin, and the Milwaukee School of Engineering. The program continues to focus on health-care opportunities and attract participants from underrepresented groups. At the UWM Healthcare Innovation Hackathon, faculty and students found ways to improve patient care in hospitals and health-care centers.





Drs. Carol Hirschmugl (left) and Marija Gajdardziska-Josifovska

## // **NSF I-CORPS PROGRAM** IS TEACHING PHYSICISTS TO BE ENTREPRENEURS

UWMRF Catalyst Grants gave physicists Marija Gajdardziska-Josifovska and Carol Hirschmugl a needed kick-start in launching their startup company, SafeLi LLC. The researchers' hybrid semiconducting nanomaterial has been shown to enhance the performance of lithium-ion batteries when used in the battery's anode. After conducting nearly 150 interviews through the I-Corps Program, the team was able to better understand the market. The two have patented their material and completed a license agreement with the UWMRF to commercialize their product.



## **DRS. COOK, ARNOLD, & STAFFORD** | PANTHERICS INC.

Milwaukee Institute for Drug Discovery (MIDD) researchers at UWM are trying to replace the inhaler as the primary treatment for asthma with an oral pill. Drs. James Cook (left), distinguished professor of chemistry, Alexander Arnold, associate professor of chemistry, and Douglas Stafford, MIDD director, transformed funding from the National Institutes of Health and a UWMRF Catalyst Grant into a patented drug compound and numerous publications. With promising animal data in hand, they have formed a new startup, Pantherics Inc., and are working toward human clinical trials sanctioned by the FDA.





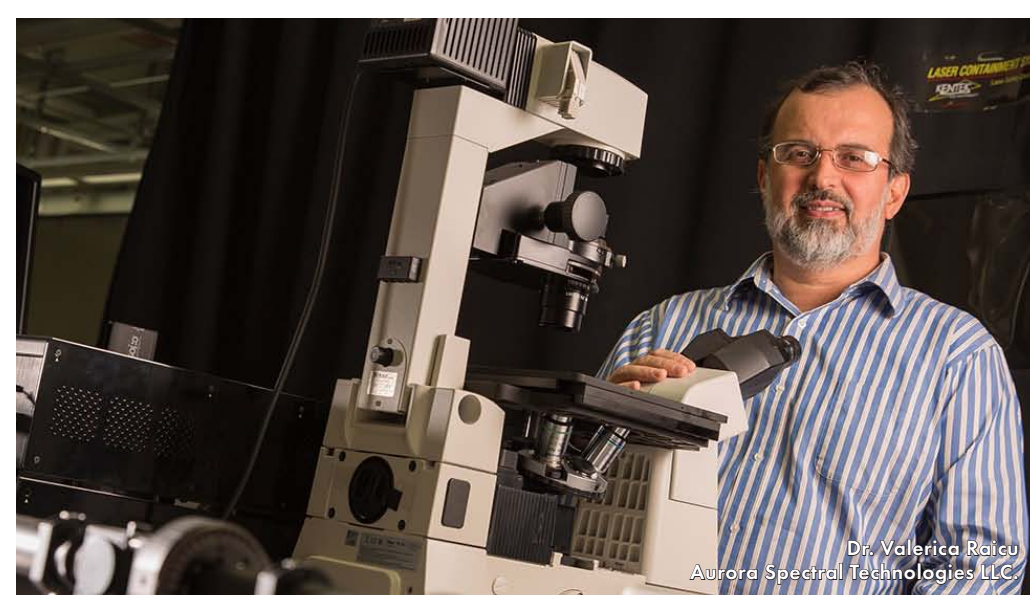
Dr. Cook recognized for his latest issued patent

**13** UWMRF **ISSUED PATENTS**

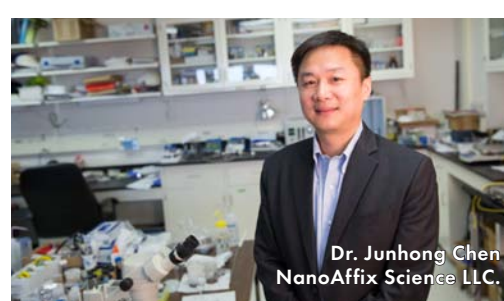
## DISTINGUISHED PROFESSOR | DR. JAMES COOK

