Cardiovascular diseases afflict people of all races, ethnicities, genders, religions, ages, sexual orientations, national origins and disabilities. The American Heart Association is committed to ensuring that our workforce and volunteers reflect the world’s diverse population. We know that such diversity will enrich us with the talent, energy, perspective and inspiration we need to achieve our mission: building healthier lives, free of cardiovascular diseases and stroke.

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

<table>
<thead>
<tr>
<th>Wednesday May 9, 2018</th>
<th>Thursday May 10, 2018</th>
<th>Friday May 11, 2018</th>
<th>Saturday May 12, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Registration, Continental Breakfast, Exhibits</strong></td>
<td><strong>Early Career Training Session</strong></td>
<td><strong>Registration, Continental Breakfast, Exhibits</strong></td>
<td><strong>Early Career Training Session</strong></td>
</tr>
<tr>
<td>7:00 am</td>
<td>8:00-10:00 am</td>
<td>8:00-9:30 am</td>
<td>8:30-10:30 am</td>
</tr>
<tr>
<td>8:00-10:00 am</td>
<td>Conference Opening and Plenary Session I: Functional Genomics – Cardiovascular Precision Medicine</td>
<td>10:00-11:45 am</td>
<td>Plenary Session II: Cardiometabolic Mechanisms of Vascular Complications in Diabetes</td>
</tr>
<tr>
<td><strong>10:30-12:15 pm</strong></td>
<td>Concurrent Session I: A – Mechanisms of Atherosclerosis – Molecular, Developmental and Cellular Biology of the Vessel Wall</td>
<td>10:00-11:45 am</td>
<td>Plenary Session III: A – Lipoprotein Metabolism and Therapeutic Targets</td>
</tr>
<tr>
<td>12:15-1:45 pm</td>
<td>Concurrent Session II: The Mentor of Women Award Luncheon (ticket required)</td>
<td>11:45-1:45 pm</td>
<td>Concurrent Session III: B – Blood Coagulation and Antithrombotic Therapy</td>
</tr>
<tr>
<td>Noon</td>
<td>Or lunch on your own</td>
<td>1:45-3:15 pm</td>
<td>C – Research Priorities in Thrombosis: A Bedside to Bench Approach</td>
</tr>
<tr>
<td><strong>3:15-3:45 pm</strong></td>
<td>Plenary Session II: Young Investigator Award Competition – Brinkhaus Prize and Page Award</td>
<td>3:15-3:45 pm</td>
<td>Next-Generation Technology Bootcamps: CRISPR-Cas9 Genome Editing (basic and advanced) (ticket required; seating is limited)</td>
</tr>
<tr>
<td>3:45-4:15 pm</td>
<td>Refreshment Break/Exhibits</td>
<td>3:45-3:30 pm</td>
<td>Or lunch on your own</td>
</tr>
<tr>
<td><strong>4:15-6:00 pm</strong></td>
<td>Concurrent Session II: A – Apoptosis, Proliferation and Lipid Metabolism</td>
<td>3:30-5:30 pm</td>
<td>Noon Closing Remarks/Adjourn</td>
</tr>
<tr>
<td>4:45-6:00 pm</td>
<td>Concurrent Session II: B – Inflammation and Infection in Vascular Biology</td>
<td><strong>5:30-7:30 pm</strong></td>
<td>1:00-8:00 pm KinMet</td>
</tr>
<tr>
<td><strong>6:00-8:00 pm</strong></td>
<td>Concurrent Session II: C – Translational Science of Vascular Medicine: Cutting Edge Technologies</td>
<td><strong>6:30-8:30 pm</strong></td>
<td><strong>7:00-11:30 pm</strong> CAAC Reception &amp; China Night</td>
</tr>
<tr>
<td><strong>8:00-10:00 pm</strong></td>
<td>Poster Session and Reception</td>
<td><strong>7:30-9:30 pm</strong></td>
<td><strong>8:00-10:00 am</strong> Training Session Early Career Training Session</td>
</tr>
<tr>
<td><strong>8:00-10:00 pm</strong></td>
<td>Joint Council Dinner (ticket required)</td>
<td><strong>9:00-12:00 pm</strong></td>
<td><strong>9:30-10:00 am</strong> Separate registration may be required for the meetings listed below.</td>
</tr>
<tr>
<td><strong>9:00-10:00 am</strong></td>
<td>Plenary Session I: Functional Genomics – Cardiovascular Precision Medicine</td>
<td><strong>9:30-10:00 am</strong></td>
<td><strong>10:00-10:30 am</strong> Plenary Session and Reception</td>
</tr>
<tr>
<td><strong>11:00-12:00 pm</strong></td>
<td>Plenary Session I: Young Investigator Award Competition – Brinkhaus Prize and Page Award</td>
<td><strong>10:30-12:00 pm</strong></td>
<td><strong>10:30-12:00 pm</strong> Plenary Session V Invited Lecture Series Hoeg Award Lecture Keynote Lecture Distinguished Lecture</td>
</tr>
</tbody>
</table>

