



**CARDIOVASCULAR  
CENTER**

# **2019 Annual Report**

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**MEDICAL  
COLLEGE®  
OF WISCONSIN**

**CARDIOVASCULAR  
CENTER**



**Ivor J. Benjamin, MD**  
Director

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Improving  
**CARDIOVASCULAR  
HEALTH**  
in  
Southeast Wisconsin  
and beyond

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Milwaukee, WI 53226  
414.955.6716

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## ABOUT US

The Cardiovascular Center (CVC), founded in 1992 at the Medical College of Wisconsin (MCW), is at the forefront of scientific discovery and innovative clinical care. Over 33,000 ft<sup>2</sup> of space is dedicated to the center's laboratories, offices, conference rooms, and equipment cores. The CVC is staffed by full- and part-time personnel who maintain core equipment, coordinate academic research, funding, and community outreach initiatives, and provide support to the more than 160 CVC members from 25 departments and institutes on the Milwaukee Regional Medical Campus and Clinical Translational Science Institute of Southeast Wisconsin-affiliated institutions.

**The CVC's mission is 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.**

The CVC's vision is to become the premier integrated basic and translational academic cardiovascular organization in the United States. At the CVC, an emphasis is placed on collaborative, multidisciplinary research at basic, clinical, and community/population levels centered around our faculty's expertise in thematic areas of research called Signature Programs and Affinity Groups.

The CVC is directed by Ivor Benjamin, MD, Professor of Medicine at MCW, who has over 25 years of experience and expertise leading cardiovascular clinical and research programs. David Gutterman, MD, the Senior Associate Director of the CVC and Northwestern Mutual Professor in Cardiology, also brings more than 25 years of experience including 8 years as Senior Associate Dean for Research with broad responsibility over basic, clinical, and population/outcomes research development and infrastructure. In 2019, the CVC welcomed two new Associate Directors, Curt Sigmund, PhD, the James J. Smith and Catherine Welsch Smith Professor and Chair of Physiology and Mary Sorci-Thomas, PhD, Professor of Medicine-Endocrinology. Together they bring decades of experience with NIH program project grants (PPGs) to oversee the CVC's team science grants initiative and a history of mentoring diverse successful trainees to broaden and strengthen our training program. Moreover, as a "Green Center", the CVC is also guided by an external scientific advisory board, internal scientific advisory board, institutional leadership, and feedback from its members and the CVC Board.

Along with its exceptional leadership, the CVC benefits from excellent institutional support including a \$4 million grant from the Advancing a Healthier Wisconsin Endowment, extramural support from NIH which includes a National Heart, Lung, and Blood Institute T32 training grant, and from philanthropic gifts by the A. O. Smith Foundation, the Michael H. Keelan, Jr., MD, Cardiovascular Research Fund through the Greater Milwaukee Foundation, Smith Family, and the Cullen Family Healthy Heart Research Program, among others.

This year, members of the CVC have been awarded more than \$85 million in total research funding, leading the state with over \$40 million in federal research funding, published more than 500 peer-reviewed research publications, and mentored more than 175 medical or graduate students and postdoctoral or clinical research fellows.

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[Link](https://mcw.box.com/shared/static/litxivsp8zbacuh1kxslbtft5eqmdho.pdf) to CVC's 2019 External Scientific Advisory Board Report:  
<https://mcw.box.com/shared/static/litxivsp8zbacuh1kxslbtft5eqmdho.pdf>

*Improving cardiovascular health in southeast Wisconsin & beyond*





# Overview & Administration



## A CLEAR VISION

To Become a Comprehensive Cardiovascular Center of Excellence

To be the premier cardiovascular center from DISCOVERY SCIENCE to PATIENT CARE and to eliminate disparities in HEALTH OUTCOMES.

## MCW Cardiovascular Center Year in Review

**27 YEARS** AS A CENTER

**163 MEMBERS** WHO ARE RESEARCHERS AND DOCTORS

**#1** IN WI FOR FEDERAL DOLLARS FOR CARDIOVASCULAR RESEARCH

OVER **400 RESEARCH PROJECTS**

**\$85M** IN FUNDING (TOTAL COSTS)

OVER **500 PUBLICATIONS** IN PEER-REVIEWED SCIENTIFIC JOURNALS

**194 FUNDED** NEW RESEARCH PROPOSALS

MENTORED OVER **175 TRAINEES**

OVER **60 CLINICAL TRIALS**

OVER **25 DEPARTMENTS/INSTITUTES**

# Administration

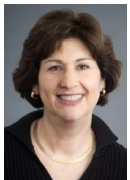


**Ivor J. Benjamin, MD, FAHA, FACC**  
**Director**

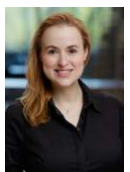
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Cell Biology, Neurobiology & Anatomy  
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Alexis Visotcky, MS, Biostatistical Analyst, avisotcky@mcw.edu, x4190



## 2017 Marked 25 Years of Cardiovascular Excellence



MCW Leadership  
with Past &  
Present  
Cardiovascular  
Center Directors  
in 2017

(L-R) Drs. Joseph Kerschner, David Harder, Allen Cowley, Jr., Ivor Benjamin, and John Raymond, Sr.



Ivor J. Benjamin, MD, FAHA, FACC  
Director of Cardiovascular Center  
Professor of Medicine, Physiology,  
Pharmacology & Toxicology,  
Surgery, Cell Biology,  
Neurobiology & Anatomy  
Medical College of Wisconsin

### **Dr. Ivor Benjamin, Director of the Cardiovascular Center, Named 2018-2019 American Heart Association President**

“I am humbled and honored to be nominated for such major leadership roles in the American Heart Association, the largest professional organization commitment to the prevention, detection and treatment of heart disease and stroke both nationally and internationally,” Benjamin said.

“Congratulations to Dr. Ivor J. Benjamin on his election as president of the American Heart Association,” said Joseph E. Kerschner, dean of the school of medicine, provost and executive vice president of MCW. “Under his leadership in the past four years as director of MCW’s Cardiovascular Center, we have created Signature Programs that serve as an incubator for driving the continuum of how research can be leveraged for quality patient care that improves the community’s cardiovascular health.”

“Dr. Ivor Benjamin is recognized internationally as a thought leader in cardiovascular medicine and research, and we are extremely pleased that he will share his talents and expertise on the national stage as president of the American Heart Association,” said John R. Raymond, Sr., MD, MCW President and CEO.

# Two New Associate Directors Welcomed in 2019

## Dr. Curt Sigmund, CVC Associate Director



December 2018: The Cardiovascular Center (CVC) is pleased to announce the appointment of **Curt D. Sigmund, PhD**, as an Associate Director of the CVC. Dr. Sigmund is the incoming Professor and Chair of the Department of Physiology at the Medical College of Wisconsin, effective early 2019. Dr. Sigmund currently serves as Professor and Roy J. Carver Chair in Hypertension Research; Director, Chair and Department Executive Officer, Department of Pharmacology;

UIHC Center for Hypertension Research at the Roy J. and Lucille A. Carver College of Medicine at the University of Iowa.

Dr. Sigmund's major areas of research focus on central nervous system and vascular mechanisms of blood pressure regulation by the renin-angiotensin system, the transcription factor PPAR-gamma, and its downstream effectors Cullin-3/RhoBTB1, investigating these using a combination of molecular biological, genetic and physiological approaches including the generation of unique transgenic and knockout models.

He has published over 250 papers, chapters, and reviews and has trained over 50 PhD students and postdoctoral fellows many

of whom hold research and faculty positions nationally and internationally. In addition, Dr. Sigmund has held numerous leadership roles in prominent societies. He recently was elected to serve a two-year term as the new Chair-Elect of the American Heart Association Council on Hypertension and is currently the Chair of the Publications Committee of the American Physiological Society (APS) acting as Associate Editor and Editor-in-Chief for several APS journals in recent years. For the Cardiovascular Center, he served on the External Scientific Review Board from 2016-2017.

Bringing a wealth of expertise in NIH program project and center grants, Dr. Sigmund has served as a regular member of the NHLBI Project Grant (PPG) Review Committee, has directed multiple PPG's over the last two decades, and is the current director of a PPG studying the genetic and signaling mechanisms in the central regulation of blood pressure and obesity. As an Associate Director, Dr. Sigmund will focus on enhancing the synergies within similar CVC programmatic initiatives.

Dr. Sigmund's laboratory will be located within the Cardiovascular Center in the Health Research Center building. The Cardiovascular Center wishes to express our excitement as we embark on this new journey to advance the greater impact of cardiovascular science and research at the Medical College of Wisconsin.

## Dr. Mary Sorci-Thomas, CVC Associate Director



February 2020: **Mary G. Sorci-Thomas, PhD**, FAHA, professor of medicine in the division of endocrinology, is joining the leadership of the Cardiovascular Center at the Medical College of Wisconsin. Already an integral member of the Center, she is the co-leader of the Cardiovascular Center's Atherosclerosis, Thrombosis, and Vascular Biology Signature Program, associate director of the T32 Postdoctoral Training Program in Cardiovascular Sciences, founding member of

the CVC's Space and Equipment Committee, and faculty chair of the CVC's 2017 Research Retreat.

She earned an undergraduate degree in chemistry/biology from Louisiana State University in Baton Rouge and a PhD in biochemistry from Wake Forest University. During her postdoctoral training in molecular biology at State University of New York at Stony Brook, she was awarded a competitive prestigious individual training fellowship from the National Institutes of Health (NIH).

Prior to joining the CVC in 2014, she was a professor of pathology at Wake Forest University. She has been continuously funded for over 30 years by NIH, has written over 85 peer-reviewed papers, serves on the editorial boards for the Journal of Lipid Research as well as Arteriosclerosis, Thrombosis, and Vascular Biology, and is the Chair for the American Heart Association's Council on Arteriosclerosis, Thrombosis, and Vascular Biology.

For 29 years, she has directed a basic research laboratory that focuses on the molecular mechanisms involved in high density lipoprotein apoA-I-mediated protection against the progression of human disease. Her laboratory is particularly interested in the role apoA-I plays in modulating cellular cholesterol levels and the impact of this process on immune cell function and the development of atherosclerosis, autoimmunity and obesity.

In her newest role in the Cardiovascular Center, Dr. Sorci-Thomas will provide administrative oversight of trainee-related initiatives. She joins Ivor Benjamin, MD, professor of medicine and director of the Cardiovascular Center, David Gutterman, MD, the Northwestern Mutual Professor of Cardiology (Sr. Associate Director), and Curt Sigmund, PhD, James J. Smith & Catherine Welsch Smith Professor and Chair of Physiology (Associate Director).



## The CVC is a MCW “Green Center”

1. It is a high priority focus area and meets critical needs of MCW
2. Provides a focal point for a specific research agenda
3. Promotes multi-investigator, multi-disciplinary research and funding opportunities
4. Advances cross-departmental research
5. Sustains research infrastructure and technology for focus area

The CVC has multiple levels of review and seeks input from:



# External Scientific Advisory Board



## ESAB CHAIR

### David G. Harrison, MD

Vanderbilt University  
Director of the Division of Clinical Pharmacology  
Director of the Center for Vascular Biology  
Betty and Jack Bailey Professor of Medicine and Pharmacology



### Donna K. Arnett, PhD, MSPH

University of Kentucky  
Dean of the College of Public Health  
2012-2013 President of the American Heart Association



### Jean-Bernard Durand, MD

Professor of Medicine  
University of Texas MD Anderson Cancer Center  
Department of Cardiology  
Medical Director, Cardiomyopathy Services  
Director, Cardiovascular Genetics Research



### Elizabeth M. McNally, MD, PhD

Northwestern University  
Director of the Center for Genetic Medicine  
Elizabeth J. Ward Professor of Genetic Medicine  
Professor of Medicine in Cardiology, Biochemistry and Molecular Genetics



### Elizabeth Murphy, PhD

National Heart, Lung and Blood Institute  
Senior Investigator  
Head of Cardiac Physiology Section  
Laboratory of Cardiac Physiology



### Peipei Ping, PhD

University of California, Los Angeles  
Professor of Physiology  
Professor of Medicine/Cardiology, and Bioinformatics  
Director of NIH BD2K Center of Excellence at UCLA  
Director of NIH BD2K Centers-Coordination Center at UCLA



### David J. Pinsky, MD

University of Michigan Medical School  
Director and Science Lead of Frankel Cardiovascular Center  
Division Chief of Cardiovascular Medicine  
Professor of Internal Medicine in Cardiology



### Daniel J. Rader, MD

University of Pennsylvania, Perelman School of Medicine  
Chair of the Department of Genetics  
Division Chief of Translational Medicine and Human Genetics  
Associate Director, Institute for Translational Medicine and Therapeutics  
Seymour Gray Professor of Molecular Medicine

# External Scientific Advisory Board

## Cardiovascular Center Welcomes Two New External Scientific Advisory Board Members



**April 11, 2019**—The Cardiovascular Center at the Medical College of Wisconsin is pleased to announce two new members joining its External Scientific Advisory Board (ESAB). Peipei Ping, PhD is a professor of physiology, medicine, cardiology, and bioinformatics, and is the director of the National

Institutes of Health BD2K Center of Excellence and Coordination Center at UCLA. Jean-Bernard Durand, MD (MCW Class of 1988) is a professor of medicine, medical director of cardiomyopathy services, and director of cardiovascular genetics research at The University of Texas MD Anderson Cancer Center.

As a "Green Center" at MCW, the Cardiovascular Center is evaluated at least annually by an ESAB composed of international leaders in cardiovascular research, clinical care, and training. The board is charged with reviewing the Cardiovascular Center's strategic directions and operation-

al priorities and providing "best practices" commentary on technologies, recruitments, and risks/benefits to achieving the Cardiovascular Center's objectives in an ever-changing scientific and research environment.



Dr. Ping brings expertise in data science and bioinformatics as well as cardiovascular proteomics and metabolomics while Dr. Durand offers a wealth of knowledge in the molecular mechanisms involved in chemotherapy-induced cardiomyopathy. They join a distinguished board: Donna Arnett, PhD, MSPH, (University of Kentucky), David Harrison, MD (Vanderbilt University), Elizabeth McNally, MD, PhD, (Northwestern University), Elizabeth Murphy, PhD (National Heart, Lung, and Blood Institute), David Pinsky, MD, (University of Michigan Medical School), and Daniel Rader, MD, (University of Pennsylvania).

## External Scientific Advisory Board Annual Visit



For two days in early October, the Cardiovascular Center hosted our External Scientific Advisory Board (ESAB) composed of six outside experts, world-renowned leaders in their fields of study. The CVC's sincere appreciation goes to them: David Harrison, MD (ESAB Chair, Vanderbilt), Donna Arnett, PhD, MSPH (University of KY), Jean-Bernard Durand, MD (UT MD Anderson Cancer Center), Elizabeth McNally, MD, PhD (Northwestern), David Pinsky, MD (Michigan), and Daniel Rader, MD (Pennsylvania).

As a "Green Center", the ESAB provided annual oversight of our ongoing major initiatives including the new Induced Pluripotent Stem Cell (iPSC) Program, NHLBI T32 Postdoctoral

Training Program, and team science awards (Pre-PPGs). This year, members of the ESAB as well as MCW faculty, trainees, and institutional partners participated in interactive breakout discussions with CVC members about hot topics selected by Signature Programs and Affinity Groups, and guided focus group discussions on "Visioning the Wisconsin Heart Initiative."

[Link to CVC's 2019 External Scientific Advisory Board Report:](https://mcw.box.com/shared/static/litxivsp8zbacuh1kxslbtft5eqmdho.pdf)  
<https://mcw.box.com/shared/static/litxivsp8zbacuh1kxslbtft5eqmdho.pdf>

# Internal Scientific Advisory Board

<b>Ivor J. Benjamin, MD, FAHA, FACC</b> Chair	Director, Cardiovascular Center Professor, Medicine, Physiology, Pharmacology & Toxicology, Surgery, Cell Biology, Neurobiology, and Anatomy Co-Director, Cardiovascular Center Postdoctoral T32 Program Director, MCW/CVC Human iPSC Program
<b>Diane W. Braza, MD</b>	Chair of Physical Medicine and Rehabilitation Residency Director of Physical Medicine and Rehabilitation Clinical Director of MCW and FMLH SpineCare Professor of Physical Medicine and Rehabilitation
<b>Zeljko J. Bosnjak, PhD</b>	Professor of Medicine Oversight Committee Member, MCW/CVC Human iPSC Program Co-Leader, CVC Signature Program in Precision Cardiovascular Medicine
<b>William B. Campbell, PhD</b>	Chairman of Pharmacology & Toxicology Florence Williams Professor of Pharmacology & Toxicology
<b>John A. Corbett, PhD</b>	Chairman of Biochemistry Professor of Biochemistry
<b>Allen W. Cowley, Jr, PhD</b>	Harry & Gertrude Hack Term Professor in Physiology Professor of Physiology 2009-2013 Director of Cardiovascular Center
<b>Leonard E. Egede, MD, MS</b>	Director, Center for Advancing Population Science Professor of Medicine & Eminent Scholar Chief, Division of General Internal Medicine
<b>David D. Gutterman, MD</b>	Senior Associate Director, Cardiovascular Center Co-Director, Cardiovascular Center Postdoctoral T32 Program Co-Leader, CVC Signature Program in ATVB Oversight Committee Member, MCW/CVC Human iPSC Program Northwestern Mutual Professor of Cardiology and Physiology Professor of Pharmacology
<b>David R. Harder, PhD</b>	1992-2009 Director of Cardiovascular Center Emeritus Member
<b>Elizabeth R. Jacobs, MD, MBA</b>	Associate Dean of Research Associate Chief of Staff for Research and Development, VA Medical Center Professor of Medicine and Physiology Executive Committee, Cardiovascular Center Postdoctoral T32 Program
<b>Jeanne M. James, MD</b>	Chief, Division of Pediatric Cardiology The Leigh Gabrielle Herma Endowed Chair for Cardiology Professor of Pediatrics--Pediatric Cardiology
<b>Balaraman Kalyanaraman, PhD</b>	Chairman of Biophysics Harry R. & Angeline E. Quadracci Professor in Parkinson's Research
<b>John R. Meurer, MD, MBA</b>	Professor of Pediatrics and Community Health Director of the MCW Institute for Health & Equity
<b>Peter J. Newman, PhD</b>	Vice President for Research, Versiti Blood Research Institute Associate Director, Versiti Blood Research Institute Professor of Pharmacology & Toxicology, Cell Biology, Neurobiology & Anatomy Oversight Committee Member, MCW/CVC Human iPSC Program
<b>Paul J. Pearson, MD, PhD</b>	Chief of the Division of Cardiothoracic Surgery Professor of Surgery
<b>Jorge Saucedo, MD, MBA</b>	Chief, Division of Cardiovascular Medicine Director, Froedtert and MCW Heart and Vascular Service Line Professor, Medicine and MCW Eminent Scholar
<b>Curt D. Sigmund, PhD</b>	Chairman of Physiology Associate Director of Cardiovascular Center James J. Smith and Catherine Welsch Smith Professor of Physiology
<b>Roy L. Silverstein, MD</b>	Chairman of Medicine Associate Director of Clinical Research, Cancer Center Linda & John Mellowes Professor of Medicine
<b>Mary G. Sorci-Thomas, PhD</b>	Associate Director, Cardiovascular Center Associate Director, Cardiovascular Center Postdoctoral T32 Program Co-Leader, CVC Signature Program in ATVB Professor, Medicine-Endocrinology
<b>Gilbert C. White, II, MD</b>	Executive Committee Chair, Cardiovascular Center Postdoctoral T32 Program Executive Vice President for Research, Versiti Blood Research Institute Professor, Medicine, Biochemistry, Pharmacology & Toxicology

# Cardiovascular Center Board



Lynnea S. Katz-Petted  
Chair  
CEO  
Revitalize Milwaukee

Leading business, professional, and civic leaders in WI who are committed to advancing cardiovascular research at MCW through increasing community awareness and raising private funds.

## Quarterly Meetings

Bruce E. Jacobs  
Founding Chair  
Community Leader/Volunteer



Bruce M. Smith  
Former Chair  
Former Chairman, President & CEO  
Smith Investment Co.

## MEMBERS

- Sally R. Bentley  
Community Volunteer/Leader
- Marybeth Budisch  
Senior Donor Services Officer  
Greater Milwaukee Foundation
- Carl (Chip) Burghardt  
Owner  
Burghardt Sporting Goods
- Cellene Byrne  
COO, Retired  
Briohn Building Corporation
- Kristine H. Cleary, Esq.  
Vice President & Legal Counsel  
Cleary Management Corporation
- Dominic Colonna  
President, Retired  
CDP, Inc.
- Gael Garbarino Cullen  
Producer/Writer  
Plum Moving Media
- Mark Curran  
Vice President of Global Operations  
Materion, Inc.
- Byron T. Foster  
President & Director  
North Star Enterprises of Wisconsin
- Laura J. Freedy  
Central Region Compliance Officer  
UnitedHealthcare
- Frederic G. Friedman  
Attorney At Law  
Reinhart, Boerner, VanDeuren, S.C.
- Phillip Georges, Esq.  
Attorney At Law  
Gruber Law Offices, LLC
- Ellen Glaisner  
Community Volunteer/Leader

- Eckhart Grohmann  
Chairman & President, Retired  
Aluminum Casting & Engineering
- Barry Grossman  
Administrative Patent Judge  
Patent Trial & Appeal Board
- Gordon H. Gunnlaugsson  
Community Volunteer/Leader
- Stanley F. Hack  
Attorney At Law  
Hack & Bodkey, S.C.
- Mikel Holt  
Publisher  
Milwaukee Community Journal
- Michael H. Keelan, Jr., MD  
Cardiologist, Retired
- Sarah Wright Kimball  
Principal  
Kimball Communications
- John Kirchgeorg  
CEO  
Life Corporation
- Dr. Vincent Kuttemperoor  
CEO & President  
V.K. Development Corporation
- William H. Levit, Jr.  
Arbitrator & Mediator  
Levit ADR LLC
- William J. Mielke  
CEO, Chairman of the Board  
Ruekert & Mielke, Inc.
- Daniel M. Muchin  
President  
Muchin Investments, LLC

- John K. Schultz  
Community Volunteer/Leader
- Johan C. R. Segerdahl  
Owner  
Iron Block Holdings, LLC
- Nancy J. Sennett  
Attorney At Law  
Foley & Lardner
- Sonia Shields Stowe  
Community Volunteer/Leader
- Dale A. Thoma  
Managing Partner  
Willis of Wisconsin

## EMERITUS MEMBERS

- James D. Bell  
Managing Director  
Robert W. Baird & Co.
- Priscilla Boelter  
Community Volunteer/Leader
- William D. Browne†  
Director  
Marquette Medical System Fndn
- John J. Burke, Jr.†  
Chairman & CEO  
Burke Properties
- Daniel F. McKeithan, Jr.†  
President & CEO  
Tamarack Petroleum  
Company, Inc.
- Nicholas C. Wilson†  
Vice Chairman  
Jacobus Wealth Management, Inc.
- Gary V. Zimmerman, FAIA  
Founder  
Zimmerman Architectural Studios

† Deceased

CVC Staff: Ashley Thompson



# Membership

Want to see a list of our members  
& their research interests?