Dr. James Cook's goal is to create safer drugs for the treatment of anxiety, pain, asthma, and bacterial infection. One of UWM's most prolific inventors, the distinguished professor of chemistry has contributed 13 patents to the UWMRF portfolio and obtained more than \$15 million in research funding. With his work as the foundation, UWM was able to establish the MIDD in 2011. Cook's collaboration with industry and other universities has resulted in more than 450 peer-reviewed publications.





Dr. Valerica Raicu  
Aurora Spectral Technologies LLC



Dr. Junhong Chen  
NanoAffix Science LLC



**13** FACULTY  
STARTUPS

## UWMRF **FACULTY STARTUPS**

Faculty startups bring new technologies to market, strengthening UWM's research enterprise and the state's economy. These new companies benefit from support through the UWMRF Catalyst Grant Program and intellectual property management, and resources through the Lubar Entrepreneurship Center and the NSF I-Corps program, which can lead to follow-on funding or investment. UWMRF Catalyst Grants, which boosts early-stage technologies, are an example of the Research Foundation's success, yielding 13 startup companies.



## T3 BIOSCIENCE LLC. | DR. CHING-HONG YANG

Dr. Ching-Hong Yang, professor of biological sciences, received UWMRF Catalyst Grants that helped him develop novel anti-microbial compounds used to fight infection in plants and animals. In 2013, Yang completed a license agreement with the UWMRF and launched a startup company, T3 BioScience LLC. The team is currently working towards U.S. Environmental Protection Agency (EPA) approval for their first product, which inhibits fire blight disease in fruit trees. Yang is also screening soil samples, as well as human tissue, for bacteria with characteristics useful for new antibiotics.



Dr. Lingfeng Wang

## UWMRF INTELLECTUAL PROPERTY & LICENSES

The UWMRF manages a growing portfolio of intellectual property for UWM faculty, staff, and students through a structured and strategic technology-transfer process. Since 2006, the UWMRF has received more than 450 invention disclosures, filed 275 patent applications, and received 56 issued patents. Most importantly, these assets have added value to the licensees and startup companies through 64 license and option agreements. With targeted marketing efforts, the UWMRF continues to expand its reach beyond our region.



Dr. Adel Nasiri



Dr. Woo-Jin Chang



Brian Kost, (left) GE Healthcare & Dr. Jun Zhang



Dr. Deyang Qu

## CORPORATE PARTNERING

The UWMRF links UWM to local industry through corporate partnerships that fuel innovation. Companies such as GE Healthcare, Johnson Controls, and Rockwell Automation have formed research collaborations with UWM researchers. For example, UWM's Water Equipment and Policy Center, funded by the NSF, allows companies to choose the water technologies they are most interested in. Working jointly, faculty and industry have produced four patent-pending inventions, a copyrighted work, and 13 licenses with local water-related companies, including A.O. Smith, Badger Meter, Baker Manufacturing, and Gannett Fleming.



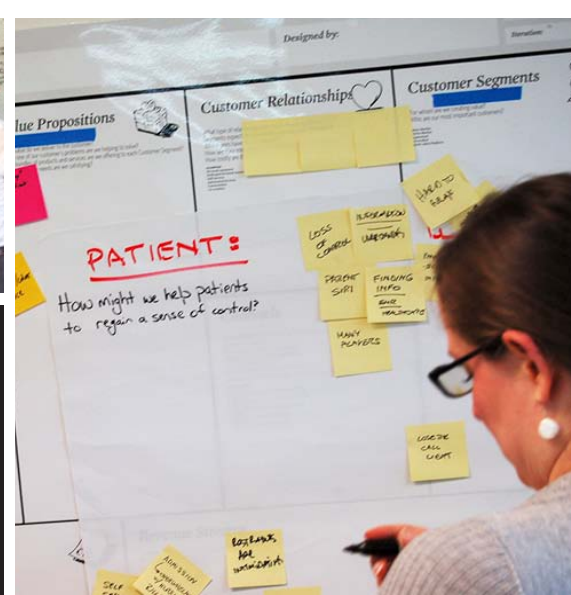
Michael Brown-Johnson (left) & Cheyenne McGlaston  
LEC Business Model Canvas Mixer



