

VASCULAR DISCOVERY: From Genes to Medicine

Scientific Sessions 2018

Final Program

May 10-12, 2018 | Hilton San Francisco Union Square Hotel | San Francisco, California

Abstracts are available on <http://professional.heart.org/vasculardiscovery18>

This annual American Heart Association scientific meeting is sponsored by the Council on Arteriosclerosis, Thrombosis and Vascular Biology, Council on Peripheral Vascular Disease, and Council on Genomic and Precision Medicine, in collaboration with the Society of Vascular Surgery's Vascular Research Initiatives Conference, the International Society on Thrombosis and Haemostasis, and the American Venous Forum.

Program at a Glance

	Wednesday May 9, 2018	Thursday May 10, 2018	Friday May 11, 2018	Saturday May 12, 2018			
7:00 AM	Separate registration may be required for the meetings listed below.	Registration, Continental Breakfast, Exhibits	Registration, Continental Breakfast, Exhibits	Registration			
7:30 AM		Early Career Training Session	Early Career Training Session				
8:00 AM	8:00 AM-6:00 PM Vascular Research Initiatives Conference 2018	9:00 AM-5:00 PM HDL Structure-Function Workshop <i>Separate registration required</i>	8:00-10:00 AM Conference Opening and Plenary Session I: Functional Genomics – Cardiovascular Precision Medicine	8:00-9:30 AM Plenary Session III: Cardiometabolic Mechanisms of Vascular Complications in Diabetes	8:30-10:30 AM Poster Session and Continental Breakfast		
8:30 AM			10:00-10:30 AM Refreshment Break/Exhibits	9:30-10:00 AM Refreshment Break/Exhibits			
9:00 AM					10:30 AM-12:15 PM Concurrent Session I A – Mechanisms of Atherosclerosis B – Molecular, Developmental and Cellular Biology of the Vessel Wall C – Cardiovascular Precision Medicine	10:00-11:45 AM Concurrent Session III A – Lipoprotein Metabolism and Therapeutic Targets B – Blood Coagulation and Antithrombotic Therapy C – Research Priorities in Thrombosis: A Bedside to Bench Approach	10:30 AM-12:00 PM Plenary Session V Invited Lecture Series Hoeg Award Lecture Keynote Lecture Distinguished Lecture
9:30 AM			12:15-1:45 PM Town Hall Meeting and Panel Discussion: Cardiovascular Precision Medicine	11:45 AM-1:45 PM Next-Generation Technology Bootcamps: CRISPR-Cas9 Genome Editing (<i>basic and advanced</i>) (<i>ticket required; seating is limited</i>) Or lunch on your own			
10:00 AM							
10:30 AM			3:45-4:15 PM Refreshment Break/Exhibits	3:15-3:45 PM Refreshment Break/Exhibits			
11:00 AM					4:15-6:00 p.m. Concurrent Session II A – Apolipoproteins and Lipid Metabolism B – Immunity and Inflammation in Vascular Biology C – Translational Science of Vascular Medicine: Cutting Edge Technologies	3:45-5:30 PM Concurrent Session IV A – Diabetes, Obesity and Metabolic Disorders B – Platelet Production, Signaling and Function C – Translational Science of Vascular Medicine: Vascular Dysfunction	
11:30 AM			6:00-8:00 PM Poster Session and Reception	5:30-7:30 PM Poster Session and Reception			
12:00 PM					1:00-6:30 PM CACC Symposia	8:00-10:00 PM Joint Council Dinner (<i>ticket required</i>)	
12:30 PM			3:00-7:00 PM Vascular Discovery Registration				
1:00 PM	7:00-11:30 PM CAAC Reception & China Night						
1:30 PM							
2:00 PM							
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- Legend:
- Plenary Session
 - Concurrent Session
 - Poster Session
 - Presentation Skills Training
 - Meals/Breaks
 - Other Meetings of Interest

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Questions and Information

Questions

If you have questions after reading this program, contact the American Heart Association National Center, Dallas, Texas:

Telephone 888.242.2453 (inside the United States)
214.570.5935 (outside the United States)

Fax 214.373.3406

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- If you have additional questions, please email us at scientificconferences@heart.org or call toll-free 888.242.2453



Letter from the Chair and Vice Chair

Dear Colleague,

On behalf of the American Heart Association, the Council on Arteriosclerosis, Thrombosis and Vascular Biology, the Council on Peripheral Vascular Disease and the Council on Genomic and Precision Medicine, we welcome you to Vascular Discovery: From Genes to Medicine 2018 Scientific Sessions.

This year we are excited to debut the new name for our conference that celebrates the collaboration of three AHA Scientific Councils along with the Society of Vascular Surgery's Vascular Research Initiatives Conference, the International Society on Thrombosis and Haemostasis, and the American Venous Forum.

Vascular Discovery 2018 provides unique opportunities to meet with colleagues from around the world who have wide-ranging research interests and expertise within the research communities of arteriosclerosis, thrombosis, vascular biology, peripheral vascular disease, genomics and precision medicine for the timely exchange of information about new and emerging scientific research.

The program includes invited plenary lectures, concurrent sessions with oral presentations of selected abstracts, and three lively poster sessions. Some of the highlights of the meeting are:

- Three precision medicine sessions, organized in collaboration with the NHLBI and the Council on Genomic and Precision Medicine, that include a plenary and concurrent session on recent advances from the views of clinical investigation, basic science and patient care, as well as a town hall meeting and panel discussion with thought leaders to discuss the future of cardiovascular precision medicine.
- A cutting edge technology session where you can learn about recent advances translating vascular science into clinical applications and the newest techniques and devices in experimental vascular research.
- A session on research priorities in thrombosis, organized in collaboration with the Council on Peripheral Vascular Disease, the International Society on Thrombosis and Haemostasis, and the American Venous Forum. Experts will lead discussions on provocative and pressing questions in thrombosis science.

In addition to concurrent sessions focused on subdisciplines in arteriosclerosis, thrombosis, and vascular biology we'll also have a rapid-fire oral abstracts session centered on peripheral vascular disease, young investigator award competitions, professional development sessions offered by the Early Career Committee, the Mentor of Women Award Luncheon (everyone is invited!), and a Next-Generation Technology Boot Camp.

We hope you will find the Vascular Discovery: From Genes to Medicine 2018 Scientific Sessions an excellent educational and academic experience and a great opportunity to network with scientists from around the world who are dedicated to building healthier lives, free of cardiovascular diseases and stroke.

Sincerely,



Nancy R. Webb, PhD, FAHA
Chair, Vascular Discovery 2018
Scientific Sessions



Lars Maegdefessel, MD, PhD
Vice Chair, Vascular Discovery 2018
Scientific Sessions

***The American Heart Association is a national voluntary health agency whose mission is
"Building healthier lives, free of cardiovascular diseases and stroke."***

The American Heart Association gratefully acknowledges the unrestricted educational grant from AstraZeneca.

***Additionally, we thank the National Heart, Lung, and Blood Institute, the ATVB Journal, and
the ATVB, PVD and GPM councils for their contributions in supporting the meeting.***

The American Heart Association is grateful to the members of the Program Committee for their dedication and leadership in planning the program.

Program Committee

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Alisa Wolberg, PhD, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Invited Presenters

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Rachel Haurwitz, PhD, Caribou Biosciences, Berkeley, California
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Joseph C. Wu, MD, PhD, FAHA, Stanford University School of Medicine, Stanford, California



Invited Moderators

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Abstract Reviewers

The conference organizers gratefully acknowledge the following individuals for their assistance with the abstract grading process:

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Zhenheng Guo	Katey Rayner	Wei Zhou
Milton H. Hamblin	Catherine Reardon	
Robert A. Hegele	Alan T. Remaley	

Room Locator

Wednesday, May 9	
CAAC Symposium	Plaza A
CAAC China Night Reception and Dinner <i>(ticket required)</i>	Plaza B
9:00 AM-5:00 PM HDL Workshop	Plaza B
Exhibits	Yosemite Room
Registration	Yosemite Room
Speaker Resource Room	Green Room
Vascular Research Initiatives Conference (VRIC) 2018 <i>(separate registration required)</i>	Imperial Ballroom A and B

Thursday, May 10	
Continental Breakfast	Yosemite Room
Concurrent Session A	Grand Ballroom B
Concurrent Session B	Imperial Ballroom B
Concurrent Session C	Imperial Ballroom A
Early Career Training	Imperial Ballroom A
Exhibits	Yosemite Room
Joint Council Dinner <i>(ticket required)</i>	Grand Ballroom B
Mentor of Women Award Luncheon <i>(ticket required)</i>	Plaza B
Plenary Sessions	Grand Ballroom B
Poster Session and Reception	Grand Ballroom A
Refreshment Breaks	Yosemite Room
Registration	Yosemite Room
Speaker Resource Room	Green Room
Town Hall Meeting and Panel Discussion: CV Precision Medicine	Imperial Ballroom A

Friday, May 11	
Continental Breakfast	Yosemite Room
Young Investigator Award Competition	Grand Ballroom B
Concurrent Session A	Grand Ballroom B
Concurrent Session B	Imperial Ballroom B
Concurrent Session C	Imperial Ballroom A
Early Career Training	Imperial Ballroom A
Exhibits	Yosemite Room
Next Generation Technology Bootcamp <i>(ticket required)</i>	Plaza A
Plenary Sessions	Grand Ballroom B
Poster Session and Reception	Grand Ballroom A
Refreshment Breaks	Yosemite Room
Registration	Yosemite Room
Speaker Resource Room	Green Room

Saturday, May 12	
Continental Breakfast	Grand Ballroom A
1:00-8:00 PM KinMet 2018	Plaza A
Plenary Sessions	Imperial Ballroom A and B
Poster Session	Grand Ballroom A
Registration	Yosemite Room
Speaker Resource Room	Green Room

General Information

Program Description

This 2½-day meeting is sponsored by the Council on Arteriosclerosis, Thrombosis and Vascular Biology, Council on Peripheral Vascular Disease, and the Council on Genomic and Precision Medicine, in cooperation with the Society for Vascular Surgery's Vascular Research Initiatives Conference, the International Society on Thrombosis and Haemostasis, and the American Venous Forum. The meeting includes diverse disciplines within the arteriosclerosis, thrombosis, vascular biology, functional genomics, precision medicine, peripheral vascular disease and vascular surgery research communities that allow investigators to explore areas of cross-disciplinary interests. Special lectures, discussions and oral and poster presentations are planned. The meeting provides opportunities for intense interaction among participants during sessions and breaks. We expect a broad representation from many disciplines and encourage young scientists to attend.

Conference Registration

Registration will be in the Yosemite Room of the Hilton San Francisco Union Square Hotel. Registration will be open during the following hours:

Wednesday, May 9	3:00–6:00 PM
Thursday, May 10	7:00 AM–6:00 PM
Friday, May 11	7:00 AM–6:00 PM
Saturday, May 12	7:30 AM–Noon

Exhibits

Beginning Wednesday afternoon, visit the **exhibits** in the Yosemite Room. Exhibits will be open during registration hours, breaks and lunch. This year we welcome:

- AHA Scientific Journals
- AHA Membership
- ATVB Diversity Committee
- Biocytogen, LLC
- International Society on Thrombosis and Haemostasis
- United Medical Instruments, Inc.
- PromoCell GmbH
- Transonic
- Exemplar Genetics
- Fujifilm Visualsonics

Learning Objectives

At the conclusion of the conference, participants will be able to:

1. Describe evidence behind the 2013 blood cholesterol guidelines and identify opportunities to integrate them into clinical practice.
2. Describe the role and potential role of newer and emerging treatments for dyslipidemia.
3. Discuss the current understanding of HDL's role in atherosclerosis and its clinical implications.
4. Review the latest research on the signaling and genetic pathways involved in vascular dysfunction and potential opportunities for new therapeutic options and management.
5. Describe the role of inflammation in CVD and the use of statin and non-statin drugs to reduce inflammation.
6. Describe the biology of cardio-metabolic pathways and risk factors as they relate to the development and progression of cardiovascular disease and diabetes, and potential options for management.
7. Review novel mechanisms and emerging antithrombotics that reduce atherothrombosis without increasing bleeding risk.

