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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 2019

Final Program
May 14–16, 2019 | Boston Marriott Copley Place Hotel | Boston, Massachusetts

This annual scientific meeting of the American Heart Association 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, and the American Venous Forum.
Co-Director of the Fireman Vascular Center  
Department of Medicine  
Massachusetts General Hospital

The Cardiology Division and the Fireman Vascular Center at the Massachusetts General Hospital are seeking an academic and clinical leader to serve as the Co-Director of the Fireman Vascular Center. Along with the Division Chief for Vascular Surgery, this individual will be jointly responsible for the full scope of clinical, research and educational activities of the Fireman Vascular Center as well as collaborative activities with the other components of the Center.  

Appointment as a Professor or Associate Professor at Harvard Medical School will be commensurate with experience, training and achievements in addition to teaching activities. Suitable candidates must be board certified in internal medicine, cardiovascular diseases and in vascular medicine.  

Interested candidates should send a personal statement with research and academic interests, three potential referees and Curriculum Vitae to:

Chair, Fireman Vascular Center Co-Director Search Committee  
Massachusetts General Hospital  
55 Fruit Street, GRB-800  
Boston, MA 02114  
MGHCardiologySearch@partners.org

We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.
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</thead>
<tbody>
<tr>
<td>7:00 AM</td>
<td>8:00 AM-7:00 PM</td>
<td>8:00-9:30 AM</td>
<td>7:30-8:30 AM</td>
</tr>
<tr>
<td>7:30 AM</td>
<td>Vascular Research Initiatives Conference 2019</td>
<td>Plenary Session III: Intersections Between the Vascular System and Cancer</td>
<td>8:30-10:30 AM Poster Session and Continental Breakfast</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>8:00-10:00 AM</td>
<td>8:00:00 AM-9:30 AM</td>
<td>10:30 AM-12:00 PM Plenary Session V Invited Lecture Series Hoeg Award Lecture Keynote Lecture Distinguished Lecture</td>
</tr>
<tr>
<td>8:30 AM</td>
<td>Conference Opening and Plenary Session I: Innovative Methods in Vascular Discovery</td>
<td></td>
<td>10:00-11:45 AM Concurrent Session III</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Early Career Training Session 1</td>
<td>A – Therapeutic Targets in Atherosclerosis</td>
<td>Noon Closing Remarks/ Adjourn</td>
</tr>
<tr>
<td>9:30 AM</td>
<td>Early Career Breakfast, Exhibits</td>
<td>B – Blood Coagulation and Antithrombotic Therapy</td>
<td>1:00-7:00 PM 8:00 AM-Noon HDL Structure-Function Workshop</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Separation registration required</td>
<td>C – Translational Science in Vascular Medicine: Vascular Dysfunction</td>
<td>Separate registration required</td>
</tr>
<tr>
<td>10:30 AM</td>
<td>10:00-10:30 AM</td>
<td>11:45 AM-1:00 PM Next-Generation Technology Bootcamp: Single Cell Sequencing</td>
<td>1:00-3:45 PM Plenary Session IV</td>
</tr>
<tr>
<td>11:30 AM</td>
<td>Speakers Corner/Break/Exhibits</td>
<td>Session sponsored by the ATVB Early Career Committee and the Diversity Committee</td>
<td>Young Investigator Award Competition – Brinkhous Prize and Page Award</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>12:00-6:00 PM</td>
<td>11:45 AM-1:45 PM Or lunch on your own</td>
<td>3:45-4:15 PM Refreshment Break/Exhibits</td>
</tr>
<tr>
<td>12:30 PM</td>
<td>KinMet</td>
<td></td>
<td>3:45-4:15 PM Refreshment Break/Exhibits</td>
</tr>
<tr>
<td>1:00 PM</td>
<td>1:00-6:00 PM</td>
<td>2:15-3:45 PM Plenary Session II: Highlights from the ATVB Journal</td>
<td>4:15-6:00 PM Plenary Session IV</td>
</tr>
<tr>
<td></td>
<td>CAAC-CSVM Symposium and China Night</td>
<td>3:00-7:00 PM Vascular Discovery Registration</td>
<td>A – Metabolic Disorders and Atherosclerosis</td>
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<tr>
<td></td>
<td>Separate registration required</td>
<td></td>
<td>B – Platelet Production, Signaling and Function</td>
</tr>
<tr>
<td>1:30 PM</td>
<td>3:00-7:00 PM</td>
<td>4:15-6:00 PM Concurrent Session II</td>
<td>C – Translational Science in Vascular Medicine: Pro/Con Debate – The Utility of Genomics in the Future of Medicine</td>
</tr>
<tr>
<td>2:00 PM</td>
<td>Vascular Discovery Registration</td>
<td>4:15-6:00 PM Concurrent Session IV</td>
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<tr>
<td>2:30 PM</td>
<td></td>
<td>A – Apolipoproteins, Lipoproteins and Lipid Metabolism</td>
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<tr>
<td>3:00 PM</td>
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<td>B – Vascular Cells, Inflammation and Thrombosis</td>
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<tr>
<td>3:30 PM</td>
<td></td>
<td>C – Strategically Focused Research Network on Vascular Disease</td>
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<tr>
<td>4:00 PM</td>
<td></td>
<td>6:00-8:00 PM Poster Session 1 and Reception Sponsored by the ATVB Journal</td>
<td>7:00-11:30 PM CAAC Reception</td>
</tr>
<tr>
<td>4:30 PM</td>
<td></td>
<td>6:00-8:00 PM Poster Session 2 and Reception</td>
<td>8:00-10:30 PM Joint Council Dinner (ticket required)</td>
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<td>7:00 PM</td>
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<td></td>
<td>8:30-10:30 AM Joint Council Dinner (ticket required)</td>
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<td>7:30 PM</td>
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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:

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Fax            214.373.3406
Email          scientificconferences@heart.org
Website        professional.heart.org

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It’s quick and easy — renew online. Visit professional.heart.org/membership.
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 2019 Scientific Sessions.

Vascular Discovery 2019 provides unique opportunities to meet with colleagues from around the world with wide-ranging research interests and expertise for the timely exchange of information about new and emerging scientific research in the areas of arteriosclerosis, thrombosis and vascular biology, peripheral vascular disease, genomics and precision medicine.

In addition to invited plenary lectures and concurrent sessions, we will have oral presentations of selected abstracts and three lively poster sessions. Some of the highlights of the meeting are:

- A Plenary Session featuring three preeminent speakers who will discuss innovative experimental approaches in vascular discovery that span basic and translation science. Research focusing on proteomics, genomics, and sex differences in cardiovascular disease will be highlighted.
- A Plenary Session devoted to recent discoveries into the links between vascular biology, the immune system, and cancer.
- A session on research priorities in thrombosis, organized in collaboration with the Council on Peripheral Vascular Disease and the International Society on Thrombosis and Haemostasis. Experts will lead discussions on provocative and pressing questions in thrombosis science, including the relationship between cancer and thrombosis.
- A session highlighting AHA’s Strategically Focused Research Network (SFRN) on Vascular Disease. Representatives from the four SFRN Centers will present ongoing research projects in the SFRN.
- An interactive session organized in collaboration with the Council on Genomic and Precision Medicine that will feature a Pro/Con debate on the importance of genomics in the future of cardiovascular medicine.

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 and Diversity Committees, the Mentor of Women Award Luncheon with featured speaker Elizabeth G. Nabel (everyone is invited!), and the not-to-be-missed ATVB Council Dinner. A Next-Generation Technology Boot Camps focusing on data science and single-cell sequencing will also be offered by the Council on Genomic and Precision Medicine.

We hope you will find the Vascular Discovery: From Genes to Medicine 2019 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,

Lars Maegdefessel, MD, PhD
Vice Chair, Vascular Discovery 2019 Scientific Sessions
The American Heart Association is a national voluntary health agency whose mission is “To be a relentless force for a world of longer, healthier lives.”

The American Heart Association gratefully acknowledges following companies for their generous support of the Vascular Discovery Scientific Sessions:

**ATVB Journal**

**Massachusetts General Hospital/Cardiovascular Research Center**

**Verve Therapeutics**

**Grantor:**

Amgen, Inc.

We also thank the National Heart, Lung, and Blood Institute, the ATVB, PVD and GPM councils for 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.

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Peter Tontonoz, MD, PhD, UCLA, Howard Hughes Medical Institute, Los Angeles, California
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The conference organizers gratefully acknowledge the following individuals for assisting with the abstract grading process:

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Alan Daugherty
W. Sean Davidson
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Xiaoping Du
William P. Fay
Sergio Fazio
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Aloe V. Finn
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Naomi M. Hamburg
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Hong Wang
Miao Wang
Jeffrey I. Weitz
Geoff H. Werstuck
Randal J. Westrick
Holger Winkels
Alisa S. Wolberg
Dennis Wolf
Baohui Xu
## Room Locator

### Monday, May 13

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<thead>
<tr>
<th>Event</th>
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<th>Floor</th>
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<tr>
<td>CAAC Symposium</td>
<td>Grand Ballroom Salons C/D</td>
<td>4th Floor</td>
</tr>
<tr>
<td>CAAC China Night Reception and Dinner (ticket required)</td>
<td>Grand Ballroom Salons A/B</td>
<td>4th Floor</td>
</tr>
<tr>
<td>Exhibits</td>
<td>Atrium Foyer</td>
<td>4th Floor</td>
</tr>
<tr>
<td>Registration</td>
<td>Atrium Foyer</td>
<td>4th Floor</td>
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<tr>
<td>KinMet 2019: 1:00-6:00 P.M.</td>
<td>Grand Ballroom Salons A/B</td>
<td>4th Floor</td>
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<tr>
<td>Speaker Resource Room</td>
<td>Tufts</td>
<td>3rd Floor</td>
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<tr>
<td>Vascular Research Initiatives Conference (VRIC) 2019 (separate registration required)</td>
<td>Grand Ballroom Salons G</td>
<td>4th Floor</td>
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### Tuesday, May 14

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<tr>
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<tr>
<td>Continental Breakfast</td>
<td>Atrium Foyer</td>
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<tr>
<td>Concurrent Session A</td>
<td>Grand Ballroom Salon E</td>
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<tr>
<td>Concurrent Session B</td>
<td>Grand Ballroom Salon F</td>
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<tr>
<td>Concurrent Session C</td>
<td>Grand Ballroom Salon G</td>
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<tr>
<td>Early Career Training</td>
<td>Grand Ballroom Salons A-D</td>
<td>4th Floor</td>
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<tr>
<td>Exhibits</td>
<td>Atrium Foyer</td>
<td>4th Floor</td>
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<tr>
<td>Mentor of Women Award Luncheon (ticket required)</td>
<td>Grand Ballroom Salons A-D</td>
<td>4th Floor</td>
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<tr>
<td>Next Generation Technology Bootcamp (ticket required)</td>
<td>Grand Ballroom Salons I-K</td>
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<tr>
<td>Plenary Sessions</td>
<td>Grand Ballroom Salons E-G</td>
<td>4th Floor</td>
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<tr>
<td>Poster Session and Reception</td>
<td>Gloucester/Back Bay</td>
<td>3rd Floor</td>
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<tr>
<td>PVD Annual Business Meeting + Networking Luncheon</td>
<td>Berkeley</td>
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<tr>
<td>Refreshment Breaks</td>
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<td>Registration</td>
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<tr>
<td>Speaker Resource Room</td>
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### Wednesday, May 15

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<tr>
<th>Event</th>
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<tbody>
<tr>
<td>Continental Breakfast</td>
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<tr>
<td>Concurrent Session A</td>
<td>Grand Ballroom Salon E</td>
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<tr>
<td>Concurrent Session B</td>
<td>Grand Ballroom Salon F</td>
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<tr>
<td>Concurrent Session C</td>
<td>Grand Ballroom Salon G</td>
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<tr>
<td>Early Career Training</td>
<td>Grand Ballroom Salons A-D</td>
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<tr>
<td>Exhibits</td>
<td>Atrium Foyer</td>
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<tr>
<td>Joint Council Dinner (ticket required)</td>
<td>Grand Ballroom Salon G</td>
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<tr>
<td>Next Generation Technology Bootcamp (ticket required)</td>
<td>Grand Ballroom Salons I-K</td>
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<tr>
<td>Plenary Sessions</td>
<td>Grand Ballroom Salons E-G</td>
<td>4th Floor</td>
</tr>
<tr>
<td>Poster Session and Reception</td>
<td>Gloucester/Back Bay</td>
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<tr>
<td>Refreshment Breaks</td>
<td>Atrium Foyer</td>
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<tr>
<td>Registration</td>
<td>Atrium Foyer</td>
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<tr>
<td>Speaker Resource Room</td>
<td>Tufts</td>
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<tr>
<td>Special event sponsored by the Early Career and Diversity Committees</td>
<td>Grand Ballroom Salons C-D</td>
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### Thursday, May 16

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<thead>
<tr>
<th>Event</th>
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<tr>
<td>Continental Breakfast</td>
<td>Gloucester/Back Bay</td>
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<tr>
<td>Plenary Sessions</td>
<td>Grand Ballroom Salons E-F</td>
<td>4th Floor</td>
</tr>
<tr>
<td>Poster Session</td>
<td>Gloucester/Back Bay</td>
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<tr>
<td>Registration</td>
<td>Atrium Foyer</td>
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<tr>
<td>Speaker Resource Room</td>
<td>Tufts</td>
<td>4th Floor</td>
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<tr>
<td>SDG/CDA Showcase</td>
<td>Grand Ballroom Salons E-F</td>
<td>4th Floor</td>
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<tr>
<td><strong>HDL Workshop</strong>&lt;br&gt;1:00-7:00 PM Thursday&lt;br&gt;8:00 AM-Noon Friday</td>
<td>Grand Ballroom Salons A-D</td>
<td>4th Floor</td>
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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 Atrium Foyer, located on the 4th floor of the Boston Marriott Copley Place. Registration will be open during the following hours:

- Monday, May 13: 3:00–6:00 PM
- Tuesday, May 14: 7:00 AM–6:00 PM
- Wednesday, May 15: 7:00 AM–6:00 PM
- Thursday, May 16: 7:30 AM–Noon

Exhibits

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

- AHA Membership
- AHA Scientific Publishing
- Biocytogen
- Cell Biologics, Inc.
- Exemplar Genetics
- FujiFilm VisualSonics, Inc.
- Illumina, Inc.
- PromoCell GmbH

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.
Joint Accreditation Statements

In support of improving patient care, this activity has been planned and implemented by the American Heart Association. 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 21.00 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 21.00 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. 16, 2019.**

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.