**Legend:**
- Plenary Session
- Concurrent Session
- Presentation Skills Training
- 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
Email        scientificconferences@heart.org
Website      professional.heart.org

Professional Membership Customer Service
Lippincott Williams & Wilkins
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            301.223.2307 (outside the United States)
Fax          301.223.2327
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To access a schedule of future conferences sponsored by AHA, follow these simple steps:

• From the home page, click on the “Education & Meetings” tab in the upper navigation bar.
• Select the conference you are interested in attending for more details, such as Registration & Housing, Programming, and Abstracts & Awards.
• If you have additional questions, please email us at scientificconferences@heart.org or call toll-free 888.242.2453
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

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Invited Presenters

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Mary Cushman, MD, MSc, FAHA, University of Vermont, Colchester, Vermont
Stefanie Dimmeler, PhD, Institute of Cardiovascular Regeneration, Frankfurt, Germany
Bruce Given, MD, Arrowhead Pharmaceuticals, Pasadena, California
Delphine Gomez, PhD, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania
Paul A. Gurbel, MD, FAHA, Inova Heart and Vascular, Lutherville, Maryland
Robert Harrington, MD, FAHA, Stanford University, Stanford, California
Rachel Haurwitz, PhD, Caribou Biosciences, Berkeley, California
Stanley Hazen, MD, PhD, FAHA, Cleveland Clinic Lerner Research Institute, Cleveland, Ohio
Karin Hoffmeister, MD, BloodCenter of Wisconsin, Milwaukee, Wisconsin
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Catherine Shanahan, PhD, Kings College, London, United Kingdom
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Kenneth Walsh, PhD, FAHA, Boston University School of Medicine, Boston, Massachusetts
Scott Wasserman, MD, Amgen, Inc., Thousand Oaks, California
Alisa Wolberg, PhD, University of North Carolina, Chapel Hill, North Carolina
Joseph C. Wu, MD, PhD, FAHA, Stanford University School of Medicine, Stanford, California
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Stella Aslibekyan, PhD, University of Alabama at Birmingham, Birmingham, Alabama
Joshua A. Beckman, MD, FAHA, FACC, Vanderbilt University Medical Center, Nashville, Tennessee
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Jordan D. Miller, PhD, Mayo Clinic, Rochester, Minnesota
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Katey Rayner, PhD, University of Ottawa Heart Institute, Ottawa, Ontario, Canada
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Gissette Reyes-Soffer, MD, Columbia University, New York, New York
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Jonathan D. Smith, PhD, FAHA, Cleveland Clinic, Cleveland, Ohio
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Kenneth Walsh, PhD, FAHA, Boston University School of Medicine, Boston, Massachusetts
Nancy R. Webb, PhD, FAHA, University of Kentucky, Lexington, Kentucky
Alisa S. Wolberg, PhD, University of North Carolina, Chapel Hill, North Carolina
Abstract Reviewers

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

- Jun-ichi Abe
- Elena Aikawa
- Michael Autieri
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- Dennis Bruemmer
- Anil K. Chauhan
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- Scott M. Damrauer
- Alan Dardik
- Alan Daugherty
- W. Sean Davidson
- Mark G. Davies
- Xiaoping Du
- Parham Eshtehardi
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- Sergio Fazio
- Maria Febbraio
- Alok V. Finn
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- Jane E. Freedman
- Mahdi O. Garelnabi
- Delphine A. Gomez
- Ming C. Gong
- Zhenheng Guo
- Milton H. Hamblin
- Robert A. Hegele
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- Victoria L. King
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- Jean-Pyo Lee
- Stephanie Lehoux
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- Zhenyu Li
- Hong Lu
- Nigel Mackman
- Lars Maegdefessel
- Ziad Mallat
- Kathleen A. Martin
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- Sanjay Misra
- Kiran Musunuru
- Rama Natarajan
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- A. Phillip Owens
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- Gregory Piazza
- J. Geoffrey Pickering
- Katey Rayner
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- Alan T. Remaley
- Gissette Reyes-Stoffer
- Anand Rohatgi
- Kerry Anne Rye
- Tamer Sallam
- Nazish Sayed
- Amy S. Shah
- Svati H. Shah
- Catherine Shanahan
- Preetha Shridas
- Mary G. Sorci-Thomas
- Filip K. Swirski
- Lisa Tannock
- Elizabeth J. Tarling
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- Ryan E. Temel
- Dwight A. Towler
- Bernado L. Trigatti
- Philip Tsao
- Eric P. van der Veer
- Hong Wang
- Jeffrey I. Weitz
- Geoff H. Werstuck
- Alisa S. Wolberg
- Joseph C. Wu
- Baohui Xu
- Wei Zhou
## Room Locator