MEDICAL COLLEGE OF WISCONSIN

Faculty Collaboration Database **FCD.mcw.edu**

Profiles for MCW, MU, MSOE, UWM, BCW, CHW, Froedtert, and VA Faculty

# Membership Guidelines & Benefits

## **Primary Research or Clinical Membership**

**Eligibility:** Criteria for primary membership in the CVC are as follows (at the discretion of the Director):

- A full-time MCW academic appointment AND one or both of the following:
  - Research faculty whose primary laboratory space resides within the CVC;
  - Clinical or Research Faculty who actively participate in one or more the Affinity Groups and/or Signature Programs.

**Expectations:** Primary members of the CVC are expected to make meaningful contributions to the research activities of the CVC in one or more of the following ways:

- Demonstrate a commitment to the mission and vision of the CVC to advance an integrated program of basic, clinical, and translational research related to cardiovascular disease;
- Share areas of expertise as mentors to junior faculty (*for senior members*);
- Participate in *ad hoc* review committees of funding proposals of fellow CVC members upon request;
- Join and actively participate in an Affinity Group/Signature Program;
- Attend the center's meetings, seminars, review committees, task forces, retreats, and related programs as appropriate;
- Acknowledge the CVC on all publications (i.e., peer-reviewed manuscripts/book chapters), in oral/poster presentations, grant submissions, and media announcements;
- Pursue extramural funding as a Principal Investigator on a NIH or other national/regional peer-reviewed, cardiovascular-related research grant or Foundation award (as defined by CVC Director) OR
  - Serve as a Principal Investigator of cardiovascular clinical trial OR
  - Serve as protocol chairperson for a national peer-reviewed (e.g., CTEP) clinical trial OR
  - Serve as a senior leader of a national peer-reviewed funded cooperative group.
- Sustain cardiovascular-related publications (during previous three years) in peer-reviewed professional journals (*Research only*) or maintain PI status of a minimum of 1 IRB approved active research protocol (*Clinical only*);
- Upon request, submit a yearly report (<3 pages) to CVC administration of publications, grant submissions and awards, collaborative efforts with other CVC members, and mentoring, service-related, and community engagement activities.

### **Benefits:**

- Eligibility for CVC funding opportunities;
- Priority access and negotiated rates to use current and future CVC core resources (equipment; technical);
- Free biostatistical/bioinformatics support (through 6/30/2020);
- Higher priority for access to CVC research office/lab space;
- Access to philanthropic funds directed to CVC-specific programs (as appropriate);
- Most direct access to expert colleagues and team science collaborators via membership in one of MCW's highly translational research programs and Affinity groups; and
- Eligibility for leadership positions within the CVC.

## **Affiliate Membership**

Affiliate membership is designated for faculty who make meaningful contributions to the research, education, patient care, and community outreach activities of cardiovascular medicine, but do not meet the above criteria for primary membership. Affiliate membership may also be appropriate for faculty whose primary membership is with another institutional Center, but who wish to be involved with the CVC community.

**Eligibility:** Members must have a full-time academic appointment at MCW or any CTSI regional member institution (Blood Center of Wisconsin, Children's Hospital of Wisconsin, Froedtert Hospital, Marquette University, Milwaukee School of Engineering, University of Wisconsin-Milwaukee, Zablocki VA Medical Center).

### **Expectations:**

- Submission as PI or co-PI on a cardiovascular-related grant or
  - active participation in clinical trial development and/or patient accrual or
  - contributions to multidisciplinary clinical program or community engagement development, including clinical outcomes and research (screening, prevention and therapeutics).
- Regular presentation of data at internal or external scientific meetings;
- Publications as contributing author on peer-reviewed articles/book chapters;
- Collaborative efforts via grants, publications, or active membership in Affinity Groups/Signature Programs;
- Service on various CVC committees when called upon;
- Recognition of CVC support on publications, abstracts, and grants, when appropriate;
- Upon request, submit a yearly report (<3 pages) to CVC administration of publications, grant submissions and awards, collaborative efforts with other CVC members, and mentoring, service-related, and community engagement activities.

### **Benefits:**

- Access to current and future CVC core resources, including free biostatistical support (until 6/20) and access to CVC shared equipment;
- Potential for enhanced interaction and collaboration via membership in one of CVC's Affinity Groups or Signature Programs.

## CVC Faculty Membership (as of 12/15/2019)

Alexanian, Arshak R. VMD, PhD  
Auchampach, John A. PhD \*  
Aufderheide, Tom P. MD  
Bai, Xiaowen PhD  
Baker, John E. PhD  
Bartz, Peter J. MD  
Baruah, Dhiraj MD  
Baumann Kreuziger, Lisa M. MD  
Benjamin, Ivor J. MD \*  
Benson, Dudley Woodrow MD, PhD  
Bergom, Carmen R. MD, PhD  
Beyer, Andreas M. PhD \*  
Beyer, Kristin PhD, MPH  
Bonini, Marcelo PhD \*  
Bosnjak, Zeljko J. PhD \*  
Braza, Diane MD  
Broeckel, Ulrich MD  
Camara, Amadou K. PhD  
Campbell, William B. PhD  
Cava, Joseph R. MD, PhD  
Chitambar, Christopher R. MD  
Chrzanowska, Magdalena B. PhD  
Cinquegrani, Michael P. MD  
Cohen, Susan S. MD  
Corbett, John A. PhD  
Cowley Jr, Allen W. PhD  
Crotty, Bradley MD  
Dash, Ranjan K. PhD  
Durand, Matt PhD \*  
Dwinell, Melinda PhD  
Ebert, Allison D. PhD  
Egede, Leonard MD, MS  
El-Meanawy, Ashraf MD, PhD \*  
Evans, Douglas B. MD  
Everson, Carol A. PhD \*  
Fitts, Robert PhD  
Foerster, Susan MD  
Forster, Hubert V. PhD  
Freed, Julie K. MD, PhD \*  
Friedland, David R. MD  
Frommelt, Peter C. MD  
Gantner, Benjamin PhD \*

Gebremedhin, Debebe PhD \*  
Geurts, Aron PhD \*  
Ginde, Salil MD, MPH  
Girotti, Albert W. PhD  
Gore, Elizabeth M. MD  
Greene, Andrew S. PhD  
Grobe, Justin PhD \*  
Gutterman, David D. MD \*  
Hari, Parameswaran MD  
He, Chenxia PhD \*  
Hoffmann, Brian R. PhD  
Hogan, Quinn H. MD  
Hogg, Neil PhD  
Holt, Jeana, DNP, MSN, APNP  
Hong, Johnny C. MD, FACS \*  
Huang, Chiang-Ching Spencer PhD  
Ibrahim, El-Sayed PhD  
Imig, John D. PhD  
Jacobs, Elizabeth R. MD \*  
James, Jeanne Marie Foose MD  
Jarzembowski, Jason, MD, PhD  
Joyce, David MD  
Joyce, Lyle MD, PhD  
Kalyanaraman, Balaraman PhD  
Kamaraju, Sailaja MD  
Kidambi, Srividya MD \*  
Kim, Joohyun MD, PhD \*  
Kindel, Tammy Lyn MD, PhD  
Konduri, Girija Ganesh MD  
Kong, Amanda MD, MS  
Kotchen, Theodore A. MD \*  
Kriegel, Alison J. PhD  
Kulinski, Jacquelyn P. MD  
Kumar, Suresh PhD  
Kumar, Vikash PhD  
Kwarteng, Jamilya PhD  
Kwitek, Anne PhD  
Kwok, Wai-Meng, PhD  
LaDisa, John PhD  
Lane, Robert H. MD  
Liang, Mingyu PhD \*

\*laboratory or parts  
of laboratory physically  
located in the CVC



## CVC Faculty Membership (as of 12/15/2019)

Lincoln, Joy PhD  
Link, Brian A. PhD  
Liu, Pengyuan PhD  
Liu, Yong PhD  
Lochhead, Robert PhD  
Lohr, Nicole L. MD, PhD \*  
Lombard, Julian H. PhD  
Lough, John W. PhD \*  
Mammoto, Akiko MD, PhD  
Mammoto, Tadanori MD, PhD  
Mansukhani, Neel MD  
Marks, David S. MD  
Mast, Alan MD, PhD  
McIntosh, Jennifer Jury DO, MS \*  
Medhora, Meetha M. PhD  
Meurer, John R. MD, MBA  
Mitchell, Aoy Tomita PhD  
Mitchell, Michael Edward MD  
Montgomery, Robert R. MD  
Myers, Charles R. PhD  
Nelson, David A. PhD  
Newman, Debra K. PhD  
Newman, Peter J. PhD  
Nghiem-Rao, T Hang MD  
Olson, Jessica PhD  
O'Meara, Caitlin C. PhD \*  
Palatnik, Anna MD  
Palygin, Oleg PhD  
Patel, Dhaval MD  
Patterson, Michaela PhD \*  
Pearson, Paul MD, PhD  
Pfister, Sandra L. PhD  
Pradeep, Sunila PhD  
Pritchard, Kirkwood A. PhD  
Ramchandran, Ramani PhD  
Rarick, Kevin PhD  
Regner, Kevin R. MD \*  
Rosenthal, Ann K. MD  
Rubenstein, Jason C. MD  
Sahoo, Daisy PhD  
Saltzberg, Mitchell MD, MSc  
Saucedo, Jorge MD, MBA  
Seabrook, Gary R. MD  
Selim, Motaz MBBS, MSc, MD, PhD  
Shaker, Reza MD  
Shimoyama, Mary E. PhD  
Sigmund, Curt PhD \*  
Silverstein, Roy L. MD  
Singh, Ravi PhD \*  
Smith, Brian PhD  
Sorci Thomas, Mary PhD  
Sorokin, Andrey PhD \*  
Sparapani, Rodney PhD  
Spearman, Andrew MD  
Staruschenko, Alexander V. PhD \*  
Stolley, Melinda PhD  
Stowe, David F. MD, PhD  
Strande, Jennifer MD, PhD \*  
Sundararajan, Sakthi K. MD  
Tefft, Brandon PhD  
Teng, Ru-Jeng MD  
Thomas, Michael J. PhD  
Urrutia, Raul MD  
Vasquez-Vivar, Jeannette PhD  
Wang, Bo PhD  
Weihrauch, Dorothee DVM, PhD  
Whelan, Harry T. MD  
White, Gilbert C. MD  
Whittle, Jeffrey MD, MPH  
Widlansky, Michael E. MD \*  
Williams, Joni MD, MPH  
Willoughby, Rodney MD  
Yeboah, Michael MBChB, PhD \*  
You, Ming MD, PhD  
Yu, Hongwei MD  
Zaharova, Sveltana PhD, FNF  
Zhang, David X. MD, PhD \*  
Zhang, Jun PhD  
Zhu, Jieqing PhD  
Zimmerman, Michael A. MD, FACS \*

\*laboratory or parts  
of laboratory physically  
located in the CVC

## Recent CVC Tenure-Track Faculty Recruits



Justin Grobe, PhD  
Associate Professor of Physiology  
Start Date: June 2019

Former Associate Professor of Pharmacology  
The University of Iowa



Curt Sigmund, PhD  
Chairman of Physiology  
Associate Director of Cardiovascular Center  
James J. Smith and Catherine Welsch Smith Professor of Physiology  
Start Date: January 2019

Former Roy J. Carver Chair in Hypertension Research; Professor and Chair,  
Department of Pharmacology; Director, Center for Hypertension Research  
The University of Iowa



Ravi Singh, PhD  
Assistant Professor of Pathology  
Start Date: October 2018

Former Instructor of Pathology & Immunology  
Baylor College of Medicine



Benjamin Gantner, PhD  
Assistant Professor of Medicine  
Start Date: September 2018

Former Research Assistant Professor of Microbiology &  
Immunology  
University of Illinois at Chicago

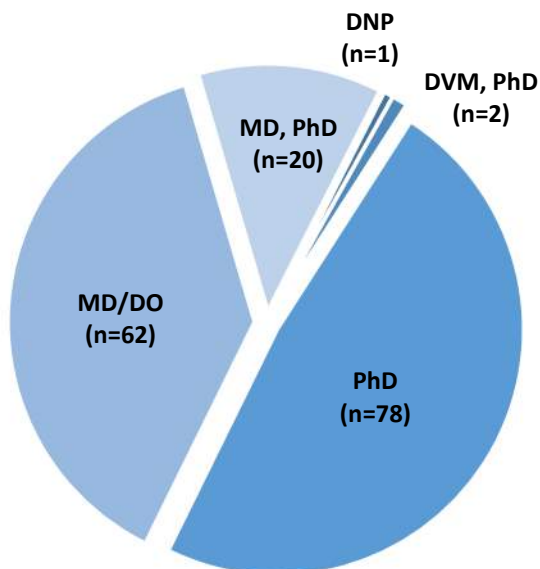
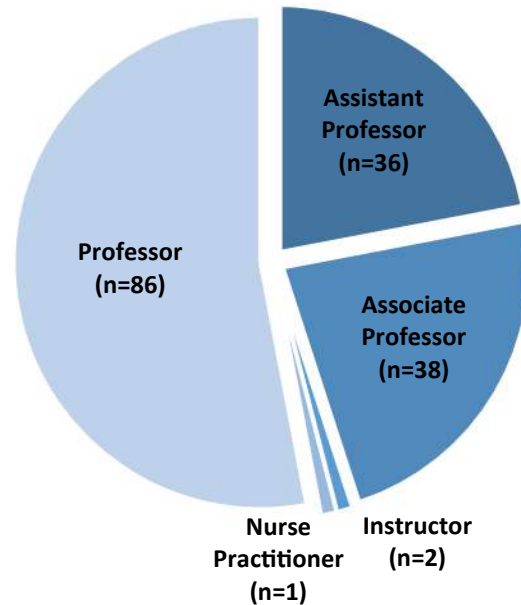
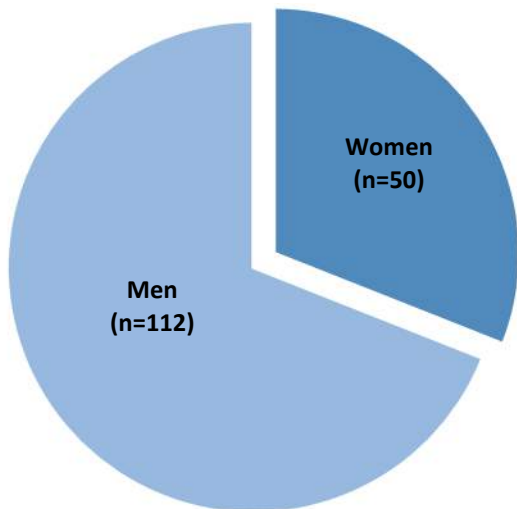


Michaela Patterson, PhD  
Assistant Professor of Cell Biology, Neurobiology & Anatomy  
Start Date: September 2018

Former Postdoctoral Fellow  
University of Southern California

# Cardiovascular Center Membership (as of 12/15/2019)

## Faculty Membership Composition (n=163)



## Departments or Institutes

- Medicine (n=43)
- Pediatrics (n=19)
- Surgery (n=18)
- Physiology (n=17)
- Anesthesiology (n=8)
- Blood Research Institute (n=7)
- Pharmacology & Toxicology (n=7)
- Biomedical Engineering (n=6)
- Institute for Health & Equity (n=6)
- CBNA (n=4)
- Biochemistry (n=3)
- Biophysics (n=3)
- Pathology (n=3)
- Radiology (n=3)
- Radiation Oncology (n=3)
- Obstetrics & Gynecology (n=3)
- CTSI-Affiliated Partners (n=2)
- Family & Community Medicine (n=2)
- Physical Medicine & Rehab (n=2)
- Emergency Medicine (n=1)
- Microbiology & Immunology (n=1)
- Neurology (n=1)
- Otolaryngology (n=1)

## Estimated Number of Associated Staff and Trainees\*

- Laboratory Personnel: >120
- Medical Students: >25
- Graduate Students: >50
- Postdoctoral and Clinical Fellows: >125

\*values are estimates due to difficulty in tracking staff and trainees; this is monitored by the institution at the departmental level



# Services

# Cardiovascular Center Resources: Overview



Headquartered on the 4th floor of the MCW Health Research Center (HRC) and Medical Education Building (MEB)



The Cardiovascular Center houses:

**3 Conference Rooms:** >1,400 ft<sup>2</sup>, equipped with audio-visual equipment including hardware and software for web conferencing.

**Microscope Core:** Room M4880 has a Nikon TE-2000U, Nikon E-55i, and Nikon E600/spot RT. Room H4360 houses a Nikon A1-R confocal microscope. The Nikon A1-R confocal system, fitted to an inverted ECLIPSE Ti-E microscope with a motorized stage, has 2 independent scanning systems allowing for both high speed resonant and high resolution non-resonant scanning. It is fitted with 4 lasers (405, 488, 514 and 561nm) and 4 detectors. The scope can be operated in both synchronous and sequential scanning modes. Objective lenses include 20x, 40x, 60x oil and 100x oil. The scope is capable of doing Z-stacks, and time studies. Both time-lapse and 3D volumetric views can be created and exported as AVI files. The Perfect Focus System allows for the maintenance of a selected focal plane over a long experiment. Both FRAP and FRET experiments can be performed as well as ratiometric studies. A separate stage insert supporting Warner live well hardware is available. Mounted on an air table, the scope has proven a stable imaging platform. The system is controlled by NIS-Elements Advanced Research software, which includes an analysis package.

**Cardiovascular Tissue Bank:** integrated within MCW's Tissue Bank, it provides rapid access to fresh human adult and pediatric cardiac and peripheral vascular specimens, access to fresh whole explanted hearts not suitable for transplantation, and over 1000 fixed/frozen human vascular tissue specimens stored for further processing.

**Induced Pluripotent Stem Cell (iPSC) Program:** Founded in 2019, this AHW-supported pilot program housed within and operated by the CVC seeks to create a multi-ethnic cohort of human patient-derived samples for a population-based biorepository for subsequent processing into iPSCs to advance translational cardiovascular research by increasing accessibility and capabilities of iPSC technology and services. The initial feasible scope of the program will encompass the following services:

- collection of multi-ethnic human patient-derived samples
- iPSC generation from these samples or samples provided by the researcher
- differentiation into cardiomyocytes, endothelial cells, or smooth muscle cells for research purposes

**Surgical Suite and Animal Preparation Room:** a separate, fully-equipped with several stainless steel workstations and laminar flow hoods.

**Small Animal Echocardiography Core:** scanning and analysis for mice, rats, rabbits, pigs, and primates; services include screening, post-event, post-surgical, and custom echocardiograms for cardiac structure and function, vascular/aorta imaging, and imaging of other organs by trained staff, consultation, and analysis on a fee-for-service basis.

**Other Equipment Cores:** includes centrifuges, freezer farm, PCR detection systems, spectrophotometer, gel-less western blotting system and more (see Equipment List).

**Environmentally-Controlled Rooms:** cold rooms, warm room, and dark room.

More info? Go to : <https://infoscope.mcw.edu/Cardiovascular-Center-Intranet.htm>



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# Cardiovascular Center Services

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- **Funding:** competitive grants for CVC members from CVC philanthropy, the institution, or AHW
- **Space Management:** housing laboratories of >24 PI's, offices, conference rooms, and other shared research areas
- **Funding Newsletter:** a monthly email to all CVC members with information about cardiovascular funding opportunities from the National Institutes of Health, American Heart Association, American Physiological Society, Department of Defense, Advancing a Healthier Wisconsin, Clinical Translational Science Institute of Southeast Wisconsin, etc.
- **Pulse Newsletter:** a quarterly newsletter featuring member announcements
- **Trainee Newsletter:** a monthly electronic newsletter for trainees containing announcements, a list of upcoming cardiovascular-related seminars, training opportunities, postdoctoral, faculty, and industry job listings, scholarships, etc.
- **Cardiovascular-Related Seminars Compilation Email:** a weekly publication listing local and regional seminars on cardiovascular-related and professional-skills related topics
- **Facebook Page:** Education for the community and information for CVC members, staff, and trainees are posted regularly on the CVC's new Facebook page found here: [www.facebook.com/Cardiovascular.Center.MCW/](http://www.facebook.com/Cardiovascular.Center.MCW/)
- **Town Halls:** Feedback from CVC members and dissemination of information to CVC members
- **Pre-PPG Newsletter:** a quarterly electronic newsletter focused on team science, including program-project grants
- **Biostatistical Consultations:** free assistance with design and analysis of clinical trials, observational studies, and surveys, as well as assistance with public databases, sample size and power calculations and data analysis and interpretation from a faculty or staff representative from the MCW Division of Biostatistics
- **CVC Seminars:** a monthly seminar series of local and national experts speaking on topics germane to the CVC's Signature Programs or Affinity Groups
- **Work-in-Progress Seminars:** a quarterly highly-interactive forum on a focused topic in which attendees discuss the aims of an unsubmitted grant or controversial findings from the laboratory, obtain broad input regarding a new investigative direction, or receive feedback for a revised grant application by a mini-study section prior to resubmission
- **CVC Research Retreat:** an annual off-campus event filled with presentations, a competitive poster session, breakfast, and lunch punctuated by a nationally-recognized speaker giving a keynote presentation
- **Research Ambassador Newsletter:** a quarterly newsletter focused on research operations and announcements
- **On Campus Annual Social Events** including a Summer Picnic and Holiday Potluck
- **CVC Conference Room Reservations:** CVC staff provide administrative support for CVC-owned A-V equipment and CVC members receive priority for room reservations
- **2 Coffee Stations:** providing caffeine and warm beverages to energize and focus members, staff, and trainees
- **Institutional Sigma/BioRad Supply Centers:** management and stocking of the supply centers located in the CVC
- **Trainee Seminars and Workshops:** quarterly events targeting professional skill-building for trainees
- **Trainee E-Digest:** a monthly electronic digest for trainees containing information to assist with the fundamental understanding of the essential "outside-of-the-laboratory" as well as research skills required to be a successful scientist
- **T32 Postdoctoral Training Grant:** directed by Ivor Benjamin, MD and David Gutterman, MD, this \$1.6 million grant (HL 134643) provides up to three-years of training for postdoctoral fellows (two new slots/year: MD/DO, PhD, or PharmD)
- **Administrative Support** for Signature Program and Affinity Group meetings, T32 Postdoctoral Training grant, and the above services

More Info? Go to: <https://www.mcw.edu/departments/cardiovascular-center-heart>

## CVC Biostatistics Consulting Services Core

The Cardiovascular Center offers free Biostatistics Consulting Services provided by Alexis (Lexi) Visotcky, MS, Biostatistician II, and Rodney Sparapani, PhD, assistant professor, from the division of biostatistics. Their consulting services are available to all CVC faculty members as well as their staff and trainees!