ATVB
Arteriosclerosis, Thrombosis, and Vascular Biology

The leading journal for basic, translational, clinical, and population research related to arteriosclerosis, thrombosis, and vascular biology.

EDITOR-IN-CHIEF
Alan Daugherty, PhD, DSc

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PUBLISHING METRICS
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Annual Early Career Awards and Cover Art Contest

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Through its articles and contributions, ranging from basic science to translational and clinical medicine to population health, ATVB equips readers with state-of-the-art knowledge to navigate recent developments across the full spectrum of arteriosclerosis, thrombosis, and vascular biology research.
Information for Presenters

The Speaker Resource Room is located in the Tufts Room on the 4th floor. 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 Tuesday may check in beginning at 3:00 PM Monday, but we request that you check in before 6:00 PM. 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>Monday, May 13</th>
<th>Tuesday, May 14</th>
<th>Wednesday, May 15</th>
<th>Thursday, May 16</th>
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<td>3:00–6:00 PM</td>
<td>7:00 AM–6:00 PM</td>
<td>7:00 AM–6:00 PM</td>
<td>7:30–10:30 AM</td>
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Abstract Presentations

Abstracts presented at Vascular Discovery 2019 will be published after the conference in the online ATVB journal. Abstracts are available on the Vascular Discovery 2019 conference website: professional.heart.org/EducationMeetings.

Abstracts 100-162 will be presented orally.

Abstracts 189-749 will be presented as posters as follows:

- **Poster Session 1:** 6:00-8:00 PM Tuesday (attended), abstracts 189-361.
- **Poster Session 2:** 6:00-8:00 PM Wednesday (attended), abstracts 363-561.
- **Poster Session 3:** 8:30-10:30 AM Thursday (attended), abstracts 565-749.

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>
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<tr>
<td>Session 1 Tuesday, May 14</td>
<td>Back Bay</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>Session 2 Wednesday, May 15</td>
<td>Back Bay</td>
<td>6:00-8:00 PM</td>
<td>6:00-8:00 PM</td>
<td>11:00 AM-5:30 PM</td>
<td>8:00-9:30 PM</td>
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<tr>
<td>Session 3 Thursday, May 16</td>
<td>Back Bay</td>
<td>8:30-10:30 AM</td>
<td>8:30-10:30 AM</td>
<td>10:00 AM Wednesday-8:00 AM Thursday</td>
<td>10:30 AM-12:30 PM Thursday</td>
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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 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.*

**Tuesday, May 14, 7:00-8:00 AM**
**Early Career Training Session**
**Succeeding at Every Stage: Insights from the Early Career Committee**
*Grand Ballroom Salons A-D*
This session focuses on how to achieve success in your post-doctoral fellowship, acquire transition grants and keys to negotiating your first independent position as a scientist or physician-scientist. Each topic is led by ECC members successful in the subject area.

**Getting Your First Grant: Insights from Study Section**
- Cynthia St. Hilaire, PhD, University of Pittsburgh, Pittsburgh, Pennsylvania
- Thomas Vallim, PhD, UCLA, Los Angeles, California

**Building a Successful International Research Program**
- Dorothee Atzler, MD, Ludwig-Maximilians-University of Munich, Munich, Germany
- 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
- Uwe Raaz, MD, Universitätsmedizin Göttingen, Göttingen, Germany

**Hit the Ground Running: Setting Up Your Lab and Hiring**
- Alison B. Kohan, PhD, University of Connecticut, Storrs, Connecticut
- Mireille Ouimet, PhD, University of Ottawa, Ottawa, Ontario, Canada

**The Importance of Mentoring and Being Mentored**
- Robert C. Bauer, PhD, Columbia University Medical Center, New York, New York
- Eric P. van der Veer, PhD, Leiden University Medical Center, Leiden, Netherlands

**Career Transition Awards**
- Alicia N. Lyle, PhD, Emory University, Atlanta, Georgia
- Genesio Karere, PhD, Wake Forest School of Medicine, Winston-Salem, North Carolina
- Milka Koupenova-Zamor, PhD, University of Massachusetts Medical School, Worcester, Massachusetts

**Work-Life Balance in Science**
- Adam C. Straub, PhD, University of Pittsburgh, Vascular Medicine Institute, Pittsburgh, Pennsylvania
- Belinda A. Di Bartolo, PhD, South Australian Health and Medical Research Institute, Adelaide, Australia

**Transitioning to Industry**
- Cynthia Hong, PhD, Novartis, Cambridge, Massachusetts
- Rachel Roth Flach, PhD, Pfizer, Inc., Cambridge, Massachusetts

**Wednesday, May 15, 7:00-8:00 AM**
**Early Career Training Session**
**Honing Skills Necessary for Difficult Situations**
*Grand Ballroom Salons A-D*
Have you ever had to have a difficult conversation or receive criticism? Do you wish to hone your communication and listening skills to better navigate tough conversations and difficult situations? Join us on 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 various situations you may face in your career.

**Thursday, May 16, 7:30-8:30 AM**
**SDG/CDA Showcase**
*Grand Ballroom Salons E-F*
This session is co-hosted by the ATVB and PVD Early Career Committees, and features presentations by current Science Development Grant and Career Development Awardees.
Conference Highlights – Early Career Activities and Ticketed Events

Next Generation Technology Bootcamps
12:15–1:30 PM Tuesday
11:45 AM-1:00 PM Wednesday
Grand Ballroom Salons I-K
We’re offering two Next Generation Technology Boot Camps, organized by the Council on Genomics and Precision Medicine. At 12:15–1:30 PM Tuesday, instruction in data science will be provided. At 11:45 AM-1:00 PM Wednesday, the session will cover single-cell sequencing. A separate ticket is required to attend. If the sessions are full, check with the Registration Desk to see if any tickets are available. Lunch will not be provided.

Ticketed Events

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

Please join us in Grand Ballroom Salons A-D at 12:15 PM Tuesday for the Mentor of Women Award Luncheon, hosted by the ATVB Women’s Leadership Committee. The featured luncheon speaker is Elizabeth G. Nabel, MD. During the luncheon, finalists for the Junior Investigator Award for Women will be announced and the ATVB Women’s Leadership Committee Mentoring Award will be presented. The luncheon is open to all attendees; however, a ticket is required. A separate, nonrefundable $50 fee for AHA members/$75 fee for non-members is required to attend this event.

The PVD Council Annual Business Meeting and Networking Luncheon will be held in the Berkeley Room on the 3rd floor of the Marriott at 12:15 PM Tuesday. Please join the PVD Council to acknowledge the 2019 recipients of the Hobson Award, Alan T. Hirsch Mid-Career Award in Vascular Medicine, Young Investigator Travel Awards, new FAHA members and network with colleagues. The luncheon is open to all attendees; however, a ticket is required. A separate, nonrefundable $35 fee for AHA members/$50 fee for non-members is required to attend this event.

On Wednesday, join your colleagues for food, drinks and entertainment at the Joint Council Dinner in the Grand Ballroom Salon G. Tickets, if available, may be purchased at registration ($60/member; $85/non-member; $30/member and $55/non-member for early career/student/trainee attendees).

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Highlighted Articles on Vascular Discovery, Selected by Editor-in-Chief, Dr. Barry London

- Elevated Wall Tension Leads to Reduced mIR-133a in the Thoracic Aorta by Exosome Release
- ARHGAP18: A Flow-Responsive Gene That Regulates Endothelial Cell Alignment and Protects Against Atherosclerosis
- Differential Phenotypes in Perivascular Adipose Tissue Surrounding the Internal Thoracic Artery and Diseased Coronary Artery

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Conference Highlights – Lectures and Awards

On Thursday morning, attend the Invited Lecture Series featuring the 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, Carlos Fernández-Hernando, PhD, will present the 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. Fernandez-Hernando earned his BSc (Biochemistry and Molecular Biology) and PhD (Biochemistry) degrees from Universidad Autónoma de Madrid (Spain). His early research focused on the study of cellular cholesterol homeostasis in regulating cell cycle progression and cellular proliferation. He completed his postdoctoral training in vascular biology and pharmacology at Yale University School of Medicine, focusing on the molecular mechanism that controls lipoprotein transport across the endothelium during atherosclerosis and the regulation of eNOS activity. During his time at Yale, he and Dr. Suárez pioneered in Sessa lab the first identification and characterization of miRNAs as major regulators of endothelial cell biology and angiogenesis. After completing his training, he became assistant professor of medicine (cardiology) and cell biology and participated in the Vascular Biology and Disease Program at NYU in 2009. While in his first two years of his position, his group and the Moore Lab published a landmark paper in the Science journal discovering a small RNA (miR-33) that regulates cholesterol and fatty acid metabolism. In several studies, he demonstrated that miRNA-33 provides a critical link between the regulation of cholesterol biosynthesis by SREBP2 and cholesterol efflux pathways mediated by ABCA1, a transporter that controls cellular cholesterol efflux and high-density lipoprotein (HDL) biogenesis. He was recruited back to the Yale University School of Medicine in 2013, where he is currently an associate professor of medicine (Comparative Medicine and Pathology departments) and member of the Vascular Biology and Therapeutics Program.

Dr. Fernandez-Hernando is internationally recognized for his pioneer work in identifying and characterizing non-coding RNAs as major regulatory molecules that control cholesterol homeostasis and lipoprotein metabolism. He has been a recipient of numerous awards for his contributions in the field of lipid metabolism and vascular biology, including the Irvine Page Young Investigator Award (American Heart Association), Springer Award (North American Vascular Biology Association), David L. Williams Award (Kern Lipid Conference), Established Investigator Award (American Heart Association) and NIH/NHLBI R35 Emerging Investigator Award.

Dr. Fernandez-Hernando’s presentation is Immunomodulatory Actions of Cholesterol Biosynthetic Intermediates on Macrophage Activation During Atherosclerosis.

The Keynote Lecture will be presented at 11:00 AM by Anne Eichmann, PhD. Dr. Eichmann is the Ensign Professor of Medicine (Cardiology) and Professor of Cellular and Molecular Physiology at Yale University School of Medicine in New Haven, Connecticut.

Dr. Eichmann completed undergraduate studies in Veterinary Medicine at the Freie Universität, in Berlin and an MSc at the Weizmann Institute in Israel, earning her PhD in Molecular and Cell Biology at the Universite Paris XI, Orsay (1994). Following stints as Research Fellow in the CNRS Institut d’Embryologie in Nogent-sur-Marne, France and Research Director at the Collège de France, she joined the faculty of Medicine at Yale University in 2010.

Dr. Eichmann’s laboratory studies the mechanisms that govern cellular guidance and tissue patterning during vascular and lymphatic development, with a focus on “tip cells,” specialized endothelial cells located on the leading edge of growing capillary sprouts. These slowly-proliferating cells appear to serve as guides to vascular patterning, by extending filopodia that explore the tip environment. The endothelial cells that follow behind, termed “stalk cells,” proliferate more rapidly and actively form a capillary lumen capable of sustaining blood flow. Her research findings have been published in top-tier journals, and her lab has earned significant and sustained funding from the NIH. Her list of honors includes an INSERM young investigator award (2002), the Jean Bernard Award from the Medical Research Foundation FRIM (2006), and election as a member of EMBO (2013).

Dr. Eichmann will lecture on Vascular Patterning in Development and Disease.
At 11:30 AM, Sekar Kathiresan, MD, will present the Distinguished Lecture on Genetic Basis for Myocardial Infarction.

Sekar Kathiresan, a physician scientist and a human geneticist, is the Director of the Center for Genomic Medicine (CGM) at Massachusetts General Hospital (MGH), Ofer and Shelly Nemirovsky MGH Research Scholar, Director of the Cardiovascular Disease Initiative at the Broad Institute, and Professor of Medicine at Harvard Medical School.

Dr. Kathiresan leverages human genetics to understand the root causes of heart attack and to improve preventive cardiac care. Among his scientific contributions, Dr. Kathiresan has helped highlight new biological mechanisms underlying heart attack, discovered mutations that protect against heart attack risk, and developed a genetic test for personalized heart attack prevention.

Dr. Kathiresan received his BA in history and graduated summa cum laude from the University of Pennsylvania in 1992 and received his MD from Harvard Medical School in 1997. He then completed his clinical training in internal medicine and cardiology at MGH, where he served as Chief Resident in Internal Medicine from 2002-2003. Dr. Kathiresan pursued research training in cardiovascular genetics through a combined experience at the Framingham Heart Study and the Broad Institute. In 2008, he joined the faculties of the MGH Cardiology Division, Cardiovascular Research Center, and Center for Genomic Medicine.

Nancy R. Webb, PhD, FAHA, is the 2019 recipient of the Mentor of Women Award, which will be presented at the Mentor of Women Luncheon on Tuesday. The award is presented annually to a member of the ATVB Council who has supported the careers of women in the fields of arteriosclerosis, thrombosis and vascular biology individually and globally through mentoring and advocacy. The award is sponsored by the ATVB Women’s Leadership Committee.

