June 8, 2016 MCW News - On Thursday, May 26th, more than 100 scientists, board members, clinicians, and trainees of the Medical College of Wisconsin (MCW) Cardiovascular Center (CVC) gathered at the Harley-Davidson Museum in Milwaukee for the annual CVC Research Retreat, sponsored in part by the AHW Endowment grant.

John R. Raymond, Sr., MD, President and CEO, and Joseph E. Kerschner, MD, Dean of the School of Medicine and Executive Vice President, opened the scientific meeting with remarks about the importance of the CVC to the mission and vision of MCW. Ivor J. Benjamin, MD, Director of the CVC and Professor of Medicine, elaborated on the newly-expanded mission of the CVC and future goals for achieving a “center of excellence.” Leaders of CVC Signature Programs (thematic areas of research) provided overviews of their programs and plans for growth followed by four original research presentations by CVC faculty.

CVC trainees presented their research in a poster competition. Rebecca L. Holme, a doctoral student in the laboratory of Daisy Sahoo, PhD, Associate Professor of Medicine, Division of Endocrinology and Vice Chair for Research in the Department of Medicine, and Muhammad Zeeshan Afzal, BPharm, PhD, a postdoctoral fellow in the laboratory of Jennifer L. Strande, MD, PhD, Assistant Professor of Medicine, Division of Cardiovascular Medicine and Medical Director and Associate Director of the Small Animal Echocardiography Core, won the poster competitions in their respective divisions.

After an introduction by David Guttermann, MD, Northwestern Mutual Professor of Cardiology and Senior Associate Director of the CVC, John P. Cooke, MD, PhD, the Joseph C. “Rusty” Walter and Carole Walter Cooke, MD, PhD, the Joseph C. “Rusty” Walter and Carole Walter Cooke Presidential Chair in Cardiovascular Disease Research and Chair of the Department of Cardiovascular Sciences at Houston Methodist Research Institute, gave a keynote lecture on “The Role of Innate Immunity in Nuclear Reprogramming.”

The retreat concluded with a discussion about “What Makes a Cardiovascular Center Successful?”, led by the CVC’s External Scientific Advisory Board (ESAB) members, Donna K. Arnett, PhD, MSPH, Dean of the College of Public Health at the University of Kentucky and former President of the American Heart Association, and Curt D. Sigmund, PhD, Chair and Department Executive Officer and Roy J. Carver Chair in Hypertension Research at the University of Iowa.

Welcome Bruce Smith, Cardiovascular Center Board Chair

Bruce Smith joined the Cardiovascular Center (CVC) Board in 2008, and was elected Chair Elect in 2014, and newly appointed Chair as of July 1st.

From 2009 until his retirement in 2012, he was Chairman of the Board, President and Chief Executive Officer of Smith Investment Company.

He has been a director of A. O. Smith Corporation since 1995 and is a member of the Investment Policy Committee and the Personnel and Compensation Committees. He is also a director of the A. O. Smith Foundation, which provides funding for the “A. O. Smith Fellowship Scholars Program”, a unique program created in 2015 to support talented cardiovascular postdoctoral researchers and physicians.

Mr. Smith is a graduate of Williams College, Williamstown, MA.

The CVC Board is composed of business, professional, and civic leaders in Wisconsin who are committed to advancing cardiovascular research at the Medical College of Wisconsin through increasing community awareness and raising private funds. The Board meets quarterly and holds numerous fundraising events each year.
April 1, 2016 MCW News - The Medical College of Wisconsin (MCW) has received a four-year, $2.6 million grant from the National Institutes of Health’s (NIH) National Heart, Lung and Blood Institute to study the risk factors of left ventricular hypertrophy (LVH), where the muscle wall of the heart’s main pumping chamber becomes enlarged and thickens at a cellular level.

Ulrich Broeckel, MD, professor of pediatrics, medicine and physiology at MCW, and Dorothee Weihrauch, DVM, PhD, associate professor of anesthesiology at MCW, are the principal investigators of the project.