Lexi has 11 years of experience with consulting and she is the second-most senior analyst in the division. Rodney has been with the CVC for 5 years and with MCW for 20. He has assisted CVC researchers applying for grant mechanisms and with complex data analyses for publication.

This past year, more than 20 CVC members made use of their knowledge and expertise in biostatistics over a total of 300 hours. These consulting services include assistance with design and analysis of studies including clinical trials, observational studies and surveys. Lexi and Rodney have decades of experience with observational databases such as Medicare and public surveys like NHANES. Their specialties include sample size/power calculations, advanced data analysis and interpretation.

The CVC's Biostatistics Consulting Service is supported by the Advancing a Healthier Wisconsin Endowment Grant awarded to the CVC by the Research and Education Program Fund, a component of the AHW Endowment at the Medical College of Wisconsin.



**Rodney Sparapani, PhD**  
[rsparapa@mcw.edu](mailto:rsparapa@mcw.edu)  
414-955-8786



**Alexis Visotcky, MS**  
[avisotcky@mcw.edu](mailto:avisotcky@mcw.edu)  
414-955-4190

## MCW CVC iPSC Program

Supported by the Cardiovascular Center's retained earnings (renovations) and a grant awarded to the CVC by the Research and Education Program Fund, a component of the Advancing a Healthier Wisconsin endowment, the CVC is piloting a Human Induced Pluripotent Stem Cell (iPSC) Program" to increase the number of investigators performing translational research and to better support investigators currently utilizing iPSCs for precision medicine. The primary objectives are to:

- Objective 4a: Create a multi-ethnic cohort of human patient-derived samples for a population-based biorepository for subsequent processing into iPSCs
- Objective 4b: Create an oversight committee to guide the overall program and to manage requests for sample procurement and/or use of currently banked samples
- Objective 4c: Educate and increase collaborations amongst internal and external investigators utilizing iPSCs and other Similar precision medicine therapies
- Objective 4d: Promote sustainability of the program



**Gracious "Ross" Ross, DVM, PhD**  
[gRoss@mcw.edu](mailto:gRoss@mcw.edu)  
414-955-5657; M4730



**John Seagrist, BS**  
[jseagrist@mcw.edu](mailto:jseagrist@mcw.edu)  
414-955-5677; M4730



## CVC Resources: CVC Tissue Bank



### FRESH, FIXED AND FROZEN SAMPLES

*Providing unified cross-disciplinary support for acquisition and distribution of cardiovascular tissue.*



#### **Grant Support – up to \$2,000 per investigator**

*The Cardiovascular Center is pleased to offer small grants to support CVC members who wish to procure cardiovascular tissue from the MCW Tissue Bank for cardiovascular research projects. These grants are made possible by a generous philanthropic donation of members of the CVC Board. Awards are up to \$2,000 per investigator.*

**Eligibility:** Only a full-time or full professional effort MCW faculty member may apply; the PI must be a member of the CVC at the time of application. [www.mcw.edu/Cardiovascular-Center/Research/CVC-Tissue-Bank.htm](http://www.mcw.edu/Cardiovascular-Center/Research/CVC-Tissue-Bank.htm)

## CVC Tissue Bank Oversight Committee



David Gutterman, MD, Chair



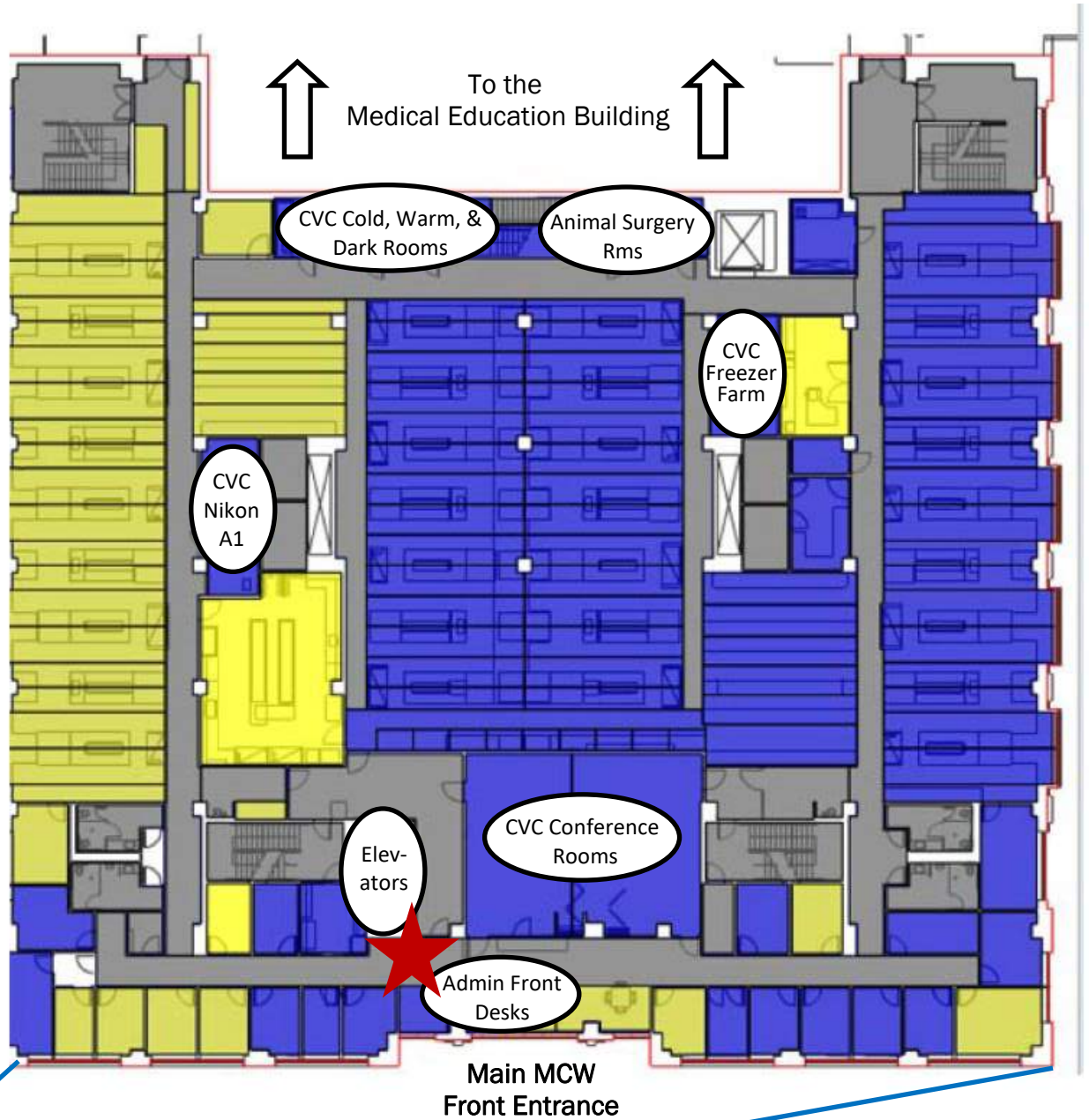
Zeljko Bosnjak, PhD



Max Wohlauser, MD



# CVC Resources: Health Research Center 4th Floor

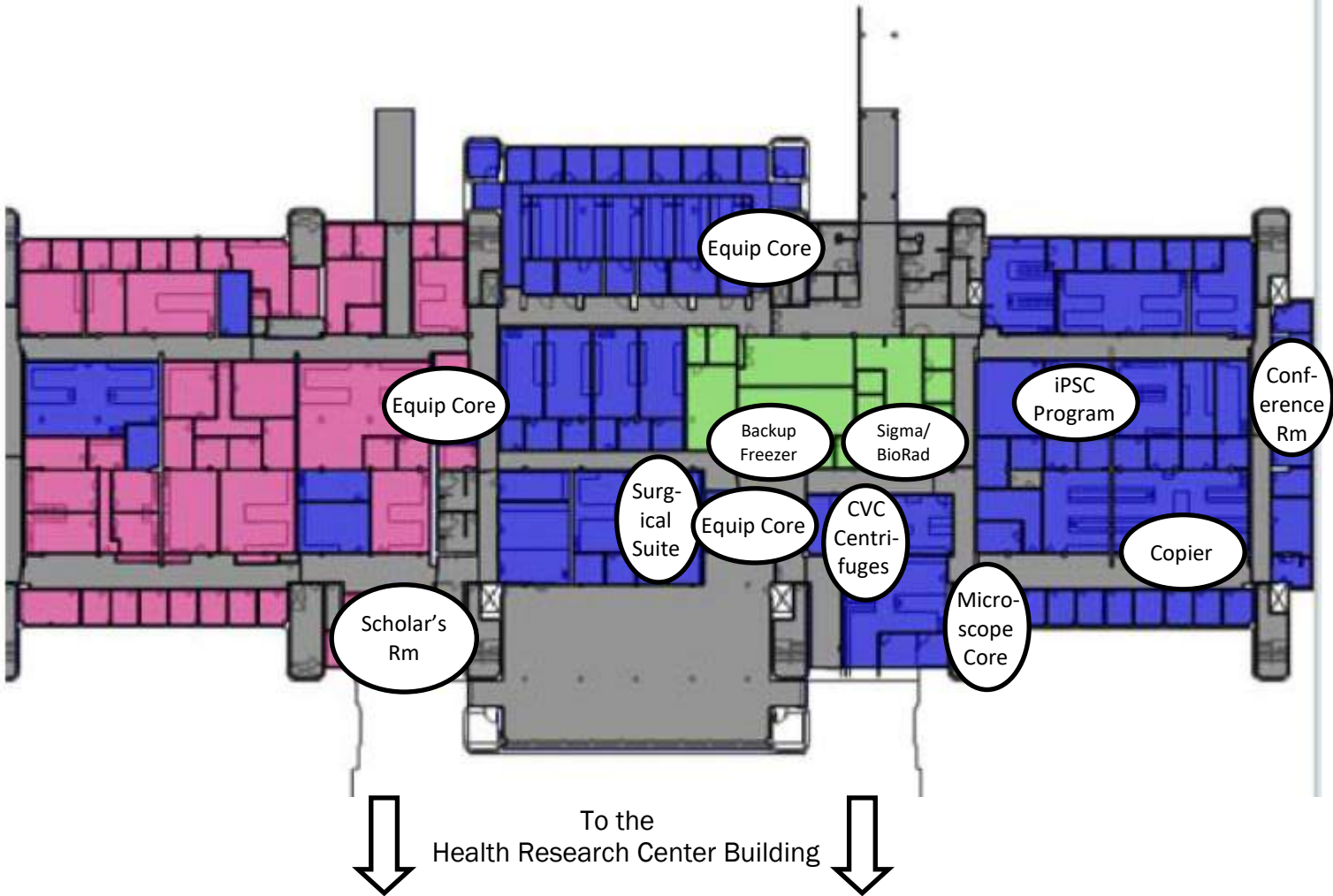


Red Star = Main CVC Entrance

The Nikon A1 is a confocal microscope that is part of the CVC's Microscopy Core.

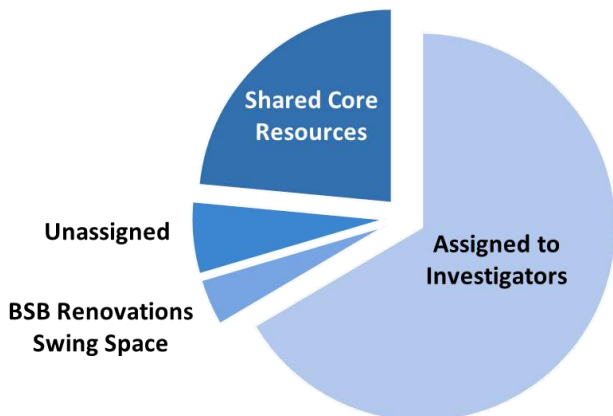


# CVC Resources: Medical Education Bldg 4th Floor



## CVC Year in Review: Our Space

### Allotment of CVC-Controlled Space



**The CVC is 94% full!**

- Assigned to Investigators:**
- Medicine: 42%
  - Physiology: 26%
  - CBNA: 11%
  - Surgery: 6%
  - Pharmacology & Toxicology: 5%
  - Anesthesiology: 3%
  - Physical Medicine & Rehab: 3%
  - Pathology: 2%
  - Orthopaedic Surgery: 1%
  - Radiation Oncology: <1%

# Cardiovascular Center Resources: Core Equipment

Description	Location	Chaperone/Trainer
Axion Microelectrode Array System	M4880	TBD
Beckman Coulter DU640 Spectrophotometer	M4480	Amelia Bitant, abitant@mcw.edu
Bio-Rad Cell Counter TC-10	M4880	Kay Nicholson, knichols@mcw.edu
Bio-Rad CFX96 Touch Real-Time PCR Detection System, 2 Units	M4480	andrewbarr@mcw.edu
Bio-Rad CFX384/C1000 PCR Detection System	M4480	andrewbarr@mcw.edu
Bio-Rad ChemiDOC MP Imaging System	M4480	TBD
BMG Labtech CLARIOstar Microplate Reader	M4480	TBD
BMG Labtech Fluorstar Omega Microplate Reader, Fluorescence, Absorbance, Luminescence at 255, 544, 485, 584 excitation; 460, 540, 520, 620 emissions	M4480	andrewbarr@mcw.edu
Chemical Hood, Built-in	M4480	N/A
Color Copier, Scanner, Fax Machine	M Hall	Andrew Barr, andrewbarr@mcw.edu
Protein Simple WES Western Blotting System	M4480	Alison Gifford, agifford@mcw.edu
Tech One Biomedical Services Microm Cryostat	M4880	TBD
<b>Audio-Visual Equipment</b>		
AVI Systems	H4940/50; M4799	andrewbarr@mcw.edu
<b>Freezers/Refrigerators</b>		
VWR -80 Chest Freezer for Defrosting/ Maintenance	M4970 Hall	andrewbarr@mcw.edu
VWR Upright Freezer for Emergencies/Freezer Failures	H4585	andrewbarr@mcw.edu
-4 Refrigerator	M4480	andrewbarr@mcw.edu
-20 Freezer	M4970 Hall	andrewbarr@mcw.edu
<b>Microscopes &amp; Accessories</b>		
Nikon Eclipse 55i	M4880	Glenn Slocum, gslocum@mcw.edu
Nikon E600/spot RT	M4056/4060	Glenn Slocum, gslocum@mcw.edu
Nikon A1R+	H4360	Glenn Slocum, gslocum@mcw.edu
Nikon A1R+ Environmental Chamber/Cell Stage	M4530	Qiang Dai at qdai@mcw.edu
Nikon TE-2000	M4880	Glenn Slocum, gslocum@mcw.edu
Computer with Software for Analyzing Nikon Images	M4880	Glenn Slocum, gslocum@mcw.edu
<b>Centrifuges &amp; Rotors</b>		
Beckman Coulter Ultracentrifuge XPN-100, 2 Units	M4015 Hall	andrewbarr@mcw.edu for user code; Hao Xu; xuhao@mcw.edu
Sorvall Superspeed RC-6+, 2 Units	M4980 Hall	Nori Nishijima, ynishijima@mcw.edu
Eppendorf 5804R Tabletop Centrifuge	M4480	andrewbarr@mcw.edu
Multiple Rotors	M4980, M4015	andrewbarr@mcw.edu

# CVC Resources: Equipment & Space Committee

## Members



David Gutterman, MD  
Chair  
Sr Associate Director, Cardiovascular Center  
Professor, Department of Medicine, Cardiovascular Medicine



John Auchampach, PhD  
Professor, Department of Pharmacology & Toxicology



Benjamin Gantner, PhD  
Assistant Professor, Department of Medicine, Endocrinology



Mary Sorci-Thomas, PhD  
Professor, Department of Medicine, Endocrinology



**Andrew Barr**  
Research  
Program  
Coordinator

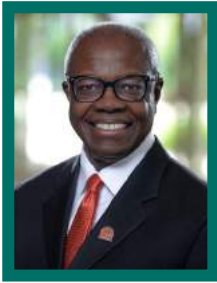


**Allison DeVan, PhD**  
Academic Program  
& Research Consultant



**Alicia Martin, MS, MBA**  
Project Manager

# CVC Resources: iPSC Oversight Committee



**Ivor J. Benjamin, MD, FAHA, FACC**  
Chair  
Professor of Medicine, Physiology,  
Pharmacology & Toxicology, Surgery,  
Cell Biology, Neurobiology & Anatomy



**Piero Antuono, MD**



**Zeljko Bosnjak, PhD**



**Aron Geurts, PhD**



**David Gutterman, MD**



**Shekar Kurpad, MD, PhD**



**Peter Newman, PhD**



**Jennifer Strande, MD, PhD**



**Brandon Tefft, PhD**



**Aoy Tomita-Mitchell, PhD**



**Jeff Whittle, MD, MPH**

## Staff



**Gracious Ross, DVM, PhD**  
Research Scientist II  
MCW CVC iPSC Program  
gRoss@mcw.edu  
M4730, x5657



**Alicia Martin, MS, MBA**  
Project Manager  
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**John Seagrist, BS**  
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M4730, x5677



**Lacey Roche, BS**  
Research Support Specialist  
lroche@mcw.edu  
H4895, x5776



# CVC's Mission #1: Research

# Cardiovascular Center Areas of Thematic Research

## SIGNATURE PROGRAMS



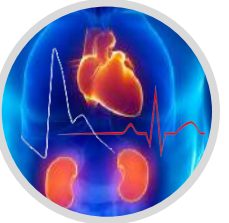
The Signature Program in **Atherosclerosis, Thrombosis & Vascular Biology** is designed to foster collaborations from which new scientific teams emerge to pursue fundamental and translational scientific investigation and to provide a resource for researchers who are interested in addressing the major causes of mortality and morbidity in Western countries through the study of lipid metabolism, inflammation, platelet biology, vascular biology and their clinical implications for cardiovascular health and disease. The Program promotes team science linking junior and senior faculty and trainees in a rich, nurturing, transdisciplinary research environment.

Leaders: Mary Sorci-Thomas, PhD & David Gutterman, MD



The **Cardiac Biology & Heart Failure** Signature Program is a platform built to support independent investigators working towards enabling their fundamental discoveries in the area of cardiac disease, to be translated into better science, clinical research, and clinical utility.

Leaders: John Auchampach, PhD & Caitlin O'Meara, PhD



The **Hypertension** Signature Program's goal is to integrate hypertension research at MCW and foster better communication among scientists working in the field.

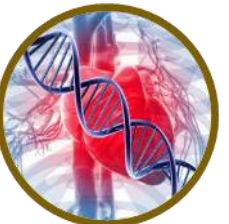
Leaders: Mingyu Liang, MB, PhD & Srividya Kidambi, MD



The **Precision Cardiovascular Medicine** Signature Program builds on the Human Genome Project and the nationwide Precision Medicine Initiative to promote enhanced understanding, and opportunities to investigate and translate advances, in both diagnostics and therapeutics, for improved outcomes of individual patients.

Leaders: Zeljko Bosnjak, PhD & Michaela Patterson, PhD

## AFFINITY GROUPS



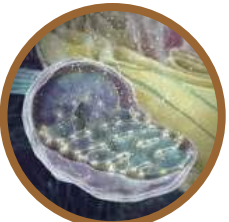
The **Cardio-Oncology** Affinity Group studies the impact of cancer therapies on cardiovascular health and the long-term effects on cancer survivors.

Leaders: Andreas Beyer, PhD, Carmen Bergom, MD, PhD



The **Prevention** Affinity Group promotes collaboration amongst investigators who focus their research efforts to improve cardiovascular health and reduce deaths from cardiovascular disease through behavioral lifestyle interventions in the clinic and surrounding community.