General Information (continued)

Joint Accreditation Statements

In support of improving patient care, the American Heart Association is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

AMA Credit Designation Statement – Physicians

The American Heart Association designates this live activity for a maximum of 21.50 *AMA PRA Category 1 Credit™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

AAPA Credit Acceptance Statement – Physician Assistants

AAPA accepts certificates of participation for educational activities certified for *AMA PRA Category 1 Credit™* from organizations accredited by ACCME or a recognized state medical society. Physician assistants may receive a maximum of 21.50 hours of Category 1 credit for completing this program.

AANP Credit Acceptance Statement – Nurse Practitioners

American Academy of Nurse Practitioners (AANP) accepts *AMA PRA Category 1 Credit™* from organizations accredited by the ACCME.

***AMA credit must be claimed within six months of attendance. Credit will no longer be available to claim after Nov. 12, 2018.*

Disclosure Policy

All persons who develop and/or control educational content in CME/CE activities provided by the American Heart Association will disclose to the audience all financial relationships with any commercial supporters of this activity as well as with other commercial interests whose lines of business are related to the CME/CE-certified content of this activity. In addition, presenters will disclose unlabeled/unapproved uses of drugs or devices discussed in their presentations. Such disclosures will be made in writing in course presentation materials.



Cold Feet?

LEARN TO RECOGNIZE THE SIGNS OF PAD IN YOUR PATIENTS

Peripheral artery disease (PAD) affects more than 200 million adults worldwide and over 8.5 million in the United States. While it is a serious risk factor for coronary artery disease and cerebrovascular disease, PAD remains a largely overlooked condition. But together, we can change that.

GETTING TO THE HEART OF VASCULAR HEALTH
heart.org/PADtoolkit



Aralez Pharmaceuticals is a proud sponsor of the American Heart Association's efforts to educate patients about Peripheral Artery Disease.

Information for Presenters

The Speaker Resource Room is located in the **Green Room on the Grand Ballroom Level**. Speakers are asked to deliver their presentations on CD-ROM, DVD-ROM or a USB storage device to the Speaker Resource Room at least one hour before the beginning of the session in which they will speak. Presenters who speak on Thursday, May 10, may check in beginning at 3 p.m. Wednesday, May 9, but we request that you check in before 6 p.m. This will allow you time to prepare, rehearse and finalize your presentation before you submit it. ***It is imperative that you review your presentation in the Speaker Resource Room if it contains video files or was created on a Mac.*** Speakers will be directed to a preloading station where a technician will load the presentations. Speakers may also use this room to review and practice their presentations on PCs and Mac computers. The Speaker Resource Room will be open during the following hours

Wednesday, May 9 3:00–6:00 PM	Thursday, May 10 7:00 AM–6:00 PM	Friday, May 11 7:00 AM–6:00 PM	Saturday, May 12 7:30–10:30 AM
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Abstract Presentations

Abstracts presented at Vascular Discovery 2018 will be published after the conference in the online *ATVB Journal*. Abstracts are available on the Vascular Discovery 2018 conference website: professional.heart.org/EducationMeetings

Abstracts 1-59 will be presented orally.

Abstracts 88-731 will be presented as posters as follows:

Poster Session 1: 6:00-8:00 PM, Thursday, May 10 (attended), abstracts 88-290

Poster Session 2: 5:30-8:00 PM, Friday, May 11 (attended), abstracts 310-516

Poster Session 3: 8:30-10:30 AM, Saturday, May 12 (attended), abstracts 520-731

Abstract poster presenters are asked to comply with the set-up and tear-down schedule below:

Poster Session Date	Location	Presentation Time	Attendance Time	Set-up Time	Tear-Down Time
Session 1 Thursday, May 10	Grand Ballroom A	6:00-8:00 PM	6:00-8:00 PM	11:00 AM-5:30 PM	8:00-9:00 PM
Session 2 Friday, May 11	Grand Ballroom A	5:30-7:30 PM	5:30-7:30 PM	11:00 AM-5:00 PM	7:30-8:30 PM
Session 3 Saturday, May 12	Grand Ballroom A	8:30-10:30 AM	8:30-10:30 AM	10:00 PM Friday- 8:00 AM Saturday	10:30 AM-12:00 PM Saturday

ePosters

In addition to the traditional poster format, abstract presenters were invited to upload their posters electronically. During the meeting, each abstract will have a QR code displayed on their poster board, which will enable attendees with smartphones to view the ePosters and, if applicable, the author's narration of the poster. ePosters are available only to attendees and may be viewed from the Communication Center in the registration area. Posters will be accessible to the general public after May 31.

Conference Highlights – Early Career Activities and Ticketed Events

Early Career Activities

Join us on Thursday and Friday for these Early Career sessions. The training sessions are open to all attendees, but are targeted to early career participants. *No advance registration is required, but seating is limited.*

Thursday, May 10, 7:00-8:00 AM

Early Career Training Session

Succeeding at Every Stage: Insights from the Early Career Committee

Imperial Ballroom A

This session focuses on how to achieve success in your post-doctoral fellowship, how to successfully acquire transition grants and keys to successfully negotiating your first independent position as a scientist or physician-scientist. Each topic is led by ECC members who have been highly successful in the subject area.

Getting Your First Grant: Insights from Study Section

Elizabeth Tarling, PhD, UCLA, Los Angeles, California

Thomas Vallim, PhD, UCLA, Los Angeles, California

Building a Successful International Research Program

Dorothee Atzler, MD, Ludwig-Maximilians-University of Munich, Munich, Germany

Belinda Di Bartolo, PhD, South Australian Health and Medical Research Institute, Adelaide, South Australia, Australia

Miao Wang, PhD, Fuwai Hospital and Chinese Academy of Medical Sciences, Beijing, China

Clinical Practice and Research Lab Management: A Balancing Act

Nick Leeper, MD, Stanford University, Stanford, California

Marcel Liberman, MD, PhD, Hospital Israelita Brasileira Albert Einstein, Sao Paulo, Brazil

Uwe Raaz, MD, Universitätsmedizin Göttingen, Göttingen, Germany

Keys to the Kingdom: Setting Up and Managing Your Own Lab

Katey Rayner, PhD, University of Ottawa Heart Institute, Ottawa, Ontario, Canada

The Importance of Mentoring and Being Mentored

Robert C. Bauer, PhD, Columbia University Medical Center, New York, New York

Work-Life Balance in Science

Adam C. Straub, PhD, University of Pittsburgh, Vascular Medicine Institute, Pittsburgh, Pennsylvania

Daisy Sahoo, PhD, Medical College of Wisconsin, Milwaukee, Wisconsin

Transitioning to Industry

Cynthia Hong, PhD, Associate Director, Search & Evaluation, Novartis Institutes for Biomedical Research

Bruce Given, MD, Chief Operating Officer, Arrowhead Pharmaceuticals, Pasadena, California

Friday, May 11, 7:00-8:00 AM

Early Career Training Session

Honing Skills Necessary for Difficult Situations

Imperial Ballroom A

Have you ever found yourself in a difficult situation as the person who must begin a tough conversation, or the person who is receiving criticism? Do you wish to hone your communication and listening skills to better navigate tough conversations and difficult situations? Join us on Friday morning for a session to help you learn new skills for navigating difficult conversations. The Early Career Committee will role-play examples of more or less effective reactions to different scenarios, followed by table discussions on a variety of situations you may come across in your career.

Friday, May 11, 11:45 AM-1:45 PM

Next Generation Technology Bootcamp

Plaza A

Pre-registration is required for this hands-on learning session to gain experience in basic and advanced genome-editing technologies. Be sure to bring your laptop! Lunch will not be provided; however, there are grab-and-go options in the Herb N' Kitchen, located in the Hilton Lobby. Feel free to bring your lunch with you to the Bootcamp.

Conference Highlights – Early Career Activities and Ticketed Events

Ticketed Events

The following events are open to all attendees. A separate nonrefundable fee is required to attend these events. Tickets will be sold at the registration desk. Please check with staff at the registration desk for availability.

Please join us in the Plaza B Room at 12:15PM Thursday for the **Mentor of Women Award Luncheon**, hosted by the ATVB Women's Leadership Committee. The featured luncheon speaker is Rachel Haurwitz, PhD, who will present on *Re-writing the Genetic Code: The Science and Ethics of CRISPR Gene Editing*. During the luncheon, finalists for the Junior Investigator Award for Women will be announced and the ATVB Women's Leadership Committee Mentoring Award will be presented. The luncheon is open to all attendees; however, a ticket is required. *A separate, nonrefundable \$50 fee for AHA members/\$75 fee for non-members is required to attend this event.*

Also on Thursday, join your colleagues for food, drinks and entertainment at the **Joint Council Dinner** in Grand Ballroom B. Tickets, if available, may be purchased at registration (\$60/member; \$75/non-member; \$30/member and \$45/non-member for early career/student/trainee attendees).



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Conference Highlights – Lectures and Awards

On Saturday morning, attend the **Invited Lecture Series** featuring the recipient of Jeffrey M. Hoeg Arteriosclerosis, Thrombosis and Vascular Biology Award for Basic Science and Clinical Research Lecture, the Distinguished Lecture and the Keynote Lecture.



At 10:30 AM, **Muredach P. Reilly, MBBCH, MSCE, FAHA**, will present this year's **Jeffrey M. Hoeg Award Lecture**. This lecture was established in 1999 to honor Jeffrey M. Hoeg, MD, for his contribution to furthering the understanding of the pathophysiology of atherosclerosis and the development of treatment strategies for its prevention through basic science and clinical research efforts.

Dr. Reilly received his medical degree from University College Dublin, Ireland and completed his residency and fellowship training in Medicine and Cardiovascular Medicine at the University of Pennsylvania, where he also received a MS degree in clinical epidemiology. Dr. Reilly went on to hold faculty positions and senior leadership roles at University of Pennsylvania. In 2016, Dr. Reilly was recruited to Columbia University to lead the Irving Institute for Clinical and Translational Research, home to their NIH-NCATS CTSA award, into a new era of genomics and precision medicine in biomedical research and personalized healthcare. In addition, Dr. Reilly is the Director of Columbia's Cardiometabolic Precision Medicine Program, a program he created to facilitate innovative, interdisciplinary research and clinical translation of new disease-causing mutations and genomic contributions to cardiovascular disease.

A cardiologist and the Florence and Herbert Irving Endowed Professor of Medicine, Dr. Reilly's research program focuses on human genomics and translational studies of atherosclerosis, cardiometabolic disorders and cardiovascular risk. His program has resulted in over 250 peer reviewed original publications and mentorship of dozens of trainees with sustained career in academic medicine. In addition to the CTSA grants, Dr. Reilly is the Principal Investigator on several NIH and NIH/NHLBI research grants on the genomics of cardiovascular disease and a K24 Mentorship award in Patient Oriented Research in Cardiometabolic Disease.