Studies have found that LVH, more commonly found in people with diabetes and hypertension, is one of the most potent risk factors for cardiovascular disease and can also lead to cardiac complications such as heart failure, stroke and sudden death. According to Dr. Broeckel, growing evidence exists that changes in the heart’s intercellular tissue, particularly in people with diabetes, contributes to disease at the cellular level of the heart muscle. This can play an important role in the development of heart problems. This is a concern for patients with juvenile diabetes as well as patients with type 2 diabetes. With this NIH grant, Drs. Broeckel and Weihrauch will examine the impact “diabetic” intercellular tissue has on these muscle cells as well as the role genetics plays.

“Improving our understanding of these mechanisms can lead to novel treatment options and methods to identify individuals at increased risk,” says Dr. Broeckel. “This becomes particularly important with an aging population and the increase in prevalence of diabetes.”

March 21, 2016 MCW News - The Medical College of Wisconsin (MCW) has received a four-year $1.5 million grant from the National Institute of Health’s (NIH) National Institute of Heart, Lung and Blood to continue funding a study focused on how health of the cells lining the inner wall of blood vessels impact the vessels’ reaction to an increase in blood flow.

David Zhang, MD, PhD, associate professor of Cardiovascular Medicine and Pharmacology and Toxicology at MCW, is the principal investigator of the project.

According to the Centers for Disease Control, coronary artery disease (CAD) is the most common type of heart disease in the United States, killing more than 370,000 people each year. Clinical trials have shown that dysfunction at the cellular level of the circulatory system can predict outcomes for patients with CAD. Dr. Zhang’s research has focused on how blood vessels relax, or dilate, in response to the stress caused by an increase in blood flow. This flow-mediated response is one of the most important regulators of cardiovascular health. Previous studies have already demonstrated that such stress can cause the cells of a blood vessel’s inner wall, called endothelial cells, to release one of two different dilation-inducing molecules depending on the presence of CAD. While they both dilate blood vessels, the molecules have different effects on the health of the vessel wall and the tendency for plaque to build up inside the arteries. With this NIH grant, Dr. Zhang will study endothelial cells to see if a switch in the health of the cells’ information intake channels plays a crucial role in the switch from one dilation molecule to the other.

“It is our hope that this study will contribute to our understanding of how coronary blood flow is regulated in both normal and disease states,” says Dr. Zhang. “With that knowledge we will be able to create new treatments for coronary artery disease and other cardiovascular disorders.”
MCW Awarded $1.9 Million for Cardiovascular Research in Chronic Kidney Disease

July 25, 2016 - The Medical College of Wisconsin (MCW) has been awarded a five-year $1.9 million grant from the National Institutes of Health (NIH) National Heart, Lung, and Blood Institute to investigate the underlying principles of chronic kidney disease (CKD) and its correlation to cardiovascular diseases. The primary aim of the research grant will be to study the condition at a molecular level and reveal new treatments for cardiovascular disease in CKD patients.

Alison J. Kriegel, PhD, assistant professor of physiology at MCW, is the principal investigator of the grant.

Cardiorenal Syndrome Type 4 (CRS4) is a condition in which CKD contributes to cardiovascular diseases such as enlargement of the heart, poor heart function and increased risk of heart attack. Cardiovascular disease is the leading cause of death among CKD patients and currently very little is known about how kidney disease can damage the heart.

Previous research has found a specific regulatory molecule (microRNA miR-21-5p) to mitigate signaling proteins associated with the progression of cardiovascular disease. During the investigation, researchers will evaluate the significance of this particular molecule to better understand CRS4, or cardiovascular disease, in a CKD model. The overall goal of the research is to identify new preventative and therapeutic treatments for CKD patients at risk for developing cardiovascular diseases.

Spotlight on MCW’s Resuscitation Outcomes Consortium (ROC)

What is ROC?
The Resuscitation Outcomes Consortium (ROC) is a clinical research network consisting of 10 Regional Clinical Centers throughout the United States and Canada, as well as a Data Coordinating Center. It was created to study better ways to treat people that have an out-of-hospital cardiac arrest or a severe traumatic injury. The Milwaukee Resuscitation Research Center is coordinated through the Medical College of Wisconsin and is directed by Cardiovascular Center internal scientific advisory board member and Professor of Emergency Medicine, Tom Aufderheide, MD.