Leader: Jacquelyn Kulinski, MD



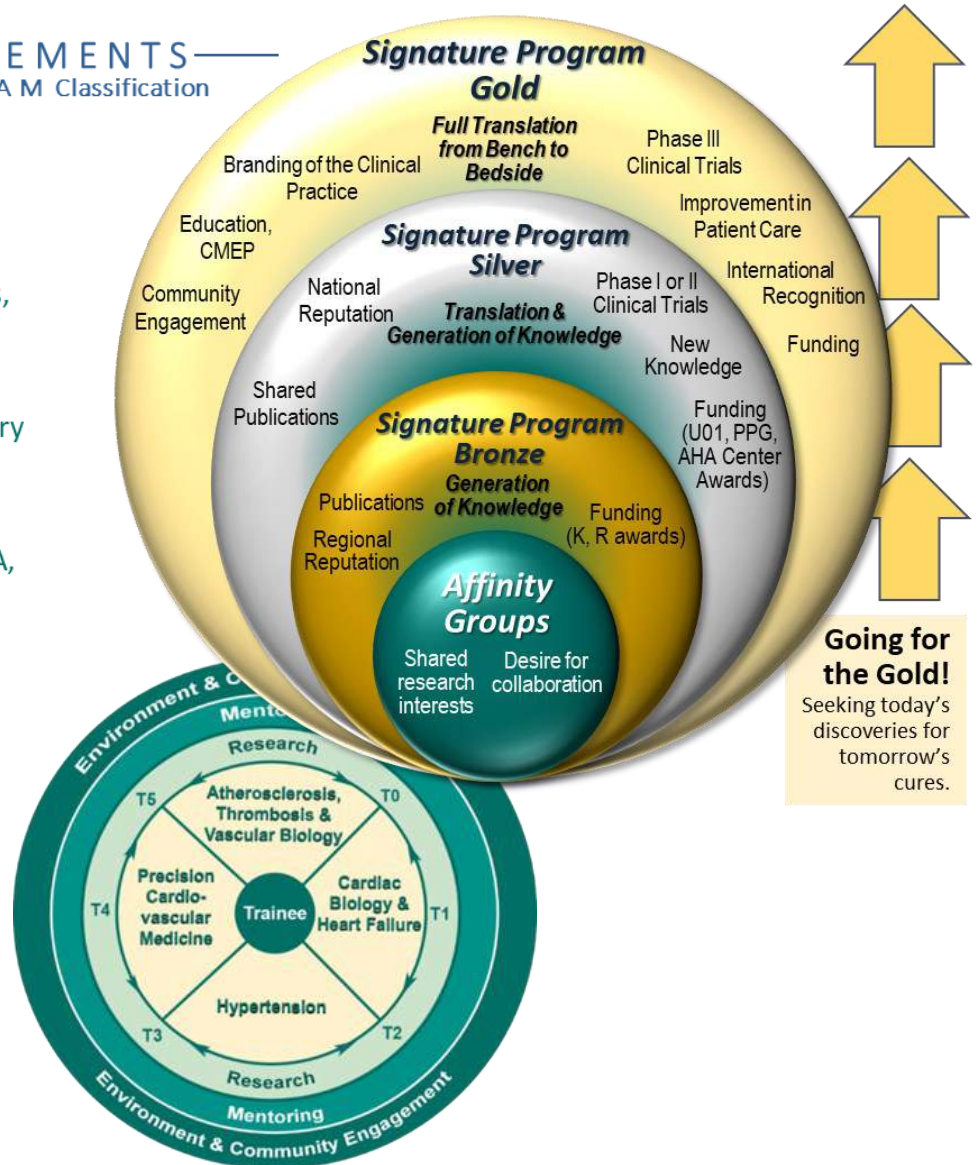
The **Redox Biology & Medicine** Affinity Group's focus is to integrate and promote research related to free radicals.

Leader: Marcelo Bonini, PhD

## 6 ESSENTIAL ELEMENTS

for SIGNATURE PROGRAM Classification

- 1 Create shared interests in either patient-specific and/or disease-specific thematic areas
- 2 Generate new knowledge (publications, citations, citations, video and media)
- 3 Integrate research across the continuum (T0-T5) from discovery science to patient care
- 4 Obtain extramural support from recognized sources (NIH, NSF, VA, etc.)
- 5 Generate intellectual property (disclosures, patents and commercialized products)
- 6 Adopt our findings into clinical practice



## 4 SIGNATURE PROGRAMS

To serve as a means to bring our most talented junior and established investigators together in support of team science, new multi-investigator initiatives, and collaboration on investigator-initiated trials; potentially with joint development of new intellectual property.



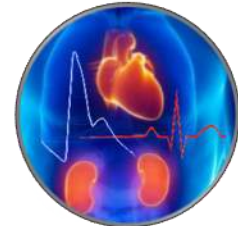
ATHEROSCLEROSIS, THROMBOSIS & VASCULAR BIOLOGY



CARDIAC BIOLOGY & HEART FAILURE



PRECISION CARDIOVASCULAR MEDICINE



HYPERTENSION



# Supporting Team Science with 2017-2019 Pre-PPG Awards

The CVC is supporting teamwork and invested in team science by awarding pre-Program Project Grants (PPG) to its Signature Programs with the goal of each Signature Program acquiring a PPG or similar multi-PI extramural award in the next few years.

The funds for these \$200K two-year awards are from the CVC's Advancing a Healthier Wisconsin Endowment Grant awarded to the CVC by the Research and Education Program Fund, a component of the AHW endowment, entitled, "The Cardiovascular Roadmap; Bridging our Foundations to 'Signature Programs'" and/or institutional funds given to the CVC for the **Signature Program Pre-PPG Awards**, and by philanthropic support given to MCW's Cancer Center and pledged to the CVC for the **Signature Program Pre-PPG Award: Cardio-Oncology Focus**.

## \$200K Pre-PPG Grants Awarded To:



### Metabolic Control of Inflammation in Atherosclerosis by Macrophage Scavenger Receptors

Program Director: Daisy Sahoo, PhD  
Project Leaders: Roy Silverstein, MD, Albert Girotti, PhD, Mary Sorci-Thomas, PhD, Michael Thomas, PhD



### Genetic and Epigenetic Mechanisms of Hypertension

Program Director: Aron Geurts, PhD  
Project Leaders: Allen Cowley, Jr., PhD, Andrew Greene, PhD, Mingyu Liang, MB, PhD



### Signaling Mechanisms Underlying Cardiac Regeneration

Program Director: John Auchampach, PhD  
Project Leaders: John Lough, PhD, Caitlin O'Meara, PhD, Brian Link, PhD



### Mitochondrial Function Disparities Contributing to Cardiovascular Toxicity from Radiation Therapy

Program Directors: Meetha Medhora, PhD & Andreas Beyer, PhD  
Project Leaders: Christopher Chitambar, MD, Carmen Bergom, MD, PhD, Jennifer Strande MD, PhD, Elizabeth Jacobs, MD, John Baker, PhD, Jason Rubenstein, MD, Rodney Sparapani, PhD, Jessica Olson, PhD

## The Cardiovascular Center's Team Science Research Symposium



Celebrating the Collaborative Research Conducted within the CVC

Alumni Center  
Medical College of Wisconsin  
Milwaukee, Wisconsin  
Wednesday, October 11, 2017



The Cardiovascular Center Presents

## "A Morning of Team Science"

A meeting of the External Scientific Advisory Board with presentations from the recipients of the CVC's Pre-PPG Awards

\*Open to MCW faculty, trainees, and staff

### JOIN US!

Tuesday, September 25<sup>th</sup>

8:00 AM - 12:15 PM

CVC Conference Room  
HRC, 4<sup>th</sup> Floor, H4950/4940

\*Breakfast provided



Brought to you in part by the Advancing a Healthier Wisconsin Endowment Grant Awarded to the CVC by the Research and Education Program Fund



Contact CVC@mcw.edu with questions



# Cardiovascular Center 2019 Annual Research Retreat



CARDIOVASCULAR  
CENTER

2019 Research Retreat

“New Approaches to Old Problems”

OCTOBER 18, 2019 • BOERNER GARDENS



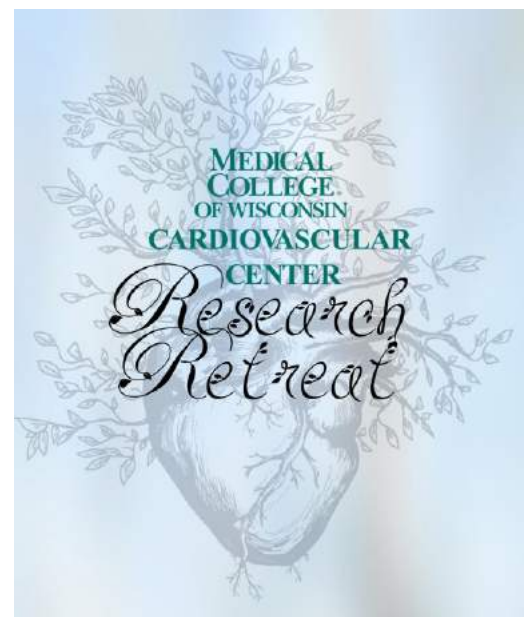
On Friday, October 18th, the Cardiovascular Center held its 5th annual Research Retreat at the Boerner Botanical Gardens in Hales Corners. This year’s event, co-chaired by **Michael Widlansky, MD, MPH**, professor of cardiology, **Julie Freed, MD, PhD**, assistant professor of anesthesiology, **Caitlin O’Meara, PhD**, assistant professor of physiology, Rebekah Gundry, PhD (in absentia), and **Jennifer Stancill, PhD**, CVC postdoctoral fellow, focused on “New Approaches to Old Problems”, with the goal of breaking down barriers to research within the CVC, exploring new models and approaches to old problems, and building bridges to

connect investigators to lead to new discoveries. From the brainstorming breakout session to the poster session housed in the beautiful garden venue to the networking social hour, this year’s retreat was filled with compelling research, insightful discussions, and numerous opportunities for connecting with other CVC investigators, trainees, and staff.



The retreat featured nationally-recognized keynote speaker, Nancy Sweitzer, MD, PhD, director of the University of Arizona Sarver Heart Center, professor of medicine and chief of the division of cardiology in the University of Arizona College of Medicine –Tucson. A record number of posters were presented during this year’s poster session for trainees, faculty, and staff. Congratulations to our winners! The CVC would like to extend

a very appreciative thank you to the judges who lent their time and expertise to judging the posters this year!



Special Thanks to Faculty Chairs, Julie Freed, MD, PhD, Caitlin O’Meara, PhD, Michael Widlansky, MD, MPH, and Trainee Chair, Jennifer Stancill, PhD

# Cardiovascular Center 2019 Annual Research Retreat

## Trainees and Staff Awarded at CVC Research Retreat

**Oct. 23, 2019 MCW News** - The 2019 Cardiovascular Center Research Retreat was held Oct. 18 focused on breaking down barriers to research within the CVC while exploring new approaches and technologies to old problems. As part of the event, three abstracts were selected as “Trainee Abstracts of Excellence” and their authors allotted time for an oral presentation.

The presenters included Bailey Dye (Lincoln Lab), Ramoji Kosuru, PhD (Chrzanowska Lab), and Hayley Powers (Sahoo Lab). The speakers were selected by the Trainee Committee for Abstract Presentation Selection, which allowed CVC trainees the opportunity to gain scientific session planning experience.

The poster session reached a record number of submissions, with 68 posters filling the Boerner Botanical Gardens atrium. Prizes were awarded in the form of \$300 and \$100 Amazon gift cards to posters in five different categories:

### Medical Student:

- 1st – Melissa Anfinson (Surgery)
- 2nd – Ayana Jamal (CBNA)

### Graduate Student:

- 1st – Wojciech Jankiewicz (Pharm & Tox)
- 2nd – Shi Fang (Physiology)

### Postdoctoral Fellow:

- 1st – Yiliang Chen, PhD (BRI)
- 2nd – Shahram Eisa-Beygi, PhD (CBNA)



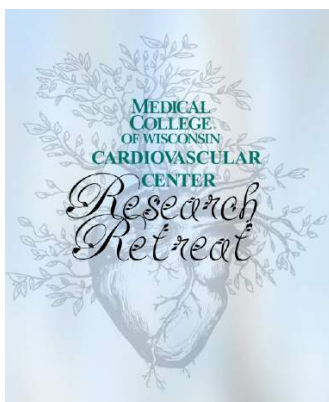
### Clinical Fellow/Resident:

- 1st – Rachel Sullivan, MD (Medicine)
- 2nd – Sakthi Sundararajan, MD (Medicine)

### Research Support Staff:

- 1st – Katy Marie LaFond (Medicine)
- 2nd – Marcus James Weitekemper (Medicine)

The CVC also wishes to extend a thank you to the members of the Trainee Committee for Abstract Presentation Selection: Melanie Gartz, MS, MHS; Ankan Gupta, PhD; Christine Klemens, PhD; Rachel Jones Lipinski, PhD; Vinal Menon, PhD; Emily Nordquist; Jennifer Stancill, PhD; Karthikeyan Thirugnanam, PhD.



**Special Thanks to Faculty Chairs, Julie Freed, MD, PhD, Caitlin O’Meara, PhD, Michael Widlansky, MD, MPH, and Trainee Chair, Jennifer Stancill, PhD**

# History of the CVC's Annual Research Retreat

## Cardiovascular Center Research Retreat

inspiring  
**impactful**  
SCIENCE

*Discovering the Cardiovascular Center's impactful science across the continuum from basic science research to patient care to population health*

HARLEY-DAVIDSON MUSEUM ■ Milwaukee, WI ■ Friday, October 19<sup>th</sup>, 2018

- Keynote Speaker: Joseph Hill, MD, PhD, Editor-in-Chief of *Circulation*
- Faculty Chair: Mingyu Liang, MB, PhD
- Trainee Chair: Christine Klemens, PhD



Keynote Speaker:  
Philipp Scherer, PhD

Gifford O. Touchstone, Jr. & Randolph  
G. Touchstone Distinguished Chair in  
Diabetes Research  
Professor & Director, Touchstone  
Diabetes Center, UT Southwestern  
Medical Center



Friday, April 21, 2017  
8:00 AM–5:00 PM



Trainee Workshop Speaker:  
Joanne Lipo Zovic, JD, MBA  
Adjunct Professor of Law  
Marquette University

- Faculty Chair: Mary Sorci-Thomas, PhD
- Trainee Chair: Kevin Wright, PhD

2016 Keynote Speaker: John Cooke, MD,  
PhD, Houston Methodist Research  
Institute

2015 Keynote Speaker: Richard, Kitsis,  
MD, Albert Einstein College of Medicine

# Cardiovascular Center Seminar Series

Supported by CVC Central & Programmatic Funds  
Two Speakers Selected by Each CVC Signature Program

Date	Speaker	Institution
11/07/2018	Jeffrey Whittle, MD	Medical College of Wisconsin
11/09/2018	Gregory Graf, PhD	University of Kentucky
11/13/2018	Shobha Ghosh, PhD	Virginia Commonwealth University
11/14/2018	Glen Borchert, PhD	University of South Alabama
11/21/2018	Michael Earing, MD	Medical College of Wisconsin
12/05/2018	Katherine Yutzey, PhD	Cincinnati Children's Hospital
01/23/2019	John Wilkins, MD	Northwestern University
02/06/2019	Rodney Sparapani, PhD Alexis Visotcky, MS	Medical College of Wisconsin
02/13/2019	Alexey Glukhov, PhD	University of Wisconsin-Madison
02/27/2019	John Lough, PhD	Medical College of Wisconsin
03/06/2019	Ron Do, PhD	Icahn School of Medicine, Mount Sinai
03/27/2019	Samuel Senyo, PhD	Case School of Engineering
04/12/2019	Christian Baer, PhD	Leibniz Universitat, Germany
05/08/2019	Amy Bradshaw, PhD	Medical University of South Carolina
05/17/2019	Sumoi Hoka, MD, PhD	International Univ of Health & Welfare
10/30/2019	Javid Moslehi, MD	Vanderbilt University
11/06/2019	Nancy Webb, PhD	University of Kentucky
11/13/2019	Joy Lincoln, PhD	Medical College of Wisconsin
11/20/2019	Ormond MacDougald, PhD	University of Michigan
12/04/2019	Hanjoong Jo, PhD	Emory University

Special thanks to our 2019-2021 Seminar Series Faculty Chair, Michaela Patterson, PhD  
CVC Staff: Andrew Barr, Research Program Coordinator

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# CVC's Advancing a Healthier Wisconsin Grant

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## HISTORY of AHW FUNDING

The Advancing a Healthier Wisconsin Endowment is a statewide funder dedicated to improving health in Wisconsin communities. The Medical College of Wisconsin established the AHW Endowment to receive part of the charitable funds resulting from the conversion of Blue Cross/Blue Shield United of Wisconsin from a nonprofit organization to a for-profit corporation in 1999. The University of Wisconsin School of Medicine and Public Health's Wisconsin Partnership Program was the other recipient and also supports statewide health improvement efforts. The MCW Consortium on Public and Community Health, comprising of nine board of directors, provides oversight for the AHW Endowment's work in community-academic partnership and public and community health. Since 2004, the AHW Endowment has provided more than 300 awards totaling more than \$160 million to advance the health of Wisconsin through community health improvement, research and education.

## THE CARDIOVASCULAR ROADMAP: BRIDGING OUR FOUNDATIONS TO "SIGNATURE PROGRAMS"

### Initial Proposal: A Major Source of Funding for the CVC

PI: Ivor J. Benjamin, MD; Type: Center Development Award; Period: 7/1/14-6/30/21; Amount: \$4 Million

Purpose: to improve cardiovascular health in Southeast Wisconsin and beyond through innovative, cutting-edge research and cost-efficient healthcare delivery by building the foundation for innovation, collaboration, and translation of research.

Aim 1: Develop a robust and sustainable infrastructure that supports and promotes multidisciplinary research efforts in cardiovascular medicine.

1a. A novel conceptual framework, called Signature Programs, will be implemented as a novel mechanism for translational research team formation and achievement. This application focuses on the top three highest priority Signature Programs (Cardio-Oncology, Vascular Biology/Disease, and Heart Rhythm Disturbances/Atrial Fibrillation), for which additional programs can be modeled in the future.

1b. Co-recruitment of physician investigators in complementary clinical disciplines of the three top priority program areas, which are designed to bridge research with clinical cohorts of patients.

1c. Recruitment of support staff who will be essential to the success of the Signature Programs.

1d. Create a pilot funding program to support new, multidisciplinary research projects among CVC members.

Aim 2: Increase the cohort of faculty, clinical fellows, & postdoctoral fellows working on translational cardiovascular research.

2a. Develop training opportunities clinical faculty in translational research (Breakfast & Learn; Lunch & Learn; senior faculty mentoring).

2b. Expand postdoctoral training experiences in translational research (monthly seminar/forum series).

2c. Educate and train clinical fellows in translational research (Breakfast & Learn; distance learning resources).

Aim 3: Improve community education and involvement in the areas of cardiovascular medicine and research.

3a. Expand our educational outreach program with participation in at least one CTSI "Science Cafés" per Signature Program each year.

3b. Create patient advisory teams (PATs) for each Signature Program modeled after the CTSI Community Engagement Key Function (CEnF) Citizen's Advisory Committee.

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# CVC's Advancing a Healthier Wisconsin Grant

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## Year 2 Progress Report Summary

During this reporting period, the Cardiovascular Center (CVC) has continued to develop an infrastructure to promote multidisciplinary research in cardiovascular medicine by building and supporting its thematic areas of research and increasing the knowledge and collaborative interactions of its investigators. This was achieved through seminars, the annual CVC Research Retreat, group meetings, evaluation by both an external and internal scientific advisory boards, and the provision of resources including, but not limited to, core equipment, pilot/seed grants, and administrative support. New staff were hired (a replacement Academic Program and Research Officer, November 2015) and recruitment of a faculty member, whose expertise complemented the research of CVC members, was actively pursued. Progress towards increasing the number of trainees and faculty working in translational cardiovascular research was made by formulating a formalized training program to enhance the training of future cardiovascular scientists (clinical and postdoctoral fellows) as outlined in a training grant application submitted to the National Institutes of Health National Heart, Lung, and Blood Institute in January. Furthermore, the creation of the A. O. Smith Fellowship Scholars Program, a program funded by philanthropic dollars, hosting of numerous multidisciplinary and translational seminars, and increasing the outreach to trainees through the CVC trainee e-newsletter helped expand the opportunities for and exposure of postdoctoral fellows, clinical faculty, and clinical fellows to translational cardiovascular research. Fruitful efforts towards improving community education were made by hosting community presentations, a donation drive, and education of CVC staff by the MCW Community Engagement Core (meetings, workshops).

## Year 3 Progress Report Summary

In FY2017, the Medical College of Wisconsin Cardiovascular Center (CVC) achieved several major accomplishments made possible by the Advancing a Healthier Wisconsin Parent Award. First, sustainable team science in cardiovascular research was supported by creating a major funding opportunity available only to the CVC's Signature Programs, groups of CVC members with similar areas of research expertise or interests. Applications for several large \$200,000 research grants were solicited and reviewed in the Spring. The goal of these awards is to promote teamwork and the subsequent submission of team-based grants to the federal government or other organizations. Second, the CVC applied for and was awarded a prestigious and highly-competitive \$1.6 million five-year T32 grant from the federal government to train postdoctoral fellows in cardiovascular research. This is one of only six postdoctoral T32 training programs on the entire Milwaukee Medical Regional Campus. Finally, with the hire of two new staff members, new initiatives promoting trainee education and community engagement were created. These accomplishments, along with the existing support/services provided by the CVC, are building the foundation of knowledge about cardiovascular health and disease that are targeted to improve prevention and clinical care in Southeast Wisconsin and beyond.

## Year 4 Progress Report Summary

During this reporting period, the Cardiovascular Center at the Medical College of Wisconsin continued to strive to improve cardiovascular health in Southeast Wisconsin and beyond by furthering the development of an infrastructure to promote multidisciplinary research, by educating and providing opportunities for translational research to its members, staff, and trainees, and by improving education and involvement in cardiovascular health and disease within the community. In addition to building on the foundation of initiatives established during the past three years of this award, the Cardiovascular Center created multiple new initiatives. These included a "Team Science Research Symposium", a day dedicated to promoting team science with presentations by the recipients of the team science grants, and recruitment of two new faculty, Marcelo Bonini, PhD and Michaela Patterson, PhD. These scientists will support the Cardiovascular Center's Signature Program in Precision Cardiovascular Medicine and Affinity Group in Redox Biology and Medicine. With regards to education and training, a new monthly "Trainee Digest" began distribution to provide materials to postdoctoral and clinical fellows on various professional skills, and three new seminar/workshop series commenced. "Work in Progress" seminars are a highly-interactive forums on a focused topic, "Collaboration Seminars" focus on fostering clinical/research partnerships with clinicians in the Herma Heart Institute, and a four-part bioinformatics workshop taught techniques for managing and integrating large research datasets. Last but not least, the Cardiovascular Center partnered with AHW in their community outreach program, "Conversations with Scientists" and held three outreach and health screening events in October in underserved areas of Milwaukee.

# CVC's Advancing a Healthier Wisconsin Grant

## Year 5 Progress Report Summary

With the support of Advancing a Healthier Wisconsin, the Cardiovascular Center at the Medical College of Wisconsin (MCW) has continued its strategic expansion, nurturing and cultivating the initiatives that improve cardiovascular health in Southeast Wisconsin and beyond. This year, major accomplishments include the addition of a new aim, to pilot a "Human Induced Pluripotent Stem Cell (iPSC) Program" to increase the number of investigators performing translational research and to better support investigators currently utilizing these types of cells (created from blood, urine, or skin samples) for precision medicine. To support this and other areas, new faculty and staff with expertise in team science funding (e.g., program project grants) and research interests aligning with our Signature Programs (areas of research expertise) were recruited and cross-campus collaborations, translational research, and training were strengthened with the Controlling Hypertension by Inspiring Change Symposium, 2018 Research Retreat, and Herma Heart Institute and Cardiovascular Center Adult Congenital Heart Disease Retreat. Efforts with training in translational research continued as well as outreach efforts including Science Cafes. Overall, a re-evaluation and restructuring of leadership within our Signature Programs, Affinity Groups, External Scientific Advisory Boards, and Internal Scientific Advisory Boards this year has also helped the Cardiovascular Center remain vibrant and evolve as its membership grows and as the fields of science and medicine progress.