Dr. Webb is professor of pharmacology and nutritional sciences at the University of Kentucky. Her laboratory investigates mechanisms of cardiovascular disease, including atherosclerosis and abdominal aortic aneurysms, with a focus on the impact of acute and chronic inflammation on lipoprotein metabolism, macrophage activation and vascular remodeling. She has published extensively on secretory phospholipase A2’s and serum amyloid A (SAA) and how these inflammatory mediators influence HDL metabolism and vascular biology. As director of the Nutritional Sciences Division at the University of Kentucky, she is actively involved in graduate education by overseeing interdisciplinary Masters’ and PhD programs in nutritional sciences. She is the director of an NIH program (T32) that trains pre-doctoral scholars in research focused on pharmacological and nutritional approaches to prevent and treat metabolic-based disorders, including obesity/diabetes, cardiovascular disease, cancer and age-related dementia. Over the past 16 years, she has served on the thesis advisory committees for 25 PhD students (13 women). She has also formally mentored six junior faculty in the University of Kentucky’s College of Medicine and served as co-chair of the Dean’s Women in Medicine and Science (WIMS) Mentoring Committee. She has served for eight years on the ATVB Council Women’s Leadership Committee (2008-16), including two years as chair and two years as immediate-past chair. She is also actively engaged in the ATVB Council’s Mentoring Program.
Conference Highlights – Lectures and Awards (continued)

The 2019 ATVB Journal Young Investigator Awards will be presented during Plenary Session II at 2:15-3:45 PM Tuesday. These investigators will also present their award-winning research during the Poster Session on Tuesday evening.

**Daniel Steinberg Early Career Investigator Award in Atherosclerosis/Lipoproteins**
Katey Rayner, PhD, University of Ottawa Heart Institute, Ottawa, Ontario, Canada, for her paper:
*Extracellular Vesicles Secreted by Atherogenic Macrophages Transfer microRNA to Inhibit Cell Migration*

**Karl Link Early Career Investigator Award in Thrombosis**
Keith B. Neeves, PhD, Colorado School of Mines, Golden, Colorado, for his paper:
*Platelets Drive Thrombus Propagation in a Hematocrit and Glycoprotein VI Dependent Manner in an in vitro Venous Thrombosis Model*

**Werner Risau Early Career Investigator Award in Vascular Biology**
Katherine A. Gallagher, MD, University of Michigan, Ann Arbor, Michigan, for her paper:
*Epigenetic Influence on Monocyte-Macrophage Mediated Inflammation in Wound Repair*

At 1:45 p.m. Wednesday, 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>
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<tbody>
<tr>
<td>Ashley C. Brown, PhD</td>
<td>143</td>
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<tr>
<td>Lacramioara Ivanciu, PhD</td>
<td>144</td>
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<tr>
<td>Tine Wyseure, PhD</td>
<td>145</td>
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<tr>
<td>Ze Zheng, MD, PhD</td>
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**ATVB Irvine H. Page Young Investigator Research Award Finalists**

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<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tr>
<td>Alison B. Kohan, PhD</td>
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<tr>
<td>Ekaterina K. Koltsova, MD, PhD</td>
<td>148</td>
</tr>
<tr>
<td>Bhama Ramkhelawon, PhD</td>
<td>149</td>
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<tr>
<td>Robert Wirka, MD</td>
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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 Tuesday poster session, and the winner will be announced during the Joint Council Dinner.

**ATVB Junior Investigator Award Winner for Women Finalists**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Haiyan Chu, PhD</td>
<td>177</td>
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<tr>
<td>Dawn Fernandez, PhD</td>
<td>176</td>
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<tr>
<td>Huiping Lin, BS</td>
<td>175</td>
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<tr>
<td>Cong-Lin Liu, MD, PhD</td>
<td>174</td>
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<tr>
<td>Linfang Zhang, MD</td>
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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 2019 Scientific Sessions, present research in oral or poster format and engage in discussion with senior investigators.

### ATVB Travel Awards for Young Investigators Winners

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<tr>
<td>Mabruka Alfaidi, MD, PhD</td>
<td>535</td>
</tr>
<tr>
<td>Justin Clark, BSc</td>
<td>114</td>
</tr>
<tr>
<td>Elizabeth Ha, BS</td>
<td>155</td>
</tr>
<tr>
<td>Graeme Koelwyn, MSc</td>
<td>603</td>
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<tr>
<td>Chuan Li, PhD</td>
<td>377</td>
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<tr>
<td>Fang Li, PhD</td>
<td>580</td>
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<tr>
<td>Sizhao Lu, MD, PhD</td>
<td>105</td>
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<tr>
<td>Huize Pan, PhD</td>
<td>324</td>
</tr>
<tr>
<td>Daphne Pariser, BA</td>
<td>405</td>
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<tr>
<td>Qing Wan, BS</td>
<td>224</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 2019 Robert W. Hobson II, MD, Early Career Investigator Award Winner

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>A. Phillip Owens, III, PhD</td>
<td>449</td>
</tr>
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</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 2019 Alan T. Hirsch, MD Mid-Career Investigator Award Winner

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>Ashish Sharma, MBBS, PhD</td>
<td>262</td>
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</tbody>
</table>

By providing travel support to early career investigators who wish to attend the Vascular Discovery 2019 Scientific Sessions, the **PVD 2019 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 2019 Travel Award for Young Investigators Winners

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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</thead>
<tbody>
<tr>
<td>Nkiruka Arinze, MD</td>
<td>234</td>
</tr>
<tr>
<td>Constance Mietus, BA</td>
<td>249</td>
</tr>
<tr>
<td>Justin Kang, PhD</td>
<td>113</td>
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<tr>
<td>Panagiotis Koutakis, PhD</td>
<td>246</td>
</tr>
<tr>
<td>Shuai Li, MD, PhD</td>
<td>631</td>
</tr>
<tr>
<td>Sunil Saini, PhD</td>
<td>628</td>
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</table>

The American Heart Association Council on Genomic and Precision Medicine Biology announces the recipients of the **GPM 2019 Travel Awards for Young Investigators.** These awards support the efforts of early career investigators in cardiovascular research and encourage participation in GPM Council and AHA activities by providing travel funds to attend the Vascular Discovery 2019 Scientific Sessions, present research in oral or poster format and engage in discussion with senior investigators. The following awardees will be recognized during the Joint Council Dinner on Wednesday.

### GPM 2019 Travel Award for Young Investigators Winner

<table>
<thead>
<tr>
<th>Name</th>
<th>Presentation Number</th>
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<tbody>
<tr>
<td>Amélie Pinard, PhD</td>
<td>140</td>
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</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, 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 2019 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 2019. Use hashtag: #VascularDiscovery19.

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**Join the Red Shoe Movement!**
The PVD Council is raising awareness of PAD by wearing red shoes or socks on Wednesday, May 15th.
Policy Information

Disclaimer
The Vascular Discovery: From Genes to Medicine 2019 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.

Emargo Guidelines
Abstracts, lectures and presentations at Vascular Discovery 2019 are embargoeed 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 2019 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.
Program Agenda

TUESDAY, MAY 14

7:00 AM
Fourth Floor Atrium
Registration, Continental Breakfast and Exhibits

7:00–8:00 AM
Grand Ballroom Salons A-D
Early Career Training Session 1
Organized in cooperation with the ATVB Early Career Committee

Getting Your First Grant: Insights from Study Section
Cynthia St. Hilaire, PhD, University of Pittsburgh, Pittsburgh, Pennsylvania
Thomas Vallim, PhD, UCLA, Los Angeles, California

Building a Successful International Research Program
Dorothee Atzler, MD, Ludwig-Maximilians-University of Munich, Munich, Germany
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
Uwe Raaz, MD, Universitätsmedizin Göttingen, Göttingen, Germany

Hit the Ground Running: Setting Up Your Lab and Hiring
Alison B. Kohan, PhD, University of Connecticut, Storrs, Connecticut
Mireille Ouimet, PhD, University of Ottawa, Ottawa, Ontario, Canada

The Importance of Mentoring and Being Mentored
Robert C. Bauer, PhD, Columbia University Medical Center, New York, New York
Eric P. van der Veer, PhD, Leiden University Medical Center, Leiden, Netherlands

Career Transition Awards
Alicia N. Lyle, PhD, Emory University, Atlanta, Georgia
Genesio Karere, PhD, Wake Forest School of Medicine, Winston-Salem, North Carolina
Milka Koupenova-Zamor, PhD, University of Massachusetts Medical School, Worcester, Massachusetts

Work-Life Balance in Science
Adam C. Straub, PhD, University of Pittsburgh, Vascular Medicine Institute, Pittsburgh, Pennsylvania
Belinda A. Di Bartolo, PhD, South Australian Health and Medical Research Institute, Adelaide, Australia

Transitioning to Industry
Cynthia Hong, PhD, Novartis, Cambridge, Massachusetts
Rachel Roth Flach, PhD, Pfizer, Inc., Cambridge, Massachusetts

8:00–8:30 AM
Grand Ballroom Salons E-G
Conference Opening Welcome
Ivor J. Benjamin, MD, FACC, FAHA, Medical College of Wisconsin, Milwaukee, Wisconsin and President, American Heart Association
Nancy R. Webb, PhD, FAHA, University of Kentucky, Lexington, Kentucky

8:30–10:00 AM
Grand Ballroom Salons E-G
Plenary Session I
Innovative Methods in Vascular Discovery (Go Red for Women Session)

Moderators:
Jane E. Freedman, MD, FAHA, University of Massachusetts Medical School, Worcester, Massachusetts
Thomas A. Vallim, PhD, University of California-Los Angeles, Los Angeles, California

8:30 Dissecting the Spatiotemporal Subcellular Organization of the Human Proteome
Emma Lundberg, PhD, Stanford University, Stanford, California and KTH Royal Institute of Technology and Uppsala University, Stockholm, Sweden

9:00 Sex Differences in Vascular Diseases
Lisa Cassis, PhD, University of Kentucky, Lexington, Kentucky

9:30 Genetic Studies of Blood Production and Disease
Vijay G. Sankaran, MD, PhD, Harvard Medical School, Harvard Stem Cell Institute, Boston, Massachusetts

10:00–10:30 AM
Fourth Floor Atrium
Speakers Corner, Break and Exhibits

10:30 AM–12:15 PM
Grand Ballroom Salon E
Concurrent Session I A
Molecular and Cellular Mechanisms of Atherosclerosis

Moderators:
Oliver Soehnlein, MD, PhD, University of Munich, Munich, Germany
Coleen A. McNamara, MD, FAHA, University of Virginia, Charlottesville, Virginia
10:30 Neutrophils in Vascular Inflammation: From Physiology to Intervention
Oliver Soehnlein, MD, PhD, University of Munich, Munich, Germany

Oral Abstract Presentations

11:00 The Non-Conserved Long Noncoding RNA, RP11-184M15.1, Regulates Macrophage Phenotype and Associates with Human Coronary Atherosclerosis
Esther Cynn, Ying Wang, Hanrui Zhang, Chenyi Xue, Jianting Shi, Daniel Y. Li, Muredach Reilly, Columbia Univ Medical Ctr, New York, NY

11:15 Single-cell Profiling of Atherosclerotic Tissue Identifies T Cell Subsets Associated with Cerebrovascular Events

11:30 MicroRNA-33 Inhibition Reprograms Monocyte/macrophage Dynamics in Atherosclerosis to Promote Plaque Regression
Milessa Silva Afonso, Monika Sharma, Paul Martin Schlegel, Coen Van Solingen, Graeme J. Koelwyn, New York Univ, New York, NY; Mireille Quinet, Dept of Biochemistry, Microbiology and Immunology, Univ of Ottawa Heart Inst, Ottawa, ON, Canada; Lauren Beckett, Karishma Rahman, Edward A. Fisher, Kathryn J Moore, New York Univ, New York, NY

11:45 Vascular Smooth Muscle Cell PGC1alpha Deletion is Atherosprotective in vivo
Raymundo A. Quintana, Hassain Sellak, Derick Okwan-Duodu, Gigi Joseph, Holly C. Williams, Felipe Paredes, Alejandra San Martin, Bernard Lassegue, Div of Cardiology, Dept of Med, Emory Univ Sch of Med, Atlanta, GA; W Robert Taylor, Div of Cardiology, Dept of Med, Emory Univ Sch of Med; Atlanta Veterans Affairs Medical Ctr and Dept of Biomedical Engineering, Georgia Inst of Technology, Atlanta, GA

12:00 Early Rescue of Lymphatic Function Limits Atherosclerosis Progression in Ldlr/- Mice
Andreea Milasan, Ali Smaani, Catherine Martel, Montreal Heart Inst, Montreal, QC, Canada

10:30 AM-12:15 PM
Grand Ballroom Salon F
Concurrent Session I B
Molecular, Developmental and Cellular Biology of the Vessel Wall

Moderators:
Delphine A. Gomez, PhD, University of Pittsburgh, Pittsburgh, Pennsylvania
Christopher P. Mack, PhD, University of North Carolina School of Medicine, Chapel Hill, North Carolina

Oral Abstract Presentations

11:00 Genomic and Genetic Insight into Blood Pressure Regulation
Christopher P. Mack, PhD, University of North Carolina School of Medicine, Chapel Hill, North Carolina

11:00 Smooth Muscle Cell-derived Vascular Progenitor Cells Promote Arterial Remodeling and Fibrosis Through Loss of Hedgehog/Wnt/B-catenin/Klf4 Activity
Sizhao Lu, Austin J. Jolly, Keith A. Strand, Karen S. Moulton, Marie F. Mutryn, Rebecca M. Tucker, Raphael A. Nemenoff, Mary C. Weiser-Evans, Univ of Colorado Anschutz Medical Campus, Aurora, CO

11:15 Long Noncoding RNA (ECAL-1) Acting as a miR-23a Sponge Protects its Target Tight Junction Protein Cldn5b to Regulate Zebrafish Cerebral Vascular Integrity
Fang-Fang Li, Yu-Lai Liang, Qing Jing, Shanghai Inst of Nutrition and Health, CAS, Shanghai, China

11:30 Smooth Muscle α-actin Translocates to the Nucleus and Participates in Chromatin Remodeling at Smooth Muscle Contractile Gene Promoters
Callie S. Kwartler, Jiyuan Chen, Xueyan Duan, UTHSC-Houston, Houston, TX; Shuangtao Ma, Michigan State Univ, East Lansing, MI; Charis Wang, Dianna Milewicz, UTHSC-Houston, Houston, TX

11:45 LMO7, a Negative Feedback Regulator of TGF-beta Signaling and a New Player in Vascular Diseases
Yi Xie, Allison C. Ostriker, Yale Univ, New Haven, CT; Jun Yu, Temple Univ, Philadelphia, PA; John Hwa, Kathleen A. Martin, Yale Univ, New Haven, CT
Program Agenda (continued)

10:30 AM-12:15 PM  
Grand Ballroom Salon G  
Concurrent Session I C  
Translational Science in Vascular Medicine: Research Priorities in Thrombosis  
Organized in cooperation with the Council on Peripheral Vascular Disease.