Why is ROC research important?
Cardiac arrest and traumatic injury are important public health problems. Heart disease is the most common cause of death in North America. Over 350,000 out-of-hospital cardiac arrests occur each year in the United States. Of those, less than 10% survive. Life-threatening severe injury is the leading cause of death in North America for persons between the ages of 1 and 44 years, and one of the leading causes of death in those over the age of 65 years.
From Caterpillars to Kidney Disease: Surprise Discoveries in Basic Science

Aug. 10, 2016
MCW News

In April, the Medical College of Wisconsin (MCW) announced that John D. Imig, PhD, professor of pharmacology and toxicology, had received a $2.3 million grant from the National Institutes of Health National Institute of Diabetes and Digestive and Kidney Diseases to investigate the development of a drug to treat type 2 diabetes and metabolic syndrome. But what we didn’t tell you is that this translational grant is all thanks to some caterpillars in California and decades of research. It’s a tale of pure curiosity with a great lesson for budding scientists and the public alike: You can’t always predict where basic science discoveries will lead.

Our story begins more than 40 years ago with a young entomologist in California, Bruce Hammock, PhD, who had found a key enzyme in the metamorphosis of caterpillars into butterflies called an epoxide hydrolase (EH). This enzyme degrades a caterpillar’s juvenile hormone, allowing it to move from the larval stage into an adult insect. Early in his career, Dr. Hammock found that if he exploited this EH and prevented larvae from becoming adults, he had on his hands an effective genetically engineered insecticide.

But this applied research wasn’t enough for Dr. Hammock’s lab. “Then we became interested in very basic science and just started asking fundamental questions,” he says. “Does the enzyme occur in plants? Does it occur in mammals?” And it turns out that it does, particularly as soluble epoxide hydrolase (sEH) in mammals, including mice and humans, and its distribution suggested it was involved in regulatory biology.

So Dr. Hammock and his team spent the next 20 years involved in biomedical research to learn how sEH worked. They began developing potent sEH inhibitors to isolate the enzyme in order to understand how it was impacting the body, discovering that it appeared to influence blood pressure. “So I looked at people who were very good in blood pressure pharmacology and went to talk to them, but most thought the work was an artifact and weren’t interested,” Hammock recalls. “The sole exception was John Imig.”

Dr. Hammock’s call came at the perfect time for Dr. Imig, then at Tulane University. “At the time, I had been looking at a different enzyme, with a hypothesis that it was changing in hypertension and kidney disease,” Dr. Imig says. “But we basically proved our hypothesis totally wrong, so we thought we needed to look at the epoxide hydrolase, and that’s when Bruce called me.”

Dr. Imig’s initial studies of the sEH antibodies Dr. Hammock provided him suggested that if he inhibited the enzyme, it might impact blood pressure. Although the first inhibitor Dr. Hammock offered Dr. Imig for testing didn’t work (it never reached the bloodstream), a subsequent one seemed to lower systolic blood pressure in hypertensive animals; the two published their findings in 2002. “Working with John, our inhibitors became more than fundamental probes,” Dr. Hammock says. “They became potential drugs.”

But bringing a new therapy to market is a long and expensive process, so the two decided that they would make the inhibitors available to many investigators, allowing them to open up the field. “That way they could be tested in as many different disease states and mechanisms as possible to really learn as much as we could about the inhibitors’ potential,” Dr. Imig says.

Various studies showed that in addition to decreasing blood pressure, the sEH inhibitors appeared to protect organs like the heart and kidney and had positive effects in diabetes. So Dr. Hammock formed a biotech company to develop these inhibitors for a clinical trial, which began in 2008.

At the same time, Dr. Imig accepted a position at MCW. “Part of the reason I came to MCW was because I collaborated a lot with the Department of Nephrology here, and I had the ability to work with clinicians who were interested in moving things from basic science to patients,” he recalls.

While the potential for new translational work appeared bright for Dr. Imig at MCW, Dr. Hammock’s biotech company failed to successfully complete a phase II clinical trial with an early version of the sEH inhibitor, and the company went out of business.