### Wednesday, May 9

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAAC Symposium</td>
<td>Plaza A</td>
</tr>
<tr>
<td>CAAC China Night Reception and Dinner <em>(ticket required)</em></td>
<td>Plaza B</td>
</tr>
<tr>
<td>9:00 AM-5:00 PM HDL Workshop</td>
<td>Plaza B</td>
</tr>
<tr>
<td>Exhibits</td>
<td>Yosemite Room</td>
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<tr>
<td>Registration</td>
<td>Yosemite Room</td>
</tr>
<tr>
<td>Speaker Resource Room</td>
<td>Green Room</td>
</tr>
<tr>
<td>Vascular Research Initiatives Conference <em>(VRIC) 2018 (separate registration required)</em></td>
<td>Imperial Ballroom A and B</td>
</tr>
</tbody>
</table>

### Thursday, May 10

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental Breakfast</td>
<td>Yosemite Room</td>
</tr>
<tr>
<td>Concurrent Session A</td>
<td>Grand Ballroom B</td>
</tr>
<tr>
<td>Concurrent Session B</td>
<td>Imperial Ballroom B</td>
</tr>
<tr>
<td>Concurrent Session C</td>
<td>Imperial Ballroom A</td>
</tr>
<tr>
<td>Early Career Training</td>
<td>Imperial Ballroom A</td>
</tr>
<tr>
<td>Exhibits</td>
<td>Yosemite Room</td>
</tr>
<tr>
<td>Joint Council Dinner <em>(ticket required)</em></td>
<td>Grand Ballroom B</td>
</tr>
<tr>
<td>Mentor of Women Award Luncheon <em>(ticket required)</em></td>
<td>Plaza B</td>
</tr>
<tr>
<td>Plenary Sessions</td>
<td>Grand Ballroom B</td>
</tr>
<tr>
<td>Poster Session and Reception</td>
<td>Grand Ballroom A</td>
</tr>
<tr>
<td>Refreshment Breaks</td>
<td>Yosemite Room</td>
</tr>
<tr>
<td>Registration</td>
<td>Yosemite Room</td>
</tr>
<tr>
<td>Speaker Resource Room</td>
<td>Green Room</td>
</tr>
<tr>
<td>Town Hall Meeting and Panel Discussion: CV Precision Medicine</td>
<td>Imperial Ballroom A</td>
</tr>
</tbody>
</table>
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

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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:

<table>
<thead>
<tr>
<th>Date</th>
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<tbody>
<tr>
<td>Wednesday, May 9</td>
<td>3:00–6:00 PM</td>
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<tr>
<td>Thursday, May 10</td>
<td>7:00 AM–6:00 PM</td>
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<tr>
<td>Friday, May 11</td>
<td>7:00 AM–6:00 PM</td>
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<tr>
<td>Saturday, May 12</td>
<td>7:30–10:30 AM</td>
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</table>

**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:

<table>
<thead>
<tr>
<th>Poster Session Date</th>
<th>Location</th>
<th>Presentation Time</th>
<th>Attendance Time</th>
<th>Set-up Time</th>
<th>Tear-Down Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday, May 10</td>
<td>Grand Ballroom A</td>
<td>6:00-8:00 PM</td>
<td>6:00-8:00 PM</td>
<td>11:00 AM–5:30 PM</td>
<td>8:00-9:00 PM</td>
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<tr>
<td>Friday, May 11</td>
<td>Grand Ballroom A</td>
<td>5:30-7:30 PM</td>
<td>5:30-7:30 PM</td>
<td>11:00 AM–5:00 PM</td>
<td>7:30-8:30 PM</td>
</tr>
<tr>
<td>Saturday, May 12</td>
<td>Grand Ballroom A</td>
<td>8:30-10:30 AM</td>
<td>8:30-10:30 AM</td>
<td>10:00 AM Friday-8:00 AM Saturday</td>
<td>10:30 AM–12:00 PM Saturday</td>
</tr>
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</table>

**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.
Conférence Highlights – Actions pour les Jeunes et Événements Payants

Événements Payants

Les événements suivants sont ouverts à tous les participants. Un droit non remboursable séparé est requis pour assister à ces événements. Les billets seront vendus au bureau d'enregistrement. Veuillez vérifier auprès du personnel au bureau d'enregistrement pour l’availability.