### March 2019 Addition of Aim 4, an iPSC Program

**Aim 4:** Pilot a "Human Induced Pluripotent Stem Cell (iPSC) Program" to increase the number of investigators performing translational research and to better support investigators currently utilizing iPSCs for precision medicine.

**Objective 4a:** Create a multi-ethnic cohort of human patient-derived samples for a population-based biorepository for subsequent processing into iPSCs

**Objective 4b:** Create an oversight committee to guide the overall program and to manage requests for sample procurement and/or use of currently banked samples

**Objective 4c:** Educate and increase collaborations amongst internal and external investigators utilizing iPSCs and other similar precision medicine therapies

**Objective 4d:** Promote sustainability of the program

### 2019 Funded Projects: Individual Investigator Project & Faculty Recruitment

**Alison Kriegel, PhD,** "A Novel Approach to Identify of Cardiac Dysfunction-Associated Factors in Chronic Kidney Disease Patients "

**Michaela Patterson, PhD,** "Cardiac Cell Regeneration and Advancing Translational Cardiovascular Research"

### 2018 Funded Projects: Community Engaged Research Projects, Individual Investigator Project

**Matthew Durand, PhD** with Community Partner, Una Van Duvall (HeartLove Place of Milwaukee), "The Harambee-Hoja partnership: A Park-Based Intervention to Increase Physical Activity in Under-Resourced Communities"

**Julie Freed, MD, PhD,** "Novel Use of Cobalamins for Treatment of Bacteria-Induced Vasoplegia"

**Kirsten Beyer, PhD** with Community Partner, with Melody McCurtis (Metcalf Park Community Bridges), "A Heart Healthy Neighborhood: Reducing Stress Together"



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# CVC's Advancing a Healthier Wisconsin Grant

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## Funded Subawards

### 2017, 2018 Funded Projects: 2 Pre-PPG Awards (\$200K, 2 Years)

**Aron Geurts, PhD** (Key Personnel: **Allen Cowley, Jr., PhD, Andrew Greene, PhD, Mingyu Liang, MB, PhD**; Signature Program in Hypertension), "Genetic and epigenetic mechanisms of hypertension"

**Daisy Sahoo, PhD** (Key Personnel: **Roy Silverstein, MD, Mary Sorci-Thomas, PhD, Albert Girotti, PhD, Michael J. Thomas, PhD**; Signature Program in Atherosclerosis, Thrombosis, and Vascular Biology), "Metabolic control of inflammation in atherosclerosis by macrophage scavenger receptors"

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### 2016 Funded Project (1 Year)

**Peter Frommelt, MD**, "Diastolic ventricular function: A pediatric heart network (NHLBI) ancillary study to establish normal values in children"

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### 2015 Funded Projects (\$25-\$50K, 1 Year)

**Aron Geurts, PhD**, "Role of BAG3 variants in dilated cardiomyopathy"

**Brian Hoffmann, PhD**, "Microvesicles in cardiovascular inflammation: Developing collaborations, core resources, and unified methodology"

**Scott Levick, PhD**, "Understanding reduced cardiac size related to postural orthostatic tachycardia"

**Aoy Tomita-Mitchell, PhD**, "The role of MYH6 in hypoplastic left heart syndrome"

**Rodney Sparapani, PhD**, "Left ventricular hypertrophy surveillance with ECGs, predictive modeling and personalized medicine"

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### These funds have allowed the Cardiovascular Center to:

- ◆ Purchase audiovisual equipment for the main Cardiovascular Center conference rooms
- ◆ Provide salary support for some of the CVC's staff
- ◆ Fund sub-awards to individual investigators (2015, 2016, 2018, 2019, 2020)
- ◆ Fund sub-awards to Signature Programs (Pre-PPGs, 2017, 2018, 2019)
- ◆ Fund sub-awards to CVC Investigators Partnering with the Community (Community Engaged Seed Grants, 2018, 2019)
- ◆ Contribute to faculty recruitment packages
- ◆ Co-fund Science Cafés for community education
- ◆ Promote research, education and networking by funding the CVC Annual Research Retreat
- ◆ Enrich trainee education by sponsoring workshops and seminars
- ◆ Provide salary support for biostatistical staff
- ◆ Build partnerships and collaboration with the Herma Heart Institute
- ◆ Pilot an induced pluripotent stem cell program
- ◆ And more!

# CVC Members' NIH Funding in 2019

NIH AWARD	#	Funding
F30	3	\$142,983
F31	4	\$180,064
F32	1	\$63,746
I01	7	\$1,518,403
K08	2	\$300,668
K23	1	\$177,796
K24	1	\$173,765
KL2	1	\$360,551
P01	4	\$8,701,338
R00	1	\$245,836
R01	55	\$29,597,983
R13	1	\$20,000
R21	6	\$1,096,377
R24	1	\$763,829
R25	1	\$151,213
R35	4	\$2,728,883
R38	1	\$274,018
R56	1	\$92,400
R61	1	\$315,958
S10	1	\$301,950
T32	4	\$1,039,765
U01	1	\$717,118
U24	2	\$1,311,648
UG1	1	\$184,800
UL1	1	\$3,664,744

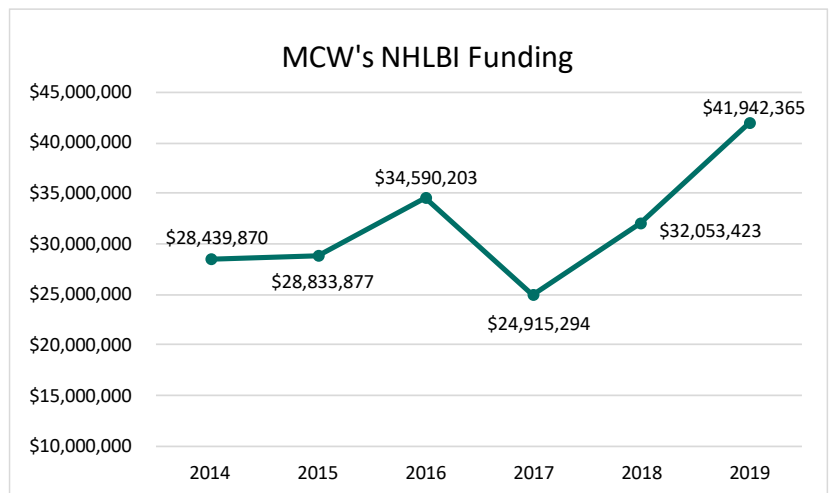
INSTITUTE	NIH GRANTS AWARDED TO CVC MEMBERS
NIA	2 x R21
NIAID	1 x R01, 1 x U01
NCCIH	1 x R61
NCI	1 x F30, 8 x R01, 2 x R21
NIDDK	2 x F31, 1 x K23, 1 x K24, 5 x R01, 1 x R56, 1 x T32
NIEHS	1 x R01
NEI	1 x R01
NIGMS	1 x P01, 1 x R01, 1 x R35
NHGRI	1 x U24
NHLBI	2 x F30, 2 x F31, 1 x F32, 2 x K08, 3 x P01, 1 x R00, 36 x R01, 1 x R13, 1 x R25, 3 x R35, 1 x R38, 3 x T32, 1 x UG1
NIMHD	1 x R01
NINDS	1 x R01, 2 x R21, 1 x U24
OD	1 x S10
NCATS	1 x KL2, 1 x UL1
VA	7 x I01



## NHLBI Funding for MCW

- ◆ #1 in Wisconsin
- ◆ Funds Totaling over \$41.9M
- ◆ Top 10 Amongst Medical Schools Nationwide
- ◆ #16 Amongst All Higher Education Institutions
- ◆ 30% Increase in Funding Since 2018

Schools of Medicine	NHLBI
1. University of Pennsylvania	\$69.8M
2. UC-San Francisco	\$68.1M
3. Columbia University	\$61.6M
4. Univ of Pittsburgh at Pittsburgh	\$59.3M
5. Johns Hopkins University	\$56.4M
6. University of MI at Ann Arbor	\$54.5M
7. Stanford University	\$53.9M
8. Yale University	\$53.2M
9. Medical College of Wisconsin	\$41.9M
10. University of AL at Birmingham	\$40.8M



# Other Funding Sources for CVC Members in 2019

## AHA Grants Awarded to CVC Members \$1,896,908 in 2019



**American Heart Association®**  
life is why™

- n=1 Established Investigator Award (Staruschenko)
- n=1 Postdoctoral Fellowship Award (Dasinger [Mattson])
- n=2 Predoctoral Fellowship Awards (Nasci [Kriegel], Spires [Staruschenko])
- n=2 Scientist Development Grants (Y. Chen, Palygin)
- n=1 Career Development Award (Patterson)
- n=2 Transformational Project Awards (A. Mammoto, M. Thomas)



# Other Funding Sources for CVC Members in 2019



MERCK SHARP & DOHME



Advancing Research. Improving Lives.™



Foundation of America, Inc.



National Kidney Foundation®



# Other Funding Sources for CVC Members in 2019



Forest County Potawatomi  
FOUNDATION





## CVC's Mission #2: Patient Care

# Pediatric Clinical Care with the Herma Heart Center



Cardiovascular Center Members Caring for Patients & Performing Research in CHW's Herma Heart Center:



John Baker, PhD



Peter Bartz, MD



Joseph R. Cava, MD, PhD



Susan Foerster, MD



Peter C. Frommelt, MD



Salil Ginde, MD, MPH



Joy Lincoln, PhD



Michael Mitchell, MD



Andrew Spearman, MD



Aoy Tomita-Mitchell, PhD

The Herma Heart Center at Children's Hospital of Wisconsin is the largest pediatric cardiac center in the state and ranked by U.S. News & World Report as a top pediatric cardiology and heart surgery program in the nation.

Jeanne James, MD is the medical director and is a member of the CVC's Internal Scientific Advisory Board.



Jeanne James, MD  
Chair for Cardiology & Medical Director of Pediatric Cardiology

In the Spring, Summer, and Fall of 2018, a new "Collaboration Seminar Series" was created to strengthen our partnership and encourage the exchange of ideas between HHI and the CVC.



## Herma Heart Institute

Compassionate, comprehensive and cutting-edge cardiac care — right here in the heart of the Midwest



- May 22nd, 7-8am, David Gutterman, MD @ HHI
- Aug 7th, 7-8am, Julie Freed, MD, PhD @ HHI
- Sep 12th, 12-1pm, Salil Ginde, MD, MPH @ CVC H4950
- Oct 30th, 7-8am, Jennifer Strande, MD, PhD @ HHI
- Nov 21st, 12-1pm, Michael Earing, MD @ CVC H4950

HHI seminars held in the 1st floor of CHW's west tower

*Funded in part by the Advancing a Healthier Wisconsin Endowment grant awarded to the Cardiovascular Center by the Research and Education Program Fund, a component of the AHW endowment at MCW*



# Pediatric Clinical Care with the Herma Heart Center



## ADULT CONGENITAL HEART DISEASE MINI-RETREAT

Friday, January 25, 2019  
11:30 AM—5 PM

Cardiovascular Center and Herma Heart Institute  
Join Forces at Adult Congenital Heart Disease Retreat

On Jan. 25, clinicians from the Herma Heart Institute and cardiovascular researchers from the Cardiovascular Center at the Medical College of Wisconsin braved the polar vortex and gathered together at Miller Park Stadium in Milwaukee to discuss tough clinical scenarios and propose collaborative research projects to address them. Their goal was to better understand, prevent, and treat adult congenital heart disease, a growing population of patients who, due to research and subsequent advances in medical care, are reaching middle and late adulthood with complex cardiovascular medical histories and complications.



Attendees were welcomed by the hosts of the event, **Jeanne James, MD**, the Leigh Gabrielle Herma Endowed Chair of Cardiology at Children's Hospital of Wisconsin, **Michael Earing, MD**, Director of the Adult Congenital Heart Disease Program at Children's Hospital of Wisconsin, and **David Guterman, MD**, the Northwestern Mutual Professor of Cardiology and Senior Associate Director of the Cardiovascular Center at the Medical College of Wisconsin. Four clinical vignettes were introduced by **Salil Ginde, MD**, **Edward Kirkpatrick, DO**, **Benjamin Goot, MD**, and **Dr. Earing**, followed by a robust dialogue between clinicians, clinical fellows, and researchers who broke into small focus groups to analyze each case and propose impactful research studies to address remaining questions.

Many thanks to the clinicians and scientists who engaged in the lively discussion, as well as to the event planning committee. This event was a springboard for future collaborative translational research between the Herma Heart Institute at Children's Hospital of Wisconsin and the Medical College of Wisconsin's Cardiovascular Center!





## Clinical Care with the Froedtert & MCW's Cardiology & Cardiac Surgery Teams



Jorge Saucedo, MD, MBA Appointed Chief of Cardiovascular Medicine at the Medical College of Wisconsin and Director of the Froedtert & Medical College of Wisconsin Heart and Vascular Service Line

Cardiovascular Center Internal Scientific Advisory Board Member

Milwaukee, Aug. 20, 2018 – **Jorge Saucedo, MD, MBA**, joined the Medical College of Wisconsin (MCW) as **Chief of Cardiovascular Medicine** in the Department of Medicine, as well as professor of medicine and MCW Eminent Scholar, on July 16, 2018. He also serves as Director of the Froedtert & MCW Heart and Vascular Service Line. Dr. Saucedo is board-certified in internal medicine, cardiovascular disease and interventional cardiology, and he provides care for the full scope of cardiac conditions. Dr. Saucedo most recently was head of the Division of Cardiology and co-director of the Cardiovascular Institute at NorthShore University HealthSystem in northern Illinois. He also held the

Allstate Foundation Judson B. Branch Chair of Cardiology and was professor of medicine at the University of Chicago Pritzker School of Medicine.

Dr. Saucedo is an accomplished academic cardiologist. A graduate of the Universidad Nacional Autonoma de Mexico in Mexico City, he completed training in internal medicine at the National Institute of Nutrition and fellowships in cardiology and interventional cardiology at National Institute of Cardiology in Mexico, the University of Michigan in Ann Arbor and Washington Hospital Center in Washington D.C.

He then joined the faculty at the University of Arkansas for Medical Sciences, where he served as director of the cardiac catheterization laboratories at the university and the John L. McClellan Veterans Affairs Medical Center. While in Arkansas, he also received an MBA from the University of Arkansas at Little Rock College of Business. From 2002 to 2013, Dr. Saucedo held numerous positions at the University of Oklahoma Health Sciences Center, including professor of medicine, vice-chief of clinical affairs in the Division of Cardiology and director of the Cardiac Catheterization Laboratories.

In June 2013, he became head of the Division of Cardiology and co-director of the Cardiovascular Institute at NorthShore University HealthSystem in northern Illinois. There he led impressive growth and expansion of cardiology, developing 13 new programs, including advanced heart failure, transcatheter mitral valve replacement, vascular medicine and a cardiology fellowship training program.

### FROEDTERT & THE MEDICAL COLLEGE OF WISCONSIN HEART AND VASCULAR PROGRAM HIGHLIGHTS

- ◆ a leading resource for transcatheter aortic valve replacement (TAVR) and other groundbreaking transcatheter procedures
- ◆ offer a multidisciplinary team approach and perform a high number of WATCHMAN procedures, placing a device inside the atrium of the heart to reduce blood clots
- ◆ the Extracorporeal Membrane Oxygenation System (ECMO) Program at Froedtert Hospital is the only adult program in Wisconsin designated as a Center on Path to Excellence in Life Support by the Extracorporeal Life Support Organization (ELSO). Froedtert Hospital achieved the silver-level designation the first year it applied.
- ◆ offer patients MitraClip, a promising new option to improve mitral regurgitation in patients with heart failure
- ◆ use the latest technology to help patients manage heart failure and keep them out of the hospital, including CardioMEMS, a remote monitoring device that can help patients measure pulmonary artery pressure, an early indication of worsening heart failure
- ◆ offer the latest short-, intermediate- and long-term devices, including both ventricular assist devices, such as the HeartMate 3 and HeartWare, and total artificial hearts (TAHs) for heart failure patients needing mechanical circulatory assist devices
- ◆ have performed adult heart transplants since 1985, with many patients surviving more than 20 years after heart transplant. This program is certified for heart transplantation by the Centers for Medicare & Medicaid Services.

# Clinical Care with the Froedtert & MCW's Cardiology & Cardiac Surgery Teams

## Cardiovascular Center Members



Jorge Saucedo, MD, MBA



Michael Cinquegrani, MD



Jacquelyn Kulinski, MD



David Marks, MD, MBA



Jason Rubenstein, MD



David Gutterman, MD



Lyle Joyce, MD, PhD



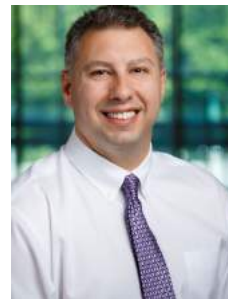
David Joyce, MD



Paul Pearson, MD, PhD



Ivor Benjamin, MD



Mike Widlansky, MD, MPH



Nicole Lohr, MD, PhD



Salil Ginde, MD, MPH



Peter Bartz, MD



Michael Mitchell, MD



The eight-story [Center for Advanced Care](#) (CFAC) on the Froedtert & the Medical College of Wisconsin Froedtert Hospital Campus opened its doors to patients in October of 2015. The 480,000-square-foot center houses three important patient care areas:

The Heart and Vascular Center, The Transplant Center and Preoperative Outpatient Management.

The Heart and Vascular Center offers a complete range of heart and vascular services, provided by one of the best teams in Wisconsin. Cardiologists, cardiac surgeons, interventional cardiologists, and many more will offer patients the most advanced surgical and non-surgical treatments available in the region in the area's only academic-based Heart and Vascular Center.

The Transplant Center consolidates the highly experienced transplant program in one place to offer the most comprehensive transplant program in the region. Nationally recognized for excellence in transplant care, Froedtert & the Medical College of Wisconsin promotes a multidisciplinary approach to the continual improvement of the clinical, scientific, and educational aspects of transplantation, thereby improving the lives of patients with organ failure.

The Preoperative Outpatient Management program is housed in the Center for Advanced Care. This means that the CFAC will be the first stop for all patients arriving for surgery at Froedtert Hospital. Here, patients will be admitted and receive all of their pre-op services, just one floor from the location of their actual surgery.

# Heart & Vascular Service Line Clinical Trials



## [Effect of Probiotic Supplementation on Endothelial Function](#)

To determine whether daily supplementation with the probiotic *Lactobacillus plantarum* 299v improves the function of blood vessels in patients with coronary artery disease.

Primary Investigator: **Michael Widlansky, MD, MPH**

Sub Category: Advanced Heart Failure

## [SynCardia 50cc Temporary Total Artificial Heart \(TAH-t\) as a Bridge to Transplant \(BTT\)](#)

The purpose of this study is to evaluate whether the 50cc TAH-t can support patients who are imminent risk of death from biventricular heart failure, are eligible for heart transplantation, and for whom the 70cc TAH-t is not appropriate due to size of the chest cavity.

Investigators: **David Joyce, MD, Lyle Joyce, MD, PhD**; Lucian Durham, MD, PhD; **Paul Pearson, MD, PhD**; Chris Rokkas, MD

Sub Category: Advanced Heart Failure

## [Myocardial Ischemia and Transfusion \(MINT\)](#)

The purpose of this study is to assess among patients with an acute myocardial infarction and a hemoglobin concentration less than 10 g/dL, if a liberal transfusion strategy with a threshold of 10 g/dL reduces the rate of the composite outcome of all-cause mortality or recurrent nonfatal acute myocardial infarction through 30 days following randomization compared to a restrictive transfusion state.

Investigators: Michael Gitter, MD, Matthew Karafin, MD; **Nicole Lohr, MD, PhD**; **David S. Marks, MD, MBA**

Sub Category: General Cardiology

## [IPC Claudication](#)

The purpose of this study is to improve walking distance in patients with intermittent claudication by using ischemic preconditioning.

Investigators: Kellie Brown, MD; Brian Lewis, MD, Michael Malinowski, MD; Peter Rossi, MD, **Matt Durand, PhD**; **Julie Freed, MD, PhD**; and **David Gutterman, MD**

Sub Category: Vascular Surgery and Vascular Interventional Radiology

## [SynCardia 70cc TAH-t for Destination Therapy \(DT\) \(RA-540\)](#)

The purpose of this research study is to evaluate whether the TAH-t can support patients with life-threatening irreversible biventricular heart failure who are not eligible for transplantation.

Investigators: **David Joyce, MD**; **Lyle Joyce, MD, PhD**; Lucian Durham, MD, PhD; **Paul Pearson, MD, PhD**; Chris Rokkas, MD

Sub Category: Advanced Heart Failure

## [REPRISE IV](#)

REPRISE IV is a prospective, multicenter single-arm study designed to evaluate the safety and effectiveness of the LOTUS Edge Valve System for TAVR in symptomatic subjects who have severe native aortic stenosis and are considered at intermediate risk for surgical valve replacement.

Investigators: Michael Salinger, MD; Peter Mason, MD; **Paul Pearson, MD**; Joshua Meskin, MD

Sub Category: Heart Valve Disease

## [Early TAVR](#)

To establish the safety and effectiveness of the Edwards SAPIEN 3 (Edwards Lifesciences, Irvine, California) transcatheter heart valve (THV) compared with clinical surveillance (CS) in asymptomatic patients with severe, calcific aortic stenosis.

**Investigators:** Peter Mason, MD; Michael Salinger, MD; **Paul Pearson, MD**; Joshua Meskin, MD; Marc Lazzaro, MD; Panayotis Fasseas, MD

Sub Category: Heart Valve Disease

**CVC Investigators Highlighted in Bold**

# Heart & Vascular Service Line Clinical Trials



## Evaluation of Hemodynamic Parameters Following Transjugular Intrahepatic Portosystemic Shunt (TIPS)

During a TIPS procedure, a shunt or stent (mesh tube) is passed down the jugular vein (the vein above the collarbone in the neck) using fluoroscopy (real time x-rays) guidance. The stent then is inserted between the portal vein (vein that carries blood from the intestines into the liver) to a hepatic vein (vein that carries blood away from the liver back to the heart). This means that blood that would usually go to the intestinal veins is now going to the heart. Because more blood will be flowing to the heart, the heart needs to be strong enough to handle the extra volume. This study is being done to determine the impact of the TIPS procedure on cardiac (heart) function by collecting data (heart pressures) during the TIPS procedure. Immediately after TIPS and at standard follow-up time points, labs and transthoracic echocardiograms (TTE or echo) will also be collected.