Nicole Green (left) & Dr. Ilya Avdeev  
University Innovation Fellows Meetup

## UWMRF ENTREPRENEURSHIP PROGRAMS

The UWMRF and the Lubar Entrepreneurship Center (LEC) have created a variety of programs to instill entrepreneurial thinking and idea creation into all disciplines at UWM. From business-plan and product competitions to coursework and fellowship opportunities, the UWMRF is molding the next generation of thought leaders. This fall, the Fresh Ideas Campaign, which offers introductory student workshops, attracted more than 2,000 participants across disciplines, helping to cultivate UWM's entrepreneurial ecosystem.



## MEDICAL TUBING ORGANIZER

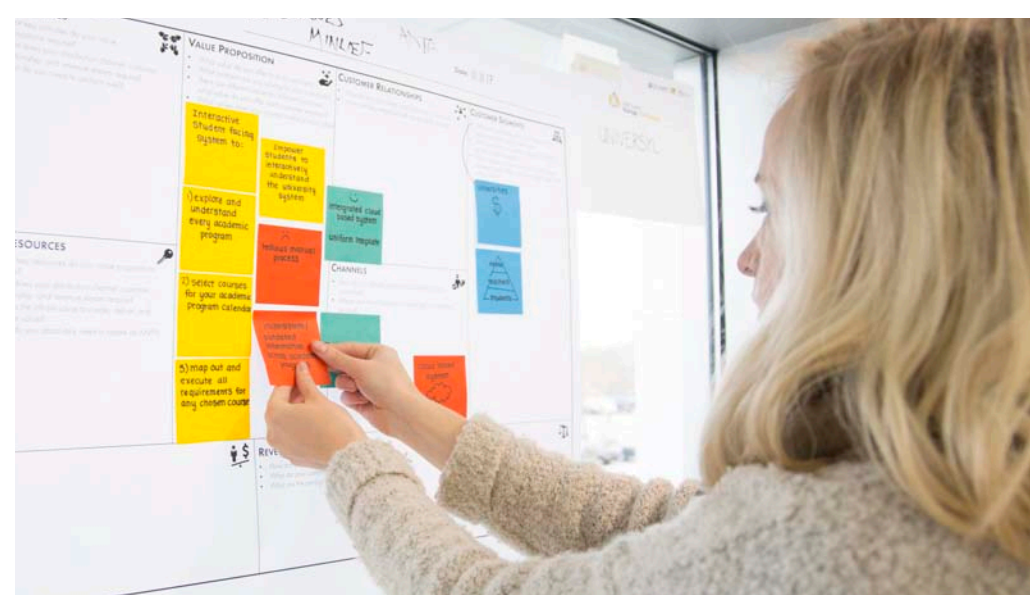
Nursing doctoral student Lindsey Roddy is bridging the gap between science and entrepreneurship. Her patent-pending device, which organizes medical tubing and cords, is helping to solve safety issues at the patient bedside. Through Student Startup Challenge, a campus wide product-idea competition, and the NSF I-Corps Program, Roddy has collected valuable feedback from working nurses to further develop several viable prototypes, while exploring partnerships to manufacture and distribute the product.



## LUBAR ENTREPRENEURSHIP CENTER

A new 24,000-square-foot facility at the corner of Kenwood Boulevard and Maryland Avenue on campus will be the area's hub for entrepreneurial resources when it opens in early 2019. The building will house both the Lubar Entrepreneurship Center (LEC) and the UWM Welcome Center and will serve as a testament to the impact of a nationally recognized research university. It will provide a modern space for students, business leaders, faculty, and entrepreneurs to meet and collaborate on new enterprises together.