Veuillez nous rejoindre à la salle Plaza B à 12h15 le jeudi pour le Mentor of Women Award Luncheon, organisé par la Commission des Women’s Leadership de l’ATVB. La conférencière invitée sera Rachel Haurwitz, PhD, qui présentera Re-writing the Genetic Code: The Science and Ethics of CRISPR Gene Editing. Au cours du déjeuner, les finalistes pour le Junior Investigator Award for Women seront annoncés et l’ATVB Women’s Leadership Committee Mentoring Award sera remis. Le déjeuner est ouvert à tous les participants ; cependant, un billet est nécessaire. Un droit non remboursable de $ 50 pour les membres AHA/$ 75 pour les non-membres est requis pour assister à cet événement.

À l’occasion du jeudi, rejoignez vos collègues pour le repas, les boissons et l’entertainment au Joint Council Dinner à la salle Grand Ballroom B. Les billets, s'ils sont disponibles, peuvent être achetés au bureau d'enregistrement ($60/membre ; $75/non-membre ; $30/membre et $45/non-membre pour les participants jeunes carrière/sté/étudiant).
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 Oser 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.
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 an 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 specializes 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 Clafin 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. Reheman 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**

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>Robert Campbell</td>
<td>14</td>
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<tr>
<td>Leonard Edelstein</td>
<td>15</td>
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<tr>
<td>Trevor Fidler</td>
<td>16</td>
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<tr>
<td>Milka Koupenova</td>
<td>17</td>
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</table>

**ATVB Irvine H. Page Young Investigator Research Award Finalists**

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<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tr>
<td>Jose Fuster</td>
<td>18</td>
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<tr>
<td>Elizabeth Tarling</td>
<td>19</td>
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<tr>
<td>Hagai Tavori</td>
<td>20</td>
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<tr>
<td>Qiuyu Zhu</td>
<td>21</td>
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</table>

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**

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>Donna Conlon</td>
<td>87</td>
</tr>
<tr>
<td>Alexandra Finney</td>
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<tr>
<td>Rituparna Ganguly</td>
<td>89</td>
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<tr>
<td>Chrissta Maracle</td>
<td>90</td>
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<tr>
<td>Jevgenia Zilberman-Rudenko</td>
<td>91</td>
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</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>Mílessa Afonso</td>
<td>190</td>
</tr>
<tr>
<td>Youri Almeida</td>
<td>607</td>
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<tr>
<td>Francis Chen</td>
<td>486</td>
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<tr>
<td>Joshua Dubland</td>
<td>612</td>
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<tr>
<td>Lahouaria Hadri</td>
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<tr>
<td>Hongliang He</td>
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<tr>
<td>Ming He</td>
<td>7</td>
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<tr>
<td>Manish Jain</td>
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<tr>
<td>Aida Javidan</td>
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<tr>
<td>Sri Harsha Kanuri</td>
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<tr>
<td>Rahul Kumar</td>
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<tr>
<td>Hui-Ping Lin</td>
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<tr>
<td>Danielle Michell</td>
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<tr>
<td>Derick Okwan-Duodu</td>
<td>28</td>
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<tr>
<td>Seul Ki Park</td>
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<td>Sudeshna Sadhu</td>
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<tr>
<td>Martin Schlegel</td>
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<tr>
<td>Vijay Sonkar</td>
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<tr>
<td>Pauline van Paridon</td>
<td>147</td>
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<tr>
<td>Bradley Wright</td>
<td>53</td>
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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

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<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tr>
<td>Alyssa Flores</td>
<td>52</td>
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</tbody>
</table>

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 Winner

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<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>Hong Chen</td>
<td>141</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>Peter Kip</td>
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<tr>
<td>Marcos Kuroki</td>
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<tr>
<td>Zhiping Liu</td>
<td>57</td>
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<tr>
<td>Neel Mansukhani</td>
<td>330</td>
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<tr>
<td>Bandana Shrestha</td>
<td>664</td>
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</tbody>
</table>
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.
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 A/V materials and of poster presentations and supporting poster materials. Science information shared by investigators during a meeting is confidential and often unpublished data. Taking photos of or recording the content of meeting room slides is also prohibited and is considered intellectual piracy and unethical. Attendees who ignore this policy will be asked to leave the educational session and are at risk of losing their badge credentials.