Investigators: Eric J. Hohenwarter, MD, **Michael Cinquegrani, MD**; Aiman Ghufuran, MD; Robert A. Hieb, MD; **Johnny Hong, MD**; **Kim Joohyun, MD, PhD**; Parag J. Patel, MD, MS; Kaila Redifer Tremblay, MD; William Rilling, MD; Kia Saeian, MD, MS; Matthew Scheidt, MD; Achuthan Sourianarayanan, MD; Sean M. Tutton, MD; Sarah B. White, MD, MS

## Other Clinical Trials Involving CVC Members



Jeff Whittle, MD, MPH

Creating the right health approaches and care for the right person is called precision medicine. Getting the right information to make that happen is the goal of the *All of Us* Research Program from the National Institutes of Health (NIH).

To get there, we want to create the largest health database ever. By understanding people's health, neighborhood, family, and lifestyle researchers will have information to better understand health and disease. This information is essential to create a healthier future for generations to come. <https://www.joinallofus.org/en>

### Over 60 Clinical Trials Last Year for CVC Members! Faculty Include:

T. Aufderheide	L. Baumann-Kreuziger	R. Blank	C. Chitambar	M. Durand
A. El-Meanawy	E. Gore	D. Gutterman	P. Hari	D. Joyce
L. Joyce	S. Kamaraju	S. Kidambi	G. Konduri	J. Kulinski
N. Lohr	D. Marks	M. E. Mitchell	A. Mohammed	A. Palatnik
P. Pearson	J. Rubenstein	M. Saltzberg	H. Whelan	J. Whittle
M. Widlansky	M. A. Zimmerman			



## CVC's Mission #3: Training & Education

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# Cardiovascular Center Seminars

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## CVC Seminar Series

Fourteen presentations were held this year, including 8 out-of-state speakers, during the Cardiovascular Center Seminar Series. Presenters were chosen based on recommendations by each of the Signature Programs. Signature Program Leaders polled their members and provided speaker recommendations. This year's speakers were: John Wilkins, MD, Northwestern University (1/23/2019), Rodney Sparapani, PhD/Alexis Visotcky, MS, MCW (2/6/2019), Alexey Glukhov, PhD, University of Wisconsin-Madison (2/13/2019), John Lough, PhD, MCW (2/27/2019), Ron Do, PhD, Icahn School of Medicine at Mount Sinai (3/6/2019), Sam Senyo, PhD, Case Western University (3/27/2019), Christian Baer, PhD, Leibniz Universitat, Germany (4/12/2019), Amy Bradshaw, PhD, Medical University of South Carolina (5/8/2019), Sumoi Hoka, MD, PhD, International University of Health and Welfare (5/17/2019), Javid Moslehi, MD, Vanderbilt University (10/30/2019), Nancy Webb, PhD, University of Kentucky (11/06/2019), Joy Lincoln, PhD, Medical College of Wisconsin (11/13/2019), Ormond MacDougald, PhD, University of Michigan (11/20/2019), Hanjoong Jo, PhD, Emory University (12/04/2019).

## Work in Progress

The format of these seminars is a highly-interactive forum on a focused topic in which attendees discuss the aims of an unsubmitted grant or controversial findings from the laboratory, obtain broad input regarding a new investigative direction, or receive feedback for a revised grant application by a mini-study section prior to resubmission. Overseen by the Cardiovascular Center's Senior Associate Director, David Gutterman, MD, materials for discussion are distributed prior to the seminar to three Cardiovascular Center members who have expertise in the topic to be discussed who act as assigned discussion facilitators. Four Work in Progress Seminars occurred recently (9/05/2018, 1/09/2019, 12/11/2019, 2/12/2020).

## Cardiovascular Center/Herma Heart Institute Collaboration Seminars

In Spring 2018, Cardiovascular Center leadership met with Herma Heart Institute leadership with the goal of enhancing collaborations and interactions between the centers to advance translational research in pediatric clinical cardiovascular care. From this, the Cardiovascular Center/Herma Heart Institute Collaboration Seminar Series was born, a 5-part breakfast or lunch hour-long presentation series, half being held in the Cardiovascular Center at the noon hour and half being held at the Herma Heart Institute early in the morning in the Spring, Summer and Fall. The inaugural seminar, presented by David Gutterman, MD at the Herma Heart Institute drew more than 35 clinicians and scientists. After these seminars, an "Adult Congenital Heart Disease" day-long symposium was held in January of 2019 at Miller Park. Currently, another seminar series has begun which continues the Herma Heart Institute/CVC partnership called "Quality, Outcomes, Research" Seminar Series. The Institute invites the speakers and the Cardiovascular Center hosts the series in the large Cardiovascular Center Conference Room.

## Trainee Seminars

Each year, the CVC holds at least 6 seminars specifically targeted to CVC trainees with the goal of enhancing their professional skills. This year's line-up included: February 20, 2019: "Managing Your Workload When Your Plate is Full", Jenny Bultman, PMP, MCW; May 29, 2019: "Catalysts for Science Policy: Education, Communicating, Advocating", CaSP Members, MCW; August 21, 2019: "Delegation for Success: What and How", Nate Filzen, MCW; September 26, 2019: "How to be More Employable in the Private Sector", David Giltner, PhD, Turning Science; September 27, 2019: "Can a Scientist Find a Rewarding Career in Industry?", David Giltner, PhD, Turning Science; December 5, 2019: "Building Racial Understanding", Reggie Jackson, Nurturing Diversity Partners; February 5, 2020: "Running a Lab", Sandra Pfister, PhD and Melinda Dwinell, PhD, MCW; March 11, 2020: "Budget Basics", Melinda Dwinell, PhD, MCW

CVC Staff: Andrew Barr, Research Program Coordinator; Erin Theriault, MS, Research Program Coordinator III;  
Supported by CVC Central, Programmatic, and AHW Funds



## *A CVC Trainee Development Seminar*

**CARDIOVASCULAR  
CENTER**

# “BUILDING RACIAL UNDERSTANDING”

How did we become so divided by race?  
In this presentation, we take a close look at the forces that have created and maintained racial divisions throughout our nation’s history.

We also present some common-sense solutions that individuals and institutions can use to move us toward an equitable, diverse society in which all Americans can thrive.



**Thursday, December 5<sup>th</sup> from 12-1:30 pm**

**MCW Alumni Center, 1<sup>st</sup> Floor, MEB, M1060**

\*Lunch provided

\*To RSVP: [cvc@mcw.edu](mailto:cvc@mcw.edu)

Presented by Reggie Jackson, Educator/Consultant with Nurturing Diversity Partners who specializes in sharing seldom-told stories and facts about the experiences of African-Americans and other peoples of color past and present.

Brought to you by the MCW Cardiovascular Center from the Advancing a Healthier Wisconsin Endowment  
Grant Awarded to the CVC by the Research and Education Program Fund



# A CVC Trainee Development Seminar



CARDIOVASCULAR  
CENTER



## “How to be More Employable in the Private Sector”

Thursday, Sept. 26<sup>th</sup>

12:00-1:00 pm

CVC Conference  
Room, HRC, 4<sup>th</sup> Floor

\*Lunch provided  
OPEN TO ALL!



## “Can a Scientist Find a Rewarding Career in Industry?”

Friday, Sept. 27<sup>th</sup>

11:00 am – 12:00 pm

CVC Conference Room,  
HRC, 4<sup>th</sup> Floor

\*Lunch provided  
OPEN TO ALL!

### Presented by David Giltner, PhD Author, Speaker, Founder of *Turning Science*

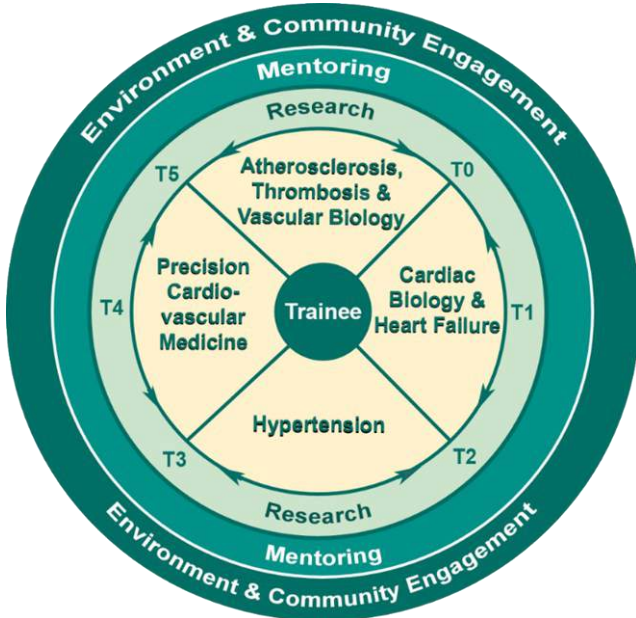
After completing his PhD in physics, David jumped straight into industry and began learning how to excel in the practical world of making things people need.

Now, more than 20 years into a career that has spanned many exciting applications, David travels all around the world teaching students and early career technologists the skills and tricks to build a rewarding career in industry.

To RSVP or with questions, contact [CVC@mcw.edu](mailto:CVC@mcw.edu)



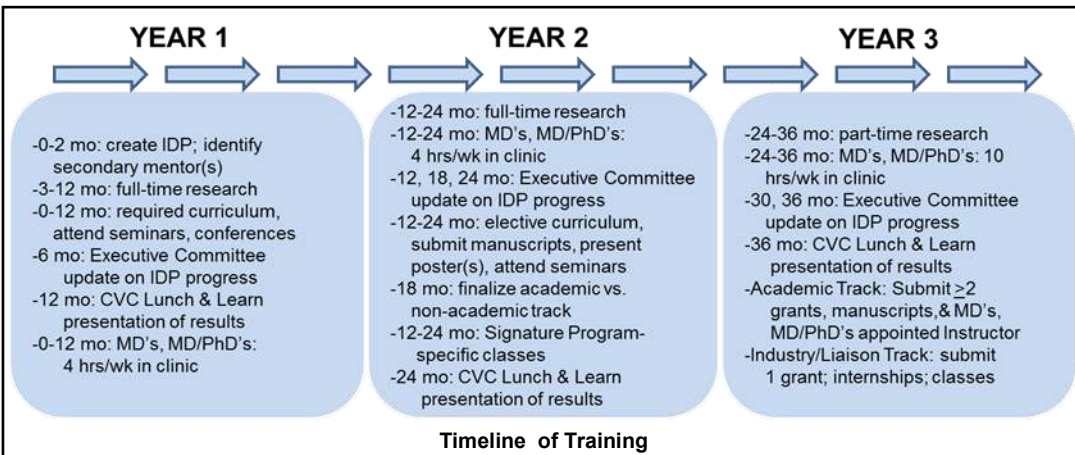
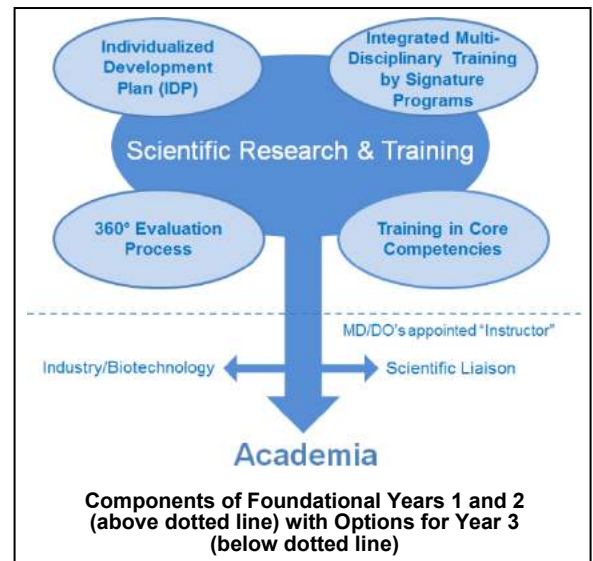
# CVC T32 Postdoctoral Grant



Conceptual Diagram of Training Program

This is a new institutional NRSA application for postdoctoral training (2 slots/year) of MDs and PhDs at the Medical College of Wisconsin's (MCW) Cardiovascular Center (CVC) in Milwaukee, WI. Building on excellence in cardiovascular research, this valuable training opportunity will leverage new CVC leadership, the renewal of the Clinical and Translational Science Institute of Southeast Wisconsin's Clinical and Translational Science Award, strong institutional support, and recent philanthropic support by the A. O. Smith Fellowship Scholars Program to fund additional trainee recruitment and an adequately-resourced training environment. The Directors, Drs. Benjamin and Gutterman, are established physician-scientists and experienced administrative leaders who, along with an additional 32 basic scientists and translational investigators, will serve as mentors. Our training program is supported by our unique strengths: 1) specific areas of scientific excellence ("Signature Programs") in the areas of atherosclerosis and thrombosis, vascular biology, precision cardiovascular medicine, and hypertension, 2) a highly-integrated collaborative research environment, and 3) access to an extensive research infrastructure. A rigorous nationwide selection process using innovative tools (e.g., Knack.it®, Meyer-Briggs®, and career path assessments)

will aid in our trainee selection and optimize matching of trainees to mentors. This 3-year training commitment emphasizes critical components designed to launch/sustain research careers: 1) individualized development plans (IDPs), 2) personalized multidisciplinary mentoring teams, 3) training in core competencies, and 4) industry/biotechnology or scientific liaison career options for trainees not pursuing a traditional career in academia. The IDP will include foundational elements of progressive responsibility, coordination across multiple levels of translation, interactions with cardiovascular and non-cardiovascular scientists, peer-to-peer learning opportunities, specific coursework, seminars, and conferences. Trainees will meet with primary mentors weekly to confirm IDP milestones are met, including at least one grant submitted in Year 3 and training in core competencies of ethical conduct of research, grant and manuscript writing, study design and management, reproducibility of data, and communication (mentoring, teamwork, networking, and oral presentation skills). Collectively, we anticipate that more than 50% of our trainees will transition, upon completion, into competitive faculty positions with peer-reviewed funding to support independent academic positions. Along with the Directors and an Associate Director, an Executive Committee, composed of 6 multi-departmental MCW faculty with extensive experience with career development, leadership, and directing training grants, will provide program oversight and monitor trainee progress every 6 months. An External Advisory Committee will comprehensively review the training program annually. Overall, the ultimate goal of this training program is to train the next generation of cardiovascular scientists, including underrepresented minorities, by incorporating broad-based, personalized, supportive, and rigorous training opportunities.



# CVC T32 Postdoctoral Training Grant

05/01/2017-04/30/2022

T32 HL134643-01

Program Directors: Ivor Benjamin, MD (contact) & David Guterman, MD

Associate Director: Mary Sorci-Thomas, PhD

APRC: Allison DeVan, PhD

Project Coordinator III: Erin Theriault, MS

## Faculty Mentors

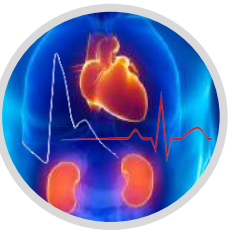
Faculty mentors are listed below in their primary group affiliations though some mentors may work in more than one research area:



**Atherosclerosis, Thrombosis & Vascular Biology:** Andreas Beyer, PhD; William Campbell, PhD; Magdalena Chrzanowska, PhD; John Corbett, PhD; Matthew Durand, PhD; Hubert Forster, PhD; Julie Freed, MD, PhD; Albert Girotti, PhD; David Guterman, MD; John Imig, PhD; Elizabeth Jacobs, MD, MBA; Balaraman Kalyanaraman, PhD; Girija Konduri, MD; Nicole Lohr, MD, PhD; Robert Montgomery, MD; Peter Newman, PhD; Kirkwood Pritchard, Jr., PhD; Ramani Ramchandran, PhD; Daisy Sahoo, PhD; Roy Silverstein, MD; Brian Smith, PhD; Mary Sorci-Thomas, PhD; Michael Widlansky, MD, MPH; David X. Zhang, MD, PhD



**Cardiac Biology and Heart Failure:** John Auchampach, PhD; Tom Aufderheide, MD; Xiaowen Bai, MD, PhD; Carmen Bergom, MD, PhD; Joy Lincoln, PhD; Caitlin O'Meara, PhD; Dorothee Weihrauch, DVM, PhD



**Hypertension:** Allen Cowley, Jr., PhD; Justin Grobe, PhD; Srividya Kidambi, MD; Alison Kriegel, PhD; Mingyu Liang, MB, PhD; Julian Lombard, PhD; Curt Sigmund, PhD; Andrey Sorokin, PhD; Alexander Staruschenko, PhD



**Precision Cardiovascular Medicine:** Ivor Benjamin, MD; Zeljko Bosnjak, PhD; Ulrich Broeckel, MD; Aron Geurts, PhD; John Lough, PhD; Michael Mitchell, MD; Michaela Patterson, PhD; Brandon Tefft, PhD; Aoy Tomita-Mitchell, PhD

# CVC T32 Postdoctoral Grant

## Training the Next Generation of Cardiovascular Researchers

*The Medical College of Wisconsin Cardiovascular Center National Institute of Health T32 Postdoctoral Training Program is drawing top talent and helping to prep the next crop of innovative heart researchers.*

Christine A. Klemens, PhD, who was born in Pittsburgh but spent her high school years in Green Bay, always knew she'd have a career in medicine. "My dad was a doctor, and mom was a dentist. It never occurred to me that it wasn't an option," says Dr. Klemens, one of two inaugural postdoctoral trainees on the Medical College of Wisconsin (MCW) Cardiovascular Center (CVC) National Institute of Health (NIH) T32 Training Program.

The program, which debuted in 2017, was created to help launch the careers of top cardiovascular researchers across the nation, whether in academia, medicine, the private sector or elsewhere. It is supported by a five-year \$1.6 million grant from the NIH National Heart, Lung, and Blood Institute as well as funding from the A. O. Smith Foundation.

"Through this program, we're able to support our mission of training the next generation of cardiovascular scientists. The path to achieving that important goal requires personalized, supportive and rigorous training that will prepare these individuals for successful careers," says Ivor Benjamin, MD, professor of medicine at MCW, director of the CVC and co-director of the CVC's T32 Program.



Fellow co-director, David Gutterman, MD, Northwestern Mutual professor of cardiology and senior associate director of the CVC, describes the program as providing three years of supplemented stipend support, tuition and a training allowance for postdoctoral fellows with an MD, PhD, DO or PharmD. Trainees are mentored by teams of faculty embedded within the CVC's Signature Programs: Precision Cardiovascular Medicine; Cardiac Biology & Heart Failure; Atherosclerosis, Thrombosis, & Vascular Biology; or Hypertension.

"These unique strengths of our training program allow MCW to draw from a pool of some of the nation's top talents in cardiovascular research," adds Dr. Gutterman.

### INVESTIGATING HYPERTENSION

Dr. Klemens is one of the first trainees appointed to the program. She studied molecular biology at the University of Wisconsin-Madison and earned her doctorate in cell biology and molecular biology at the University of Pittsburgh. Her doctoral work focused on characterizing the role of a scaffolding protein, ankryin G, in kidney function.

As part of her T32 training within the CVC's Hypertension Signature Program, she's working in the laboratory of her program mentor, Alexander Staruschenko, PhD, professor of physiology, and is co-mentored by Oleg Palygin, PhD, assistant professor of physiology. Under their guidance, Dr. Klemens is seeking to better understand how mutations in a voltage sensitive chloride channel affect blood pressure control in the kidneys.

"If we can better understand the various mutations of the chloride channel, more effective treatments for high blood pressure are possible," Dr. Klemens says.

High blood pressure, also known as hypertension, is an ailment that affects more than 100 million Americans, according to the American Heart Association, and can put individuals at increased risk to suffer kidney failure, stroke and heart attack, Dr. Klemens adds. Through her research, she hopes to shed more light on chloride channel 6, describing it as an understudied transmembrane protein.

"No one really has a strong idea of what this particular protein does. There's very little research on it," she says.

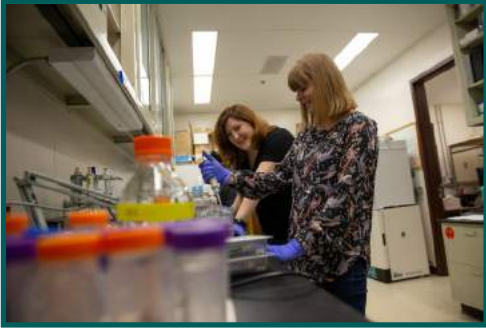
Dr. Staruschenko, who began studying this channel several years ago, says having someone with Dr. Klemens' skill set in the laboratory is a great benefit.

"When people join my lab, I always try to see what they can do, what they know and how I can utilize their skill," he says. "Dr. Klemens is a great communicator and team player who brings a great deal of expertise that will help our research answer very specific questions about the role of chloride channels in hypertension."

## FOCUS ON DIABETES

In addition to appointing a T32 trainee in its Hypertension Signature Program, the CVC recruited a postdoctoral trainee into its Atherosclerosis, Thrombosis & Vascular Biology Signature Program. Jennifer S. Stancill, PhD, joined the lab of her primary mentor, John Corbett, PhD, chair and professor of biochemistry, just a few months ago and is co-mentored by Rebekah Gundry, PhD, associate professor of biochemistry. Dr. Stancill received her Bachelor of Science at the University of North Carolina, her home state, in 2011 and went on to earn her doctorate in cell and developmental biology at Vanderbilt University last year. She will be working on a project that builds upon her doctoral research on gene expression and beta cell physiology by investigating why beta cells become dysfunctional in type 2 diabetes.

“Beta cells help regulate blood sugar levels, but in type 2 diabetes, these cells fail,” Dr. Stancill explains. “The ultimate goal of my research is to better understand mechanisms contributing to beta cell failure and to find out why this happens in some individuals with insulin resistance, but not in others. The goal for the entire community of researchers in this area is to understand why beta cells are failing and possibly reverse it.”



An estimated 30 million Americans have diabetes, more than 9 percent of the U.S. population, according to data from the Center for Disease Control (CDC) National Diabetes Statistic Report for 2017. In recent years, diabetes has ranked in the top 10 leading causes of death in the United States and people with diabetes are at a greater risk for heart disease and stroke, found the report.