Moderators:
Hugo Ten Cate, MD, PhD, FAHA, Maastricht University, Maastricht, Netherlands  
Alisa Wolberg, PhD, FAHA, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

10:30 Targeting Protein Disulfide Isomerase with an Oral Flavonoid to Prevent Thrombosis in Cancer  
Jeffrey Zwicker, MD, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts

11:00 Mechanisms of Cancer Associated Thrombosis  
Nigel Mackman, PhD, FAHA, University of North Carolina School of Medicine, Chapel Hill, North Carolina

Oral Abstract Presentations

11:30 Genetic Analysis Implicates LDL Cholesterol Reduction and Plasminogen Activator-inhibitor 1 Antagonism as Therapeutic Interventions for Venous Thromboembolism  
Derek Klarin, Emma Busenkell, Massachusetts General Hosp, Boston, MA; Renae Judy, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Julie Lynch, Dept of Veterans Affairs, Salt Lake City Health Care System, Salt Lake City, UT; Krishna Aragam, Mark Chaffin, Mary Haas, Broad Inst of Harvard and MIT, Cambridge, MA; Themistocles L. Assimes, Stanford Univ Sch of Med, Stanford, CA; Jie Huang, Massachusetts Veterans Epidemiology Res and Information Ctr, Boston, MA; Kyung Min Lee, Qing Shao, Edith Nourse Rogers Memorial VA Hosp, Bedford, MA; Jennifer E. Huffman, Massachusetts Veterans Epidemiology Res and Information Ctr, Boston, MA; Yufenf Huang, Yan V. Sun, Emory Univ Rollins Sch of Public Health, Atlanta, GA; Marijana Vujkovic, Danish Saleheen, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Donald R. Miller, Edith Nourse Rogers Memorial VA Hosp, Bedford, MA; Peter Reaven, Phoenix Veterans Affairs Health Care System, Phoenix, AZ; Scott DuVall, Dept of Veterans Affairs, Salt Lake City Health Care System, Salt Lake City, UT; William Boden, State Univ of New York at Buffalo Schs of Med and Public Health, Buffalo, NY; Saia Pyarajan, Massachusetts Veterans Epidemiology Res and Information Ctr, Boston, MA; J. Michael Gaziano, Boston VA Healthcare System, Boston, MA; John Concato, VA Connecticut Healthcare System, New Haven, CT; Daniel J. Rader, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Kelly Cho, Massachusetts Veterans Epidemiology Res and Information Ctr, Boston, MA; Philip S. Tsao, Stanford Univ Sch of Med, Stanford, CA; Sekar Kathiresan, Pradeep Natarajan, Massachusetts General Hosp, Boston, MA; Scott M. Damrauer, Dept of Surgery, Perlmansch Sch of Med, Univ of Pennsylvania, Philadelphia, PA; VA Million Veteran Program

11:45 Hematopoietic Nox2 Regulates Susceptibility to Venous Thrombosis in Mice  
Vijay Sonkar, Rahul Kumar, Melissa Jensen, Univ of Iowa, Iowa City, Iowa, IA; Sanjana Dayal, Univ of Iowa, Iowa City, Iowa, IA

12:00 Time Course and Subsequent Outcomes of Major Bleeding Events According to Bleeding Site in Patients Receiving Anticoagulant Therapy for Venous Thromboembolism: Insights from the RIETE Registry  
Behnoood Bikdeli, Columbia Univ Medical Ctr, New York, NY; José Antonio Nieto, Dept of Internal Med. Hosp Virgen de la Luz, Cuenca, Spain; Fares Moustafa, Dept of Emergency. Clermont-Ferrand Univ Hosp, Clermont-Ferrand, France; Nuria Ruiz-Giménez, Hosp Univirio de La Princesa, Madrid, Spain; Alicia Lorenzo, Hosp Univirio La Paz, Madrid, Spain; Sebastian Schellong, Municipal Hosp of Dresden Friedrichstadt, Dresden, Germany; Silvia Soler, Hosp Olot i Comarcal de la Garrotxa, Gerona, Spain; Maria Del Valle Morales, Hosp del Tajo, Madrid, Spain; Mijan Bosevski, Inst for Cardiovascular Diseases. Faculty of Med, Clinical Ctr, Skopje, Macedonia; The Former Yugoslav Republic of; Olga Gavin, Dept of Haematology Hosp Clinico Univirio Lozano Blesa, Zaragoza, Spain; Manuel Monreal, Hosp Univirio Germans Trias i Pujol, Badalona, Barcelona, Spain
12:15-1:45 PM
Grand Ballroom Salons A-D
The Mentor of Women Award Luncheon (ticket required)
Lunch will be provided.

Luncheon Presentation
Elizabeth G. Nabel, MD, Harvard University, Boston, Massachusetts

12:15-1:45 PM
Or lunch on your own

12:15-1:30 PM
Grand Ballroom Salons I-K
Next-Generation Technology Bootcamp – Data Science
Lunch will not be provided. Organized in cooperation with the Council on Genomics and Precision Medicine.

12:15-1:30 PM
Berkeley
PVD Annual Business Meeting and Networking Luncheon (ticket required)
Lunch will be provided.

12:15-2:15 PM
Or lunch on your own

2:15-3:45 PM
Grand Ballroom Salons E-G
Plenary Session II
Highlights from the ATVB Journal
Moderators:
Chantal Boulanger, PharmD, PhD, Cardiovascular Research Center HEGP, Inserm U-970, Paris, France
Hong S. Lu, MD, PhD, FAHA, University of Kentucky, Lexington, Kentucky

2:15
ATVB Journal Report
Alan Daugherty, PhD, DSc, FAHA, University of Kentucky, Lexington, Kentucky

2:15
Presentations by the 2019 ATVB Journal Early Career Investigator Award Recipients

2:15
Daniel Steinberg Early Career Investigator Award in Atherosclerosis/Lipoproteins
Extracellular Vesicles Secreted by Atherogenic Macrophages Transfer microRNA to Inhibit Cell Migration
Katey Rayner, PhD, FAHA, University of Ottawa Heart Institute, Ottawa, Ontario, Canada

2:45
Karl Link Early Career Investigator Award in Thrombosis
Platelets Drive Thrombus Propagation in a Hematocrit and Glycoprotein VI Dependent Manner in an in vitro Venous Thrombosis Model
Keith B. Neeves, PhD, Colorado School of Mines, Golden, Colorado

3:00
Werner Risau Early Career Investigator Award in Vascular Biology
Epigenetic Influence on Monocyte-Macrophage Mediated Inflammation in Wound Repair
Katherine A Gallagher, MD, FAHA, University of Michigan, Ann Arbor, Michigan

3:15
The Interplay of Innate and Adaptive Immune Responses in Atherosclerosis
Ziad Mallat, MD, PhD, University of Cambridge, Cambridge, United Kingdom

3:45-4:15 pm
Fourth Floor Atrium
Break and Exhibits

4:15-6:00 PM
Grand Ballroom Salon E
Concurrent Session II A
Apolipoproteins, Lipoproteins and Lipid Metabolism

Moderators:
Kerry Anne Rye, PhD, FAHA, University of New South Wales, Kensington, NSW, Australia
Peter Tontonoz, MD, PhD, UCLA, Howard Hughes Medical Institute, Los Angeles, California

4:15
New Pathways for Cellular and Systemic Lipid Transport
Peter Tontonoz, MD, PhD, UCLA, Howard Hughes Medical Institute, Los Angeles, California

Oral Abstract Presentations

4:45
Adipocyte-specific Deletion of Scavenger Receptor B Type 1 Prevents Weight Gain and Adipose Expansion with High Fat Diet in Mice
Justin Jung-Euy Kang, Ken Chambliss, UT Southwestern Medical Ctr, Dallas, TX; Kasey C. Vickers, Vanderbilt Univ, Nashville, TN; Philip W. Shaul, Chieko Mineo, UT Southwestern Medical Ctr, Dallas, TX

5:00
Apolipoprotein(a) Secretion is Modulated by Sortilin, Proprotein Convertase Subtilisin/Kexin Type 9, and Microsomal Triglyceride Transfer Protein
Justin Clark, Michael B. Botta, Univ of Western Ontario, London, ON, Canada; Marlys L. Koschinsky, Robarts Res Inst, London, ON, Canada
5:15 Trib1 Hepatic Deficiency Impairs Low Density Lipoprotein Cholesterol Clearance, and Raises Plasma Lipids Through Both Low Density Lipoprotein Receptor Dependent and Independent Mechanisms
Katherine Quiroz-Figueroa, Andrea M. Berrido, Mikhaila Smith, Cecilia Vitali, John S. Millar, Univ of Pennsylvania, Philadelphia, PA; Robert C. Bauer, Columbia Univ, New York, NY; Daniel J. Rader, Univ of Pennsylvania, Philadelphia, PA

5:30 Acute Liver-Specific Deletion of HMG-CoA Reductase Results in Depletion of Essential Isoprenoids and ER Stress
Marco De Giorgi, Kelsey E. Jarrett, Jason C. Burton, Alexandra M. Doerffer, Ayrea Hurley, Baylor Coll of Med, Houston, TX; Ang Li, Rice Univ, Houston, TX; Rachel H. Hsu, Mia Furgurson, Baylor Coll of Med, Houston, TX; Jun Han, Christoph H. Borchers, Univ of Victoria, Victoria, BC, Canada; William R. Lagor, Baylor Coll of Med, Houston, TX

5:45 Transgelin: A New Gene Involved in LDL Endocytosis in Liver Cells Identified by a Whole-genome Crispr-cas9 Screen
Diego Lucero, NHLBI-NIH, Bethesda, MD; Michael Mendelson, Boston Children's Hosp, Dept of Cardiology, Boston, MA; Promotto Islam, Lita A. Freeman, Edward B. Neufeld, Jingrong Tang, Christian Combs, Yuesheng Li, Alan T. Remaley, NHLBI-NIH, Bethesda, MD

4:15-6:00 PM
Grand Ballroom Salon F
Concurrent Session II B
Vascular Cells, Inflammation and Thrombosis

Moderators:
Craig Morrell, DVM, PhD, University of Rochester, Rochester, New York
Dennis Wolf, MD, University Heart Center Freiburg, Freiburg, Germany

4:15 The Platelet Napoleon Complex: Small Cells, Big Immune Functions
Craig Morrell, DVM, PhD, University of Rochester, Rochester, New York

Oral Abstract Presentations

4:45 Assembly of the Nlrp3 Inflammasome Regulates NET Formation and is Promoted by the Vimentin Intermediate Filament Cytoskeletal System
Patrick Münzer, Roberto Negro, Venkat Magupalli, Boston Children's Hosp, Boston, MA; Mark Kittisopikul, Amir Vahabikashi, Northwestern Univ, Chicago, IL; Sui Ling Wong, Boston Children's Hosp, Boston, MA; Hao Wu, Boston Children's Hosp, Boston, MA; Karen Ridge, Northwestern Univ, Chicago, IL; Denisa Wagner, Boston Children's Hosp, Boston, MA

5:00 Neutrophil Extracellular Trap Mediated Increased Thrombin Generation in Aging Rahil Kumar, Vijay K Sonkar, Gary L. Pierce, Sanjana Dayal, Univ of Iowa, Iowa City, IA

5:15 Adenosine Receptor Agonism Protects Against Netosis and Thrombosis in Antiphospholipid Antibody Syndrome
Ramadan Ali, He Meng, Srilakshmi Yalavarthi, Andrew P. Vreede, Paula L. Bockenstedt, David J. Pinsky, Yogendra Kanthi, Jason S. Knight, Univ of Michigan, Ann Arbor, MI

5:30 Neutrophil1 and PI GF/VEGF-B: a Novel Neuroimmune Pathway Involved in Angiotensin II-Induced Hypertension and Target Organ Damage
Daniela Carnevale, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy; Daniele Iodice, IRCCS Neuromed, Pozzilli, Italy; Sara Perrotta, Sapienza Univ, Pozzilli, Italy; Fabio Pallante, Roberta Iacobucci, Giuseppe Cifelli, IRCCS Neuromed, Pozzilli, Italy; Giuseppe Lemo, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy

5:45 Macrophage-dependent Lymphangiogenesis and Antigen Trafficking After Experimental Myocardial Infarction
Kristofer E. Glinton, Wanshu Ma, Xin Yi Yeap, Lubov S. Grigoryeva, Xiaolei Liu, Guillermo Oliver, Edward B. Thorp, Northwestern Univ, Chicago, IL
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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>4:50</td>
<td><strong>Ischemia-related Skeletal Muscle Damage in PAD: From Basic Science to Clinical Trials</strong></td>
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<td>Mary McDermott, MD, FAHA, Northwestern University, Chicago, Illinois</td>
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<td>5:00</td>
<td><strong>Poly ADP-Ribose Polymerase 1 (PARP-1) in Calf Skeletal Muscle is Associated with Walking</strong></td>
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<td>Performance in Peripheral Artery Disease</td>
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<td>Sunil Saini, PhD, University of Florida, Gainesville, Florida</td>
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<td>5:10</td>
<td><strong>The Role of Microvascular Disease in Limb Outcomes in PAD</strong></td>
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<td>Joshua Beckman, MD, FAHA, Vanderbilt University Medical Center, Nashville, Tennessee</td>
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<td>5:20</td>
<td><strong>Vascular Delivery of Insulin is Coupled to Muscle Metabolism by Extracellular Matrix-integrin</strong></td>
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<td>David Cappel, BA, Vanderbilt University Medical Center, Nashville, Tennessee</td>
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<td>5:30</td>
<td><strong>Current Controversies in Sexual Dimorphism of Aortopathies</strong></td>
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<td>Alan Daugherty, PhD, FAHA, University of Kentucky, Lexington, Kentucky</td>
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<tr>
<td>5:40</td>
<td><strong>Sexual Dimorphism of Experimental Thoracic Aortic Diseases</strong></td>
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<td>Jeff Chen, BS, University of Kentucky, Lexington, Kentucky</td>
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<td>5:50</td>
<td><strong>Q&amp;A/Discussion</strong></td>
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**Glouchester/Back Bay Poster Session 1 and Reception**