The AHA will take photographs and video during its conferences and may display, reproduce and/or distribute them in AHA educational, news or promotional material, whether in print, electronic or other media, including the AHA website. Your registration for an AHA conference is your grant to the AHA the right to use your name, image and biography for such purposes as well as any other purpose. All photographs and/or videos become the property of the AHA.

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.

Americans with Disabilities Act (ADA)
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**

<table>
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<tr>
<th>Time</th>
<th>Location</th>
<th>Event Description</th>
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<tr>
<td>7:00 AM</td>
<td>Yosemite Room</td>
<td>Registration, Continental Breakfast and Exhibits</td>
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| 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 |
| 7:00–8:30 AM | Grand Ballroom B | 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 | Yosemite Room          | Refreshment Break and Exhibits                                                  |

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### Early Career Training

**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

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### 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

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<th>Time</th>
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| 8:30  | Grand Ballroom B    | 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 | Yosemite Room       | Refreshment Break and Exhibits                        |
Program Agenda (continued)

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 Macropage Polarization and Efferocytosis
Allison Schroeder, Danielle Hyatt, Francis J. Alenghat.
University of Chicago, Chicago, Illinois

11:15 Resolvin D1 Limits Senescent Cells in Atherosclerosis
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
Alecia Blassczak, Valerie Wright, Joey Liu, The Ohio State University, Columbus, Ohio; Tuo Deng, Houston Methodist Well Cornell Medical College, Houston, Texas; David Bradley, Stephen Bergin, Willa Hsuhe, 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
Holger Winkel, Erik Ehinger, Melanie Vassalo, Konrad Buscher, Huy Dinh, Kouji Kobiymaya, Anouk Hamers, LJL, 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 Zernecke, Institute of Experimental Biomedicine, Wuerzburg, Germany; Santhi K. Ganesh, University of Michigan, Ann Arbor, Michigan

12:00 An IL23-IL22 Axis Regulates Intestinal Microbial Homeostasis to Protect from Diet-induced Atherosclerosis
Alia Fatkhullina, Juliana Peshkova, Ekaterina Koltsa, Fox Chase Cancer Center, Philadelphia, Pennsylvania; Giorgio Trincher, 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

Oral Abstract Presentations

11:00 Role of Endothelial YingYang1 in Controlling Angiogenetic Sprouting and Maturation
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
Ming He, Tse-Shun Huang, Marcy Martin, Shu Chien, John Shyy, University of California, San Diego, La Jolla, California


11:45 Ribosomal Profiling of Vascular Smooth Muscle Cells in Vivo Identifies Cell-type Specific Transcripts and Enrichment of Blood Pressure Associated Genes
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
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, Ashley 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 McClanaghan, Yan Huang, Theresa Harter, G. Schuyler Brown, Kristina Hinman, Carmen Halabi, Scot Matkovich, Robert P. Mechem, 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, Fluitgen Deutschland GmbH, Jena, Germany; Andreas Bausch, Lars Maegdefessel, Technical Univ Munich, Munich, Germany

12:00 Genotype to Phenotype: Function of Rare Coding Variants in ANGPTL3
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 Vesic, 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

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 Pamir, Oregon Health and Science Univ, Portland, OR; Tarner 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, Ylka Latif, Jonathan Nelson, Aris Xie, Jonathan R. Lindner, Hagai Tavori, Oregon Health & Science Univ, Portland, OR

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 K. 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

3:45-4:15 pm Yosemite Room Refreshment Break and Exhibits

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

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

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

5:00 Clearance of ApoC-III Glycoforms Associated With Triglyceride Metabolism
Hussein Yassin, Natalie Keguelian, Univ of Southern California, Los Angeles, CA; Bastian Rams, 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)

4:15-6:00 PM
Imperial Ballroom B
Concurrent Session II B
Immunity and Inflammation in Vascular Biology and Thrombosis

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

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; Milesa 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