Dr. Reilly has received numerous awards including a Special Recognition Award from the American Heart Association (AHA) in 2010, the 2013 William Osler Patient Oriented Research Award, and AHA's Mentor of Women Award in 2015. In 2010, Dr. Reilly was elected to the Royal College of Physicians in Ireland as well as to the American Society of Clinical Investigation.

The title of Dr. Reilly's presentation is ***Translational Studies in Cardiometabolic Disorders***.



The **Keynote Lecture** will be presented at 11:00 AM, by **Stefanie Dimmeler, PhD**. Professor Dimmeler is Professor of Experimental Medicine and Director of the Institute of Cardiovascular Regeneration at the Institute of Cardiovascular Regeneration, Center for Molecular Medicine at the University of Frankfurt in Frankfurt, Germany.

Dr. Dimmeler received her PhD degree from the University of Konstanz in Konstanz (Germany). She then completed a fellowship in Experimental Surgery at the University of Cologne and in Molecular Cardiology at the University of Frankfurt (Germany). Dr. Dimmeler is the author of more than 300 peer-reviewed papers, published in highly qualified journals. She is among the top 1% Thomson Reuters Highly Cited Researcher and her h-index is 115. She has been invited to speak at more than 300 meetings and has presented various keynote lectures. She has received more than 17 awards, including the Frankel-Award of the German Cardiac Society, the Alfred Krupp Award, the Leibniz Award, the Award of the Jung Foundation, and she presented the prestigious George E. Brown Memorial Lecture at the American Heart Association's Scientific Sessions as well as in 2015, the Thomas W. Smith Memorial Lecture and in 2016, the Michael Oliver Memorial Lecture at the BAS Autumn Meeting, and the Paul Dudley White International Lecture at the AHA Scientific Sessions. She received two ERC Advanced Investigator Grants. Dr. Dimmeler has been the chief editor of EMBO Molecular Medicine and associate editor of the European Heart Journal. Currently, she is associate editor of Circulation Research. Her group elucidates the basic mechanisms underlying cardiovascular disease and vessel growth with the aim to develop new cellular and pharmacological therapies for improving the treatment of cardiovascular disease. Ongoing research focuses on epigenetic mechanisms that control cardiovascular repair, specifically non-coding RNAs.

Dr. Dimmeler will lecture on ***RNA Control in Vascular Biology: Implications for Atherosclerosis and New Vascularization***.

Conference Highlights – Lectures and Awards (continued)



At 11:30 a.m., **Paul M. Ridker, MD, MPH, FAHA, FACC**, will present the Distinguished Lecture on *Inflammation as a Target for Atherosclerosis: CANTOS and Beyond*. Dr. Ridker is a Eugene Braunwald Professor of Medicine at Harvard Medical School and serves as a Director of the Center for Cardiovascular Disease Prevention at Brigham and Women's Hospital. He specialized in atherosclerosis and cardiovascular disease including the role of inflammation in the disease process and the role of CRP.

Dr. Ridker's particular areas of interest involve molecular and genetic determinants of hemostasis, thrombosis, and inflammation with a focus on "predictive medicine", early disease diagnosis, and the underlying causes and prevention of acute coronary syndromes. His research efforts are primarily supported by RO1 research grants from the National Heart, Lung, and Blood Institute (NHLBI), a Distinguished Clinical Scientist Award from the Doris Duke Charitable Foundation, and through philanthropic research grants from the Leducq Foundation and the Donald W Reynolds Foundation.

Dr. Ridker has been the recipient of a Clinician Scientist Award (1992-1997), an Established Investigator Award (1997-2002), and a Distinguished Scientist Award (2013) from the American Heart Association. His pioneering work on inflammation, CRP, and atherothrombosis, was also recognized by Time Magazine who named him among America's Ten Best Researchers in Science and Medicine in 2001 and as one of the "Time 100" in 2004.

In addition to his work in cardiovascular epidemiology, Dr. Ridker has been the Principal Investigator or Study Chairman of several multinational clinical trials including PREVENT, PRINCE, Val-MARC, LANCET, JUPITER, SPIRE-1, SPIRE-2, as well as the ongoing Canakinumab Anti-Inflammatory Thrombosis Outcomes Study (CANTOS) and the NHLBI-funded Cardiovascular Inflammation Reduction Trial (CIRT), both designed to directly test the inflammatory hypothesis of atherothrombosis. Dr. Ridker is also Trial Chairman of PROMINENT, an ongoing study of triglyceride reduction among patients with diabetes.

Dr. Ridker is the author of over 800 original articles and 5 textbooks related to cardiovascular medicine. A frequent invited lecturer at national and international conferences, he is also a member of multiple editorial boards and co-inventor on patents filed by the Brigham and Women's Hospital that relate to the use of inflammatory biomarkers in cardiovascular disease.



Kathryn J. Moore, PhD, FAHA, is the 2018 recipient of the Mentor of Women Award, which will be presented at the Mentor of Women Luncheon on Thursday. The award is presented annually to a member of the ATVB Council who has shown exceptional support of the careers of women in the fields of arteriosclerosis, thrombosis and vascular biology on an individual and global basis through mentoring and advocacy. The award is sponsored by the ATVB Women's Leadership Committee.

Dr. Moore is the Jean and David Blechman Professor of Cardiology, and Professor of Cell Biology at New York University School of Medicine. She is internationally recognized for her research on the molecular pathogenesis of cardiometabolic diseases, and the roles that non-coding RNAs and dysregulated immune responses play in those settings. During the course of her research career, Dr. Moore has made training the next generation of female scientists a priority, and many of her former trainees have gone on to successful academic and/or clinical careers.

Dr. Moore received her B.Sc. (Microbiology) and Ph.D. (Parasitology/Immunology) degrees from McGill University in Montreal, Canada. Although her early research focused on the immune response to pathogens, Dr. Moore became fascinated with the mechanisms of "sterile" inflammation in disease, and pursued her postdoctoral training at Harvard Medical School, focusing on the mechanisms of chronic inflammation in lupus and atherosclerotic cardiovascular disease. She joined the faculty at Harvard Medical School and Massachusetts General Hospital in 2001 as an Assistant Professor in the Department of Medicine, with secondary faculty appointments in the Center for Human Genetic Research, and the Center for Study of Inflammatory Bowel Disease. In 2009, Dr. Moore was recruited to New York University School of Medicine, where she is the Jean and David Blechman Professor of Cardiology (Medicine) and Professor of Cell Biology.

Dr. Moore has been the recipient of several prestigious awards for her contributions in the fields of innate immunity and vascular biology, including the Claffin Distinguished Scholar Award, the Ellison Foundation New Scholar in Aging Award, the American Heart Association's Special Recognition Award in Vascular Biology, the Jeffrey Hoeg Arteriosclerosis Award for Basic Science and Clinical Research and an NIH Outstanding Investigator Award. In addition, Dr. Moore has served on the Leadership Committee of the Arteriosclerosis, Thrombosis and Vascular Biology Council since 2004, acting as Chair of the Council from 2014-2016. During her tenure on the Committee, Dr. Moore made mentoring the next generation of scientists a top priority and helped to develop recommendations for AHA policies in the areas of science and medicine.

Conference Highlights – Lectures and Awards (continued)

The 2018 **ATVB Journal Young Investigator Awards** will be presented during Plenary Session III at 8:00-9:30 AM Friday. These investigators will also present their award-winning research during the Poster Session on Thursday evening.



Daniel Steinberg Early Career Investigator Award in Atherosclerosis/Lipoproteins

Mireille Ouimet, Ottawa Heart Institute, Ottawa, Canada, for her paper:

microRNA-33 Regulates Macrophage Autophagy in Atherosclerosis



Karl Link Early Career Investigator Award in Thrombosis

T. Rehegan Adili, University of Michigan, Ann Arbor, Michigan, for his paper:

First Selective 12-LOX Inhibitor, ML355, Impairs Thrombus Formation and Vessel Occlusion In Vivo With Minimal Effects on Hemostasis



Werner Risau Early Career Investigator Award in Vascular Biology

Leena Panneerseelan-Bharath, Boston University, Boston, Massachusetts, for her paper:

Endothelial Cell Autophagy Maintains Shear Stress-Induced Nitric Oxide Generation via Glycolysis-Dependent Purinergic Signaling to Endothelial Nitric Oxide Synthase

At 1:45 PM Thursday, finalists for the **Kenneth M. Brinkhous Young Investigator Prize in Thrombosis** and the **Irvine H. Page Young Investigator Research Award** will present their abstracts. The Brinkhous Prize recognizes outstanding endeavors by new investigators in fundamental and applied research in thrombosis. The Page Award encourages investigators to continue careers in arteriosclerosis and vascular biology and recognizes talented investigators at an early or beginning point in their careers. The winners of these competitions will be announced during the Joint Council Dinner.

ATVB Kenneth M. Brinkhous Young Investigator Prize in Thrombosis Finalists

Name	Presentation Number
Robert Campbell	14
Leonard Edelstein	15
Trevor Fidler	16
Milka Koupenova	17

ATVB Irvine H. Page Young Investigator Research Award Finalists

Name	Presentation Number
Jose Fuster	18
Elizabeth Tarling	19
Hagai Tavori	20
Qiuyu Zhu	21

The **Junior Investigator Award for Women** is sponsored by the ATVB Women’s Leadership Committee and helps recruit and retain women in the field of arteriosclerosis, thrombosis and vascular biology by recognizing excellent research being conducted by women. The finalists will present their abstracts during the Thursday poster session, and the winner will be announced during the Joint Council Dinner

ATVB Junior Investigator Award Winner for Women Finalists

Name	Presentation Number
Donna Conlon	87
Alexandra Finney	88
Rituparna Ganguly	89
Chrissta Maracle	90
Jevgenia Zilberman-Rudenko	91

Conference Highlights – Lectures and Awards (continued)

The **ATVB Travel Awards for Young Investigators** encourage and support the efforts of early career investigators in cardiovascular research and encourage participation in ATVB and AHA activities by providing travel funds to attend the Vascular Discovery 2018 Scientific Sessions, present research in oral or poster format and engage in discussion with senior investigators.

ATVB Travel Awards for Young Investigators Winners

Name	Presentation Number
Milessa Afonso	190
Youri Almeida	607
Francis Chen	486
Joshua Dubland	612
Lahouaria Hadri	277
Hongliang He	36
Ming He	7
Manish Jain	509
Aida Javidan	700
Sri Harsha Kanuri	98
Rahul Kumar	534
Hui-Ping Lin	100
Danielle Michell	415
Derick Okwan-Duodu	28
Seul Ki Park	10
Sudeshna Sadhu	2
Martin Schlegel	583
Vijay Sonkar	54
Pauline van Paridon	147
Bradley Wright	53

The American Heart Association Council on Peripheral Vascular Disease is pleased to announce the winner of the following council-sponsored awards. The awardees will be recognized during the PVD Council Luncheon and presented with the awards during the Joint Council Dinner on Thursday.

Robert W. Hobson II, MD, Early Career Investigator Award. This award recognizes an outstanding early career investigator in the field of vascular and endovascular medicine, vascular surgery or vascular biology. Dr. Hobson is a founding member of the PVD Council and an established, well-respected clinician-investigator in vascular diseases.