The story could have ended here, but luckily neither researcher was phased. “It’s very complicated to get a drug to market, and you have to be very persistent,” Dr. Imig says. He and Dr. Hammock both see some other possible uses for new variations of the inhibitor, which is where Dr. Imig’s NIH grant comes in to play. In addition, Dr. Hammock recently founded a company to develop sEH inhibitors that is targeting diabetic neuropathic pain; he has already received three large federal grants with the aim of moving to clinical trials. Meanwhile, British pharmaceutical company GlaxoSmithKline has an EH inhibitor being tested for chronic obstructive pulmonary disease — including chronic bronchitis and emphysema — and just released successful results of its phase I clinical trial. And that’s just the sEH research that’s the furthest along, Dr. Imig notes.

“Collaborations across pharmaceutical companies, other academic institutions and with people around the world really help a lot with making advancements,” says Dr. Imig. He and Dr. Hammock know an sEH inhibitor has valuable market potential; it’s just a question of which use will get there first.

“An added benefit,” Dr. Hammock notes, “is that I get to work on this exciting project with a brilliant scientist in John Imig who has also become a dear friend.”

So the story is far from over, just in a new chapter and with a happy ending still in sight. Clinical trials are months away rather than years. “When society provides us with an opportunity to have a really good time asking fundamental questions, we owe it to society to ask if there is something we can give back,” Dr. Hammock says. “And I think John and I, along with our colleagues, have a real chance to develop something to give back to patients.”

And it’s all thanks to some caterpillars and the drive to ask basic questions. As Dr. Hammock likes to conclude in his talks, “Science is full of surprises.”
June 2, 2016 MCW News - Dawn S. Bragg, PhD, and Daisy Sahoo, PhD, have been chosen as Fellows in the Hedwig van Ameringen Executive Leadership in Academic Medicine® (ELAM) program, which prepares senior women faculty members for leadership at academic health centers. ELAM is a core program of the Institute for Women’s Health and Leadership at Drexel University College of Medicine in Philadelphia.

The one-year program’s curriculum combines traditional MBA training, such as finance and organizational theory, with activities that enhance personal and professional development around leadership, career advancement, communication and the use of information and learning technologies.

This year, competition for the 54 Fellow positions was even more competitive, as eligibility was extended to international candidates as well as to individuals from professional schools other than those of medicine (for example, schools of dentistry and public health). The selection of Drs. Bragg and Sahoo marks the first time that MCW has had two Fellows chosen, as well as the first time that MCW’s ELAM Fellows have held the Doctor of Philosophy degree.

Dr. Bragg serves as Associate Dean for Student Affairs/Diversity, Director of Measurement and Evaluation, and Associate Professor of Pediatrics. She joined MCW in 1992 as a Senior Evaluation Specialist in the Office of Educational Services and served in that office as Assistant Director and Interim Director before being named Director of Measurement and Evaluation in 2014. In this role, Dr. Bragg leads a team that ensures MCW’s curricula continue to develop, that its pedagogy achieve the desired outcomes of outstanding instruction and evaluation, that this pedagogy utilizes correct metrics and assessments, and that it is anchored by an understanding of diverse perspectives.

Dr. Bragg was named Assistant Professor of Pediatrics in 2000 and was promoted to Associate Professor of Pediatrics-Medical Education in 2008. Additionally, she served as Assistant Dean for Student Affairs/Diversity from 2004-2010 – at which time she was promoted to Associate Dean. In these two positions, Dr. Bragg has promoted an environment conducive to the teaching and enrichment of a diverse student body to become competent physicians. Dr. Bragg also has recruited students from diverse backgrounds for matriculation to MCW and directed enrichment programs which serve as pipelines to MCW for students from diverse backgrounds.

To advance her work on diversity and inclusion, Dr. Bragg serves as Co-Principal Investigator on a five-year Advancing a Healthier Wisconsin Endowment award to prepare minority students for medical school and biomedical research careers. She also is Co-Principal Investigator on a five-year grant from the National Institutes of Health’s National Heart, Lung and Blood Institute to provide biomedical research training to students underrepresented in medicine and biomedical research in preparation for medical or graduate school.