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

5:15  Interleukin-35 Suppresses Endothelial Activation by Inhibiting Mitochondrial Reactive Oxygen Species Mediated Site-specific Acetylation of Histone 3 Lysine 14
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<th>Time</th>
<th>Session</th>
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<tr>
<td>5:30</td>
<td>IL-17A Induces Vascular Dysfunction via Downregulation of eNOS Expression</td>
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<td>Rebecca Schueler, Susanne Karbach, Katrin Schaefer, Sabine Kossmann, Matthias Oelze, Venkata Garlapati, Jaak Huppert, Andrew Croxford, Andreas Daiber, Thomas Muenzel, Ari Waisman, Philip Wenzel, Univ Medical Ctr Mainz, Mainz, Germany</td>
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<td>5:45</td>
<td>A Ligand-specific Blockade of the Integrin Mac-1 Selectively Targets Pathologic Vascular Inflammation While Maintaining Protective Host-defense</td>
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<td>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</td>
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| 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 |

**THURSDAY/FRIDAY**

<table>
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<th>Time</th>
<th>Session</th>
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| 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**

<table>
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<th>Time</th>
<th>Session</th>
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| 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 Room 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**  
Kelsey E. Jarrett, Alexandra 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**  
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**  
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**  
Alice Ossoli, Sara Simonelli, Univ degli Studi di Milano, Milano, Italy; Marisa Varretti, 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 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

Oral Abstract Presentations

10:30 **Coagulation Factor XII Promotes Platelet Consumption in the Presence of Microbial PolYPHosphate Under Shear Flow**  
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; Robert Harrington, MD, FAHA, Stanford University, Stanford, California; 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**  
Congqing Wu, Yinan Wei, Zhenyu Li, Univ of Kentucky, Lexington, KY
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 Ctrl, 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 Ctrl, 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, Anaum Maqsood, Univ of North Carolina at Chapel Hill, Chapel Hill, NC; Charlotte Thalain, Karolinska Inst, Stockholm, Sweden; Denis F. Noubouosse, Univ of North Carolina at Chapel Hill, Chapel Hill, NC; Hakan Wallen, Karolinska Inst, 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

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 Panneerseelan-Bharath, Boston University, Boston, Massachusetts
FRIDAY

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**  
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, Bhaba Ramkhelawon, New York Univ Sch of Med, New York, NY; Mary-Ellen Harper, Univ of Ottawa, Ottawa, ON, Canada; Aldons Lusis, 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**  
Jiean Xu, Qihua Yang, Xiaoyu Zhang, Peiking Univ, Beijing, China; Zhiying Liu, August Univ, August, GA; Yaping Cao, Lina Wang, Yaqi Zhou, Xianqi 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, August Univ, August, GA; Mei Hong, Peiking Univ, Beijing, China; Yuqing Huo, August Univ, August, GA

4:45  **Platelet-Endothelial Interactions in Atherosclerosis-Prone Arteries in a Non-Human Primate Model of Obesity and Insulin Resistance**  
Eran I. Brown, J. Todd Belcik, James M. Hodovan, Federico Moccetti, Koya Ozawa, Lindsay A. Bader, Paul Klevit, Jonathan R. Lindner, Oregon Health & Science Univ, Portland, OR

5:00  **SR-BI and PCPE2 Modulate Lipid Trafficking in Adipocytes**  
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**  
Pijus Barman, Milie Fang, Gianila 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**  
Nathaly Anto Michel, Christoph Bode, Andreas Zirilk, Dennis Wolf, Univ Heart Ctr Freiburg, Freiburg, Germany
Program Agenda (continued)

5:00 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

5:15 Novel Tirofiban Conjugate for the in vivo Detection of Activated Platelets
Khanh Q. Ha, Xiaoxin Zheng, Chase Kessinger, Farouc Jaffer, Jason McCarthy, Massachusetts General Hosp, Boston, MA

3:45-5:30 PM
Imperial Ballroom A
Concurrent Session IV C
Translational Science of Vascular Medicine: Vascular Dysfunction
Organized in cooperation with the Council on Peripheral Vascular Disease

Moderators:
Peter Henke, MD, FAHA, University of Michigan, Ann Arbor, Michigan
Scott M. Damrauer, MD, University of Pennsylvania, Philadelphia, Pennsylvania

3:45 Specialized Lipid Mediators and Resolution of Vascular Inflammation
Michael S. Conte, MD, FAHA, FACS, University of California San Francisco Medical Center, San Francisco, California