PVD 2018 Robert W. Hobson II, MD, Early Career Investigator Award Winner

Name	Presentation Number
Alyssa Flores	52

The Alan T. Hirsch, MD Mid-Career Award in Vascular Medicine recognizes investigators who are at mid-level of their careers actively involved in research related to peripheral vascular disease. Dr. Hirsch was a dedicated clinician-investigator and leader in the field of peripheral artery disease.

PVD 2018 Alan T. Hirsch, MD Mid-Career Investigator Award Winnerr

Name	Presentation Number
Hong Chen	141

By providing travel support to early career investigators who wish to attend the Vascular Discovery 2018 Scientific Sessions, the **PVD 2018 Travel Award for Young Investigators** honors outstanding new researchers, facilitates active participation in the annual meeting and highlights the benefits of ongoing membership in the AHA at the early career level.

PVD 2018 Travel Award for Young Investigators Winners

Name	Presentation Number
Peter Kip	337
Marcos Kuroki	721
Zhiping Liu	57
Neel Mansukhani	330
Bandana Shrestha	664

Web Resources

HealthJobsPLUS for Professionals

The American Heart Association, in partnership with Lippincott Williams & Wilkins (a Wolters Kluwer business), is proud to offer HealthJobsPlus.com, which provides a first-rate source for those seeking and posting jobs by connecting qualified healthcare professionals with top-notch employers.

Professional.heart.org

Professional Heart Daily is the American Heart Association/American Stroke Association's powerful Internet resource for healthcare professionals devoted to the fight against cardiovascular disease and stroke. Depending on the level of membership selected, AHA/ASA Professional Members may have access to all 12 AHA scientific journals, biweekly clinical updates, core clinical textbooks, a continually updated drug database and much more. Links to the Vascular Discovery 2018 Scientific Sessions website, science news and the AHA's Professional Online Network are also available on the site

learn.heart.org

Healthcare professionals can complete the conference evaluation and claim CME/CE credits after the meeting on this website. Podcasts, online courses, satellite broadcasts and webcasts are also available on learn.heart.org.

Twitter

Tweet your questions/comments during the meeting or just talk about what's happening at Vascular Discovery 2018. Use hashtag: **#VascularDiscovery18**.



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Arteriosclerosis, Thrombosis, and Vascular Biology

An American Heart Association Journal

The forum for publication of basic, translational, clinical, and population research in the area of arteriosclerosis, thrombosis, and vascular biology.

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Policy Information

Disclaimer

The Vascular Discovery: From Genes to Medicine 2018 Scientific Sessions is a scientific and educational conference for exchanging and discussing research results and scientific developments in the field of cerebrovascular disease. Accordingly, the American Heart Association cannot and does not offer any assurance or warranty of the accuracy, truthfulness or originality of the information presented at the conference.

Embargo Guidelines

Abstracts, lectures and presentations at Vascular Discovery 2018 are embargoed for release at the time of presentation. Information may not be released before the scheduled presentation time.

Photography/Recording Policy

No person may record any portion of the AHA Scientific Sessions, scientific conferences and the AHA/ASA International Stroke Conference, whether by video; still or digital photography; audio; or any other recording or reproduction mechanism. This includes recording of presentations and supporting AV materials and of poster presentations and supporting poster materials.

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No Smoking Policy

AHA policy prohibits smoking in conference meeting rooms and exhibits/registration areas. Thank you for your cooperation.

Seating/Badge Requirement

Seating is on a first-come, first-served basis. According to fire code, a session must be closed if the room fills to capacity. You must wear your name badge at all times during the symposium. Nonregistered guests may not be permitted into the sessions or food and beverage events. Be sure to remove your badge when you leave the conference or your hotel room.

The American Heart Association reserves the right to revoke or deny attendance to any registered participant, speaker, exhibitor, news media reporter or photographer of presentations or activities at AHA/ASA scientific conferences and meetings



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We encourage participation by all individuals. If you have a disability, advance notification of any special needs will help us to serve you better. Please indicate what your needs are at the time of registration. We cannot ensure the availability of appropriate accommodations without prior notification

Please Note: The American Heart Association shall not be liable for cancellation of the Vascular Discovery 2018 Scientific Sessions caused by labor strikes, civil disorders, fires, weather conditions, or other acts of God for any damages or losses resulting from such cancellations.

Other Meetings of Interest

The following conferences/symposia are not part of the educational activities of Vascular Discovery 2018:

Vascular Research Initiatives Conference

May 9, 2018, Hilton San Francisco

8:00 AM–7:00 PM

A separate registration fee is required to attend.

The 32nd annual Vascular Research Initiatives Conference (VRIC), presented by the Society for Vascular Surgery® (SVS), is a one-day session preceding the main Vascular Discovery 2018 meeting, uniquely designed to foster interaction among top scientists of diverse disciplines who are investigating peripheral vascular disease and its treatments. The conference is also dedicated to stimulating and encouraging interest in research among trainees who are aspiring academic vascular surgeons.

Chinese American Academy of Cardiology-Chinese Society for Vascular Medicine (CAAC-CSVM)

Symposium and China Night

May 9, 2018, Hilton San Francisco

Symposium: 1:00–6:00 PM

China Night Dinner: 7:00–10:00 PM

This event is hosted by the Chinese American Academy of Cardiology and the Chinese Society for Vascular Medicine. Join us to promote cardiovascular research excellence and collaboration. *There is no cost to attend the symposium; however, a separate registration and fee is required to attend the China Night reception and dinner.*

8th Annual HDL Workshop

May 9, 2018, Hilton San Francisco

9:00 AM–5:00 PM

The HDL Workshop provides an opportunity for researchers in the HDL community to discuss the latest developments in the field. In addition to a panel discussion by leaders in the field, this highly interactive international forum features short talks and stimulating discussions among the attendees and speakers. *Separate registration required.*

Kinetics-Metabolism 2018

May 12, 2018, Hilton San Francisco

Plaza A Room

1:00–8:00 PM

New Day and Time! Scientists interested in lipoprotein and cellular metabolism and kinetic modeling are invited to attend KinMet 2018. This informal meeting will provide a forum for all researchers, including postgraduate students, to present preliminary data, a complete research study, or to discuss issues related to experimental design and analysis. *There is no additional cost to attend the meeting, and all registrants are invited.*



Program Agenda

THURSDAY, MAY 10

7:00 AM

Yosemite Room

Registration, Continental Breakfast and Exhibits

7:00–8:00 AM

Imperial Ballroom A

Early Career Training

Succeeding at Every Stage:

Insights from the Early Career Committee

Organized in cooperation with the

ATVB Early Career Committee

Getting Your First Grant:

Insights from Study Section

Elizabeth Tarling, PhD, UCLA, Los Angeles, California

Thomas Vallim, PhD, UCLA, Los Angeles, California

Building a Successful International Research Program

Dorothee Atzler, MD, Ludwig-Maximilians-University of Munich, Munich, Germany

Belinda Di Bartolo, PhD, South Australian Health and Medical Research Institute, Adelaide, South Australia, Australia

Miao Wang, PhD, Fuwai Hospital and Chinese Academy of Medical Sciences, Beijing, China

Clinical Practice and Research Lab Management: A Balancing Act

Nick Leeper, MD, Stanford University, Stanford, California

Marcel Liberman, MD, PhD, Hospital Israelita

Brasileira Albert Einstein, Sao Paulo, Brazil

Uwe Raaz, MD, Universitätsmedizin Göttingen, Göttingen, Germany

Keys to the Kingdom: Setting Up and Managing Your Own Lab

Katey Rayner, PhD, University of Ottawa Heart Institute, Ottawa, Ontario, Canada

The Importance of Mentoring and Being Mentored

Robert C. Bauer, PhD, Columbia University Medical Center, New York, New York

Work-Life Balance in Science

Adam C. Straub, PhD, University of Pittsburgh,

Vascular Medicine Institute, Pittsburgh, Pennsylvania

Daisy Sahoo, PhD, Medical College of Wisconsin,

Milwaukee, Wisconsin

Transitioning to Industry

Cynthia Hong, PhD, Associate Director, Search & Evaluation, Novartis Industries for Biomedical Research, Cambridge, Massachusetts

Bruce Given, MD, Chief Operating Officer, Arrowhead Pharmaceuticals, Pasadena, California

8:00–8:30 AM

Grand Ballroom B

Conference Opening Welcome

8:00. Conference Opening Welcome

John J. Warner, MD, MBA, FAHA, UT Southwestern Medical Center University Hospitals, Dallas, Texas, and President, American Heart Association

Nancy R. Webb, PhD, FAHA, University of Kentucky, Lexington, Kentucky

8:30–10:00 AM

Grand Ballroom B

Plenary Session I

Functional Genomics –

Cardiovascular Precision Medicine

Organized in cooperation with the Council on Genomic and Precision Medicine, and the National Heart, Lung, and Blood Institute.

Moderators:

Jennifer L. Hall, PhD, American Heart Association, Dallas, Texas

Kiran Musumuru, MD, PhD, MPH, FAHA, University of Pennsylvania, Philadelphia, Pennsylvania

8:30 Precision Medicine: The View from the Clinic

Dan M. Roden, MD, FAHA, Vanderbilt University, Nashville, Tennessee

8:50 From the Bench to the Bedside: CYP 2C19

Genotyping

Paul A. Gurbel, MD, FAHA, Ivona Heart and Vascular, Lutherville, MD

9:10 Precision Medicine: The View from Basic Science

Joseph C. Wu, MD, PhD, FAHA, Stanford University School of Medicine, Stanford, California

9:30 Interactive Discussion/Q&A

10:00–10:30 AM

Yosemite Room

Refreshment Break and Exhibits

THURSDAY

Program Agenda (continued)

THURSDAY

10:30 AM-12:15 PM

Grand Ballroom B

Concurrent Session I A

Mechanisms of Atherosclerosis

Moderators:

Kenneth Walsh, PhD, FAHA, Boston University School of Medicine, Boston, Massachusetts
Muredach P. Reilly, MBBCH, MCSE, FAHA, Columbia University, New York, New York

10:30 **Somatic Mutations that Contribute to Clonal Hematopoiesis and Cardiovascular Disease**
Kenneth Walsh, PhD, FAHA, Boston University School of Medicine, Boston, Massachusetts

Oral Abstract Presentations

11:00 **Skap2 Regulates Atherosclerosis through Macrophage Polarization and Efferocytosis** **1**
Allison Schroeder, Danielle Hyatt, **Francis J. Alenghat**, University of Chicago, Chicago, Illinois

11:15 **Resolvin D1 Limits Senescent Cells in Atherosclerosis** **2**
Sudeshna Sadhu, Nicholas Rymut, Justin Heinz, Gabrielle Fredman, Albany Medical Coll, Albany, New York

11:30 **The Impact of MHCII Loss in Myeloid Cells and Adipocytes on Atherosclerosis and Liver Fat Accumulation** **3**
Alecia Blaszczyk, Valerie Wright, Joey Liu, The Ohio State University, Columbus, Ohio; Tuo Deng, Houston Methodist Weill Cornell Medical College, Houston, Texas; David Bradley, Stephen Bergin, Willa Hsueh, The Ohio State University, Columbus, Ohio