Dr. Sahoo is Vice Chair for Research (Department of Medicine) and Associate Professor of Medicine, Biochemistry, and Pharmacology & Toxicology. She became Vice Chair for Research in the Department of Medicine in September 2014 and has made a significant impact since taking on the position. More than one-third of this clinical department’s 325 faculty members are engaged in research, and Dr. Sahoo oversees their diverse research endeavors. These include clinical trials and basic and clinical/translational research projects, as well as projects based on public health, outcomes research, quality improvement and the development of educational tools.

Dr. Sahoo joined MCW as Assistant Professor in the Department of Medicine (Division of Endocrinology, Metabolism and Clinical Nutrition) in February 2007, and subsequently received secondary Assistant Professor appointments in the Department of Pharmacology & Toxicology and the Department of Biochemistry. Dr. Sahoo was named Associate Professor of Medicine, Biochemistry, and Pharmacology & Toxicology in July 2013.

**Drs. Dawn S. Bragg and Daisy Sahoo Selected as 2016-2017 ELAM Fellows**
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April 12, 2016 MCW News - Marking a first for the state, Froedtert & the Medical College of Wisconsin and Ohio-based Cleveland Clinic will join forces in an affiliation that leverages the academic, clinical and research components of both organizations. This affiliation enables both organizations to share best practices related to patient care and hospital processes.

“We are pleased and proud to be selected as an affiliate member of the Cleveland Clinic Heart & Vascular Institute,” said Cathy Buck, president of Froedtert Hospital. “By aligning our academic medical center with a world-renowned peer organization, we can bring the very best in cardiovascular care to our patients. Froedtert Hospital is the only hospital in Wisconsin and the upper Midwest to join the Cleveland Clinic Heart & Vascular Institute as an affiliate member. Cleveland Clinic’s heart program has been ranked No. 1 by U.S. News & World Report for 21 years.

As affiliates, the two organizations will remain independent but share best practices in patient care, outcomes measurement, quality reporting and clinical research. In addition, physician teams from both entities will collaborate to accelerate advances in heart care treatments and protocols.

“We have a strong cardiovascular program, and this relationship will help us take it to the next level,” said Michael Cinquegrani, MD, professor of medicine (cardiovascular) and director of Froedtert & MCW heart and vascular services. “The best get better by collaborating and learning from each other. Joining our Medical College Physicians group with a proven national performer will accelerate our progress toward having a world-class heart program here in Milwaukee to benefit people throughout the region.”

The affiliation follows the October 2015 opening of the Froedtert & MCW Center for Advanced Care, the new home of the Froedtert & MCW heart and vascular program. The program, which experienced a 170 percent increase in outpatient volume over the past 10 years, occupies the entire fourth floor of the new building and provides outpatient care for cardiology, electrophysiology, cardiac surgery, interventional radiology and vascular surgery and diagnostic services.

Needed: Obese Research Volunteers Ages 18-50 for Research Study

Aug. 31, 2016 MCW News - Researchers from the Medical College of Wisconsin and University Wisconsin-Milwaukee are performing a clinical research study assessing workplace interventions to reduce sedentary behavior in obese MCW office workers. Males and females are both encouraged to participate and must be obese (Body Mass Index or BMI of 28.0 - 44.9) and between the ages of 18-50.

Four 1-2 hour visits to the MCW Adult TRU (Froedtert Pavilion Building) for study visits, ultrasound of your arm or leg, blood tests, accelerometer activity assessments, and use of a sit-stand desk will be required. Compensation is $150 for this 27-week study.

Interested? Contact Jacquelyn Kulinski, MD, 414-955-6896 or jakulinski@mcw.edu.

Note: In order to be a qualified participant, MCW employees must meet the requirements under the "Participation as Research Subjects" Corporate policy.

Needed: Identical Twins to Study Effects of Genes & Environment on Blood Pressure

April 22, 2016 MCW News - Froedtert Hospital and the Medical College of Wisconsin (MCW) are recruiting identical twins for a clinical study that will determine what kind of modifications to one’s genetic code would lead to higher blood pressures. Mingyu Liang, MB, PhD, professor of Physiology, and Sridiva Kidambi MD, assistant professor of Medicine at the Medical College of Wisconsin, are the lead investigators for the study.