4:05 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

Rapid-Fire Oral Abstract Presentations

4:25 The Vascular Ecto-enzyme, CD39 Protects from Venous Thrombogenesis by Inhibiting Innate Immune Activation
Yogendra Kanthi, Benjamin N. Jacobs, Liguo Chi, Vinita Yadav, Raymond Zhao, Alison Banka, Jason S. Knight, David J. Pinsky, University of Michigan, Ann Arbor, Michigan

4:31 A New Model of Murine Stasis Pulmonary Thromboembolism in vivo With Assessment by Noninvasive Multimodal Molecular-Structural Imaging
Chase W. Kessinger, Farouc A. Jaffer, Massachusetts General Hospital/Harvard Medical School, Boston, Massachusetts

4:37 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

4:43 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

4:49 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

4:55 TRAIL Protects Against Endothelial Dysfunction in vivo and Inhibits Angiotensin-II Induced Oxidative Stress in Vascular Endothelial Cells in vitro
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

5:01 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, 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
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, Yaping Cao, Qiuhua Yang, Peking University, Shenzhen, China; Ha Won Kim, Neal L. Weintraub, Yuqing Hua, 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, Wenzhou 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

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, MBCH, 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
AUTHOR INDEX (continued)

McPherson, Ruth .......... 42, 610
McKendrick, Shannon ....... 417
McWilliams, Lisa .......... 548
Mecham, Robert P. ........ 11
Mectace, Melanie .......... 624
Medina, Jan .............. 223, 235, 451
Medina, Marisa .......... 198
Medrano, Maria .......... 612, 673
Meher, Akshaya K .......... 260, 428
Mehta, Nehal .......... 197, 212, .......... 549, 589
Mehta, Vedanta ........... 442
Mei, Xiaohan .............. 168
Meier, Simon ............ 112, 651
Melchor, John T. .......... 26, 556
Melhoft Rasmussen, Lars .... 712
Meina-Hurtado, Carlos .... 124
Mendivil, Carlos .......... 557
Meng, Xianzhong .......... 656
Menke, Laura ............. 121
Mercado-Deane, Maria-Gisera ...... 426
Messina, Louis .......... 253
Meucci, Sandro .......... 12
Mercury, Peter ........... 119
Miano, Joseph ............. 619
Miao, Yifei ............... 250, 685
Michaelson, Daniel ....... 399
Michel, Nathaly A ........ 4
Michell, Danielle L ....... 415
Michie, Gary .............. 174
Michie, Sara A .......... 713
Mietus, Constance J ............ 340
Miglioni, Mary .......... 284
Miles, Joshua ............. 33, 565
Mike, Frank ............... 28
Milagro, Sarah ........... 451
Milgram, Sarah A ........ 235
Miller, Clint L .......... 619
Miller, Donald R .......... 24, 126
Miller, Jordan D ........... 238
Miller, Megan R ........... 653, 503
Minner, Ross .............. 709
Ming, Ran ................. 164
Minnier, Jessica .......... 135, 561
Mintz, Gary S ............. 646
Miracle, Gerald ........... 672
Miriayala, Sumitra ........ 116
Mishra, Lopa .............. 139
Mitchell, Carol .......... 470
Mitchell, Gary F .......... 512
Mitchell, James R .......... 122, 357
Mintz, Daniel ............. 508
Mx, Doran S ............. 140
Myata, Satoshi ........... 315
Muzuno, Ken .............. 449
Myrghanik, Andrew ....... 329, 595
Moccetti, Federico ........ 29, 43
Mtnikov, Diana M .......... 211
Mohammadali, Leila ........ 686
Mohammadmoradi, Shayan .... 108
Mojcher, Alexander C ....... 429, 663
Molan, Claire ............. 480, 716
Molony, David ........... 646
Moncada-Pazos, Angela .... 493
Monge, Steven .......... 320
Monteiro, Dougall ....... 288
Montague, Samantha J .... 532
Montanieri, Silvia ........ 459
Montgomery, William ....... 147
Mongovin, Steve .......... 13
Moir, Jeremy .............. 34
Moran, Eugene .......... 290
Moran, Matthew .......... 73
Moran, Scott ............. 188
Morawietz, Verne ......... 263
Morris, Andrew .......... 214
Morris, Mark ............. 287
Morris, Robert .......... 360
Morrissey, James H ....... 37
Morrone, Maria ........... 141
Morris, Kenneth J .......... 478
Morrow, David F ........... 484
Morton, Allynson .......... 557
Mortez, Laurent O .......... 212
Morton, Susan ............. 97
Mount, Deirdra J. H. ....... 273
Mount, Nick ............... 20
Møller, Carollyn .......... 339
Møller, Karl .................. 191
Møller, Kay .......... 180
Møller, Elise ............. 238
Møller, Thomas ........... 30
Mouhr, Domes .................. 369
Mumcu, Sultan ........... 134
Mumcuoglu, Musa .......... 533
Muraoka, Genya .......... 134
Murasaki, Natalia ........ 686
Murphy, Andrew J ........ 294
Murphy, Andrew .......... 59
Murphy, Michael .......... 59
Murphy, Pravind ........... 369
Musunuru, Kiran ......... 13, 214
Myasoedova, Veronika ....... 459
Myers, Fred ............... 136, 138
Naderi Nabi, Farnoosh ....... 153
Nakajima, Katsuyuki ....... 171
Nakaki, Masatomi .......... 361
Nakamura, Maki .......... 53
Nakauchi, Hiromitsu ....... 408
Nakayama, Karina .......... 731
Nanda, Vivek ............. 233, 619
Narayanaswamy, Chandrakala ...... 201
Nari, Nandip ..
## Program at a Glance