11:45 **Comprehensive Assessment of Immune Cells in Mouse and Human Atherosclerosis by Single-cell RNA-sequencing and Mass Cytometry** **4**
Holger Winkels, Erik Ehinger, Melanie Vassalo, Konrad Buscher, Huy Dinh, Kouji Kobiyama, Anouk Hamers, LJI, La Jolla, California; Clement Cochain, Institute of Experimental Biomedicine, Wuerzburg, Germany; Ehsan Vafadarnejad, Antoine Emmanuel Saliba, Helmholtz Institute for RNA-based Infection Research, Wuerzburg, Germany; Alma Zerneck, Institute of Experimental Biomedicine, Wuerzburg, Germany; Pramod Akula Bala, Amlan Kanti Ghosh, LJI, La Jolla, California; Nathaly Anto Michel, Natalie Hoppe, Ingo Hilgendorf, Andreas Zirlik, Department of Cardiology and Angiology I, University Heart Center Freiburg, Freiburg, Germany; Catherine Hedrick, Klaus Ley, Dennis Wolf, LJI, La Jolla, California

12:00 **An IL23-IL22 Axis Regulates Intestinal Microbial Homeostasis to Protect from Diet-induced Atherosclerosis** **5**
Aliia Fatkhullina, Iuliia Peshkova, Ekaterina Koltsova, Fox Chase Cancer Center, Philadelphia, Pennsylvania; Giorgio Trinchieri, Amiran Dzutsev, Ctr for Cancer Research, National Cancer Institute, National Institutes of Health, Bethesda, Maryland

10:30 AM-12:15 PM

Imperial Ballroom B

Concurrent Session I B

Molecular, Developmental and Cellular Biology of the Vessel Wall

Moderators:

Delphine Gomez, PhD, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
Jordan D. Miller, PhD, Mayo Clinic, Rochester, Minnesota

10:30 **Epigenetic Control of Smooth Muscle Cell Differentiation and Plasticity** **2**
Delphine Gomez, PhD, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania

Oral Abstract Presentations

11:00 **Role of Endothelial YingYang1 in Controlling Angiogenic Sprouting and Maturation** **6**
Shuya Zhang, Ji Young Kim, Suowen Suowen Xu, Marina Koroleva, Zhenggen Jin, University of Rochester, Rochester, New York

11:15 **Athero-protective Flow Regulation of ITPR3: an Epigenetic Approach** **7**
Ming He, Tse-Shun Huang, Marcy Martin, Shu Chien, John Shyy, University of California, San Diego, La Jolla, California

11:30 **Perivascular Cell-specific Knockout of the Stem Cell Pluripotency Gene Oct4 Inhibits Angiogenesis in Part by Attenuating Perivascular and Endothelial Cell Migration** **8**
Daniel L. Hess, Molly R. Kelly-Goss, Olga Cherepanova, Anh T. Nguyen, Brian H. Annex, Shayn M. Peirce, Gary K. Owens, University of Virginia, Charlottesville, Virginia

11:45 **Ribosomal Profiling of Vascular Smooth Muscle Cells *in Vivo* Identifies Cell-type Specific Transcripts and Enrichment of Blood Pressure Associated Genes** **9**
Audrey C. Cleuren, Martijn A. van der Ent, Kristina L. Hunker, Min-Lee Yang, Hui Jiang, David Ginsburg, Santhi K. Ganesh, University of Michigan, Ann Arbor, Michigan

Program Agenda (continued)

12:00 **Similar Increases in Arterial Shear-rate Evoked by Handgrip Exercise Activate Autophagy and Enos to a Lesser Extent in Primary Endothelial Cells From Older vs. Adult Subjects**
Seul Ki Park, D. Taylor La Salle, James Cerbie, Jae Min Cho, Ashely Nelson, David E. Morgan, Joel D. Trinity, J. David Symons, University of Utah, Salt Lake City, Utah

10:30 AM-12:15 PM

Imperial Ballroom A

Concurrent Session I C

Cardiovascular Precision Medicine

Organized in cooperation with the Council on Genomics and Precision Medicine and the National Heart, Lung, and Blood Institute.

Moderators:

Stella Aslibekyan, PhD, University of Alabama at Birmingham, Birmingham, Alabama
Nehal N. Mehta, National Institutes of Health, Bethesda, Maryland

10:30 **Why Personalized Medicine Matters**
Edward Abrahams, PhD, Personalized Medicine Coalition, Washington, D.C.

10:50 **TBD**
Christopher J. O'Donnell, MD, MPH, FAHA, FACC, Veterans Administration Healthcare, Harvard Medical School, Boston, Massachusetts

11:10 **Machine Learning for Precision Medicine in Heart Failure**
Sanjiv J. Shah, MD, FAHA, Northwestern University Feinberg School of Medicine, Chicago, Illinois

Oral Abstract Presentations

11:30 **Cardiovascular Consequences of Cantu Syndrome and Response to Glibenclamide Treatment in Two Novel KATP Channel Mutant Mouse Models**
Conor McClenaghan, Yan Huang, Theresa Harter, G. Schuyler Brown, Kristina Hinman, Carmen Halabi, Scot Matkovich, Robert P. Mecham, Carla J. Weinheimer, Attila Kovacs, Sarah England, Maria S. Remedi, Colin G. Nichols, Washington University in St Louis, St Louis, MO

11:45 **Aorta-on-a-chip: a Tool to Gain Molecular and Translational Insight Into Vascular Diseases**
Valentina Paloschi, Claudio Rolli, Benedikt Buchmann, Technical Univ Munich, Munich, Germany; Sandro Meucci, Micronit Microtechnologies, Enschede, Netherlands; Felix Rogowitz, Fluigent Deutschland GmbH, Jena, Germany; Andreas Bausch, Lars Maegdefessel, Technical Univ Munich, Munich, Germany

10 12:00 **Genotype to Phenotype: Function of Rare Coding Variants in *ANGPTL3***
Xiao Wang, Univ of Pennsylvania, Philadelphia, PA; A. Christina Vourakis, Alexandra E. Sperry, Harvard Univ, Cambridge, MA; Alexandra C. Chadwick, Wenjun Li, Wenjian Lv, Kiran Musunuru, Univ of Pennsylvania, Philadelphia, PA

12:15-1:45 PM

Imperial Ballroom A

Town Hall Meeting and Panel Discussion: Cardiovascular Precision Medicine

Organized in cooperation with the Council on Genomic and Precision Medicine, and the National Heart, Lung, and Blood Institute. No ticket required; lunch on your own.

12:15-1:45 PM

Plaza Room B

The Mentor of Women Award Luncheon (ticket required)

Luncheon Presentation

Re-writing the Genetic Code: The Science and Ethics of CRISPR Gene Editing

Rachel Haurwitz, PhD, Caribou Biosciences, Berkeley, California

12:15-1:45 PM

Or lunch on your own

1:45-3:45 PM

Grand Ballroom B

Plenary Session II

Young Investigator Award Competition

Moderators:

Jonathan D. Smith, PhD, FAHA, Cleveland Clinic, Cleveland, Ohio
Alisa Wolberg, PhD, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Kenneth M. Brinkhous Young Investigator Prize in Thrombosis Competition

1:45 **Interferon-induced Transmembrane 3 (IFITM3) on Megakaryocytes and Platelets Regulates Fibrinogen Endocytosis and Thrombosis During Inflammation**
Robert A. Campbell, Bhanu K. Manne, Samantha Saperstein, Lauren Page, Hansjorg Schwertz, Jesse W. Rowley, Andrew S. Weyrich, Matthew T. Rondina, Univ of Utah, Salt Lake Cty, UT

THURSDAY

Program Agenda (continued)

THURSDAY

2:00 **PAR4 Ala120Thr Variant Alters PAR4 Desensitization, Sensitivity to Platelet Antagonists and Risk of Large Vessel Stroke**
Michael Whitley, Thomas Jefferson Univ, Philadelphia, PA; David Henke, Lukas Simon, Baylor Coll of Med, Houston, TX; Joanne Vesce, Thomas Jefferson Univ, Philadelphia, PA; Michael Holinstat, Univ Of Michigan, Ann Arbor, MI; Marvin Nieman, Case Western Reserve Univ, Cleveland, OH; Chad Shaw, Baylor Coll of Med, Houston, TX; Paul Bray, Univ of Utah, Salt Lake City, UT; **Leonard Edelstein**, Thomas Jefferson Univ, Philadelphia, PA

2:15 **Glucose Metabolism is Required for Platelet Hyperactivation in a Murine Model of Type 1 Diabetes Mellitus**
Trevor P. Fidler, Columbia Univ, New York, NY; Alex P. Marti 52240, Katelyn Gerth, Univ of Iowa, Iowa City, IA; Matthew T. Rondina, Andrew S. Weyrich, Univ of Utah, Salt Lake City, UT; Evan D. Abel, Univ of Iowa, Iowa City, IA

2:30 **Platelet TLRs Mediate Complement C3 Release During the Initial Neutrophil Response to Pathogens**
Milka Koupenova, Heather A. Corkrey, Evelyn A. Kurt-Jones, Jane E. Freedman, Univ of MA Medical Sch, Worcester, MA

Irvine H. Page Young Investigator Research Award Competition

2:45 **TET2 Loss of Function-driven Clonal Hematopoiesis Promotes Age-related Vascular and Systemic Inflammation and Metabolic Dysfunction in Mice**
Jose J. Fuster, Univ of Virginia Sch of Med., Charlottesville, VA; Maria A. Zuriaga, Maya Polackal, Kenneth Walsh, Boston Univ, Boston, MA

3:00 **Anti-MicroRNA-144 Therapy Attenuates Progression and Promotes Regression of Atherosclerosis**
Elizabeth J. Tarling, Joan Cheng, Angela Cheng, UCLA, Los Angeles, CA; Nathalie Pamiir, Oregon Health and Science Univ, Portland, OR; Tamer Sallam, Thomas Q. de Aguiar Vallim, UCLA, Los Angeles, CA

3:15 **Regression of Atherosclerosis Through Manipulation of Vascular Macrophages; a Novel Gene-therapy Approach**
Courtney Howard, Azzadine Ammi, Paul Muelle, Katherine Huynh, Federico Moccetti, Yllka Latifi, Jonathan Nelson, Aris Xie, Jonathan R. Lindner, **Hagai Tavori**, Oregon Health & Science Univ, Portland, OR

15 3:30 **ARHGEF26 is a Novel Genetic Risk Factor for Vascular Inflammation and Coronary Artery Disease**

Qiuyu M. Zhu, Broad Inst, Cambridge, MA; Derek Klarin, Connor A. Emdin, Massachusetts General Hosp, Boston, MA; Mark Chaffin, Steven Horner, Brian McMillan, Alison Leed, Broad Inst, Cambridge, MA; Michael E. Weale, Chris C. Spencer, Genomics plc, Oxford, United Kingdom; François Aguet, Ayellet V. Segrè, Kristin G. Ardlie, Broad Inst, Cambridge, MA; Amit V. Khera, Massachusetts General Hosp, Boston, MA; Virendar K. Kaushik, Broad Inst, Cambridge, MA; Pradeep Natarajan, Massachusetts General Hosp, Boston, MA; CARDIoGRAMplusC4D Consortium; Sekar Kathiresan, Massachusetts General Hosp, Boston, MA

16

3:45-4:15 pm
Yosemite Room

Refreshment Break and Exhibits

17

4:15-6:00 PM

Grand Ballroom B

**Concurrent Session II A
Apolipoproteins and Lipid Metabolism**

Moderators:

David Y. Hui, PhD, FAHA, University of Cincinnati College of Medicine, Cincinnati, Ohio
Gissette Reyes-Soffer, MD, Columbia University Medical Center, New York, New York

18

4:15 **Novel Roles of ApoE Receptor-2 in Modulation of Atherosclerosis Lesion Complexity**

David Y. Hui, PhD, FAHA, University of Cincinnati College of Medicine, Cincinnati, Ohio

19

Oral Abstract Presentations

4:45 **Hepatic Sortilin Regulates Apolipoprotein B Secretion only Under Conditions of Secretory Stress Dependent of the Presence of Secretory Stress**

Donna M. Conlon, Amrith Rodrigues, Kathy Guo, Nicholas Hand, Daniel Rader, Univ of Pennsylvania, Philadelphia, PA

20

5:00 **Clearance of ApoC-III Glycoforms Associated With Triglyceride Metabolism**

Hussein Yassine, Natalie Kegulian, Univ of Southern California, Los Angeles, CA; Bastian Ramms, Univ of California San Diego, San Diego, CA; Steven Horton, Univ of Southern California, Los Angeles, CA; Olgica Trenchevska, Dobrin Nedelkov, Arizona State Univ, Tempe, AZ; Mark J. Graham, Ionis Pharmaceuticals, Carlsbad, CA; Philip L. Gordts, Univ of California San Diego, San Diego, CA

Program Agenda (continued)

- | | | | | |
|------|---|----|--|----|
| 5:15 | Association of APOL1 Risk Alleles with Coronary Heart Disease in Million Veteran Program
Alexander G. Bick , Massachusetts General Hosp, Boston, MA; Themistocles L. Assimes, Stanford Univ Sch of Med, Stanford, CA; Ayush Giri, Vanderbilt Univ, Nashville, TN; Derek Klarin, Massachusetts General Hosp, Boston, MA; Julie Lynch, Salt Lake City VA Health Care System, Salt Lake City, UT; Cassieanne Robisson-Cohen, Vanderbilt Univ, Nashville, TN; Jennifer E. Huffman, Boston VA Healthcare System, Boston, MA; Yan V. Sun, Emory Univ, Atlanta, GA; Kyong-Mi Chang, Corporal Michael Crescenz VA Med Cntr, Philadelphia, PA; Donald R. Miller, Boston Univ, Boston, MA; Kelly Cho, Boston VA Healthcare System, Boston, MA; Todd Edwards, Vanderbilt Univ, Nashville, TN; Chris O'Donnell, Boston VA Healthcare System, Boston, MA; Philip S. Tsao, Palo Alto VA Health Care System, Palo Alto, CA; Peter W. Wilson, Atlanta VA Medical Ctr, Atlanta, GA; Sekar Kathiresan, Massachusetts General Hosp, Boston, MA; Daniel J. Rader, Univ of Pennsylvania, Philadelphia, PA; Adriana M. Hung, Vanderbilt Univ, Nashville, TN; Scott M. Damrauer, Univ of Pennsylvania, Philadelphia, PA | 24 | 4:15-6:00 PM
<i>Imperial Ballroom B</i>
Concurrent Session II B
Immunity and Inflammation in Vascular Biology and Thrombosis

Moderators:
Elena Aikawa, MD, PhD, FAHA, Harvard Medical School, Brigham and Women's Hospital, Boston, Massachusetts
Nicholas J. Leeper, MD, Stanford University, Stanford, California | |
| 5:30 | Anti-Apolipoprotein A-I Antibody Profiles Predict Cardiovascular Disease Outcomes in Patients and in a Mouse Model of Atherosclerosis
Robert H. Kline IV, David Henson, Vincent J. Venditto , Univ of Kentucky, Lexington, KY | 25 | 4:15 Extracellular Vesicles as Precursors of Microcalcification in Rupture-prone Atherosclerotic Plaques
Elena Aikawa, MD, PhD, FAHA, Harvard Medical School, Brigham and Women's Hospital, Boston, Massachusetts | |
| 5:45 | Apolipoprotein A-I Helical Registry Modulates Lecithin:cholesterol Acyl Transferase Activity
Allison L. Cooke , Jamie C. Morris, John T. Melchior, Univ of Cincinnati, Cincinnati, OH; W. Gray Jerome, Vanderbilt Univ, Nashville, TN; Scott E. Street, Thomas B. Thompson, Univ of Cincinnati, Cincinnati, OH; Loren E. Smith, Vanderbilt Univ, Nashville, TN; Amy S. Shah, Andrew Herr, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH; Jere P. Segrest, Vanderbilt Univ, Nashville, TN; Jay W. Heinecke, Univ of Washington, Seattle, WA; W. Sean Davidson, Univ of Cincinnati, Cincinnati, OH | 26 | Oral Abstract Presentations

4:45 A Micropeptide Concealed in a Putative Long Non-coding RNA Directs Inflammation
Coen van Solingen , Monika Sharma, New York Univ Langone Health, New York, NY; Roel Bijkerk, Leiden Univ Medical Ctr, Leiden, Netherlands; Milessa S. Afonso, Graeme J. Koelwyn, Kaitlyn R. Scacalossi, New York Univ Langone Health, New York, NY; Anton Jan van Zonneveld, Leiden Univ Medical Ctr, Leiden, Netherlands; Kathryn J Moore, New York Univ Langone Health, New York, NY | 27 |
| | | | 5:00 Neutrophils Aged Under Oxidative Stress Impede Vascular Repair
Derick Okwan-Duodu , Wenxue Liu, Kai xu, Eric Shin, Raymundo A. Quintana, Giji Joseph, Laura Hansen, Hassan Sellak, Rebecca Levit, David Archer, W. Robert Taylor, Emory Univ, Atlanta, GA | 28 |
| | | | 5:15 Interleukin-35 Suppresses Endothelial Activation by Inhibiting Mitochondrial Reactive Oxygen Species Mediated Site-specific Acetylation of Histone 3 Lysine 14
Xinyuan Li, Ying Shao, Xiaojin Sha, Pu Fang, Lewis Katz Sch of Med, Philadelphia, PA; Yin-Ming Kuo, Andrew J. Andrews, Fox Chase Cancer Ctr, Temple Univ Health System, Philadelphia, PA; Ya-feng Li, William Y. Yang, Lewis Katz Sch of Med, Philadelphia, PA; Massimo Maddaloni, David W. Pascual, Univ of Florida, Gainesville, FL; Jin J. Luo, Xiaohua Jiang, Hong Wang, Xiao-feng Yang , Lewis Katz Sch of Med, Philadelphia, PA | 29 |

THURSDAY

Program Agenda (continued)

5:30 **IL-17A Induces Vascular Dysfunction via Downregulation of eNOS Expression**
Rebecca Schueler, Susanne Karbach, Katrin Schaefer, Sabine Kossmann, Matthias Oelze, Venkata Garlapati, Juak Huppert, Andrew Croxford, Andreas Daiber, Thomas Muenzel, Ari Waisman, Philip Wenzel, Univ Medical Ctr Mainz, Mainz, Germany

5:45 **A Ligand-specific Blockade of the Integrin Mac-1 Selectively Targets Pathologic Vascular Inflammation While Maintaining Protective Host-defense**
Dennis Wolf, Nathaly Anto Michel, Univ Heart Ctr Freiburg, Freiburg, Germany; Konrad Buscher, Klaus Ley, La Jolla Inst, La Jolla, CA; Peter Libby, Harvard Medical Sch, Boston, MA; Christoph Bode, Univ Heart Ctr Freiburg, Freiburg, Germany; Karlheinz Peter, Baker Heart Inst, Melbourne, Australia; Andreas Zirlik, Univ Heart Ctr Freiburg, Freiburg, Germany

4:15-6:00 PM

Imperial Ballroom A

Concurrent Session II C

Translational Science of Vascular Medicine: Cutting-Edge Technologies

Organized in cooperation with the Council on Peripheral Vascular Disease.

This session is not part of the accredited CE program.

Moderators:

Ngan F. Huang, PhD, Stanford University School of Medicine, Stanford, California
Lars Maegdefessel, MD, PhD, Technical University Munich, Munich, Germany

4:15 **Genomic Tools for Cardiovascular Medicine**
Stephen Quake, PhD, Stanford University, Stanford, California

4:40 **Bench to Bedside: Developing a Therapy for Patients with Atherosclerotic Cardiovascular Disease**
Scott Wasserman, MD, Amgen, Inc., Thousand Oaks, California

5:05 **The Promise of RNA Interference as a Therapeutic Approach for Treatment of Cardiovascular Diseases**
Bruce Given, MD, Arrowhead Pharmaceuticals, Pasadena, California

5:25 **Light-sheet Imaging for Cardiovascular Injury and Repair**
Tzung K. Hsiai, MD, PhD, FAHA, University of California Los Angeles, Los Angeles, California

5:50 **Panel Discussion/Q&A**

30 6:00-8:00 PM
Grand Ballroom A
Poster Session 1 and Reception

8:00-10:00 PM
Grand Ballroom B
Joint Council Dinner
(ticket required)

FRIDAY, MAY 11

7:00 AM
Yosemite Room
Registration, Continental Breakfast and Exhibits

7:00-8:00 AM
Imperial Ballroom A
Early Career Training Session
Honing Skills Necessary for Difficult Situations
Organized in cooperation with the ATVB Early Career Committee

8:00-9:30 AM
Grand Ballroom B
Plenary Session III
Cardiometabolic Mechanisms of Vascular Complications in Diabetes

Moderators:

Kathleen A. Martin, PhD, Yale University, New Haven, Connecticut
Coleen A. McNamara, MD, FAHA, University of Virginia, Charlottesville, Virginia

8:00 **Platelet Mitochondria in Health and Disease; the "Low Battery" Warning**
John Hwa, MD, PhD, Yale University School of Medicine, New Haven, Connecticut

8:30 **Novel Mediators of Vascular Calcification in Peripheral Vascular Disease**
Catherine Shanahan, PhD, King's College, London, United Kingdom

9:00 **Gut Microbes as a Therapeutic Target for Cardiovascular Disease**
Stanley L. Hazen, MD, PhD, FAHA, Cleveland Clinic Lerner Research Institute, Cleveland, Ohio

9:30-10:00 AM
Yosemite Room
Refreshment Break and Exhibits

Program Agenda (continued)

10:00-11:45 AM

Imperial Ballroom A

Concurrent Session III A Lipoprotein Metabolism and Therapeutic Targets

Moderators:

Marina Cuchel, MD, PhD, University of Pennsylvania
Perelman School of Medicine, Philadelphia,
Pennsylvania

Mahdi O. Garelnabi, PhD, MSc, FAHA, University of
Massachusetts, Lowell, Massachusetts

10:00 TBD

Marina Cuchel, MD, PhD, University of Pennsylvania
Perelman School of Medicine, Philadelphia,
Pennsylvania

Oral Abstract Presentations

10:30 **Somatic Editing of *Ldlr* with AAV-CRISPR
for Atherosclerosis Studies** 32

Kelsey E. Jarrett, Alexandria M. Doerfler, Ayrea
Hurley, Rachel H. Hsu, Marco De Giorgi, Baylor
Coll Med, Houston, TX; Ang Li, Rice Univ,
Houston, TX; Henry J. Pownall, Houston
Methodist Res Inst, Houston, TX; Ciaran Lee,
Gang Bao, Rice Univ, Houston, TX; **William R.
Lagor**, Baylor Coll Med, Houston, TX