**WEDNESDAY, MAY 15**

7:00 AM
Fourth Floor Atrium
Registration, Continental Breakfast and Exhibits

7:00-8:00 AM
Grand Ballroom Salons A-D
Early Career Training 2
Honing Skills Necessary for Difficult Situations
Organized in cooperation with the ATVB Early Career Committee

8:00 AM
Perivascular Cell Plasticity in Metastatic Progression
Rosandra N. Kaplan, MD, National Cancer Institute, Bethesda, Maryland

8:30 AM
Clonal Hematopoiesis as a Driver of Inflammation and Cardiovascular Disease
Siddhartha Jaiswal, MD, PhD, Stanford University, Stanford, California

9:00 AM
Cardiovascular Disease and Breast Cancer: Cross-disease Communication
Kathryn J. Moore, PhD, FAHA, New York University Medical Center, New York, New York

9:30–10:00 AM
Fourth Floor Atrium
Speakers Corner, Break and Exhibits

10:00-11:45 AM
Grand Ballroom Salon E
Concurrent Session III A
Therapeutic Targets in Atherosclerosis

Moderators:
Andrew J. Murphy, PhD, Baker Heart and Diabetes Institute, Melbourne, Australia
Gissette Reyes-Soffer, MD, Columbia University Medical Center, New York, New York

10:00 AM
The Role of Macrophage Metabolism in Atherosclerosis
Andrew J. Murphy, PhD, Baker Heart and Diabetes Institute, Melbourne, Australia

10:30 AM
Activation of Oxidized Soluble Guanylate Cyclase Slows Progression of Aortic Valve Calcification
Bin Zhang, Carolyn Roos, Michael Hagler, Grace Verzosa, Heyu Zhang, Hartzell Schaiff, Maurice Sarano, Jordan Miller, Mayo Clinic, Rochester, MN

10:45 AM
Supplementation with the Sialic Acid Precursor N-acetyl-D-Mannosamine Breaks the Link Between Obesity and Hypertension
Jun Peng, Ctr for Pulmonary and Vascular Biology, Dept of Pediatrics, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Wanpen Vongpatanasin, Hypertension Section, Div of Cardiology, Dept of Internal Med, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Ivan S. Yuhanna, Subhashis Banerjee, Keiji Tanigaki, Anastasia Sacharidou, Ctr for Pulmonary and Vascular Biology, Dept of Pediatrics, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Haiyan Chu, Ctr for Pulmonary and Vascular Biology, Dept of Pediatrics, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Nathan C. Sundgren, Ken L. Chambliss, Chieko Mineo, Philip W. Shaul, Ctr for Pulmonary and Vascular Biology, Dept of Pediatrics, Univ of Texas Southwestern Medical Ctr, Dallas, TX;
**Program Agenda**

11:00 Improving Drug-eluting Stents Using Novel Cell-targeting Ligands  
Li-Hsien Lin, William H. Thiel, Univ of Iowa, Div of Cardiovascular Med, Iowa City, IA

11:15 Stent-based Gene Therapy of Restenosis with an Oxidation-resistant Apolipoprotein A1 Mutant  

11:30 Targeting Micrornas to Block Abdominal Aortic Aneurysm Progression in a Novel Yucatan Ldlr-KOMini-pig Model  

10:00-11:45 am  
**Grand Ballroom Salon F**  
**Concurrent Session III B**  
**Blood Coagulation and Antithrombotic Therapy**

**Moderators:**  
Alan E. Mast, MD, PhD, Blood Center of Wisconsin, Milwaukee, Wisconsin  
A. Phillip Owens, PhD, University of Cincinnati, Cincinnati, Ohio

10:00 Platelet TFPI, an Anticoagulant Protein in a Procoagulant Cell  
Alan E. Mast, MD, PhD, Blood Center of Wisconsin, Milwaukee, Wisconsin

10:00-11:50 am  
**Grand Ballroom Salon G**  
**Concurrent Session III C**  
**Translational Science in Vascular Medicine: Vascular Dysfunction**  
Organized in cooperation with the Council on Peripheral Vascular Disease, and the American Venous Forum.

**Moderators:**  
Yabing Chen, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama  
Peter Henke, MD, FAHA, University of Michigan, Ann Arbor, Michigan  
Lars Maegdefessel, MD, PhD, Conference Vice Chair, Technical University Munich, Munich, Germany

10:00 Modular Regulation of Vascular Stiffness and Aging  
Yabing Chen, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama

**Oral Abstract Presentations**

10:30 Aging Impairs Wound Healing by Hematopoietic Stem Cell Autonomous Mechanism  
Jinglian Yan, Guodong Tie, Amanda Tutto, Kate Hayes, Lyne Khair, Louis Messina, UMass Medical school, Worcester, MA

10:45 Beta2 Microglobulin and Transforming Growth Factor-Beta Differentially Polarize Monocytes  
Zachary Hilt, Sara Ture, Daphne Pariser, Scott Cameron, Craig Morrell, Univ of Rochester, Rochester, NY

11:00 Impaired Primary Hemostasis in Patients on Cardiopulmonary Bypass  
Maria Bortot, Katrina Bark, Keith Neves, Nathan Clendenen, Univ of Colorado, Aurora, CO; David Jr. Bark, Colorado State Univ, Fort Collins, CO; Jorge DiPaola, Univ of Colorado, Aurora, CO

11:15 An Anticoagulant Vascular Domain Contributes to Cerebral Hemorrhages During Vascular Malformations  
Miguel A. Lopez-Ramirez, Preston Hare, Shady Soliman, Angela Pham, Romuald Girard, Tine Wyseure, Issam A. Awad, Laurent O. Mosnier, Mark H. Ginsberg, Univ of California San Diego, La Jolla, CA

11:30 Apoer2 Drives the Maternal Hypertension and Other Complications of Pregnancy in the Antiphospholipid Syndrome (aps)  
Haiyan Chu, Anastasia Sacharidou, An B. Nguyen, UTSW, Dallas, TX; David R. Natale, UCSD, San Diego, CA; Philip Shaul, Chieko Mineo, UTSW, Dallas, TX
10:30  New Concepts in Vascular Calcification
Mechanisms and Regulation
Cecilia Giachelli, PhD, University of Washington,
Seattle, Washington

Rapid Fire Oral Abstract Presentations

11:00  Microbial Colonization Restores Neointimal
Hyperplasia Development After Arterial
Injury in Germ-Free Mice
Edmund B. Chen, Katherine E. Shapiro,
Northwestern Univ, Feinberg Sch of Med,
Chicago, IL; Thomas Kuntz, Betty Theriault,
Univ of Chicago, Chicago, IL; Michael J.
Nooromid, Kelly H Wun, Northwestern Univ,
Feinberg Sch of Med, Chicago, IL; Vanessa
Leone, Katharine Harris, Univ of Chicago,
Chicago, IL; Qun Jiang, Northwestern Univ,
Feinberg Sch of Med, Chicago, IL; Melanie
Spedale, Univ of Chicago, Chicago, IL; Liqun
Xiong, Owen M Eskandari, Northwestern Univ,
Feinberg Sch of Med, Chicago, IL; Eugene B.
Chang, Univ of Chicago, Chicago, IL; Karen J.
Ho, Northwestern Univ, Feinberg Sch of Med,
Chicago, IL

11:05  Early Restoration of Blood Flow Reduces
Venous Thrombus Burden and Vein Wall
Scarring Following DVT: Implications for
Preventing the Post-Thrombotic Syndrome
Wenzhu Li, Chase W. Kessinger, Makoto Orii,
Jie Cui, Stephan M. Kellnberger, Adam W.
Mauskapf, Lang Wang, Xiaoxin Zheng,
Ahmed Tawakol, Peter Libby, Peter K. Henke,
Farouc A. Jaffer, CVRC, MGH, Boston, MA

11:10  CD73 Deficiency and Peripheral Artery
Calcification
Claire Chu, William J Moorhead III, John
Callahan IV, Camille K Boutford, Swastika Sur,
Univ of Pittsburgh, Pittsburgh, PA; Jason N.
MacTaggart, Alexey Kamenskiy, Univ of
Nebraska Medical Ctr, Omaha, NE; Cynthia
St. Hilaire, Univ of Pittsburgh, Pittsburgh, PA

11:15  Host Genotype-shaped Gut Microbiome
Modulate Atherosclerosis Development in
Mice
Kazuyuki Kasahara, Qijun Zhang, Eugenio I.
Vivas, Univ Wisconsin Madison, Madison, WI;
Aldons J. Lusis, Univ California Los Angeles,
Los Angeles, CA; Federico E. Rey, Univ
Wisconsin Madison, Madison, WI

11:20  Trans-thrombus Leukocyte Migration: A
Novel Mode of Neutrophil Extravasation
Following Vascular Injury
Chaojun Tang, Lei Wang, Soochow Univ,
Suzhou, China; Shuchu Gupta, Chelsea N.
Matzko, Lawrence F. Brass, Univ of
Pennsylvania, Philadelphia, PA; Li Zhu,
Soochow Univ, Suzhou, China; Timothy J.
Stalker, Univ of Pennsylvania, Philadelphia, PA

11:25  Cd4+ T Cell Deficiency of KLF10 Impairs
Blood Flow and Neovascularization in
Response to Tissue Hypoxia
Akm Wara, Brigham and Women’s Hosp,
Harvard Medical Sch, Boston, MA

11:30  Correlation of Clinical Risk Scores for
Stroke with Carotid Plaque Gene Expression
Profiles in Atherosclerotic Patient
Katarina Wadén, Mariette Lengquist, Gabrielle
Paulsson-Berne, Ulf Hedin, Joy Roy, Ljubica
Matic, Karolinska Inst, Stockholm, Sweden

11:35  Heterozygous Missense Mutations in
PLEKH2 Predispose to Thoracic Aortic
Aneurysms and Dissections
Amélie Pinard, Xiaoyan Qi, Guannan Zhou,
Fen Wang, Gilbert R Upchurch Jr, Zhihua Jiang,
Univ of Florida, Gainesville, FL

11:40  Inhibition of Toll-Like Receptor 7
Attenuates Aortic Pathologies Induced
Smooth Muscle Cell Specific Tgfbr1
Deletion
Xiaoyan Qi, Guannan Zhou, Fen Wang,
Gilbert R Upchurch Jr, Zhihua Jiang, Univ of
Florida, Gainesville, FL

11:45  Efferocytosis-stimulating Nanoparticles
for Precision Atherosclerosis Therapy
Alyssa M. Flores, Jianqin Ye, Niloufar
Hosseini-Nassab, Kai Uwe Jarr, Xingjun Zhu,
Bryan R. Smith, Nicholas J. Leeper, Stanford
Univ, Stanford, CA

11:45 AM-1:00 PM
Grand Ballroom Salons I-K
Next-Generation Technology Bootcamps:
Single Cell Sequencing (ticket required)
Lunch on your own.
Organized in cooperation with the Council on Genomic
and Precision Medicine.

11:45 AM-1:00 PM
Grand Ballroom Salons C-D
TBD
Organized in cooperation with the ATVB Early Career
Committee and ATVB Diversity Committee.

11:45 AM-1:45 PM
Or lunch on your own
**Program Agenda** (continued)

1:45-3:45 PM  
**Grand Ballroom Salons E-G**  
**Plenary Session IV**  
**Young Investigator Award Competition**

**Moderators:**  
Coleen A. McNamara, MD, FAHA, University of Virginia, Charlottesville, Virginia  
Marvin T. Nieman, PhD, FAHA, Case Western Reserve University, Cleveland, Ohio

**Kenneth M. Brinkhous Young Investigator Prize in Thrombosis Competition**

1:45  
**Neonatal Coagulopathy: Investigating Mechanisms and Establishing Preclinical Models**  
Ashley Brown, Kimberly Nellenbach, Nina Guzzetta, North Carolina State Univ, Raleigh, NC

2:00  
**The Contribution of Antithrombin-mediated FIXa Inhibition to the Regulation of Clot Formation in vivo**  
Lacramioara Ivanciu, Valder Arruda, Rodney M. Camire, Children's Hosp of Philadelphia/Univ of Pennsylvania, Philadelphia, PA

2:15  
**Extended Stability of Activated TAFI Normalizes Vascular Dysfunction in Hemophilic Joint Disease in Mice**  
Tine Wyseure, Ruchi Agashe, The Scripps Res Inst, La Jolla, CA; Annette von Drygalski, Univ of California, San Diego, La Jolla, CA; Scott Henderson, Laurent O Mosnier, The Scripps Res Inst, La Jolla, CA

2:30  
**Tipping the Balance of Hepatocyte-Derived tPA and PAI1 Contributes to Defective Fibrinolysis in Obesity**  
Ze Zheng, Ira Tabas, Columbia Univ Medical Ctr, New York City, NY

Irvine H. Page Young Investigator Research Award Competition

2:45  
**ApoC-III Stimulates Intestinal Regulatory T Cells and Intestinal Tolerance: Is Lipoprotein Triglyceride a Critical Regulator of Tregs?**  
Alison B. Kohan, Univ of Connecticut, Storrs, CT

3:00  
**Key Role of Cytokines in Regulation of Intestinal Microbial Homeostasis, Inflammation and Atherosclerosis**  
Allia Fatkhullina, Iulia Peshkova, Turan Aghayev, Ekaterina Koltsova, Fox Chase Cancer Ctr, Philadelphia, PA

3:15  
**Chronic Obstructive Pulmonary Disease Promotes Aortic Aneurysm by Modulating Mitochondrial Fission in Transmural Macrophages**  
Ludovic Boytard, Tarik Hadi, George Miller, Lior Zangi, Bhama Ramkhelawon, NYU Medical Ctr, New York, NY