According to Dr. Corbett, researchers within the diabetic community think that beta cells are extremely sensitive to oxidative stress, but studies from his laboratory suggest otherwise. Dr. Stancill, along with six other researchers in

Dr. Corbett’s laboratory, will help bring new knowledge to this area with her experience in genetics and prior research on how gene expression is controlled in beta cells.

“She’s a wonderfully creative scientist who is not afraid to try anything new. The team is combining her expertise with theirs to push the boundaries of this study,” Dr. Corbett says.

As co-directors of the T32 program, Drs. Benjamin and Gutterman laud this work as it is likely to provide insights into how beta cells function, insights that could be the key to unraveling new treatments for diabetes and lowering the risk for heart and blood vessel diseases.

## ADVANCING INNOVATION THROUGH EDUCATION

Aside from honing research skills with oversight by mentoring teams, other major components of the CVC’s T32 Program are the creation of an Individualized Development Plan (IDP) and structured guidance in cultivation of professional skills, including writing grants and publishing manuscripts.

The IDP, according to Dr. Benjamin, tailors training to match the career goals of each trainee while ensuring that all foundational elements of professional skills are learned. This living document provides a roadmap for training that is constantly being monitored and modified by mentors and trainees and also encourages trainees to continually assess their own skills and interests and how they can be matched with the array of resources at MCW.

“That way we can optimize their training,” says Dr. Benjamin, “and it will allow MCW an opportunity to take advantage of its excellent resources and vaulted position as an academic medical center.”

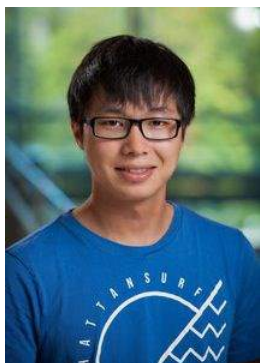
The CVC will add two new trainees annually over the next four years. The plan is for the trainees to continue to connect with the four broad priority areas within the CVC: studying personalized medicine and heredity; heart structure and function; plaque, clots and blood vessel health; and high blood pressure.

As for Dr. Stancill, who plays clarinet in a Wauwatosa community band, and Dr. Klemens, who has a trained therapy dog and enjoys hiking, their career goals are to become primary investigators in their own laboratories. They both feel strongly that participation in the CVC’s T32 Training Program is a giant step in that direction.

“The Medical College of Wisconsin Cardiovascular Center has an excellent track record of producing researchers that proceed to the next level.” Dr. Klemens says. “I strongly believe I’m being provided with the right guidance and academic support in order for that to happen.”

## CVC T32 Postdoctoral Grant

The Cardiovascular Center at the Medical College of Wisconsin (MCW) has appointed **Moua Yang, PhD** as the third postdoctoral trainee in the Cardiovascular Center's T32 postdoctoral training program sponsored by the National Institutes of Health.



Dr. Yang received his bachelor of science in biology at the University of Wisconsin- Stevens Point in 2012. He received his doctorate in cell biology in 2018 in the laboratory of **Roy Silverstein, MD**, the Linda and John Mellowes Professor and Chair of Medicine at MCW. His primary mentor for the T32 program is **Brian Smith, PhD**, assistant professor of biochemistry at MCW and member of the Cardiovascular Center's Atherosclerosis, Thrombosis and Vascular Biology Signature Program. With expertise from his doctoral studies in how blood clots are formed, Dr. Yang's postdoctoral training will expand scientific knowledge regarding the role of oxidative modifications of proteins, free radicals and inflammation in blood clot formation (also known as thrombosis) within blood vessels filled with atherosclerotic fatty plaques, a common occurrence in patients with cardiovascular disease.

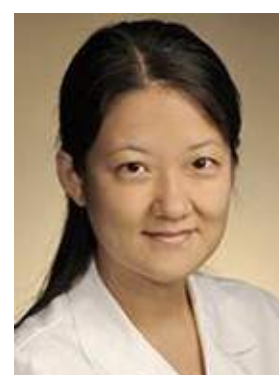
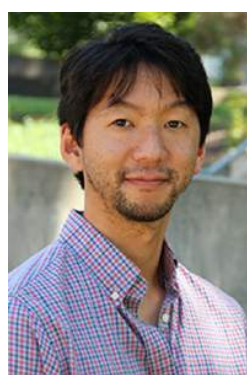
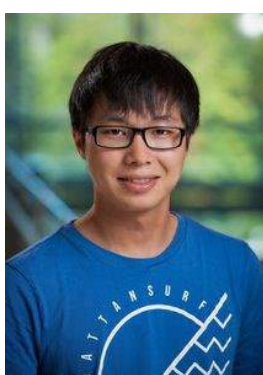
"The long-term goal of my work is to decrease the burden of cardiovascular disease caused by thrombosis and plaque build-up in the arteries, which together, are the leading cause of death and disability in people with cardiovascular disease," Dr. Yang said. "I am also proud to represent the Hmong community of Wisconsin as a researcher."

Building on excellence in cardiovascular research, the Cardiovascular Center's T32 postdoctoral training program, "*Training in Signature Transdisciplinary Cardiovascular Sciences*," is funded by a \$1.6 million grant from the National Heart, Lung, and Blood Institute that provides support for two new postdoctoral training slots each year. The grant provides up to three years of training for appointed postdoctoral fellows in the Cardiovascular Center with an MD, PhD, PharmD or DO degree.

The goal of this training program is to train the next generation of cardiovascular scientists, including underrepresented minorities such as Hmong Americans, by incorporating broad-based, personalized, supportive and rigorous training opportunities.

Dr. Yang joins two other postdoctoral fellows in the Cardiovascular Center's T32 postdoctoral training program, Jennifer Stancill, PhD and Christine Klemens, PhD.

Ivor Benjamin, MD, professor of medicine and director of the Cardiovascular Center at MCW and David Gutterman, MD, Northwestern Mutual Professor of Cardiology and senior associate director of the Cardiovascular Center at MCW, are co-directors. Complementary support for trainees is provided by a grant given to the Cardiovascular Center by the A. O. Smith Foundation for the A. O. Smith Fellowship Scholars Program, a program designed to support talented cardiovascular researchers and physicians to overcome the barriers that exist in launching and sustaining a successful research career.



Fellows (left to right): Drs. Klemens, Stancill, Yang, Nakagawa, Liu

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## CVC T32 Postdoctoral Grant

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Milwaukee, April 30, 2019 – The Cardiovascular Center at the Medical College of Wisconsin (MCW) has appointed **Pablo Nakagawa, PhD** as a postdoctoral trainee in the Cardiovascular Center's T32 postdoctoral training program sponsored by the National Institutes of Health.

Dr. Nakagawa received his Master of Science in clinical biochemistry and biotechnology at the University of Buenos Aires in 2008. He received his doctorate in physiology in 2014 in the laboratory of Oscar Carretero, MD, a senior staff scientist in the Division of Hypertension and Vascular Research at Henry Ford Health Systems in Detroit, MI.

His primary mentor is **Curt Sigmund, PhD**, the James J. Smith & Catherine Welsch Smith Professor of Physiology, chair of physiology, associate director of the Cardiovascular Center, and member of the Cardiovascular Center's Hypertension Signature Program. With expertise from his doctoral studies in the renin-angiotensin system, Dr. Nakagawa's postdoctoral training will expand scientific knowledge about the treatment of high blood pressure by understanding how the brain renin-angiotensin system regulates cardiovascular and metabolic function using a unique mouse model developed in Dr. Sigmund's laboratory.

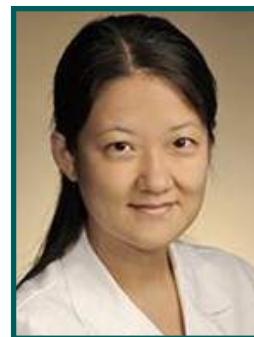
"I am confident that my training at the Medical College of Wisconsin will provide me with an outstanding environment to develop cutting-edge research skills required to work at the front line of modern cellular and molecular physiology," Dr. Nakagawa said.

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**Milwaukee, Dec. 1, 2019** – The Cardiovascular Center (CVC) at the Medical College of Wisconsin (MCW) has appointed Jing Liu, PhD, as a post-doctoral trainee in the CVC's T32 postdoctoral training program sponsored by the National Institutes of Health.

Dr. Liu received her Bachelor of Medicine at Peking University and doctorate in pharmacology and nutritional sciences at the University of Kentucky, followed by a fellowship in the laboratory of Kaikobad Irani, MD, a professor in the division of cardiovascular medicine at the University of Iowa.

Her primary mentor is **Mingyu Liang, MB, PhD**, professor and eminent scholar in the department of physiology and director of the Center of Systems Molecular Medicine at MCW, and co-leader of the CVC's Hypertension Signature Program. With expertise from her doctoral studies on microRNA-204 (miR-204), Dr. Liu's postdoctoral training will expand scientific knowledge about the treatment of chronic kidney disease by understanding the underlying mechanisms of how miR-204 prevents renal injury.



"This fellowship will provide a novel opportunity to advance the scientific discovery of an important research problem while enabling me to develop preliminary data for my independent research proposal," Dr. Liu said.

# CVC Resources for Trainees

**2019 CVC Research Retreat:** Postdoctoral fellows, clinical fellow, medical students, and graduate students received experience in presenting their research using posters and oral presentations. \$300 and \$100 awards were given to the best posters. Time was set aside for networking. Several abstracts were selected and these trainees gave presentations.

## **CVC Trainee Seminars, Workshops, and Networking Opportunities:**

CVC Trainee Development Series, “Managing Your Workload When Your Plate is Full”, Jenny Bultman, PMP, MCW Human Resources and Talent Development Office, 2/20/2019

CVC Trainee Development Series, “Catalysts for Science Policy: Education, Communicating, Advocating”, MCW CaSP Members, 5/29/2019

CVC Trainee Development Series, “Delegation for Success: What and How”, Nate Filzen, MCW Human Resources and Talent Development Office, 9/26/2019

CVC Trainee Development Series, “How to Be More Employable in the Private Sector”, David Giltner, PhD, Turning Science, 9/26/2019

CVC Trainee Development Series, “Can a Scientist Find a Rewarding Career in Industry”, David Giltner, PhD, Turning Science, 9/27/2019

CVC Trainee Poster Session, CVC Research Retreat, 10/18/2019

CVC Trainee Select Presentations, CVC Research Retreat, 10/18/2019

CVC Trainee Development Series, “Building Racial Understanding”, Reggie Jackson, Nurturing Diversity Partners, 12/5/2019

CVC Trainee Development Series, “Running a Lab”, Sandra Pfister, PhD and Melinda Dwinell, PhD, 2/5/2020

CVC Trainee Development Series, “Budget Basics”, Melinda Dwinell, PhD, 3/11/2020

**Trainee E-newsletter:** Each month, the CVC distributes an electronic newsletter to CVC postdoctoral fellows containing announcements, a list of upcoming cardiovascular-related seminars, training opportunities, postdoctoral, faculty, and industry job listings, scholarship information, etc.

**Trainee E-Digest:** Each month, the CVC distributes an electronic digest to CVC postdoctoral fellows containing information to assist with the fundamental understanding of the essential “outside-of-the-laboratory” research skill required to be a successful scientist.

**T32 Grant:** In May 2017, the CVC was awarded a \$1.6 million five year grant that provides up to three-years of training for postdoctoral fellows with an MD, PhD, PharmD, or DO degree (two new slots/year). This is one of only six postdoctoral T32 training programs on the entire Milwaukee Medical Regional Campus. And to-date, 5 postdoctoral fellows have been appointed.

## **Postdoctoral Appreciation Events:**

“One Smart Cookie”, 9/16/2019

Professional Postdoc Portraits, 9/28/2019

“Wine Down Friday”, 9/20/2019



CVC Staff Support: Erin Theriault, MS, Research Program Coordinator III

# CVC's Support of Summer Student Internships

**500 Stars Initiative:** 1 Student Supported in Summer 2019 by the CVC's Cullen Funds: Ayman Ishuaku (Mentor = Brian Hoffmann, PhD)

The Clinical Translational Science Institute (CTSI) [500 Stars Initiative](#) is a ten-year, multi-institutional, comprehensive educational & workforce diversity plan focused on increasing **under-represented minority** (URM) students in the translational workforce. Its vision is to enrich the southeast Wisconsin translational research workforce through promoting inclusion and diversity by providing training and educational opportunities to students of diverse background in high school, undergraduate, and graduate programs who are looking for a career in clinical and translational science. Past Mentors are Drs. Widlansky, Strande, Ren, Meurer.

**DSHREP & ROADS:** 2 Students Supported in Summer 2019 by the CVC with Funds from the Cullen Family Healthy Heart Research Program: Abigail Perkins (Mentor = Ramani Ramchandran, PhD), Oluwapelumi Oguntade (Ivor Benjamin, MD)

CVC members have promoted diversity in the biosciences and increased their community engagement by acting as mentors to over 60 undergraduate students participating in the [Diversity Summer Health-Related Research Education Program](#) (DSHREP) and [Research Opportunity for Academic Development in Science](#) (ROADS) since these programs began, competitive programs that provide research opportunities to individuals from **disadvantaged backgrounds, underrepresented cultural and ethnic groups, and individuals with disabilities.**



Left to Right: Mr. Castro, Mrs. Bushee, Mrs. Perkins, Unknown, Mr. Ishuaku, Mrs. Oguntade

**Medical Student Summer Research Program:** 2 Students Supported in Summer 2018 by the CVC's Cullen Funds: Victor Magana Castro (Mentor = El-Sayid Ibrahim, PhD), and Chana Bushee (Mentor = Salil Ginde, MD)

The [Medical Student Summer Research Program](#) is a full-time summer fellowship program. It is awarded to MCW medical students who wish to gain valuable research experience between their first and second years of medical school. Students are placed on a research team, and their skills are shaped through the guidance of our seasoned MCW faculty. While actively engaged in their research, students observe how new discoveries translate into the development of new drugs, devices and treatment modalities, while exploring potential research careers. Publishing and presenting their research breakthroughs are two important program goals.

Past Mentors are Drs. Hong, Gebremedhin, Palatnik, Egede.

**Summer Program for Undergraduate Research:** 1 Student Supported in Summer 2019 by the CVC with Programmatic Funds  
CVC Mentor: Ivor Benjamin, MD

The [Summer Program for Undergraduate Research \(SPUR\)](#) has provided hands-on research experience to over 1,000 students, many of whom have since made significant contributions through S.T.E.M.-related positions. SPUR hosts roughly 30 participants each summer from across the country who gain valuable research experience, refine critical thinking skills, build upon academic and professional networks and are introduced to various health science disciplines and academic medicine. Participation preference is typically given to current sophomores and juniors with a GPA of 3.2 or higher that are majoring in a S.T.E.M.-related program.

Past Mentors are Drs. El-Meanawy, Hoffmann.





## CVC's Mission #4: Community Engagement

# Community Engagement

## Cardiovascular Center & Office of Community Engagement Fund 2 Community-Engaged Cardiovascular Seed Grants

MCW News—Congratulations to **Matthew Durand, PhD**, assistant professor of physical medicine and rehabilitation and a Cardiovascular Center faculty member, and his community partners, Una Van Duval and Viola Rembert of **HeartLove Place of Milwaukee**, for their funded proposal, “**The Harambee-Hoja Partnership: A Park-Based Intervention to Increase Physical Activity in Under-Resourced Communities.**”



The Cardiovascular Center (CVC), in collaboration with the MCW Office of the Senior Associate Dean for Community Engagement, is supporting this \$50,000 award with its Advancing a Healthier Wisconsin Research and Education Program parent award, “The Cardiovascular Roadmap: Bridging our Foundations to ‘Signature Programs’.” The project will assess the feasibility of a community-engaged research approach to develop and test a park-based physical activity intervention in Milwaukee’s 53212 zip code, a community with a disproportionate rate of cardiovascular disease.



The long-term objective is to create sustainable park-based physical activity interventions that engage a wide range of community members, ultimately leading to a more active lifestyle and reduced cardiovascular risk among under-resourced communities. If successful, this model may be applied to other parks in urban settings in the city of Milwaukee and elsewhere.

The Cardiovascular Center is committed to improving cardiovascular health in southeast Wisconsin and beyond and engaging the community to eliminate disparities in health outcomes. This project supports promising cardiovascular-focused research in the Milwaukee area and seeks to advance understanding about how community engagement can be done in complex research settings. In addition, the funded project demonstrates clear relevance and importance to the work Dr. Durand does on campus and more importantly, to the community involved in the project. The project encourages sustainability and an authentic community-academic partnership.



MCW News—The Community Engagement Core, housed within the Office of the Senior Associate Dean for Community Engagement at the Medical College of Wisconsin (MCW), in collaboration with the MCW Cardiovascular Center awarded their second Community Engaged Research (CEnR) Seed Grant with a focus on cardiovascular health and disease.



The MCW CEnR Seed Grant Program seeks to fund promising, early-stage research focused on improving the health of Wisconsin communities, with an emphasis on research that has high possibility of future extramural grant funding. **Kirsten Beyer, PhD**, assistant professor in the Institute for Health and Equity at MCW and member of the MCW Cardiovascular Center, in partnership with Melody McCurtis, site coordinator and outreach specialist at **Metcalfe Park Community Bridges**, are leading the project entitled, “**A Heart Healthy Neighborhood: Reducing Stress Together.**”



This community-academic partnership will assess the feasibility of a formal research study using Mindfulness-Based Stress Reduction (MBSR), a program that uses meditation, non-judgmental awareness, and gentle movement to facilitate stress management, in Milwaukee residents at high risk for chronic exposure to stress. The study will also determine whether MBSR can promote heart-healthy behaviors by reducing participants’ stress levels and strengthening their beliefs that they can make and sustain healthy habits such as increasing physical activity and improving eating habits. The overall goal of this study is to lower the risk of cardiovascular disease in a local community where chronic exposure to stress and higher concentrations of poverty and disadvantage increase the risk for cardiovascular disease.

Funding for this 12-month \$50,000 award is through an Advancing a Healthier Wisconsin (AHW) Endowment Research and Education Program Fund grant awarded to the Community Engagement Core entitled, “Community Engagement Core Implementation Initiative”.

CVC Staff: Miltza Bonet-Vazquez, MPH, Program Manager; Allison DeVan, PhD, APRC  
Thank you to the reviewers and the staff of MCW’s Office of Community Engagement

# Community Engagement

## CVC and CTSI Partner Host Science Café with Cardio-Oncology Focus

On Tuesday, June 25, at the St. Ann Center for Intergenerational Care, the Cardiovascular Center, together with the Clinical & Translational Science Institute (CTSI), hosted a Cardio-Oncology Science Café, “Don’t Lose Heart: The Impact of Cancer Treatment on the Heart”. The Science Café serves as a way to support part of the CVC’s mission to engage the community to

eliminate disparities in health outcomes by strengthening science literacy through translational scientists in an informal setting. The casual setting allows for bi-directional dialogue of current scientific and medical issues and their translational impact on our culture and society.

Members of the community enjoyed dinner as CVC investigators discussed the impact of cancer treatment on the heart. The evening included a presentation and discussion with CVC members **Carmen Bergom, MD, PhD**, associate professor of radiation oncology and pharmacology and toxicology, and **Noura Dabbouseh, MD, MS**, assistant professor of medicine (cardiology). A wide-range of questions and engaging discussion then took place, allowing community members to ask questions and broaden their knowledge on the impact of cancer

therapies on cardiovascular health and the long-term effects on cancer survivors.

To listen to the podcast from this event, visit [www.soundcloud.com/ctsi\\_science\\_cafes](http://www.soundcloud.com/ctsi_science_cafes).

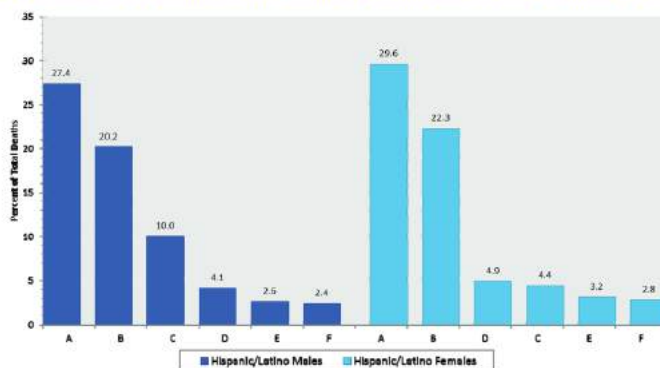


## Blood Pressure Screening Project in Local Underserved Latinos

- In partnership with the United Community Center of Milwaukee
- Investigators: David Gutterman, MD (PI), Militza Bonet-Vazquez, MPH, Mark Kaeppler, MD, and Neil Shah, MD, as well as two medical students and a pharmacy student
- Supported by the Northwestern Mutual Foundation via an endowed professorship
- **The goal is for students to become community “ambassadors for cardiovascular health”, so that they understand the fundamentals of identifying and management of high blood pressure**
- UCC students desiring exposure in a health care field are instructed how to measure blood pressure of family members, are provided with materials to do this, then measure and record the blood pressures they obtain

## HYPERTENSION & LATINOS

Major Causes of Death for Hispanic or Latino Males and Females, 2009



A indicates cardiovascular disease plus congenital cardiovascular disease (ICD-10 I00-I99, Q20-Q28); B, cancer (ICD-10 C00-C97); C, accidents (ICD-10, V01-X59, Y85-Y86); D, diabetes mellitus (E10-E14); E, chronic lower respiratory disease (ICD-10 J40-J47); F, influenza and pneumonia (ICD-10 J09-J18). Source: NCHS.



David Gutterman, MD

# Community Engagement

## Local Scouts Earn First Ever “Health in Action” Patch with Help of Froedtert & the Medical College of Wisconsin

On July 23, 2019, several MCW and Froedtert Health departments collaborated with the Girl Scouts of Wisconsin Southeast to launch the Health in Action patch program. The program is a partnership between Froedtert & the MCW Network and the Girl Scouts designed to expose scouts to health, wellness and the career possibilities in healthcare.

Participating departments included the MCW Cardiovascular Center (CVC), Froedtert’s Community Engagement, Organizational Learning and the Genomic Sciences and Precision Medicine Core. Froedtert hosted more than 30 Girl Scouts in the morning to participate in four different interactive stations including: Listen to your Heart, Learn about the Body, Keep Your Body Healthy and Health in Action.

Scouts participated in activities such as taking their pulse, using a stethoscope and listening to heart sounds, learning how to manage their cardiovascular risk factors, building a model of a lung and learning the importance of proper handwashing techniques.