Interested participants will be asked to come to the translational research unit for study related measurements. Genetic modifications will be determined from a blood sample from each twin. Subjects will be compensated for their time.

For more information about this clinical study, call Dr. Kidambi’s office, 414-955-7472.
MCW Cardiovascular Researcher Wins Steve Cullen Healthy Heart Scholar Award

Peter C. Frommelt, MD, professor and interim chief of pediatrics in the division of cardiology at the Medical College of Wisconsin (MCW) and member of MCW’s Cardiovascular Center, is the recipient of the 2016 Steve Cullen Healthy Heart Scholar Award. This award was developed to identify and honor a junior or mid-career MCW scientist involved in cutting-edge cardiovascular research. The $25,000 award will be designated for Dr. Frommelt’s research to establish accurate, average values for heart function in children during the time the heart is relaxing and filling with blood.

Utilizing data collected from National Institutes of Health National Heart, Lung and Blood Institute’s Pediatric Heart Network, a collaboration of clinical sites and a data coordinating center created in 2001 to improve outcomes and quality of life in children with heart disease, the goal of the proposed research is to significantly improve scientific knowledge and clinical practice of children with congenital and acquired heart disease.

Among Dr. Frommelt’s major achievements is the development of intraoperative and post-operative techniques resulting in the nation’s best outcomes after surgery for hypoplastic left heart syndrome. He has earned 28 national elected/appointed leadership and committee positions and 12 such local/regional positions, and has given countless invited and peer-reviewed lectures, presentations and workshops on the local, regional, national and international level. His honors include numerous Outstanding Teacher Awards from MCW, several Standing Ovation Awards from the MCW Student Assembly, and the 2011 Outstanding Research Award in pediatric cardiology from the American Heart Association. He has co-authored 91 scientific papers and 78 research abstracts.

Dr. Frommelt received his medical degree from the University of Iowa School of Medicine, completed his residency at the University of California and a fellowship in pediatric cardiology at the University of Michigan. He joined MCW in 1991.

The Steve Cullen Healthy Heart Scholar Award is funded by proceeds from the annual Steve Cullen Healthy Heart Club Run/Walk that is held in memory of Steve Cullen, a former Milwaukee alderman, who died at the age of 40 of sudden cardiac arrhythmia. His father and two brothers also died of heart disease. The Steve Cullen Healthy Heart Club Run/Walk has grown in attendance by over 500 percent since its inception and has raised more than $400,000 for life-saving cardiovascular research and awareness. In addition to the scholarship, proceeds also support heart and vascular research at the Cardiovascular Center at MCW, where more than 100 faculty physicians and research scientists collaborate to improve cardiovascular health in Southeast Wisconsin and beyond through cutting-edge research, cost-efficient and high-quality health care delivery, rigorous training of the next generation of cardiovascular scientists, and engaging the community to eliminate disparities in health outcomes.

8th Annual “Have a Heart” Motorcycle Ride

The 8th Annual Have a Heart Motorcycle Ride was held on June 8, 2016. Approximately 120 riders showed their support on showed on this 80 degree sunny day to raise money for cardiovascular research.

Riders experienced a 70-mile scenic ride through the hills and countryside of Southeast Wisconsin. This year, almost $20,000 was raised, totaling $93,500 in proceeds for this event’s eight year history.

Many thanks to our sponsors:
- Suburban Motors Harley-Davidson
- Suburban Milwaukee HOG Chapter
- Gruber Law Offices.
CVC Golf Challenge Is A Big Success!

The 18th Annual CVC Golf Challenge took place on Monday, August 1, 2016. Ninety-two golfers came to play a scramble format on a beautiful summer day. The day began with a barbecue lunch followed by a shotgun start at noon.

After 18 holes, players returned for an elegant dinner and program, with remarks from President and CEO of the Medical College of Wisconsin, Dr. John Raymond; Director of the Cardiovascular Center, Dr. Ivor Benjamin; and Mr. Daniel Bell, a grateful patient who recently received a heart transplant at Froedtert Hospital. After an exciting silent and live auction, the event raised approximately $92,000, the highest proceeds from this event’s 18 year history!