Amber Lazenby (left) & Taffanie Johnson  
UWM Innovation Expo

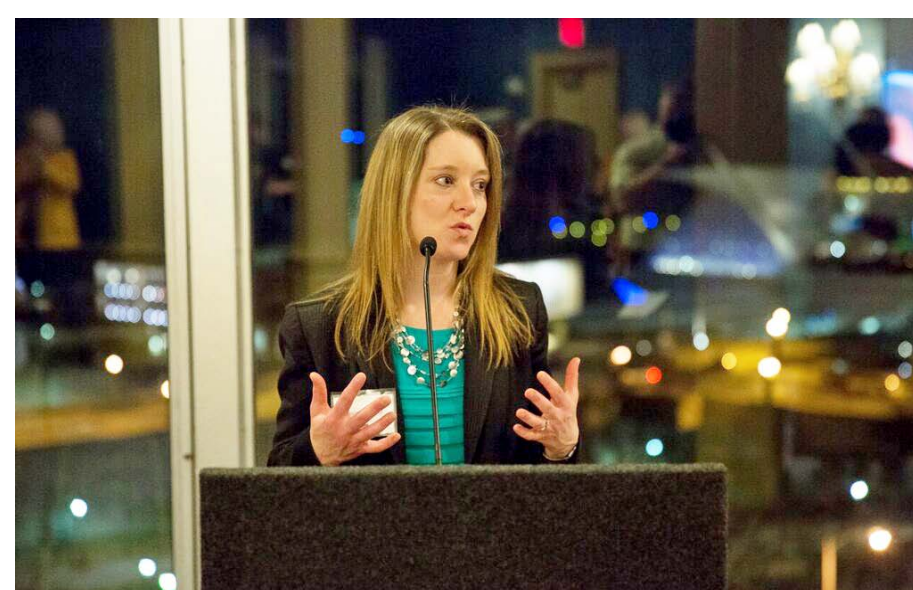




From the left, Nicole Green, Brian Thompson, Jessica Silvaggi, Audrey Salazar, & Francesca Forcinito

## UWMRF **TEAM**

The UWMRF is driven by a mission to improve lives and the economy through education and research. The Research Foundation bridges the gap between academic discovery and the marketplace, and arms students with skills that enhance innovation and entrepreneurship. We are deeply grateful to the supporters and organizations who make this work possible and invite you to learn more about us at the [UWMRF.org](https://UWMRF.org), Facebook, Twitter, and LinkedIn.



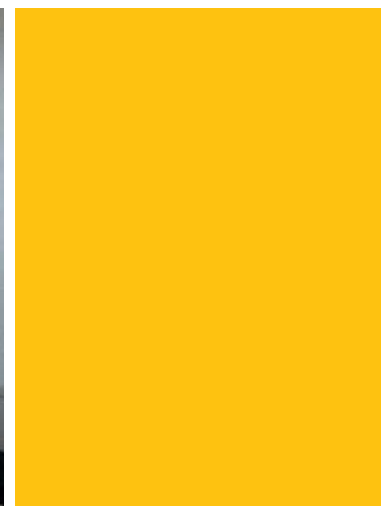
// WE STRIVE TO SHARE THE  
**CUTTING-EDGE INNOVATIONS**  
CREATED AT UWM WITH **PARTNERS**  
LOCALLY AND GLOBALLY, IN AN  
EFFORT TO **GROW THE ECONOMY**  
AND **MAKE THE WORLD BETTER**  
ONE STEP AT A TIME.

- **JESSICA SILVAGGI**  
SENIOR LICENSING MANAGER



// THE UWMRF IS **HONORED**  
**TO SUPPORT UWM**, & WE  
ARE DEEPLY GRATEFUL TO THE  
SUPPORTERS, RESEARCHERS, &  
**INNOVATORS** WHO **PARTNER**  
**WITH US** IN THESE EFFORTS.

- **BRIAN THOMPSON**  
PRESIDENT, UWMRF / DIRECTOR, LEC





POWERFUL IDEAS | PROVEN RESULTS