10:45 **Differential Effects of Proprotein Convertase
Subtilisin/Kexin Type 9 (PCSK9) Production
and Function on Microsomal Triglyceride
Transfer Protein** 33

Cecilia Huang, Joshua Miles, Hagai Tavori,
Oregon Health and Science Univ, Portland, OR;
Peter P. Toth, CGH Medical Ctr, Sterling, IL;
Sergio Fazio, Oregon Health and Science Univ,
Portland, OR

11:00 **Leveraging Mouse Liver Co-expression
Networks and Human Lipid Gwas Data to
Identify Cholesterol Metabolism Genes** 34

Zhonggang Li, Jenny Nguyen, Sabrina Belisle,
Sophia Ly, Fernanda Leyva Jaimes, **Brian W.
Parks**, Univ of Wisconsin-Madison, Madison, WI

11:15 **Recombinant LCAT Restores Defective HDL
Mediated Endothelial Protection in Acute
Coronary Syndrome** 35

Alice Ossoli, Sara Simonelli, Univ degli Studi di
Milano, Milano, Italy; Marisa Varrenti, Nuccia
Morici, Fabrizio Oliva, Miriam Stucchi, ASST
Grande Ospedale Metropolitano Niguarda,
Milano, Italy; Monica Gomaraschi, Lorenzo
Arnaboldi, Alberto Corsini, Univ degli Studi di
Milano, Milano, Italy; Michael Thomas, Medical
Coll of Wisconsin, Milwaukee, WI; Sotirios
Karathanasis, MedImmune, Gaithersburg, MD;
Fabrizio Veglia, Monzino Cardiologic Inst, Milano,
Italy; Laura Calabresi, Univ degli Studi di Milano,
Milano, Italy

11:30 **Functionalized Nanoparticle Based “Two-
pronged” Approach to Attenuate/regress** 36

**Atherosclerosis by Simultaneous Knock
Down OfSR-A and LXR-mediated Stimulation
of Macrophage Cholesterol Efflux**

Hongliang He, Jing Wang, Virginia
Commonwealth Univ, Richmond, VA; Paul
Yannie, Hunter McGuire VA Medical Ctr,
Richmond, VA; Hu Yang, Shobha Ghosh,
Virginia Commonwealth Univ, Richmond, VA

10:00-11:45 AM

Imperial Ballroom B

Concurrent Session III B Blood Coagulation and Antithrombotic Therapy

Moderators:

Robert Harrington, MD, FAHA, Stanford University,
Stanford, California

Jane E. Freedman, MD, FAHA, University of
Massachusetts Medical School,
Worcester, Massachusetts

10:00 **Antithrombotic Therapy in Ischemic Heart
Disease: Current Thoughts and Questions**
Robert Harrington, MD, FAHA, Stanford University,
Stanford, California

Oral Abstract Presentations

10:30 **Coagulation Factor XII Promotes Platelet
Consumption in the Presence of Microbial
Polyphosphate Under Shear Flow** 37

Jevgenia Zilberman-Rudenko, Oregon Health
& Science Univ, portland, OR; Stephanie E.
Reitsma, Oregon Health & Science Universit,
Portland, OR; Cristina Puy, Oregon Health &
Science Univ, Portland, OR; Stephanie A. Smith,
Univ of Michigan Medical Sch, Ann Arbor, MI;
Chantal P Wiesenekker, Erik I. Tucker, Oregon
Health & Science Univ, Portland, OR; Richard J.
Travers, Univ of Michigan Medical Sch, Ann
Arbor, MI; Coen Maas, Rolf T. Urbanus, Univ
Medical Ctr Utrecht, Utrecht, Netherlands;
David Gailani, Vanderbilt Univ Sch of Med,
Nashville, TN; Alvin H Schmaier, Case Western
Reserve Univ, Cleveland, OH; Florea Lupu,
Oklahoma Medical Res Fndn, Oklahoma City,
OK; James H Morrissey, Univ of Michigan
Medical Sch, Ann Arbor, MI; Andras Gruber,
Owen J. McCarty, Oregon Health & Science
Univ, Portland, OR

10:45 **Inflammasome Activation Triggers Blood
Coagulation Through Pyroptosis** 38

Congqing Wu, Yinan Wei, Zhenyu Li, Univ of
Kentucky, Lexington, KY

FRIDAY

Program Agenda (continued)

FRIDAY/SATURDAY

11:00 **A Small Fragment Derived from von Willebrand Factor Improves Survival in a Mouse Model of Endotoxemia-Induced Disseminated Intravascular Coagulation**
Christian Valladolid, Sonya Cirlos, Marina Martinez-Vargas, Bobby Guillory, Miguel A. Cruz, Baylor Coll of Med, Houston, TX

11:15 **Accelerated Atherosclerosis and Thrombosis in Jak2v617f Mice**
Wei Wang, Columbia Univ, New York, NY; Wenli Liu, Tianjin Medical Univ, Tianjin, China; Ying Wang, Yang Tang, Columbia Univ, New York, NY; Brittany Woods, Memorial Sloan Kettering Cancer Ctr, New York, NY; Carrie Welch, Bishuang Cai, Columbia Univ, New York, NY; Ding Ai, Tianjin Medical Univ, Tianjin, China; Yong-Guang Yang, Columbia Univ, New York, NY; Carlos Silvestre, Oliver Soehnlein, Ludwig Maximilian Univ of Munich, Munich, Germany; Ira Tabas, Columbia Univ, New York, NY; Ross L. Levine, Memorial Sloan Kettering Cancer Ctr, New York, NY; Alan R. Tall, **Nan Wang**, Columbia Univ, New York, NY

11:30 **Neutrophil Extracellular Traps Enhance Venous Thrombosis in Mice Bearing Human Pancreatic Tumors**
Yohei Hisada, Reaves Houston, Anam Maqsood, Univ of North Carolina at Chapel Hill, Chapel Hill, NC; Charlotte Thalín, Karolinska Instt, Stockholm, Sweden; Denis F. Noubououssie, Univ of North Carolina at Chapel Hill, Chapel Hill, NC; Hakan Wallen, Karolinska Instt, Stockholm, Sweden; Krasimir Kolev, Semmelweis Univ, Budapest, Hungary; Brian C. Cooley, Nigel S Key, Nigel Mackman, Univ of North Carolina at Chapel Hill, Chapel Hill, NC

10:00-11:45 AM

Imperial Ballroom A

Concurrent Session III C

Research Priorities in Thrombosis: A Bedside to Bench Approach

Organized in cooperation with the Council on Peripheral Vascular Disease, the International Society on Thrombosis and Haemostasis, and the American Venous Forum.

Moderators:

Joshua A. Beckman, MD, FAHA, FACC, Vanderbilt University Medical Center, Nashville Tennessee
Alisa S. Wolberg, PhD, University of North Carolina, Chapel Hill, North Carolina

If I Had \$10M to Spend on Thrombosis Research, I Would ...

10:00 **Joshua A. Beckman, MD, FAHA, FACC, Vanderbilt University Medical Center, Nashville, Tennessee**

10:15 **Philip Tsao, PhD, Stanford University School of Medicine and VA Palo Alto Health Care System, Stanford, California**

39 10:30 **Mary Cushman, MD, MSc, FAHA, University of Vermont, Colchester, Vermont**

10:45 **Alisa S. Wolberg, PhD, University of North Carolina, Chapel Hill, North Carolina**

11:00 **Discussion/ Q&A**

11:45 AM-1:45 PM

Plaza Room A

Next-Generation Technology Bootcamp: CRISPR-Cas9 Genome Editing (basic and advanced) (ticket required)

Lunch on your own. Organized in cooperation with the Council on Genomic and Precision Medicine

11:45 AM-1:45 PM

Or lunch on your own

1:45-3:15 PM

Grand Ballroom B

Plenary Session IV

Highlights from the *ATVB* Journal

Moderators:

Karin Bornfeld, PhD, University of Washington, Seattle, Washington
Nigel Mackman, PhD, FAHA, University of North Carolina, Chapel Hill, North Carolina

1:45 **ATVB Journal Report**

Alan Daugherty, PhD, DSc, FAHA, University of Kentucky, Lexington, Kentucky

Presentations by the 2018 *ATVB* Journal Early Career Investigator Award Recipients

2:00 *Daniel Steinberg Early Career Investigator Award in Atherosclerosis/Lipoproteins*

microRNA-33 Regulates Macrophage Autophagy in Atherosclerosis

Mireille Ouimet, Ottawa Heart Institute, Ottawa, Canada

2:15 *Karl Link Early Career Investigator Award in Thrombosis*

First Selective 12-LOX Inhibitor, ML355, Impairs Thrombus Formation and Vessel Occlusion In Vivo With Minimal Effects on Hemostasis

Reheman Adili, University of Michigan, Ann Arbor, Michigan

2:30 *Werner Risau Early Career Investigator Award in Vascular Biology*

Endothelial Cell Autophagy Maintains Shear Stress-Induced Nitric Oxide Generation via Glycolysis-Dependent Purinergic Signaling to Endothelial Nitric Oxide Synthase

Leena Panneerseeelan-Bharath, Boston University, Boston, Massachusetts

Program Agenda (continued)

2:45 **Adversity and Cardiovascular Disease**
Michelle A. Albert, MD, MPH, FAHA, University of California at San Francisco, San Francisco, California

3:15-3:45 PM

Yosemite Room

**Refreshment Break
and Exhibits**

3:45-5:30 PM

Grand Ballroom B

Concurrent Session IV A

Diabetes, Obesity and Metabolic Disorders

Moderators:

Amy S. Shah, MD, Cincinnati Children's Hospital, Cincinnati, Ohio

Katey Rayner, PhD, University of Ottawa, Ottawa, Ontario, Canada

3:45 **Adolescent Onset Type 2 Diabetes: Nontraditional Risk Factors for Cardiovascular Disease**

Amy S. Shah, MD, Cincinnati Children's Hospital, Cincinnati, Ohio

Oral Abstract Presentations

4:15 **Activation of RIP1 Promotes Inflammation in Atherosclerosis and Obesity: a Novel Target for Cardiometabolic Diseases** 42

Denuja Karunakaran, Adam Turner, My Anh Nguyen, Joshua Kandiah, David Smyth, Univ of Ottawa Heart Inst, Ottawa, ON, Canada; Calvin Pan, Univ of California Los Angeles, Los Angeles, CA; Michele Geoffrion, Zachary Lister, Majid Nikpay, Hailey Wyatt, Ella deKemp, Univ of Ottawa Heart Inst, Ottawa, ON, Canada; Richard Lee, Ionis Pharmaceuticals, Carlsbad, CA; Ludovic Boytard, Bhama Ramkhalawon, New York Univ Sch of Med, New York, NY; Mary-Ellen Harper, Univ of Ottawa, Ottawa, ON, Canada; Aldons Lusic, Univ of California Los Angeles, Los Angeles, CA; Ruth McPherson, Katey Rayner, Univ of Ottawa Heart Inst, Ottawa, ON, Canada

4:30 **Endothelial Adenosine Kinase Deficiency Ameliorates Diet-induced Insulin Resistance** 43