In total, the CVC Golf Challenge has raised $1.4 million.

A special thank you to Lexus Brookfield/Lexus North Shore and AO Smith Foundation for their continued support to this event!

Congratulations to the 2016 Michael H. Keelan, Jr., MD Research Foundation Grant Recipients!

The Michael H. Keelan, Jr., MD, Research Foundation Grant is an endowment managed at the Greater Milwaukee Foundation that is designated for cardiovascular research at the Medical College of Wisconsin at the discretion of the director of the Cardiovascular Center. The fund, established by the Tendick Family, honors the life and career of Michael H. Keelan, Jr., MD, ’60, whose career as a cardiologist spanned several decades. Dr. Keelan has been known as “a cardiologist’s cardiologist” and is a member of the Cardiovascular Center board.

This Year’s $25,000 Recipients are:

**Jacquelyn Kulinski, MD**
Assistant Professor
Department of Medicine,
Cardiovascular Medicine
Cardiovascular Center
Prevention Affinity Group

*Project Title: Interventions to reduce sedentary behavior at work: A pilot study*

Sedentary behavior, such as sitting, watching TV, reading, and driving, increases the risk for a heart attack. The modern workplace fosters this sedentary behavior as 80% of American jobs are classified as sedentary. The goal of this study is to assess the ease of implementation and effects of a "sit-stand workstation", a desk designed to allow work while sitting or standing, on levels of physical activity, blood sugar and cholesterol, blood pressure, body fat, and measures of blood vessel health in a small group of people after 3 and 6 months. Results of this study will help plan the design of a larger study and may provide evidence that a sit-stand workstation decreases sedentary behavior and alters measures associated with improved heart and blood vessel health.

**Caitlin O’Meara, PhD**
Assistant Professor
Department of Physiology
Cardiovascular Center
Cardiac Biology & Heart Failure Signature Program

*Project Title: The role of Interleukin 13 in guiding cardiomyocyte cell cycle activity*

Over one million Americans suffer from a heart attack each year. Although many patients survive the initial event, a full recovery of heart function does not usually occur, in part because many heart cells do not properly regenerate. This lack of regeneration is the major focus of this project, in which a substance secreted primarily by immune cells, Interleukin 13 (IL-13), will be studied to determine its role in the activation of heart cell recovery. By understanding how regeneration occurs and what stimulates it, new treatments can be developed to activate this process in patients following a heart attack, providing an alternative to heart transplant or left ventricular assist device (LVAD) implant surgery.
A. O. Smith Family's Legacy of Support

Family is at the heart of A. O. Smith's 34-year support of MCW and its Cardiovascular Center (CVC). (Established in 1992, MCW's Cardiovascular Center focuses on improving cardiovascular health in Southeast Wisconsin and beyond.)

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

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

The CVC is housed in part of the building constructed through their father’s support. A significant area of interest for the A. O. Smith Foundation is the Cardiovascular Center Board of Directors Seed Funds program. Seed funding is used by investigators during the earliest stages of scientific research and helps pay for laboratory supplies, specialized equipment and the staff time needed to gather initial data that serve as the basis for competitive grant applications for long-term funding from the National Institutes of Health (NIH) or other extramural funding agencies.

Most recently, the A. O. Smith Foundation awarded a five-year grant to help create the A. O. Smith Fellowship Scholars Program. This unique program is designed to support talented cardiovascular researchers and physicians in an innovative educational program that aims to provide mentoring, training, research support and the necessary resources to overcome the barriers that exist to launching and sustaining a successful research career.

