



The Director's Corner

The beginning of each new year provides us with a few moments to deeply and quietly reflect on each of our many accomplishments and the achievements of the Cardiovascular Center in the past 12 months. With our 25th anniversary just around the corner, I wish to extend a personal invitation for each and every one of you to attend the CVC's Town Hall Meeting on Dec 20 at 1 p.m. in our main Conference Room. Your valuable input and feedback on the CVC's past and future initiatives is sincerely appreciated!

*Ivor J. Benjamin, MD
Director of the CVC*



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External Scientific Advisory Board Report Provides Recommendations for the Cardiovascular Center

As a "Green Center," the Cardiovascular Center is evaluated at least annually by an External Scientific Advisory Board (ESAB) composed of international leaders in cardiovascular research, education, clinical care and community engagement.

In late Spring, members of the ESAB received an extensive orientation packet and visited the CVC, learning about the Center, meeting its members, and visiting with institutional leadership. They attended the CVC's Research Retreat held at the Harley-Davidson Museum in downtown Milwaukee. In late Summer, we received their recommendations and shared them with all CVC members and affiliates.

December's Town Hall Meeting will give CVC members an opportunity to learn more about the ESAB's report and to discuss the CVC's response to the report and other future initiatives.

Key recommendations by the ESAB include:

- Invest heavily in Signature Programs to support collaborative funding applications
- Enhance clinical integration
- Initiate and participate in strategic hires of translational scientists and a population health scientist
- Build partnerships with satellite sites, new colleges, and the Office of Technology Development
- Enhance the CVC's identity, increase visibility, and promote shared decision-making and evaluation across programs
- Create a Community Engagement Advisory Board and support community health initiatives.

Please Join Us for Our
Cardiovascular Center Town Hall Meeting
 Tuesday, Dec 20, 1 p.m., H4940/H4950
 to learn about the CVC's upcoming initiatives & to provide your valuable feedback

From the Cardiovascular Center Board Chair



As the new CVC board chair, I am honored to serve as the 8th chair since the board's inception almost 25 years ago. I look forward to approaching the new year with energized board members who are actively engaged in raising funds for cardiovascular research. We are planning to host three signature events in 2017, including the 21st annual Steve Cullen Healthy Heart Run/Walk on February 11; the Have a Heart Motorcycle Ride on June 10; and the 19th annual CVC Golf Challenge on July 24. In

addition to planning successful events, the CVC will be celebrating 25 years in 2017. Exciting celebration plans are underway, and I look forward to sharing more details in the near future. I wish all staff, faculty and partners of the CVC a very happy holiday season and blessed new year. Thank you to everyone who supports the important mission of the CVC to improve cardiovascular health through innovative, cutting-edge research and cost-efficient healthcare delivery. I look forward to new challenges and goals to pursue in the upcoming year.

-Bruce Smith

2016 Convocation and Research Day Highlight Efforts, Achievements

Sept. 23, 2016 MCW News - On Sept. 21, the Medical College held its annual Convocation event and daylong Research Day Poster Session. The Convocation ceremony recognizes faculty members for their honors and accomplishments over the past academic year.

The Convocation address was delivered by Beth A. Drolet, MD, interim chair for the Department of Dermatology at MCW and chief experience officer, medical director of birthmarks and vascular anomalies at Children's Hospital of Wisconsin.

The day long Research Day Poster sessions was sponsored by the Office of Research.

Those who won awards during the Research Day Poster sessions include:

Clinical Fellows and Resident Awardees

Basic Research – Vaishali Singh – Pediatric Nephrology (winner)

Basic Research -- Manav Bhalla – Diagnostic Radiology (runner up)

Non-Basic Research – Guru Murthy, Hematology-Oncology (winner)

Non-Basic Research -- Jared Robbins, Radiation Oncology (runner up)

Junior Faculty Awardees

Basic Research – Oleg Palygin, Physiology (winner)

Basic Research -- Muthusamy Kunnimalaiyaan, Surgery (runner up)

Non-Basic Research – Andrew Kastenmeier, Surgery (winner)

Non-Basic Research -- Timothy Ridolfi, Surgery (runner up)