Jiean Xu, Qihua Yang, Xiaoyu Zhang, Peiking Univ, Beijing, China; Zhiping Liu, Augusta Univ, Augusta, GA; Yapeng Cao, Lina Wang, Yaqi Zhou, Xianqiu Zeng, Min Zhang, Qian Ma, Peiking Univ, Beijing, China; Yiming Xu, Guangzhou Medical Univ, Guangzhou, China; Yong Wang, Chengdu Univ of Traditional Chinese Med, Chengdu, China; Zsolt Bagi, David J. Fulton, Augusta Univ, Augusta, GA; Mei Hong, Peiking Univ, Beijing, China; Yuqing Huo, Augusta Univ, Augusta, GA

4:45 **Platelet-Endothelial Interactions in Atherosclerosis-Prone Arteries in a Non-Human Primate Model of Obesity and Insulin Resistance** 44

Eran I. Brown, J. Todd Belcik, James M. Hodovan, Federico Moccetti, Koya Ozawa, Lindsay A. Bader, Paul Kievit, Jonathan R. Lindner, Oregon Health & Science Univ, Portland, OR

5:00 **SR-BI and PCPE2 Modulate Lipid Trafficking in Adipocytes** 45

Hao Xu, Sushma Kaul, Sarah Proudfoot, Rebecca L. Schill, Kaniz Fatema, Michael J. Thomas, Rachel Kallinger, Medical Coll Wisconsin, Milwaukee, WI; Mete Civelek, Univ of Virginia, Charlottesville, VA; Rebecca A. Haeusler, Columbia Univ, New York, NY; Alan T. Remaley, Edward B. Neufeld, Daniela A. Malide, Natl Heart, Lung, and Blood Inst, Translational Vascular Med Branch, Bethesda, MD; Daisy Sahoo, Mary G. Sorci-Thomas, Medical Coll Wisconsin, Milwaukee, WI

5:15 **Obesity-induced Oxidative Stress in Hematopoietic Stem and Progenitor Cells Allows a Sustained Myelopoiesis and Persistent Inflammation in Mouse Peripheral Artery Disease** 46

Pijus Barman, Millie Fang, Giamila Fantuzzi, Timothy J. Koh, **Norifumi Urao**, Univ Illinois Chicago, Chicago, IL

3:45-5:30 PM

Imperial Ballroom B

Concurrent Session IV B

Platelet Production, Signaling and Function

Moderators:

Marvin T. Nieman, PhD, Case Western Reserve University, Cleveland, Ohio

Milka Koupnova-Zamor, PhD, University of Massachusetts, Worcester, Massachusetts

3:45 **TBD**
Benjamin T. Kile, PhD, FAHMS, Monash University, Clayton, Victoria, Australia

4:15 **Novel Roles of Megakaryocyte and Platelet Glycans at the Regulation of the Bone Marrow Niche**
Karin Hoffmeister, MD, BloodCenter of Wisconsin, Milwaukee, Wisconsin

Oral Abstract Presentations

4:45 **The Signaling Adapter Tumor-Necrosis Receptor Associated Factor 1 (TRAF-1) Regulates Thrombosis and Haemostasis in Mice** 47

Nathaly Anto Michel, Christoph Bode, Andreas Zirlik, **Dennis Wolf**, Univ Heart Ctr Freiburg, Freiburg, Germany

FRIDAY

Program Agenda (continued)

- | | | | | | |
|---|--|----|------|--|----|
| 5:00 | <p>Platelets Amplify Monocyte and Macrophage Inflammation Propagating Atherosclerosis Progression
 Tessa J. Barrett, Felix Zhou, Mike Gorenchtein, Edward A Fisher, Jeffrey S Berger, NYU Sch of Med, New York, NY</p> | 48 | 4:37 | <p>Clinical and Genetic Determinants of Varicose Veins: a Prospective, Community-Based Study of ~500,000 Individuals
 Alyssa M. Flores, Eri Fukaya, Stanford University School of Medicine, Stanford, California; Daniel Lindholm, Stefan Gustafsson, Uppsala University, Uppsala, Sweden; Daniela Zanetti, Erik Ingelsson, Nicholas J. Leeper, Stanford University School of Medicine, Stanford, California</p> | 52 |
| 5:15 | <p>Novel Tirofiban Conjugate for the <i>in vivo</i> Detection of Activated Platelets
 Khanh Q. Ha, Xiaoxin Zheng, Chase Kessinger, Farouc Jaffer, Jason McCarthy, Massachusetts General Hosp, Boston, MA</p> | 49 | 4:43 | <p>Differential Effects of LRP1 in AngII-induced Ascending Aortic Pathologies Between Male and Female Mice: Lack of Association With Elastin Fragmentation
 Bradley Christopher Wright, Hisashi Sawada, Jessica J. Moorleghen, Deborah A. Howatt, Debra L. Rateri, Mark W. Majesky, Alan Daugherty, University of Kentucky, Lexington, Kentucky</p> | 53 |
| <p>3:45-5:30 PM
 <i>Imperial Ballroom A</i>
 Concurrent Session IV C
 Translational Science of Vascular Medicine: Vascular Dysfunction
 <i>Organized in cooperation with the Council on Peripheral Vascular Disease</i></p> <p>Moderators:
 Peter Henke, MD, FAHA, University of Michigan, Ann Arbor, Michigan
 Scott M. Damrauer, MD, University of Pennsylvania, Philadelphia, Pennsylvania</p> | | | | | |
| 3:45 | <p>Specialized Lipid Mediators and Resolution of Vascular Inflammation
 Michael S. Conte, MD, FAHA, FACS, University of California San Francisco Medical Center, San Francisco, California</p> | 50 | 4:49 | <p>Genetic Deficiency in Nox2-containing NADPH Oxidase Decreases Susceptibility to Venous Thrombosis in Mice
 Vijay K. Sonkar, Rahul Kumar, Sean Gu, Prakash Doddapattar, Steven R. Lentz, Sanjana Dayal, University of Iowa Health Care, Iowa City, Iowa</p> | 54 |
| 4:05 | <p>Novel Therapies for Improving Walking Performance in Peripheral Artery Disease: From Basic Science to Clinical Trials
 Mary M. McDermott, MD, FAHA, Northwestern University, Chicago, Illinois</p> | 51 | 4:55 | <p>TRAIL Protects Against Endothelial Dysfunction <i>in vivo</i> and Inhibits Angiotensin-II Induced Oxidative Stress in Vascular Endothelial Cells <i>in vitro</i>
 Pradeep Manuneedhi Cholan, Sian Cartland, Benjamin Rayner, Scott Genner, Heart Research Institute, Sydney, Australia; Lei Dang, Shane Thomas, University of New South Wales, Sydney, Australia; Mary Kavurma, Heart Research Institute, Sydney, Australia</p> | 55 |
| <p>Rapid-Fire Oral Abstract Presentations</p> | | | | | |
| 4:25 | <p>The Vascular Ecto-enzyme, CD39 Protects from Venous Thrombogenesis by Inhibiting Innate Immune Activation
 Yogendra Kanthi, Benjamin N. Jacobs, Ligu Chi, Vinita Yadav, Raymond Zhao, Alison Banka, Jason S. Knight, David J. Pinsky, University of Michigan, Ann Arbor, Michigan</p> | 50 | 5:01 | <p>Endothelial 6-Phosphofructo-2-Kinase/ Fructose-2,6-Bisphosphatase, Isoform 3 (PFKFB3) Deficiency Inhibits Hypoxia-Induced Pulmonary Hypertension in Mice
 Yapeng Cao, Qihua Yang, Lina Wang, Jiean Xu, Peking University Shenzhen Graduate School, Shenzhen, China; Zhiping Liu, Augusta University, Augusta, Georgia; Yiming Xu, Guangzhou Medical University, Guangzhou, China; Yong Wang, Chengdu University of Traditional Chinese Medicine, Chengdu, China; David J. Fulton, Neal L. Weintraub, Augusta University, Augusta, Georgia; Chaodong Wu, Texas A&M University, College Station, Texas; Qinkai Li, Peking University Shenzhen Graduate School, Shenzhen, China; Yunchao Su, Augusta University, Augusta, Georgia; Mei Hong, Peking University Shenzhen Graduate School, Shenzhen, China; Yuqing Huo, Augusta University, Augusta, Georgia</p> | 56 |
| 4:31 | <p>A New Model of Murine Stasis Pulmonary Thromboembolism <i>in vivo</i> With Assessment by Noninvasive Multimodal Molecular-Structural Imaging
 Chase W. Kessinger, Farouc A. Jaffer, Massachusetts General Hospital/Harvard Medical School, Boston, Massachusetts</p> | 51 | | | |

Program Agenda (continued)

5:07 **Adenosine Kinase Epigenetically Regulates Abdominal Aortic Aneurysm Formation**
Zhiping Liu, Augusta University Augusta, Georgia; Jiean Xu, Peking University, Shenzhen, China; Jiaojiao Wang, Augusta University, Augusta, Georgia; Yiming Xu, School of Basic Medical Sciences, Guangzhou Medical University, Guangzhou, China; Yong Wang, College of Basic Medicine, Chengdu University of Traditional Chinese Medicine, Chengdu, China; Lina Wang, Yapeng Cao, Qihua Yang, Peking University, Shenzhen, China; Ha Won Kim, Neal L. Weintraub, Yuqing Huo, Augusta University, Augusta, Georgia

5:13 **Efficacy and Mechanisms of Metformin Therapy in Established Experimental Abdominal Aortic Aneurysms**
Baohui Xu, Gang Li, Fanru Shen, Trevor Weden, Anna Cabot, Hongping Deng, Stanford University School of Medicine, Stanford, California; Xiaofeng Chen, Whenzhou Medical University Taizhou Hospital, Linhai, China; Ronald L. Dalman, Stanford University School of Medicine, Stanford, California

5:19 **Defining the Mechanisms of Autologous Bone Marrow Cell Therapy in Critical Limb Ischemia**
Bianca Kenyon, Ashley Gutwein, S. Keisin Wang, Linden Green, Michael Murphy, Indiana University School of Medicine, Indianapolis, Indiana

5:25 **Q&A/Discussion/Wrap-up**

5:30-7:30 PM

Grand Ballroom A

Poster Session 2 and Reception

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SATURDAY, MAY 12

8:00 AM

Yosemite Room

Registration

8:30-10:30 AM

Grand Ballroom A

Poster Session 3 and Continental Breakfast

10:30 AM-NOON

Imperial Ballroom A/B

Plenary Session V

Invited Lecture Series

Moderators:

Mary G. Sorci-Thomas, PhD, FAHA, Medical College of Wisconsin, Milwaukee, Wisconsin

Nancy R. Webb, PhD, FAHA, University of Kentucky, Lexington, Kentucky

Jeffrey M. Hoeg Arteriosclerosis, Thrombosis and Vascular Biology Award for Basic Science and Clinical Research Lecture

10:30 **Translational Studies in Cardiometabolic Disorders**

Muredach P. Reilly, MBBCH, MSCE, FAHA, Columbia University, New York, New York

Keynote Lecture

11:00 **RNA Control in Vascular Biology: Implications for Atherosclerosis and New Vascularization**

Stefanie Dimmeler, PhD, Institute of Cardiovascular Regeneration, Frankfurt, Germany

Distinguished Lecture

11:30 **Inflammation as a Target for Atherosclerosis: CANTOS and Beyond**

Paul M. Ridker, MD, Brigham and Women's Hospital, Boston, Massachusetts

NOON

Closing Remarks/Conference Adjourns

FRIDAY/SATURDAY

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