3:30  
**Single Cell Transcriptional Landscape of Atherosclerosis in Mice and Humans Reveals a Critical Role for Coronary Disease Gene TCF21**  
Robert Wirka, Dhananjay Wagh, David Paik, Milos Pjanic, Trieu Nguyen, Clint Miller, Ramen Kundu, Manabu Nagao, John Coller, Tiffany Koyano, Robyn Fong, Joseph Woo, Boxiang Liu, Stephen Montgomery, Joseph Wu, Kuixi Zhu, Rui Chang, Melissa Alamprese, Michelle Tallquist, Juyong Kim, Thomas Quertermous, Stanford Univ, Palo Alto, CA

3:45-4:15 PM  
**Atrium Foyer**  
Break and Exhibits

4:15-6:00 PM  
**Grand Ballroom Salon E**  
**Concurrent Session IV A**  
**Metabolic Disorders and Atherosclerosis**

**Moderators:**  
Rebecca A. Haeusler, PhD, Columbia University, New York, New York  
Katey Rayner, PhD, FAHA, University of Ottawa Heart Institute, Ottawa, Ontario, Canada

4:15  
**New Pathways Linking Insulin Signaling with Cholesterol and Lipoprotein Metabolism**  
Rebecca A. Haeusler, PhD, Columbia University, New York, New York

Oral Abstract Presentations

4:45  
**Atheroprotective B-1 Cells are Abundant in Perivascular Adipose Tissue in the Aortic Arch Region and Decline with Aging as Atherosclerosis Develops**  
Prasad Srikakulapu, Aditi Upadhye, John Davy, Melissa Marshal, Coleen McNamara, Univ of Virginia, Charlottesville, VA
Program Agenda (continued)

5:00  The Role of Macrophage MerTK and its Cleavage in Nonalcoholic Steatohepatitis
Bishuang Cai, Columbia Univ, New York, NY; Paola Dongiovanni, Fondazione IRCCS Ca’ Granda, Milano, Italy; XiaoBo Wang, Columbia Univ, New York, NY; Kathleen Corey, Massachusetts General Hosp, Boston, MA; Ze Zheng, Columbia Univ, New York, NY; Raymond Chung, Massachusetts General Hosp, Boston, MA; Raymond Birge, Rutgers Univ, Newark, NJ; Luca Valenti, Fondazione IRCCS Ca’ Granda, Milano, Italy; Ira Tabas, Columbia Univ, New York, NY

5:15  Macrophage-derived 27-hydroxycholesterol Promotes Atherosclerosis by Activating Endothelial Inflammation via ERα, Septin 11, and Jnk Kinase
Linzhang Huang, Lin Xu, Mohamed Ahmed, Bonne Thompson, Jeffrey McDonald, Univ of Texas Southwestern ME, Dallas, TX; Erik Nelson, Univ of Illinois at Urbana-Champaign, Urbana, IL; Sunghie Park, Donald P. McDonnell, Duke Univ Sch of Med, Durham, NC; Chieko Mineo, Paul W Shaul, Univ of Texas Southwestern ME, Dallas, TX

5:30  Sexual Dimorphism of Atherosclerosis and Plasma Lipids: Analysis of Complex Traits in a Diversity Outbred F1 Mouse Population
Myungsuk Kim, Erik Gertz, Alexa Rindy, Excel Que, Nazmul Huda, Brian Bennett, USDA-ARS, Davis, CA

5:45  Adipocyte-Specific Tribbles1 Regulates Adiponectin Secretion and Plasma Lipids
Elizabeth Ha, RuiFeng Ling, Jian Cui, Robert Bauer, Columbia Univ, New York, NY

4:15-6:00 PM
Grand Ballroom Salon F
Concurrent Session IV B Platelet Production, Signaling and Function

Moderators:
Katya Ravid, MD, PhD, Whitaker Cardiovascular Institute, Boston University School of Medicine, Boston, Massachusetts
Jing Li, PhD, University of Illinois at Chicago, Chicago, Illinois

4:15  Malignancy-Associated Platelet Dysfunction: Leads to Mechanisms
Katya Ravid, MD, PhD, Whitaker Cardiovascular Institute, Boston University School of Medicine, Boston, Massachusetts

Oral Abstract Presentations

4:45  Quantitative Phosphoproteomic Profiling and Causality Pathway Mapping the Platelet Response to Vascular Injury

5:00  An Integrin αIIbβ3 Intermediate Affinity State Mediates Biomechanical Platelet Aggregation
Yunfeng Chen, The Scripps Res Inst, San Diego, CA; Lining Ju, Heart Res Inst, The Univ of Sydney, Camperdown, Australia; Fangyuan Zhou, Jiexi Liao, Georgia Inst of Technology, Atlanta, GA; Lingzhou Xue, Dept of Statistics, Pennsylvania State Univ, University Park, PA; Qian Su, Dayong Jin, Inst for Biomedical Materials and Devices (IBMD), Faculty of Science, Univ of Technology Sydney, Sydney, Australia; Yuping Yuan, Heart Res Inst, The Univ of Sydney, Camperdown, Australia; Hang Lu, Sch of Chemical & Biomolecular Engineering, Georgia Inst of Technology, Atlanta, GA; Shaun Jackson, Heart Res Inst, The Univ of Sydney, Camperdown, Australia; Cheng Zhu, Georgia Inst of Technology, Atlanta, GA

5:15  Attenuation of Platelet Activation and Thrombus Formation by Tannic Acid: Inhibition of Protein Disulfide Isomerase
Qing Li, Tao You, Li Zhu, Soochow Univ, Suzhou, China

5:30  The Role of Platelets in Response to Human Influenza Infection

5:45  Mitogen Activation Protein Kinase-interacting Kinase 1 Regulates Platelet Production and Activation
Bhanu Kanth Manne, Robert Campbell, Elizabeth Middleton, Seema Bhatlaker, Univ of Utah, Salt Lake City, UT; Rikiro Fukunaga, Osaka Univ of Pharmaceutical Sciences, Osaka, Japan; Christopher Proud, South Australian Health and Medical Res Inst, Adelaide, Australia; Andrew Weyrich, Matthew Rondina, Univ of Utah, Salt Lake City, UT

4:15-6:00 PM
Grand Ballroom Salon G
Concurrent Session IV C Translational Science of Vascular Medicine: Pro/Con Debate – The Utility of Genomics in the Future of Medicine
Organized in cooperation with the Council on Genomics and Precision Medicine, and the Council on Peripheral Vascular Disease.

Moderators:
Kiran Musunuru, MD, PhD, MPH, FAHA, University of Pennsylvania, Philadelphia, Pennsylvania
Aruna Pradhan, MD, MPH, FAHA, Brigham and Women’s Hospital, Boston, Massachusetts
Program Agenda (continued)

Oral Abstract Presentations

4:15   **Blood Progenitor Endothelial Cells-on-a-chip: A Disease and Patient-specific Cell Source for Vascular Medical Devices**
Tanmay Mathur, Texas A&M Univ, College Station, TX; Travis W. Hein, Texas A&M Health Science Ctr, Temple, TX; Jonathan D. Flanagan, Baylor Coll of Med, Houston, TX; **Abhishek Jain**, Texas A&M Univ, College Station, TX

4:30: **Human Genetics in Vascular Mechanotransduction and Metabolism**
Matthew Krause, Univ of Chicago, Chicago, IL; Mete Civelek, Univ of Virginia, Charlottesville, IL; Casey Romanoski, Univ of Arizona, Tucson, AZ; **Yun Fang**, Univ of Chicago, Chicago, IL

Pro/Con Debate

4:45   **Pro: Precision Medicine – What Do We Really Mean?**
Calum A. MacRae, MD, PhD, FAHA, Brigham and Women’s Hospital, Harvard Medical School, Boston, Massachusetts

5:05   **Con: Genomics-driven Precision Medicine Will Not Move the Needle on Cardiovascular Health**
Michael J. Joyner, MD, Mayo Clinic, Rochester, Minnesota

5:25   Discussion/Audience Input

8:00-10:30 PM
Glouchester/Back Bay Poster Session 3 and Continental Breakfast

THURSDAY, MAY 16

8:00 AM
Fourth Floor Atrium Registration

7:30-8:30 AM
Grand Ballroom Salons E-F SDG/CDA Showcase
Organized by the ATVB and PVD Early Career Committees.

Moderators:
Luke P. Brewster, MD, PhD, FAHA, Emory University, Atlanta, Georgia
Thomas A. Vallim, PhD, University of California-Los Angeles, Los Angeles, California

7:30   **YAP and TAZ Limit Cytoskeletal and Focal Adhesion Maturation to Enable Persistent Cell Motility and Vasculogenesis**
Joel Boerckel, PhD, University of Pennsylvania, Philadelphia, Pennsylvania

7:45   **Epigenetic Control of Vascular Smooth Muscle Cell Identity and Lineage Memory**
Delphine Gomez, University of Pittsburgh, Pittsburgh, Pennsylvania

8:00   **TBD**
Rebecca Levit, MD, Emory University, Atlanta, Georgia

8:15   **Flow Dependent Endothelial Cell Polarization**
Julia J. Mack, PhD, University of California Los Angeles, Los Angeles, California

8:30-10:30 AM
Glouchester/Back Bay Poster Session 3 and Continental Breakfast

10:30 AM–NOON
Grand Ballroom Salons E
Plenary Session V
Invited Lecture Series

Moderators:
Mary G. Sorci-Thomas, PhD, FAHA, Medical College of Wisconsin, Milwaukee, Wisconsin
Nancy R. Webb, PhD, FAHA, Conference Chair, University of Kentucky, Lexington, Kentucky

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

10:30   **Immunomodulatory Actions of Cholesterol Biosynthetic Intermediates on Macrophage Activation During Atherosclerosis**
Carlos Fernández-Hernando, PhD, Yale University School of Medicine, New Haven, Connecticut

Keynote Lecture

11:00   **Vascular Patterning in Development and Disease**
Anne Eichmann, PhD, Yale University School of Medicine, New Haven, Connecticut

Distinguished Lecture

11:30   **Genetic Basis for Myocardial Infarction**
Sekar Kathiresan, MD, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts

NOON
Closing Remarks/Conference Adjourns
Membership provides you...

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## Molecular, Developmental, and Cellular Biology of Vessel Wall
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## Population Science, Genetics, and Genomics in Vascular Discovery
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## Immune Mechanisms of Atherosclerosis
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## Immunity and Inflammation in Vascular Biology
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## Inflammation and Hemostasis
- Oral Abstracts: 118, 129, 137, 145
- Poster Abstracts: 285, 286, 287, 288, 479, 481, 482, 483, 670, 671, 672, 673, 675
Oral Abstracts

100  The Non-Conserved Long Noncoding RNA, RP11-184M15.1, Regulates Macrophage Phenotype and Associates with Human Coronary Atherosclerosis

**Esther Cynn**, Ying Wang, Hanrui Zhang, Chenyi Xue, Jianting Shi, Daniel Y. Li, Muredach Reilly, Columbia Univ Medical Ctr, New York, NY


101  Single-cell Profiling of Atherosclerotic Tissue Identifies T Cell Subsets Associated with Cerebrovascular Events


102  MicroRNA-33 Inhibition Reprograms Monocyte/macrophage Dynamics in Atherosclerosis to Promote Plaque Regression

**Milessa Silva Afonso**, Monika Sharma, Paul Martin Schlegel, Coen Van Solingen, Graeme J Koelwyn, New York Univ, New York, NY; Mireille Ouimet, Dept of Biochemistry, Microbiology and Immunology, Univ of Ottawa Heart Inst, Ottawa, ON, Canada; Lauren Beckett, Karishma Rahman, Edward A Fisher, Kathryn J Moore, New York Univ, New York, NY


103  Vascular Smooth Muscle Cell PGC1alpha Deletion is Atheroprotective in vivo

**Raymundo A Quintana**, Hassan Sellak, Derick Okwan-Duodu, Gijii Joseph, Holly C Williams, Felipe Paredes, Alejandro San Martin, Bernard Lassegue, Div of Cardiology, Dept of Med, Emory Univ Sch of Med, Atlanta, GA; W Robert Taylor, Div of Cardiology, Dept of Med, Emory Univ Sch of Med; Atlanta Veterans Affairs Medical Ctr and Dept of Biomedical Engineering, Georgia Inst of Technology, Atlanta, GA


104  Early Rescue of Lymphatic Function Limits Atherosclerosis Progression in Ldlr-/- Mice

**Andreea Milasan**, Ali Smaani, Catherine Martel, Montreal Heart Inst, Montreal, QC, Canada

A. Milasan: None. A. Smaani: None. C. Martel: None.

105  Smooth Muscle Cell-derived Vascular Progenitor Cells Promote Arterial Remodeling and Fibrosis Through Loss of Hedgehog/Wnt/B-catenin/Klf4 Activity

**Sizhao Lu**, Austin J Jolly, Keith A Strand, Karen S Moulton, Marie F Mutryn, Rebecca M Tucker, Raphael A Nemenoff, Mary C Weiser-Evans, Univ of Colorado Anschutz Medical Campus, Aurora, CO


106  Long Noncoding RNA (ECAL-1) Acting as a miR-23a Sponge Protects its Target Tight Junction Protein Cldn5b to Regulate Zebrafish Cerebral Vascular Integrity

Fang-Fang Li, Yu-Lai Liang, Qing Jing, Shanghai Inst of Nutrition and Health, CAS, Shanghai, China

F. Li: None. Y. Liang: None. Q. Jing: None.

107  Smooth Muscle α-actin Translocates to the Nucleus and Participates in Chromatin Remodeling at Smooth Muscle Contractile Gene Promoters

**Callie S Kwarter**, Jiuyan Chen, Xueyan Duan, UTHSC-Houston, Houston, TX; Shuangtao Ma, Michigan State Univ, East Lansing, MI; Charis Wang, Dianna Milewicz, UTHSC-Houston, Houston, TX


108  LMO7, a Negative Feedback Regulator of TGF-beta Signaling and a New Player in Vascular Diseases

**Yi Xie**, Allison C Ostriker, Yale Univ, New Haven, CT; Jun Yu, Temple Univ, Philadelphia, PA; John Hwa, Kathleen A Martin, Yale Univ, New Haven, CT