Certificate winners

#1 – Senior Faculty – Basic – Erwin Cabacungan, Physiology

#2 – Senior Faculty – Basic – Donald Jacobson, Radiology

#1 – Senior Faculty – Non-Basic – Parag Patel, Radiology

#1 – Senior Faculty – Non-Basic - Sean Tutton, Radiology

#2 – Senior Faculty – Non-Basic – Eric Hohenwalter, Radiology

#1 – Research Staff – Robyn Oldham, Pediatrics

#2 – Research Staff – **Michael Grzybowski**, Physiology

MCW Team Participates in International Workshop on EPR in Biology and Medicine

Oct. 17, 2016 MCW News - MCW researchers participated in the 10th International Workshop on EPR in Biology and Medicine, held Oct. 2-6. **Balaraman Kalyanaraman, PhD**, chair and professor of biophysics and Harry R. and Angeline E. Quadracci Professor in Parkinson's Research, co-chaired the event.

The conference was jointly organized by the Jagiellonian University, the University of Pittsburgh and the Medical College of Wisconsin. One of the co-chairs was Tadeusz Sarna, PhD, professor of biophysics at Jagiellonian University and visiting professor in the MCW department of ophthalmology. Jane Thelaner, sr. administrative assistant, helped to coordinate the meeting.

The objectives of the workshop were to review progress in EPR instrumentation and methodology and cover selected topics of biomedical applications of advanced EPR spectroscopy, such as metals in biology, distance

measurements by site-directed spin labeling, synthesis and use of new spin labels and spin traps in biological research, reactive oxygen and nitrogen species and oxidative damage, EPR imaging, oximetry, free radicals and excited state species in photobiology, advanced optical imaging, and fluorescence detection. James Hyde, PhD, The James S. Hyde Professor Emeritus of Biophysics, and former director of the National Biomedical EPR Center, delivered the keynote presentation.

Speakers from biophysics at MCW included Jim Feix, PhD, professor; Dr. Kalyanaraman; Candice Klug, PhD, professor; W. Karol Subczynski, PhD, professor; Jeannette Vasquez Vivar, PhD, professor; and Jacek Zielonka, PhD, research director. Additional speakers from MCW included: **Ivor Benjamin, MD**, professor of medicine and director of the Cardiovascular Center; **Albert Girotti, PhD**, professor of biochemistry; and Witold

Korytowski, PhD, assistant professor of biochemistry.

Arrangements have been made with Larry Berliner, editor-in-chief of *Cell Biochemistry and Biophysics (CBB)* to publish a special issue devoted to the workshop.

This was the tenth EPR workshop organized in Krakow since 1989. The 1st International EPR Workshop was organized by Dr. Karol Subczynski (who was then on the faculty of biophysics at Jagiellonian University) in conjunction with the conferment of the honorary doctorate degree from Jagiellonian University to Prof. James Hyde. This collaborative effort between MCW and Jagiellonian University researchers has resulted in hundreds of scientific publications, recruitment of graduate students, post-doctoral fellows and visiting professors to MCW.

The Cardiovascular Center is a proud sponsor of this event.

Dr. Lombard Receives NIH Grant to Investigate Genetic Factors in Cardiovascular Disease

The Medical College of Wisconsin (MCW) received a four-year, \$1.7 million grant from the National Institutes of Health's National Heart, Lung, and Blood Institute to investigate genetic factors involved with cardiovascular diseases.

Julian H. Lombard, PhD, professor of physiology at MCW, is the principal investigator of the grant.



Diets that are high in salt are associated with high blood pressure and other diseases that adversely affect the function of blood vessels. Oxidant stress, a disruption in the normal chemistry balance in the body's cells, can cause stress in blood vessels and impair the ability to grow new blood vessels. Oxidant stress often occurs in individuals with a high salt diet and plays a major role in many cardiovascular diseases.

A particular gene, NRF2, is associated with the regulation of multiple proteins that protect against oxidant stress. However, when the protective properties regulated by the NRF2 gene are suppressed or defective, many diseases can occur in the human body. The NRF2 cell protective system has been found to be involved, either directly or indirectly, in more than 200 different human diseases.

The proposed study will assess the impact of the genetic absence of NRF2 to determine the gene's role in restoring normal function of blood vessels that are adversely affected by a high salt diet. The researchers will also explore the potential use of directly stimulating NRF2 as a therapeutic strategy to combat oxidant stress and promote blood vessel growth for those affected by cardiovascular diseases.