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

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

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

– Anthony Braza
Cardiovascular Center Seminar Series

September 21  
David Lefer, PhD  
LSU Health: New Orleans

September 28  
Andrey Sorokin, PhD  
Internal Lab Presentation  
Medical College of Wisconsin

October 12  
Pedro Jose, PhD  
George Washington University

November 2  
Allen Cowley, Jr., PhD  
Internal Lab Presentation by Louise Evans, Postdoctoral Fellow  
Medical College of Wisconsin

November 9  
Amanda LeBlanc, PhD  
University of Louisville

December 14  
Jessica Fetterman, PhD  
Boston University School of Medicine

January 18  
Leslie Leinwand, PhD  
University of Colorado Boulder

walk with heart.  
sunday, september 18  
american heart association heart & stroke walk

The 2016 Milwaukee Heart Walk will be held on Sunday, September 18. Last year, MCW had 376 registered walkers and raised more than $18,000 – and we hope to exceed those totals in 2016. In the past 5 years (2010-2014), MCW received funding for 29 research studies totaling $2,997,592. This research has led to many lifesaving discoveries, but many medical challenges remain.

Participants can enjoy a 1 or 3-mile walk or 5k Fun Run at Veterans Park on Milwaukee's lakefront:
- 5k Fun Run at 8:15 a.m.
- Opening ceremonies at 10 a.m.
- 1 & 3 mile walk routes at 10:10 a.m.

The event will feature music, food, survivor tributes, kid's zone, free health screenings & more.

A special “thank you” to everyone who provided suggestions and feedback for our Fall 2016 and Spring 2017 seminar speakers!
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Research Interests</th>
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<tbody>
<tr>
<td><strong>Lisa Baumann Kreuziger, MD, MS</strong></td>
<td>Assistant Professor, Medicine Division of Hematology/Oncology</td>
<td>Mechanisms, prevention and management of thrombosis in patients with left ventricular assist devices.</td>
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<tr>
<td><strong>Susan Cohen, MD</strong></td>
<td>Assistant Professor, Pediatrics Division of Neonatology</td>
<td>Neonatal metabolic responses that predispose to cerebrovascular disease later in life.</td>
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<tr>
<td><strong>Ulrike Kappes, MD, PhD, MPH</strong></td>
<td>Assistant Professor, Medicine CLIA-Laboratory Director Clinical Sequencing Laboratory</td>
<td>The whole exome/whole genome sequencing in humans and the clinical interpretation of variants as it applies to cardiovascular disease.</td>
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<tr>
<td><strong>Debra K. Newman, PhD</strong></td>
<td>Senior Investigator, Blood Center of Wisconsin Microbiology &amp; Molecular Genetics, Blood Research Institute</td>
<td>Determining the extent to which deficiencies in platelet number or function contribute to excessive bleeding in the setting of neonatal cardiac surgery.</td>
</tr>
<tr>
<td><strong>Max Wohlauer, MD</strong></td>
<td>Assistant Professor, Surgery Division of Vascular Surgery</td>
<td>Further determining the mechanisms linking inflammation and coagulation.</td>
</tr>
<tr>
<td><strong>Caitlin O’Meara, PhD</strong></td>
<td>Assistant Professor, Physiology</td>
<td>Role of IL-13 in a neonatal model of heart regeneration and delineation and possible therapeutic capabilities of the cell-type specific effects of IL-13 in post-MI injury.</td>
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MCW Cardiovascular Center
Health Research Center (HRC) 4th Floor
Medical College of Wisconsin
8701 Watertown Plank Road
Milwaukee, WI 53226
Phone: 414-955-5611
Fax: 414-955-6515

To become a CVC member:
http://www.mcw.edu/Cardiovascular-Center/Membership-Guidelines.htm

Vision

The Cardiovascular Center at Froedtert Hospital & the Medical College of Wisconsin aims to become the premier integrated basic and translational academic organization in the United States.

Mission

To improve cardiovascular health in Southeast Wisconsin and beyond through cutting-edge research, cost-efficient and high-quality healthcare delivery, rigorous training of the next generation of cardiovascular scientists, and engaging the community to eliminate disparities in health outcomes.

Credits

Content, Layout
Allison DeVan, PhD
Academic Program & Research Consultant
Cardiovascular Center

News
Richard Katschke
Maureen Remmel

Editing
Anthony Braza
Internal Communications Editor
Communications Office

Newsletter Title
Shirley Wayne, MBA
Clinical Research Coordinator
CIBMTR

For questions or additional information please contact Allison DeVan at adevan@mcw.edu; 414-955-5617