<table>
<thead>
<tr>
<th>Wednesday</th>
<th>Thursday  May 10, 2018</th>
<th>Friday  May 11, 2018</th>
<th>Saturday  May 12, 2018</th>
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<tbody>
<tr>
<td>7:00 am</td>
<td>Separate registration may be required for the meetings listed below.</td>
<td>8:00-10:00 am Plenary Session I: Cardiometabolic Mechanisms of Vascular Complications in Diabetes</td>
<td>8:30-10:30 am Plenary Session V: Invited Lecture Series Hoag Award Lecture Keynote Lecture Distinguished Lecture</td>
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<tr>
<td>8:00 am</td>
<td>Registration, Continental Breakfast, Exhibits</td>
<td>8:00-9:30 am Plenary Session III: Lipoprotein Metabolism and Therapeutic Targets</td>
<td>8:30-10:30 am Plenary Session and Reception</td>
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<td>8:30 am</td>
<td>Early Career Training Session</td>
<td>9:30-10:45 am Concurrent Session III</td>
<td>10:30 am-12:00 pm Joint Council Dinner</td>
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<td>10:00-11:15 am Concurrent Session</td>
<td>Noon Closing Remarks/Adjourn</td>
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<tr>
<td>9:30 am</td>
<td>Conference Opening and Plenary Session I: Functional Genomics - Cardiovascular Precision Medicine</td>
<td>11:45 am-1:00 pm Next-Generation Technology Bootcamps: CRISPR-Cas9 Genome Editing (basic and advanced)</td>
<td>1:00-8:00 pm KnoxMed</td>
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<td>10:00 am</td>
<td>Refreshment Break/Exhibits</td>
<td>1:00-3:00 pm</td>
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<td>10:30 am</td>
<td>10:30 am-12:15 pm Concurrent Session I</td>
<td>3:15-3:45 pm Refreshment Break/Exhibits</td>
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<tr>
<td>11:00 am</td>
<td>A - Mechanisms of Atherosclerosis</td>
<td>3:45-3:50 pm</td>
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<td>11:30 am</td>
<td>B - Molecular, Developmental and Cellular Biology of the Vessel Wall</td>
<td>3:50-4:00 pm Concurrent Session IV</td>
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<td>12:00 am</td>
<td>C - Cardiovascular Precision Medicine</td>
<td>4:00-4:15 pm Concurrent Session II</td>
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<td>12:30 pm</td>
<td>12:15-1:45 pm The Mentor of Women Award Luncheon</td>
<td>4:15-5:45 pm Plenary Session II: Cardiovascular Precision Medicine: Vascular Dysfunction</td>
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<td>1:00 pm</td>
<td>Or lunch on your own</td>
<td>5:00-5:30 pm Concurrent Session</td>
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<td>2:00 pm</td>
<td>5:30-6:00 pm Poster Session and Reception</td>
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### Legend:
- **Plenary Session**
- **Concurrent Session**
- **Presentation Skills Training**
- **Other Meetings of Interest**
- **Poster Session**
- **Meals/Breaks**
Cardiovascular diseases afflict people of all races, ethnicities, genders, religions, ages, sexual orientations, national origins and disabilities. The American Heart Association is committed to ensuring that our workforce and volunteers reflect the world’s diverse population. We know that such diversity will enrich us with the talent, energy, perspective and inspiration we need to achieve our mission: building healthier lives, free of cardiovascular diseases and stroke.

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.