Roy L. Silverstein, MD, Elected as New Leadership to American Society of Hematology

Oct. 27, 2016 MCW News - The American Society of Hematology (ASH), the world's largest professional society concerned with the causes and treatment of blood disorders, today announced the election of four new members to its Executive Committee for terms beginning after the 2016 ASH Annual Meeting December 3-6 in San Diego.

Roy L. Silverstein, MD, will serve a one-year term as vice president followed by successive terms as president-elect and president. Robert A. Brodsky, MD, will serve a four-year term as secretary, and John C. Byrd, MD, and Cynthia E. Dunbar, MD, will each serve four-year terms as councilors.

"Hematologists are at the forefront of cutting-edge advancements in science and patient care, and as the premier professional society for the field, ASH plays an important role in providing high-quality training, education, and research. All of these attributes require support and strong leadership to develop and grow," said 2016 ASH President Charles S. Abrams, MD, of the University of Pennsylvania. "Drs. Silverstein, Brodsky, Byrd, and Dunbar have demonstrated impressive commitment to hematology and to the Society through their years of service as editors, program leaders, and mentors. These experiences, coupled with their breadth of knowledge in hematology, will shape the future of the field."

Dr. Silverstein is the John and Linda Mellowes Professor and Chair, Department of Medicine at the Medical College of Wisconsin (MCW) in Milwaukee, where he also serves as the associate director for the MCW Cancer Center. Dr. Silverstein is also senior investigator for the Blood Research Institute at BloodCenter of Wisconsin. His research interests include clinical non-malignant hematology translational research on the molecular, cellular,

and genetic causes of thrombosis; angiogenesis; and atherosclerosis.



Dr. Silverstein has been an ASH member for more than 30 years, and during that time he has served in various leadership roles in virtually all aspects of the Society. Recently, he chaired the search committees for founding editor-in-chiefs of *ASH Clinical News* and the Society's new journal, *Blood Advances*. He has served as the editor-in-chief of *The Hematologist*, chaired the Society's Committee on Government Affairs, and co-chaired the 2012 ASH Annual Meeting Scientific Program. Dr. Silverstein is also a past member of the Society's Committees on Educational Affairs and Training. As vice president of ASH, Dr. Silverstein will aim to engage the Society's members to examine hematology training and develop innovative pathways for clinicians and researchers to successfully enter the field. He plans to lead ASH as a forceful advocate for continuing to invest in hematology research and in support of training and practice.

The [American Society of Hematology \(ASH\)](#) is the world's largest professional society of hematologists dedicated to furthering the understanding, diagnosis, treatment, and prevention of disorders affecting the blood. For more than 50 years, the Society has led the development of hematology as a discipline by promoting research, patient care, education, training, and advocacy in hematology. The official journal of ASH is [Blood](#), the most cited peer-reviewed publication in the field, which is available weekly in print and online.

Annual Graduate School Research Poster Session a Huge Success

Oct. 19, 2016 MCW News - Research presented by graduate students and postdoctoral fellows became the center of attention on Thursday, Oct. 6, at the 26th annual Graduate School Research Poster Session. Faculty, staff, students and postdoctoral fellows took part in the celebration of scientific progress and accomplishments of 87 presenters highlighting work across the MCW.



A genuine thank you is extended to all who contributed to the success of this year's event. A special thank you is

also extended to the MCW/Marquette Alumni Association for its continued contribution toward financial awards and the Friends of MCW for their contribution towards student awards.

Congratulations to the following Cardiovascular Center trainees who won awards:

- Shauna Rasmussen, Graduate Student in Physiology, Advisor: Aron Geurts, PhD
- Raman Kutty, Graduate Student in Cell Biology, Neurobiology and Anatomy, Advisor: Ramani Ramchandran, PhD
- Michael Olp, Graduate Student in Biochemistry, Advisor: Brian Smith, PhD
- Matthew Waas, Graduate Student in Biochemistry, Advisor: Rebekah Gundry, PhD
- Dawid Chabowski, Graduate Student in Pharmacology and Toxicology, Advisor: David Gutterman, MD
- Mike Tanner, PhD, Postdoctoral Fellow in Medicine, Advisor: Michael Widlansky, MD, MPH
- Justine Abais-Battad, PhD, Postdoctoral Fellow in Physiology, Advisor: David Mattson, PhD

2016 Medical Student Research Day Poster Contest: Many Winners from the Cardiovascular Center

Nov. 4, 2016 MCW News - Congratulations to the 14 medical student summer research fellows who were selected winners of the Dr. Michael J. Dunn Poster Contest Awards at the Medical Student Research Day Poster Session held Oct. 13. Winners were selected from a group of 111 presenters, all of whom participated in the Medical Student Summer Research Training Program this past summer.