109  Yes-associated Protein Upregulates Platelet Derived Growth Factor Receptor Beta to Promote Vascular Smooth Muscle Cell Proliferation and Neointima Formation

**Islam Osman**, Augusta Univ, Augusta, GA; Luyi Yu, Xiuhua Kang, The First Affiliated Hosp of Nanchang Univ, Nanchang, China; Abu Ahmed, Guoqing Hu, Augusta Univ, Augusta, GA; Wei Zhang, The First Affiliated Hosp of Nanchang Univ, Nanchang, China; Jiilang Zhou, Augusta Univ, Augusta, GA


110  Genetic Analysis Implicates LDL Cholesterol Reduction and Plasminogen Activator-inhibitor 1 Antagonism as Therapeutic Interventions for Venous Thromboembolism

**Derek Klarin**, Emma Buserikell, Massachusetts General Hosp, Boston, MA; Renea Judy, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Julie Lynch, Dept of Veterans Affairs, Salt Lake City Health Care Syst, Salt Lake City, UT; Krishna Aragam, Mark Chaffin, Mary Haas, Broad Inst of Harvard and MIT, Cambridge, MA; Themiostoles
Hematopoietic Nox2 Regulates Susceptibility to Venous Thrombosis in Mice

Vijay Sonkar, Rahul Kumar, Melissa Jensen, Univ of Iowa, Iowa City, Iowa, IA; Sanjana Dayal, Univ of Iowa, Iowa City, Iowa, IA; IA

V. Sonkar: None. R. Kumar: None. M. Jensen: None. S. Dayal: None.

Time Course and Subsequent Outcomes of Major Bleeding Events According to Bleeding Site in Patients Receiving Anticoagulant Therapy for Venous Thromboembolism: Insights from the RIETE Registry

Behnood Bikdeli, Columbia Univ Medical Ctr, New York, NY; José Antonio Nieto, Dept of Internal Med. Hosp Virgen de la Luz, Cuenca, Spain; Fares Moustafa, Dept of Emergency. Clermont-Ferrand Univ Hosp, Clermont-Ferrand, France; Núria Ruiz-Giménez, Hosp Univirio de La Princesa, Madrid, Spain; Alicia Lorenzo, Hosp Univirio La Paz, Madrid, Spain; Sebastian Schellong, Municipal Hosp of Dresden Friedrichstadt, Dresden, Germany; Silvia Soler, Hosp Olot i Comarcal de la Garrotxa, Gerona, Spain; María Del Valle Morales, Hosp del Tajo, Madrid, Spain; Marian Bosevski, Inst for Cardiovascular Diseases. Faculty of Med, Clinical Ctr, Skopiej, Macedonia, The Former Yugoslav Republic of; Olga Gavin, Dept of Haematology. Hosp Clinico Univirio Lozano Blesa, Zaragoza, Spain; Manuel Monreal, Hosp Univirio Germans Trias i Pujol, Badalona, Barcelona, Spain

B. Bikdeli: Research Grant; Significant; Dr. Bikdeli was supported by the National Heart, Lung, and Blood Institute, National Institutes of Health, through grant number T32 HL007854. Other; Significant; Dr. Bikdeli reports that he has been a consulting expert (on behalf of the plaintiff) for litigation related to a specific type of IVC filters.


Adipocyte-specific Deletion of Scavenger Receptor B Type 1 Prevents Weight Gain and Adipose Expansion with High Fat Diet in Mice

Justin Jung-Euy Kang, Ken Chambliss, UT Southwestern Medical Ctr, Dallas, TX; Kasey C Vickers, Vanderbilt Univ, Nashville, TN; Philip W Shaul, Chieko Mineo, UT Southwestern Medical Ctr, Dallas, TX


Apolipoprotein(a) Secretion is Modulated by Sortilin, Proprotein Convertase Subtilisin/Kexin Type 9, and Microsomal Triglyceride Transfer Protein

Justin Clark, Michael B Boffa, Univ of Western Ontario, London, ON, Canada; Marlys L Koschinsky, Robarts Res Inst, London, ON, Canada

J. Clark: None. M.B. Boffa: Employment; Significant; University of Western Ontario. Research Grant; Significant; Natural Sciences and Engineering Research Council. Other Research Support; Modest; Ionis. M.L. Koschinsky: Employment; Significant; University of Western Ontario. Research Grant; Significant; Natural Sciences and Engineering Research Council. Heart and Stroke Foundation of Ontario, Pfizer/ASPIRE Cardiovascular. Other Research Support; Significant; Eli Lilly, Sanofi/Regeneron, Cardovax. Speakers Bureau; Modest; Amgen. Honoraria; Modest; Eli Lilly. Consultant/Advisory Board; Modest; Amgen.

Trib1 Hepatic Deficiency Impairs Low Density Lipoprotein Cholesterol Clearance, and Raises Plasma Lipids Through Both Low Density Lipoprotein Receptor Dependent and Independent Mechanisms

Katherine Quiroz-Figueroa, Andrea M Berrido, Mikhaila Smith, Cecilia Vitali, John S Millar, Univ of Pennsylvania, Philadelphia, PA; Robert C Bauer, Columbia Univ, New York, NY; Daniel J Rader, Univ of Pennsylvania, Philadelphia, PA

116 Acute Liver-Specific Deletion of HMG-CoA Reductase Results in Depletion of Essential Isoprenoids and ER Stress
Marco De Giorgi, Kelsey E Jarrett, Jason C Burton, Alexandria M Doerfler, Ayrea Hurley, Baylor Coll of Med, Houston, TX; Ang Li, Rice Univ, Houston, TX; Rachel H Hsu, Mia Furgurson, Baylor Coll of Med, Houston, TX; Jun Han, Christoph H Borchers, Univ of Victoria, Victoria, BC, Canada; William R Lagor, Baylor Coll of Med, Houston, TX

117 Transgelin: A New Gene Involved in LDL Endocytosis in Liver Cells Identified by a Whole-genome Crisp-r-cas9 Screen
Diego Lucero, NHLBI-NIH, Bethesda, MD; Michael Mendelson, Boston Children’s Hosp, Dept of Cardiology, Boston, MA; Promotto Islam, Lita A Freeman, Edward B Neufeld, Jingrong Tang, Christian Combs, Yuersheng Li, Alan T Remaley, NHLBI-NIH, Bethesda, MD

118 Assembly of the Nlrp3 Inflammasome Regulates NET Formation and is Promoted by the Vimentin Intermediate Filament Cytoskeletal System
Patrick Münzer, Roberto Negro, Venkat Magupalli, Boston Childrens Hosp, Dept of Cardiology, Boston, MA; Mark Kittisopikul, Amir Vahabikashi, Northwestern Univ, Chicago, IL; Siu Ling Wong, Boston Childrens Hosp, Boston, MA; Robert Goldman, Northwestern Univ, Chicago, IL; Hao Wu, Boston Childrens Hosp, Boston, MA; Karen Ridge, Northwestern Univ, Chicago, IL; Denisa Wagner, Boston Childrens Hosp, Boston, MA

119 Neutrophil Extracellular Trap Mediated Increased Thrombin Generation in Aging
Rahul Kumar, Vijay K Sonkar, Gary L Pierce, Sanjana Dayal, Univ of Iowa, Iowa City, IA
R. Kumar: None. V.K. Sonkar: None. G.L. Pierce: None. S. Dayal: None.

120 Adenosine Receptor Agonism Protects Against Netosis and Thrombosis in Antiphospholipid Antibody Syndrome
Ramadan Ali, He Meng, Sri Lakshmi Yalavarthi, Andrew P Vreede, Paula L Bockenstedt, David J Pinsky, Yogendra Kanthi, Jason S Knight, Univ of Michigan, Ann Arbor, MI

121 Neurophilin1 and PIGF/VEGF-B: a Novel Neuroimmune Pathway Involved in Angiotensin II-Induced Hypertension and Target Organ Damage
Daniela Carnevale, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy; Daniele Iodice, IRCCS Neuromed, Pozzilli, Italy; Sara Perrotta, Sapienza Univ, Pozzilli, Italy; Fabio Pallante, Roberta Iacobucci, Giuseppe Cifelli, IRCCS Neuromed, Pozzilli, Italy; Giuseppe Lembo, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy

122 Macrophage-dependent Lymphangiogenesis and Antigen Trafficking After Experimental Myocardial Infarction
Kristofer E Glinton, Wanshu Ma, Xin Yi Yeap, Lubov S Grigoryeva, Xiaolei Liu, Guillermo Oliver, Edward B Thorp, Northwestern Univ, Chicago, IL
K.E. Glinton: None. W. Ma: None. X. Yeap: None. L.S. Grigoryeva: None. X. Liu: None. G. Oliver: None. E.B. Thorp: None.

123 Activation of Oxidized Soluble Guanylate Cyclase Slows Progression of Aortic Valve Calcification
Bin Zhang, Carolyn Roos, Michael Hagler, Grace Verzosa, Heyu Zhang, Hartzell Schaff, Maurice Sarano, Jordan Miller, Mayo Clinic, Rochester, MN

124 Supplementation with the Sialic Acid Precursor N-acetyl-D-Mannosamine Breaks the Link Between Obesity and Hypertension
Jun Peng, Ctr for Pulmonary and Vascular Biology, Dept of Pediatrics, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Wanpen Vongpatanasin, Hypertension Section, Div of Cardiology, Dept of Internal Med,Univ of Texas Southwestern Medical Ctr, Dallas, TX; Ivan S Yuhanna, Subhashis Banerjee, Keiji Tanigaki, Anastasia Sacharidou, Ctr for Pulmonary and Vascular Biology, Dept of Pediatrics, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Haiyan Chu, Ctr for Cardiology, Dept of Internal Med,Univ of Texas Southwestern Medical Ctr, Dallas, TX

125 Improving Drug-eluting Stents Using Novel Cell-targeting Ligands
Li-Hsien Lin, William H Thiel, Univ of Iowa, Div of Cardiovascular Med, Iowa City, IA
L. Lin: None. W.H. Thiel: None.
126
Stent-based Gene Therapy of Restenosis with an Oxidation-resistant Apolipoprotein A1 Mutant

127
Targeting Micrornas to Block Abdominal Aortic Aneurysm Progression in a Novel Yucatan Ldlr-KOMini-pig Model

128
Aging Impairs Wound Healing by Hematopoietic Stem Cell Autonomous Mechanism
Jinglian Yan, Guodong Tie, Amanda Tutto, Kate Hayes, Lyne Khar, Louis Mass, UMass Medical school, Worcester, MA
J. Yan: None. G. Tie: None. A. Tutto: None. K. Hayes: None. L. Khar: None. L. Messina: None.

129
Beta-2 Microglobulin and Transforming Growth Factor-Beta Differentially Polarize Monocytes
Zachary Hilt, Sara Ture, Daphne Pariser, Scott Cameron, Craig Morrell, Univ of Rochester, Rochester, NY
Z. Hilt: None. S. Ture: None. D. Pariser: None. S. Cameron: None. C. Morrell: None.

130
Impaired Primary Hemostasis in Patients on Cardiopulmonary Bypass
Maria Bortot, Katrina Bark, Keith Neeves, Nathan Clendenen, Univ of Colorado, Aurora, CO; David Jr. Bark, Colorado State Univ, Fort Collins, CO; Jorge DiPaola, Univ of Colorado, Aurora, CO

131
An Anticoagulant Vascular Domain Contributes to Cerebral Hemorrhages During Vascular Malformations
Miguel A Lopez-Ramirez, Preston Hare, Shady Soliman, Angela Pham, Romuald Girard, Tine Wyseure, Issam A Awad, Laurent O. Mosnier, Mark H. Ginsberg, Univ of California San Diego, La Jolla, CA
M.A. Lopez-Ramirez: None. P. Hare: None. S. Soliman: None. A. Pham: None. R. Girard: None. T. Wyseure: None. I.A. Awad: None. L.O. Mosnier: None. M.H. Ginsberg: None.

132
Apoer2 Drives the Maternal Hypertension and Other Complications of Pregnancy in the Antiphospholipid Syndrome (aps)
Haiyan Chu, Anastasia Sacharidou, An B. Nguyen, UTSW, Dallas, TX; David R. Natale, UCSD, San Diego, CA; Philip Shaul, Chieko Mineo, UTSW, Dallas, TX

133
Microbial Colonization Restores Neointimal Hyperplasia Development After Arterial Injury in Germ-Free Mice
Emund B Chen, Katherine E Shapiro, Northwestern Univ, Feinberg Sch of Med, Chicago, IL; Thomas Kurtz, Betty Therault, Univ of Chicago, Chicago, IL; Michael J. Noormid, Kelly H Wun, Northwestern Univ, Feinberg Sch of Med, Chicago, IL; Vanessa Leone, Katharine Harris, Univ of Chicago, Chicago, IL; Qun Jiang, Northwestern Univ, Feinberg Sch of Med, Chicago, IL; Melanie Spedale, Univ of Chicago, Chicago, IL; Liqun Xiong, Owen M Eskandari, Northwestern Univ, Feinberg Sch of Med, Chicago, IL; Eugene B. Chang, Univ of Chicago, Chicago, IL; Karen J. Ho, Northwestern Univ, Feinberg Sch of Med, Chicago, IL

134
Early Restoration of Blood Flow Reduces Venous Thrombus Burden and Vein Wall Scarring Following DVT: Implications for Preventing the Post-Thrombotic Syndrome
Wenzhu Li, Chase W. Kessinger, Makoto Orii, Jie Cui, Stephanie M. Kellinberger, Adam W. Mauskapf, Lang Wang, Xiaoxin Zheng, Ahmed Tawakol, Peter Libby, Peter K. Henke, Farouc A. Jaffer, CVRC, MGH, Boston, MA
135
CD73 Deficiency and Peripheral Artery Calcification
Claire Chu, William J Moorhead III, John Callahan IV, Camille K Boufford, Swastika Sur, Univ of Pittsburgh, Pittsburgh, PA; Jason N MacTaggart, Alexey Kamenskiy, Univ of Nebraska Medical Ctr, Omaha, NE; Cynthia St Hilaire, Univ of Pittsburgh, Pittsburgh, PA

136
Host Genotype-shaped Gut Microbiome Modulate Atherosclerosis Development in Mice
Kazuyuki Kasahara, Oijun Zhang, Eugenio I Vivas, Univ Wisconsin Madison, Madison, WI; Aldons J Lusis, Univ California Los Angeles, Los Angeles, CA; Federico E Rey, Univ Wisconsin Madison, Madison, WI

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Trans-thrombus Leukocyte Migration: A Novel Mode of Neutrophil Extravasation Following Vascular Injury
Chaojun Tang, Lei Wang, Soochow Univ, Suzhou, China; Shuchi Gupta, Chelsea N. Matzko, Lawrence F. Brass, Univ of Pennsylvania, Philadelphia, PA; Li Zhu, Soochow Univ, Suzhou, China; Timothy J Stalker, Univ of Pennsylvania, Philadelphia, PA

138
Cd4+ T Cell Deficiency of KLF10 Impairs Blood Flow and Neovascularization in Response to Tissue Hypoxia
Akma Wara, Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA
A. Wara: None.