At the end of the event, the scouts were given their Health in Action Patches by Christy Brown, Chief Executive Officer of Girl Scouts of Wisconsin Southeast, and Cathy Jacobson, President and CEO of Froedtert Health.



## Human Population Symposium Aims to Improve Cardiovascular Health

**June 18, 2019 MCW News** – The Medical College of Wisconsin School of Pharmacy, Cardiovascular Center (CVC), and Center for Advancing Population Science (CAPS) held an interprofessional symposium on May 20, titled “Controlling Hypertension by Inspiring Change,” on the MCW-Milwaukee Campus. The program was held to discuss, create, and assess community-related interventions designed to improve cardiovascular health in Wisconsin. Hypertension affects 1.3 million adults (1 in 3) in Wisconsin despite the existence of effective treatment strategies.

The symposium hosted three keynote speakers who demonstrated successful examples of community-engaged research for reducing hypertension in underserved groups. The CVC speaker, Michelle A. Albert, MD, MPH, professor of cardiology at the University of California at San Francisco, discussed the relationship between adversity and cardiovascular disease. The CAPS speaker, Gbenga Ogedegbe, MD, professor of population health and medicine at New York University, discussed the role of churches to address cardiovascular health. The School of Pharmacy speaker, Ross T. Tsuyuki, BPharm, PharmD, MS, professor of pharmacology at University of Alberta, discussed the impact of pharmacists as prescribers in the treatment of patients with hypertension.

After the keynote presentations, an interactive session was held in which an inter-professional team of practitioners, students, and community partners brainstormed community-based solutions to help eliminate disparities related to hypertension and cardiovascular disease in Wisconsin. There were five different visionary work groups who discussed potential community-based interventions that could be implemented at clinics/pharmacies, barbershops, schools, community centers, and in homes.



“The suggestions of the visionary work groups will be used to plan for sustaining inter-professional changes to addressing cardiovascular health disparities in Southeastern Wisconsin communities,” said Karen MacKinnon, BPharm, RPh, symposium coordinator and director of outreach for the School of Pharmacy.

# Community Engagement Seminar



**MEDICAL  
COLLEGE  
OF WISCONSIN**

**Cardiovascular Center  
Community Engagement**

ADVANCING A HEALTHIER  
WISCONSIN ENDOWMENT

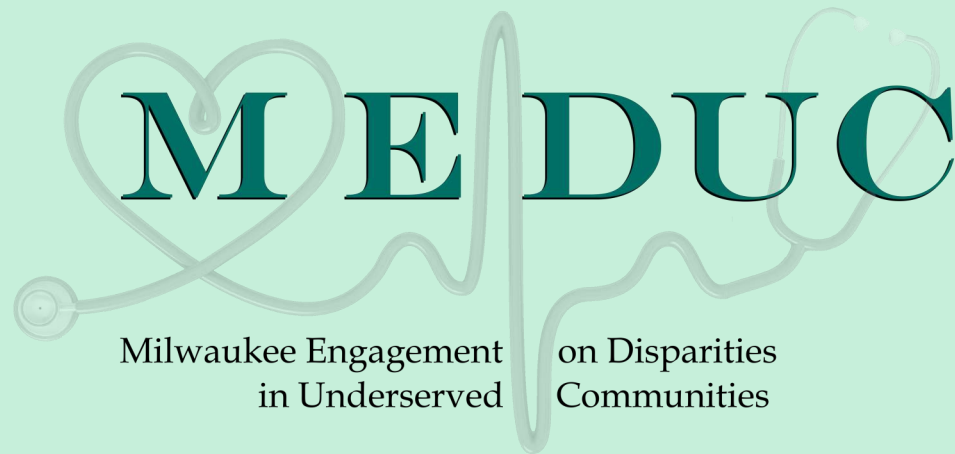


“Building Bridges from Social Isolation in Neighborhood Engagement:  
A Multi-Level Social Network Intervention  
to Improve Health of Black Men”,  
01/16/2019, Presented by Amy Harley, PhD, MPH, RD,  
UW-Milwaukee Zilber School of Public Health

*CARDIOVASCULAR RESEARCH:  
BENCH to COMMUNITY  
Seminar Series*



**CARDIOVASCULAR  
CENTER**



Milwaukee Engagement on Disparities  
in Underserved Communities

In partnership with a large number of academic and community partners, the ultimate goal is to build a sustainable collaborative community-based and healthcare system approach to eliminating **uncontrolled hypertension** in the high-burden metropolitan Milwaukee Black/African American community.



Hypertension (high blood pressure), a precursor to heart disease, impacts approximately **1.3 million** adults in WI. The blood pressure control rate is **much lower** for Black/African American adults compared to White adults, increasing heart disease risk.   
-2019 WI Health Disparities Report

**Featuring:**

- ◇ Oversight by a Community Advisory Board
- ◇ Flexibility in approach/study design
- ◇ Academic partner, Johns Hopkins Center for Health Equity
- ◇ Community partners
- ◇ Clinic partners
- ◇ Interventions in clinics vs. barbershops & beauty salons with community health workers & pharmacists
- ◇ Directed by Ivor Benjamin, MD





Cardiovascular Center

# CURRENT PARTNERSHIPS TO ACHIEVE OUR MEDUC INITIATIVE



## Noir'e Hair District



Join Our Partnership! Contact:

MCW Cardiovascular Center • [cvc@mcw.edu](mailto:cvc@mcw.edu) • 414-955-6716



# Philanthropy



# Philanthropic Support

## 23rd Annual Steve Cullen Heart Healthy Club Run/Walk a Success!



**Feb. 9, 2019** — Narrowly escaping the polar vortex, over 500 runners, walkers, and volunteers, came out on Saturday, February 9, to support the 23rd Annual Steve Cullen Healthy Heart Club Run & Walk. Participants followed the chilly, but

scenic path along Underwood Parkway in Wauwatosa through Milwaukee County's beautiful Hansen and Hoyt Parks.

The event has a long history of supporting heart and blood vessel research at the Cardiovascular Center at the Medical College of Wisconsin, raising more than \$450,000 for cardiovascular research and awareness.



From patient care to training students in the earliest stages of their scientific journey, these funds have supported research

and scholarship including a recent study on the treatment of dangerously low blood pressure caused by

blood infections and providing numerous summer student internship experiences within CVC labs.

The run/walk is held in memory of Steve Cullen, a former Milwaukee alderman, who died in 1995 at age 40 of sudden cardiac arrhythmia. His father, at age 41, and two brothers, ages 53 and 51, also died of heart disease. The Cullen Run/Walk has grown in attendance by more than 500 percent since its inception, encouraging heart-healthy lifestyles for all participants, their families and friends.



Sponsored by the Cullen family and the Badgerland Striders, the event included Cullen Family & Friends Chili, refreshments, food, an awards ceremony and live music.

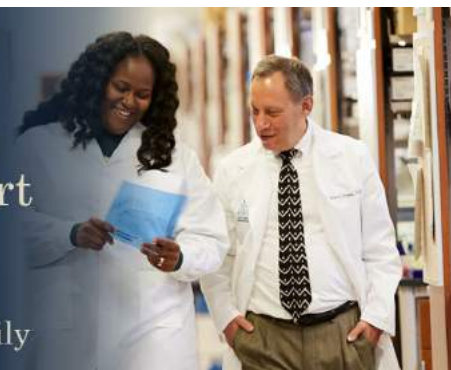
The CVC thanks and congratulates board member Gael Cullen, her family, and the Badgerland Striders for holding another fantastic event!



*Cullen Run Board Chair Gael Garbarino Cullen (center) and her daughters (from left to right) Colleen, Molly, and Annie, and her granddaughter present a \$41,285 check to Dr. Ivor Benjamin, director of the Cardiovascular Center at MCW.*

Medical College of Wisconsin  
**Cardiovascular Center**  
**Cullen Family Healthy Heart  
Research Program**

*Proposal Prepared for*  
Gael Garbarino Cullen & the Cullen Family



## 2019 Steve Cullen Healthy Heart Scholar

**Alison Kriegel, PhD**  
*Associate Professor  
Physiology*



### **Education and Training:**

- **Bachelors of Science:**  
University of Wisconsin-  
Milwaukee, Marquette University

- **PhD, Fellowship:**  
Medical College of Wisconsin

**Project: Identification of  
Novel Cardiorenal  
Syndrome-Associated  
Factors Using a  
Hemodialysis-Focused  
Approach**

## Cullen Summer Research Fellowship for Medical Students

The Medical Student Summer Research Program, directed by Cardiovascular Center faculty Ramani Ramchandran, PhD, Professor of Pediatrics, is a full-time summer fellowship program. It is awarded to MCW medical students who wish to gain valuable research experience between their first and second years of medical school.

Students are placed on a research team, and their skills are shaped through the guidance of our seasoned MCW faculty. While actively engaged in their research, students will observe how new discoveries translate into the development of new drugs, devices and treatment modalities, while exploring potential research careers. Publishing and presenting their research breakthroughs are two important program goals for the students.

This program relies on philanthropy and a grant from the National Institutes of Health. To train students, who work 40-hour weeks, \$3,600 is needed per student to support stipends and partial costs of presenting their research at local, regional, or national meetings. The faculty mentor's department pays for the other portion of travel and presentation costs.

## Cullen Diversity Summer Research Fellowship

**Diversity Summer Health-Related Research Education Program (DSHREP)** is a competitive program designed to provide research opportunities for undergraduate students from backgrounds that are historically underrepresented in biomedical science, including individuals from disadvantaged backgrounds, underrepresented cultural and ethnic groups, and individuals with disabilities. The target ethnic groups for the program are: African Americans, Mexican-Americans, Native Americans (American Indians and Alaska Natives), Hmong and mainland Puerto Ricans.

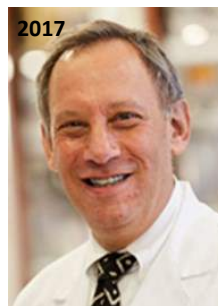
# History of the Cullen Family Healthy Heart Research Program



The [Steve Cullen Healthy Heart Club Run/Walk](#) began 20 years ago in memory of former Milwaukee Alderman, Steve Cullen who died of a sudden heart attack at the age of 40. His father, at age 41, and two brothers, ages 53 and 51, also died from heart disease. The Medical College of Wisconsin Cardiovascular Center is the beneficiary of the funds raised annually by the Steve Cullen Healthy Heart Club Run/Walk, which is held every February near Milwaukee.



## Steve Cullen Healthy Heart Scholars



## Supporting the Training of the Next Generation of Diverse Scientists & Physicians in the CVC

- CTSI 500 Stars Summer Internship for Under-Represented Minorities
- DSHREP Summer Internship for Under-Represented Minorities
- ROADS Summer Internship for Under-Represented Minorities
- MSSRP Summer Internship for Medical Students

## Supporting Cutting-Edge Core Equipment within the CVC

Salary Support of Staff Who Train CVC Investigators on Use of the Nikon A1 Confocal Microscope: Allows CVC members to be trained in advanced cell imaging free of charge.

Maintenance Costs of Nikon A1 Confocal Microscope: Keeping this valuable equipment in working order.



## Philanthropic Support: A.O. Smith Foundation



JANUARY 28, 2016 MCW NEWS — The Medical College of Wisconsin (MCW) Cardiovascular Center is the recipient of a grant from the [A. O. Smith Foundation](#) which will support the creation of 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.

“This contribution provides an unprecedented opportunity to establish our program and support the next generation of talented physicians and scientists whose research could bring about the next treatment that saves a life or prevents a disability caused by cardiovascular disease,” says Ivor J. Benjamin, MD, FAHA, FACC, director of the Cardiovascular Center and professor of medicine at MCW. “The support of the A. O. Smith Foundation demonstrates the strong institutional commitments our innovative training programs have from the community and highlight the ongoing legacy of A. O. Smith as a valued partner.”

### A.O. Smith Foundation Visits Cardiovascular Center

**Feb. 6, 2019 MCW News** - On Jan. 29, the Cardiovascular Center was delighted to welcome executives from the A.O. Smith Foundation as they visited and toured the center. The A.O. Smith Foundation has committed \$500,000 to support the creation of the A. O. Smith Fellowship Scholars Program.



This scholarship program serves as a springboard to support the recruitment and retention of the best and brightest trainees associated with the CVC’s NHLBI training program, “Training in Signature Transdisciplinary Cardiovascular Sciences”, one of only six NIH-funded postdoctoral training programs on the Milwaukee Regional Medical Campus.

The goal of the CVC’s NHLBI training program is to train talented cardiovascular researchers and physicians through mentoring, training, and support to overcome the barriers that exist to launching and sustaining a successful research career. The currently appointed scholars are **Moua Yang, PhD** (Brian Smith Lab), **Christine Klemens, PhD** (Alexander Staruschenko Lab), and **Jennifer Stancil, PhD** (John Corbett Lab).



Dr. John Raymond, Dr. Ivor Benjamin and the A.O. Smith Scholars personally thanked the Foundation guests for their continued strong commitment to the CVC’s innovative training program. During their visit, the guests were able to see the A.O. Smith Scholars office, as well as tour the Brian Smith Lab to see first-hand the exciting scientific research and training their support helps make possible.

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# Philanthropic Support

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## Smith Family Program for Enhanced Precision Therapeutics

Milwaukee, August 30, 2017 - The Medical College of Wisconsin's (MCW) Therapeutic Accelerator Program, a recently-established, innovative program within the Department of Pharmacology and Toxicology, has made awards to MCW investigators John Auchampach, PhD, professor in the Department of Pharmacology and Toxicology, Andreas Beyer, PhD, assistant professor in the Department of Medicine (cardiovascular medicine) and Abhay Singh Chauhan, PhD, assistant professor in the School of Pharmacy for their projects:

- "A3 Adenosine Receptor Positive Allosteric Modulators for Chronic Pain", John Auchampach, PhD
- "A New Approach in Cardiac Oncology: Harnessing Telomerase", Andreas Beyer, PhD \*\*Program sponsored by the Cardiovascular Center's Smith Family Program for Enhanced Precision Therapeutics\*\*
- "Dendrimer-Resveratrol Formulation for Effective Anti-Inflammatory and Antioxidant Activities via Dermal Application", Abhay Singh Chauhan, PhD

The mission of the Therapeutic Accelerator Program is to facilitate and accelerate discovery of new therapeutics to target human diseases. Directed by John Imig, PhD, professor in the Department of Pharmacology and Toxicology, this program aims to traverse the "Valley of Death," a term used by the National Institutes of Health to describe the inability of many research discoveries to develop into commercially-available drugs or therapeutics. Leveraging the existing expertise and resources of MCW faculty and their laboratories along with partnerships with the Clinical Translational Science Institute of Southeast Wisconsin, MCW Cardiovascular Center, MCW Drug Discovery Center, School of Pharmacy, and regional academic institutions and businesses, the Therapeutic Accelerator Program bridges the gap from "bench to bedside," moving basic research findings by MCW investigators toward drug development.

The three funded projects target the prevention and treatment of chronic pain, cardiovascular damage resulting from cancer treatment, and aging. The cardiovascular project is supported in part by funding from the MCW Cardiovascular Center's "Smith Family Program for Enhanced Precision Therapeutics," a program made possible by the generous support of the Smith Family.

## 2019 Michael H. Keelan, Jr., MD, Research Foundation Grant

**Milwaukee, June 4, 2019** – Oleg Palygin, PhD, assistant professor of Physiology and Cardiovascular Center member, is the recipient of the 2019 Michael H. Keelan Jr., MD Scholar Award for his project, "Essential Role of Kir4.1/Kir5.1 Channels in Renal Salt Handling." This study will explore new powerful renal regulators of electrolyte balance and blood pressure and progress the development of compounds targeting specific electrolyte channels in the kidney for the treatment of hypertension, a condition affecting one of every three adults in Wisconsin.



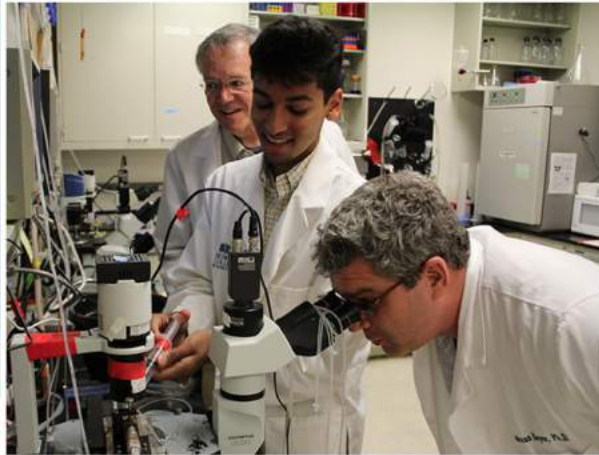
This \$50,000 competitive award is made possible by the Michael Keelan, Jr. Research Foundation Grant, an endowment managed by the Greater Milwaukee Foundation and designated for cardiovascular research at the Medical College of Wisconsin Cardiovascular Center.

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 is currently an active member on the Cardiovascular Center Board.

Past recipients are Caitlin O'Meara, PhD (2016), Jacquelyn Kulinski, MD (2016), Brian Smith, PhD (2017), Carmen Bergom, MD, PhD (2018).

# Smith Family Program for Enhanced Precision Therapeutics

Because of you...  
we are making a  
difference TOGETHER.



## Finding Treatments for Cardiovascular Damage Caused by Chemotherapy

Project Title: "A New Approach in Cardiac Oncology: Harnessing Telomerase"

Principal Investigator:



Andreas M. Beyer, PhD, FAHA  
Associate Professor of Medicine, Cardiovascular  
Medicine  
Associate Professor of Physiology  
Cardiovascular Center  
Medical College of Wisconsin

About the Researcher: Dr. Beyer joined MCW in 2009 after receiving his doctoral degree from the University of Iowa, specializing in genetics and physiology. He has over 35 peer-reviewed scientific publications and receives funding from the National Institutes of Health for several cardiovascular research projects.

To Learn More About the Beyer Lab: <https://www.mcw.edu/departments/cardiovascular-center-heart/members/faculty-and-labs/andreas-beyer-lab>

About the Project: Systemic chemotherapy, such as doxorubicin, plays a central role in cancer therapy, yet it is toxic to the heart and blood vessels. This project is testing if and how telomerase, an enzyme naturally present in the body, protects blood vessels. By understanding the damage to the heart and blood vessels that occurs with cancer treatment, the goal is to develop strategies to reduce/prevent this from occurring in an ever-growing population of cancer survivors.



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# Smith Family Program for Enhanced Precision Therapeutics

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## Enhancing Medical Devices Used in Patients with Heart Failure

Project Title: "Percutaneous Distal Embolic Protection for LVAD Thrombolysis"

Principal Investigators:



Lyle D. Joyce, MD, PhD  
Professor of Surgery, Cardiothoracic Surgery  
Section Chief, Adult Cardiac Surgery  
Cardiovascular Center  
Froedtert & Medical College of Wisconsin



David L. Joyce, MD  
Associate Professor of Surgery, Cardiothoracic  
Surgery  
Surgical Director, Cardiac Transplantation  
Cardiovascular Center  
Froedtert & Medical College of Wisconsin

About the Researchers: Both Dr. David Joyce and Dr. Lyle Joyce joined MCW as faculty members in June 2017 and remain one of the few – if not only – father-son duos in cardiothoracic surgery in the country.

To Learn More About the Joyces: <https://www.mcw.edu/mcwknowledge/mcw-stories/meet-david-and-lyle>

About the Project: Their project will test unique modifications to left ventricular assist devices (LVAD), mechanical pumps that assist the heart in circulating blood when the heart muscle is weak. Over the past three decades, LVAD technology has evolved as one of the preferred treatments for heart failure, yet complications can arise if blood clots form within the device. The goal of this project is to test a new prototype that lessens blood clot formation, laying the groundwork for human clinical trials.



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# Philanthropic Support



On July 25, guests enjoyed an evening on Milwaukee's lakefront at Discovery World for the 2nd annual "Heart of the Matter Food & Wine Event". The event featured award-winning wines paired with a heart-healthy dinner menu designed by Bartolotta Chef Felix Rosado.



Dr. **Nicole Lohr, MD, PhD**, CVC member, associate professor, department of medicine and division chief of Cardiovascular Medicine at the Zablocki VA Medical Center, shared both her personal and professional experiences showing how research being conducted at the Medical College of Wisconsin has led to discoveries that allow for the treatment of cardiovascular disease that we once were unable to treat. Dr. Lohr explained how money raised at this event and future events helps with researcher's laboratory needs, further fostering growing collaborations, and translating discoveries to treat patients.

CVC Board Member, Sally Bentley, a Froedtert & Medical College of Wisconsin patient, shared her story as well. In 2006, Sally was diagnosed with mitral valve prolapse and underwent open heart surgery from the heart and vascular care team. In 2016, Sally began to experience an irregular heart rhythm, making her an immediate candidate for the Watchman Device, a small, permanent implant placed in the heart to reduce the risk of stroke in patients with atrial fibrillation. She attributes the Froedtert & Medical College of Wisconsin heart and vascular team for saving her life, stating, "my cardiology team is the best." Sally represents a woman whose heart and life are thriving, thanks to highly specialized care, and is now living her life to the fullest.



The evening concluded with an exciting auction, led by Steve "the Homer" True. All proceeds support cardiovascular research, clinical care, education and community outreach programs at Froedtert & the Medical College of Wisconsin.





# Philanthropic Support

## Have a Heart Ride Finale Culminates with an 11-Year Total of \$165,000 Raised for Cardiovascular Research

On June 1st, the 11th annual Have a Heart Motorcycle Ride, sponsored by House of Harley-Davidson® and Gruber Law, was held that began and ended at House of Harley-Davidson® in Greenfield.



Before the ride, the Cardiovascular Center paused to honor and remember Daniel "Jack" F. McKeithan, Jr., a Cardiovascular Center Founding Board member who was also one of the founders of the Have a Heart Ride. Mr. McKeithan was very passionate about supporting cardiovascular research at the Medical College of Wisconsin. He was a wise and respected businessman with a compassionate and generous heart. He treated everyone with dignity and kindness. His wife, Mrs. Patti McKeithan was given a special gift in memory of husband.

Riders then enjoyed a 70-mile scenic ride through the hills and countryside of Southeastern Wisconsin. Over its 11 years, the Ride has netted over \$165,000 for cardiovascular research. The Cardiovascular Center thanks the House of Harley for hosting the event, title sponsor Gruber Law, and CVC Board members Danny Muchin, Phil Georges, and Bill Mielke for their support.



Proudly supporting lifesaving research at the Cardiovascular Center at the Medical College of Wisconsin



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