The training program is directed by **Dr. David R. Harder**, Kohler Company Professor of Cardiovascular Research, professor of physiology and associate dean for research. More than 52 MCW faculty served as referees for the contest.

The posters were scored on the basis of originality and innovativeness, experimental design and methodology, results and conclusions and overall impression. The top 10 posters were selected; 2 posters tied for the 8th place, three tied for 9th and two tied for 10th. Each awardee received a \$500 prize.

The Medical Student Summer Research Program provides an opportunity for first- and second-year medical students to work hands-on a variety of basic science, clinical or translational research investigations currently underway on our campus. Working as a member of a research team, the trainees gain new research tools, explore research and academic medicine as a career choice, and develop lasting mentoring relationships with their preceptors.

The program is supported through several NIH grants, as well as other local, state and regional organizations, the Friends of MCW, the Dr. Michael J. Dunn Summer Research Fellowship Awards, the Class of 2001 Scott Sprtel Summer Research Award and many Medical College of Wisconsin departments and research centers.

The Cardiovascular Center is proud to report that our 9 of the 14 winners are our trainees!

Congratulations to:

- Jennifer Gray (Mentor: Girija Konduri, MD)
- Merrill Rubens (Mentor: Srividya Kidambi, MD)
- Xavier Glover (Mentor: John Imig, PhD)
- Thomas Hirsch (Mentor: Brian Smith, PhD)
- Scott Sandy (Mentor: Aron Geurts, PhD)
- Kristen Winsor (Mentor: Alexander Staruschenko, PhD)
- Matthew Wright (Mentor: Susan Cohen, MD)
- Tae Kyu "Brian" Uhm (Mentor: Ramani Ramchandran, PhD)
- Sophie Miller (Mentor: Alison Kriegel, PhD)

A. O. Smith Postdoctoral Fellowship in Cardiovascular Sciences

A two-year **A. O. Smith Postdoctoral Fellowship** (with the possibility of a third year of support) is available in the **Medical College of Wisconsin Cardiovascular Center**, Milwaukee, Wisconsin, in one of five major areas of research:

- Atherosclerosis and Thrombosis
- Cardiac Biology and Heart Failure
- Precision Cardiovascular Medicine
- Hypertension
- Vascular Biology



The A. O. Smith postdoctoral fellow will receive personalized training within multidisciplinary mentoring teams led by exceptional faculty mentors. Fellows will create and follow an individualized development plan (IDP), conduct research studies, attend required courses/seminars, write grants, publish manuscripts, present oral presentations locally and nationally, and learn other skills necessary for a successful career in cardiovascular research or a closely-related field. Clinical scholars will have protected time for research. Per NIH guidelines, the postdoctoral fellow must be a U.S. citizen or permanent resident.

Applicants should be highly-motivated, ambitious, productive, and have (or anticipate having) a PhD, PharmD, MD, or DO in a relevant research area such as biology, molecular biology, genetics, immunology, biochemistry, pharmacology, or physiology with a strong track record of, and a keen interest in, at least one of the five research areas. Stipends begin at \$50,000 (stipends determined by years of experience).

TO APPLY: Interested applicants should apply online through MCW Human Resources **ONLY** (Requisition ID: 20965; www.mcw.edu/Human-Resources.htm). Submit copies of your:

- curriculum vitae and contact information for 3 references
- statement of research interests, including preference for 1 of the 5 major research areas
 - and mention of where you learned about the fellowship.

For questions specific to the fellowship, contact Allison DeVan, PhD, adevan@mcw.edu.

For more info & list of mentors, visit our Facebook page at

<http://tinyurl.com/CVCpostdoc>



The Cardiovascular Center (CVC) is directed by Ivor Benjamin, MD. Last year, members of the CVC published more than 340 scientific articles in peer-reviewed journals, were awarded more than \$43.5 million in total funding, with \$21.3 million being funded by NHLBI, and mentored more than 50 trainees. The mission of the CVC is 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.

Seeking Participants for Clinical Studies

Healthy Non-Athletes, Ages 18-40

Nov. 21, 2016 MCW News - Researchers from the Medical College of Wisconsin are performing a clinical research study on the effects of exercise on the heart and blood vessels. Males and females are both invited to participate and must be 18-40 years old, have a body mass index of <30 and not regularly exercise. Three visits (a screening visit and two study visits) to Froedtert Hospital are required.

Each subject will undergo one blood draw and two fat biopsies. Half of the subjects will also take part in two ultrasound exams and two weight-lifting sessions. All subjects will take lipoic acid, an over-the-counter dietary supplement, for approximately 5 weeks.

Subjects will be compensated \$50 for each ultrasound exam, \$75 for the first tissue biopsy, and \$100 for the second tissue biopsy.

Interested? Contact **Andy Kadlec**: 955-7548 or akadlec@mcw.edu

Body Mass Index of 28.0-44.9, Ages 18-50

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.

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 **Srividya 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 Community Makes a Difference at American Heart Association Heart & Stroke Walk

Sept. 30, 2016
MCW News - On Sunday, Sept. 18, more than 1,300 individual represented MCW and Froedtert at the 2016 Milwaukee Heart & Stroke Walk and 5k Fun Run at Veterans Park on Milwaukee's lakefront. Members of the MCW & Froedtert



teams were easily identifiable among participants due to their light blue t-shirts.

More than 491 members of the MCW community – including employees, their family members and friends – raised more than \$13,500 this year for the American Heart Association.

Thank you to everyone who participated!



Community Engagement

Welcome!

Carol A. Everson, PhD
 professor, Department of
 Medicine
 Division of Endocrinology



Her research interests include determining how the restriction of sleep, a basic biological requirement, affects the functions of cells, processes and systems in ways that increase the risk of disease, such as cardiovascular disease, osteoporosis, and cancer. Areas of study include mediation of cell injury and inflammatory processes by sleep, abnormalities in blood cell production and bone metabolism resulting from sleep restriction and changes to brain injury status by sleep augmentation and sleep restriction.

Quinn H Hogan, MD
 professor, Department of
 Anesthesiology
 Director of Pain Research



His research interests include identifying disrupted functions of sensory neurons following injury and exploring novel therapies for pain. More specifically, he studies the identification of membrane biophysics to evaluate neuronal function in the absence of dissociation, characterizing cytoplasmic calcium signals in membrane activation, identifying the basic mechanisms of pain and emphasizing the importance of valid behavioral testing as a necessary criterion for relevant pain study.

Hongwei Yu, MD
 associate professor,
 Department of
 Anesthesiology



Dr. Yu's research focuses on gene and cell therapy in chronic pain including DRG transplantation of mesenchymal stem cells for targeted cell therapy for neuropathic pain, neuronal and glia transduction by AAVshH10 in the dorsal root ganglion and spinal cord, and peripheral nerve injury in the loss of nociceptive neuron-specific Gai-interacting protein (GINIP) primarily using rodent models.

Cardiovascular Center Seminar Series

December 14	Jessica Fetterman, PhD Boston University School of Medicine
January 18	Leslie Leinwand, PhD University of Colorado Boulder
February 15	Paul Brookes, PhD University of Rochester Medical Center
March 15	Elizabeth Murphy, PhD NIH/NHLBI
April 12	Lynn Nedrick, PhD La Jolla Institute
May 24	Merry Lindsey, PhD University of Mississippi Medical Center
June 13	Paul Schumacker, PhD Northwestern University Medical Center

Hunger Task Force Hot Cocoa Drive 2016

The **Cardiovascular Center** brought in 50 boxes of hot cocoa plus other food items! Thank you for donating!

Cardiovascular Center Events

December 15, 2016	MCW Holiday Party 4 p.m. to 6 p.m. MCW Cafeteria
December 20, 2016	CVC Town Hall Meeting 1 p.m. H4940/4950
January, Day TBD, 2017	CVC Holiday Luncheon Time TBD, H4940
February 11, 2017	21st Annual Steve Cullen Healthy Heart Club Run & Walk 8K Run & 2 Mile Run/Walk supporting Cardiovascular Research at MCW Registration now open— cullenrun.com
April 21, 2017	Cardiovascular Center Research Retreat Harley Davidson Museum

Events



A special
“thank you”
to everyone
who
provided
suggestions
and
feedback
for our Fall
2016 and
Spring
2017
seminar
speakers!

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



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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

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