139
Correlation of Clinical Risk Scores for Stroke with Carotid Plaque Gene Expression Profiles in Atherosclerotic Patients

140
Heterozygous Missense Mutations in PLEKHO2 Predispose to Thoracic Aortic Aneurysms and Dissections
Amélie Pinard, Xue-Yan Duang, Dongchuan Guo, Ellen S Regalado, Alana C Cecchi, Limin Gong, Tracy A Bensend, Ellen M Hostetter, The Univ of Texas Health Science Ctr at Houston, Houston, TX; University of Washington Center for Mendelian Genomics; Michael J Barshad, Div of Genetic Med, Dept of Pediatrics, Univ of Washington, Seattle, WA; Deborah A Nickerson, Dept of Genome Sciences Univ of Washington, Seattle, WA; Dianna M Milewicz, The Univ of Texas Health Science Ctr at Houston, Houston, TX

141
Inhibition of Toll-Like Receptor 7 Attenuates Aortic Pathologies Induced Smooth Muscle Cell Specific Tgfbr1 Deletion
Xiaoyan Qi, Guannan Zhou, Fen Wang, Gilbert R Upchurch Jr, Zhihua Jiang, Univ of Florida, Gainesville, FL

142
Efferocytosis-stimulating Nanoparticles for Precision Atherosclerosis Therapy
Alyssa M. Flores, Jianqin Ye, Niloufar Hosseini-Nassab, Kai Uwe Jarr, Xue-Yan Duang, Dongchuan Guo, Ellen S Regalado, Alana C Cecchi, Limin Gong, Tracy A Bensend, Ellen M Hostetter, The Univ of Texas Health Science Ctr at Houston, Houston, TX; University of Washington Center for Mendelian Genomics; Michael J Barshad, Div of Genetic Med, Dept of Pediatrics, Univ of Washington, Seattle, WA; Deborah A Nickerson, Dept of Genome Sciences Univ of Washington, Seattle, WA; Dianna M Milewicz, The Univ of Texas Health Science Ctr at Houston, Houston, TX

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Neonatal Coagulopathy: Investigating Mechanisms and Establishing Preclinical Models
Ashley Brown, Kimberly Nellenbach, Nina Guzzetta, North Carolina State Univ, Raleigh, NC
A. Brown: None. K. Nellenbach: None. N. Guzzetta: None.

144
The Contribution of Antithrombin-mediated FIXa Inhibition to the Regulation of Clot Formation in vivo
Lacramioara Ivanciu, Valder Arruda, Rodney M Camire, Children's Hosp of Philadelphia / Univ of Pennsylvania, Philadelphia, PA
L. Ivanciu: None. V. Arruda: None. R.M. Camire: None.

145
Extended Stability of Activated TAFI Normalizes Vascular Dysfunction in Hemophilic Joint Disease in Mice
Tine Wyseure, Ruchi Agashe, The Scripps Res Inst, La Jolla, CA; Annette von Drygalski, Univ of California, San Diego, La Jolla, CA; Scott Henderson, Laurent O Mosnier, The Scripps Res Inst, La Jolla, CA

146
Tipping the Balance of Hepatocyte-Derived tPA and PAI1 Contributes to Defective Fibrinolysis in Obesity
Ze Zheng, Ira Tabas, Columbia Univ Medical Ctr, New York City, NY
Z. Zheng: None. I. Tabas: None.

147
ApoC-III Stimulates Intestinal Regulatory T Cells and Intestinal Tolerance: Is Lipoprotein Triglyceride a Critical Regulator of Tregs?
Alison B Kohan, Univ of Connecticut, Storrs, CT
A.B. Kohan: None.
Oral Abstracts (continued)

148
Key Role of Cytokines in Regulation of Intestinal Microbial Homeostasis, Inflammation and Atherosclerosis
Alia Fatkhullina, Iliulia Peshkova, Turan Aghayev, Ekaterina Koltsova, Fox Chase Cancer Ctr, Philadelphia, PA
A. Fatkhullina: None. I. Peshkova: None. T. Aghayev: None. E. Koltsova: None.

149
Chronic Obstructive Pulmonary Disease Promotes Aortic Anuremysm by Modulating Mitochondrial Fission in Transmural Macrophages
Ludovic Boytard, Tarik Hadi, George Miller, Lior Zangi, Ludovic Boytard, Tarik Hadi, George Miller, Lior Zangi, Bhma Ramkhalawon, NYU Medical Ctr, New York, NY

150
Single Cell Transcriptional Landscape of Atherosclerosis in Mice and Humans Reveals a Critical Role for Coronary Disease Gene TCF21
Elizabeth Ha, Ruifeng Ling, Jian Cui, Robert Bauer, Columbia Univ, New York, NY
E. Ha: None. R. Ling: None. J. Cui: None. R. Bauer: None.

151
Atheroprotective B-1 Cells are Abundant in Perivascular Adipose Tissue in the Aortic Arch Region and Decline with Aging as Atherosclerosis Develops
Prasad Srikakulapu, Aditi Upadhye, John Davy, Melissa Marshall, Coleen McNamara, Univ of Virginia, Charlottesville, VA
P. Srikakulapu: Research Grant; Significant; AHA Career Development Award. A. Upadhye: None. J. Davy: None. M. Marshall: None. C. McNamara: Research Grant; Significant; NIH.

152
The Role of Macrophage MerTK and its Cleavage in Nonalcoholic Steatohepatitis
Bishuang Cai, Columbia Univ, New York, NY; Paola Dongiovanni, Fondazione IRCCS Ca’ Granda, Milano, Italy; Xiaobo Wang, Columbia Univ, New York, NY; Kathleen Corey, Massachusetts General Hosp, Boston, MA; Ze Zheng, Columbia Univ, New York, NY; Raymond Chung, Massachusetts General Hosp, Boston, MA; Raymond Birge, Rutgers Univ, Newark, NJ; Luca Valenti, Fondazione IRCCS Ca’ Granda, Milano, Italy; Ira Tabas, Columbia Univ, New York, NY

153
Macrophage-derived 27-hydroxycholesterol Promotes Atherosclerosis by Activating Endothelial Inflammation via ERα, Septin 11, and Jnk Kinase
Linzhang Huang, Lin Xu, Mohamed Ahmed, Bonne Thompson, Jeffrey McDonald, Univ of Texas Southwestern ME, Dallas, TX; Erik Nelson, Univ of Illinois at Urbana-Champaign, Urbana, IL; Sunghee Park, Donald P McDonnell, Duke Univ Sch of Med, Durham, NC; Chieko Mineo, Philip W Shaul, Univ of Texas Southwestern ME, Dallas, TX

154
Sexual Dimorphism of Atherosclerosis and Plasma Lipids: Analysis of Complex Traits in a Diversity Outbred F1 Mouse Population
Myungsuk Kim, Erik Gertz, Alexa Rindy, Excel Que, Nazmul Huda, Brian Bennett, USDA-ARS, Davis, CA
M. Kim: None. E. Gertz: None. A. Rindy: None. E. Que: None. N. Huda: None. B. Bennett: None.

155
Adipocyte-Specific Tribbles1 Regulates Adiponectin Secretion and Plasma Lipids
Elizabeth Ha, Ruifeng Ling, Jian Cui, Robert Bauer, Columbia Univ, New York, NY
E. Ha: None. R. Ling: None. J. Cui: None. R. Bauer: None.

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157
An Integrin αβ, Intermediate Affinity State Mediates Biomechanical Platelet Aggregation
Yufeng Chen, The Scripps Res Inst, San Diego, CA; Lining Ju, Heart Res Inst, The Univ of Sydney, Camperdown, Australia; Fangyuan Zhou, Jixi Liao, Georgia Inst of Technology, Atlanta, GA; Linda Xue, Dept of Statistics, Pennsylvania State Univ, University Park, PA; Qian Su, Dayong Jin, Inst for Biomedical Materials and Devices (IBMD), Faculty of Science, Univ of Technology, Sydney, Australia; Yiping Yuan, Heart Res Inst, The Univ of Sydney, Camperdown, Australia; Hang Lu, Sch of Chemical & Biomolecular Engineering, Georgia Inst of Technology, Atlanta, GA
Oral Abstracts

158  Attenuation of Platelet Activation and Thrombus Formation by Tannic Acid: Inhibition of Protein Disulfide Isomerase
Qing Li, Tao You, Li Zhu, Soochow Univ, Suzhou, China
Q. Li: None. T. You: None. L. Zhu: None.

159  The Role of Platelets in Response to Human Influenza Infection

160  Mitogen Activation Protein Kinase-interacting Kinase 1 Regulates Platelet Production and Activation
Bhanu Kanth Manne, Robert Campbell, Elizabeth Middleton, Seema Bhatlaker, Univ of Utah, Salt Lake City, UT; Rikiro Fukanaga, Osaka Univ of Pharmaceutical Sciences, Osaka, Japan; Christopher Proud, South Australian Health and Medical Res Inst, Adelaide, Australia; Andrew Weyrich, Matthew Rondina, Univ of Utah, Salt Lake City, UT

161  Blood Progenitor Endothelial Cells-on-a-chip: A Disease and Patient-specific Cell Source for Vascular Medical Devices
Tanmay Mathur, Texas A&M Univ, College Station, TX; Travis W Hein, Texas A&M Health Science Ctr, Temple, TX; Jonathan D Flanagan, Baylor Coll of Med, Houston, TX;
Abhishek Jain, Texas A&M Univ, College Station, TX
T. Mathur: None. T.W. Hein: None. J.D. Flanagan: None. A. Jain: None.

162  Human Genetics in Vascular Mechanotransduction and Metabolism
Matthew Krause, Univ of Chicago, Chicago, IL; Mete Civelek, Univ of Virginia, Charlottesville, IL; Casey Romanoski, Univ of Arizona, Tucson, AZ; Yun Fang, Univ of Chicago, Chicago, IL
M. Krause: None. M. Civelek: None. C. Romanoski: None. Y. Fang: None. 170
Extracellular Vesicles Secreted by Atherogenic Macrophages Transfer microRNA to Inhibit Cell Migration
Katey Rayner, PhD, University of Ottawa Heart Institute, Ottawa, Ontario, Canada, for her paper:
Daniel Steinberg Early Career Investigator Award in Arteriosclerosis/Lipoproteins
Poster Abstracts

Poster Session 1 Abstracts

ATVB Journal Awardees

170 Extracellular Vesicles Secreted by Atherogenic Macrophages Transfer microRNA to Inhibit Cell Migration
Katy Rayner, PhD, University of Ottawa Heart Institute, Ottawa, Ontario, Canada, for her paper:
Daniel Steinberg Early Career Investigator Award in Arteriosclerosis/Lipoproteins

171 Platelets Drive Thrombus Propagation in a Hematocrit and Glycoprotein VI Dependent Manner in an in vitro Venous Thrombosis Model
Keith B. Neeves, PhD, Colorado School of Mines, Golden, Colorado, for his paper:
Karl Link Early Career Investigator Award in Thrombosis

172 Epigenetic Influence on Monocyte-Macrophage Mediated Inflammation in Wound Repair
Katherine A Gallagher, MD, University of Michigan, Ann Arbor, Michigan, for her paper:
Werner Risau Early Career Investigator Award in Vascular Biology

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173 Helicobacter Pylori Infection Increases the Risk for Carotid Atherosclerosis
Linfang Zhang, Zhiheng Chen, Xiujuan Xia, Yixi Li, Greg Petroski, Gregory Flaker, Hong Hao, Canxia Xu, Zhenguo Liu, Univ of Missouri Sch of Med, Columbia, MO
L Zhang: None. Z. Chen: None. X. Xia: None. Y. Li: None. G. Petroski: None. G. Flaker: None. H. Hao: None. C. Xu: None. Z. Liu: None.

174 Na+·H+ Exchanger 1 Determines Atherosclerotic Lesion Acidification and Promotes Atherosclerosis
Cong-Lin Liu, Xian Zhang, Brigham and Women's Hosp, Boston, MA; Matthias Nahrendorf, Ctr for Systems Biology, Massachusetts General Hosp, Boston, MA; Samuel Achilefu, Mallinckrodt Inst of Radiology, Washington Univ Sch of Med, St. Louis, MO; Peter Libby, Guang-Ping Shi, Brigham and Women's Hosp, Boston, MA

175 Receptor-independent Ldl Macropinocytosis by Macrophages Contributes to the Pathogenesis of Atherosclerosis
Huiping Lin, Bhupehsing Singla, Pushpamurk Ghostal, Mary C. Shaw, David Fulton, Gabor Csanyi, Augusta Univ, Augusta, GA

176 Single-cell Profiling of Atherosclerotic Tissue Identifies T Cell Subsets Associated with Cerebrovascular Events

177 ApoER2 Drives the Maternal Hypertension and Other Complications of Pregnancy in the Antiphospholipid Syndrome (aps)
Haiyan Chu, Anastasia Sacharidou, An B. Nguyen, UTSW, Dallas, TX; David R. Natale, UCSD, San Diego, CA; Philip Shaul, Chieko Mineo, UTSW, Dallas, TX

Vascular Diseases SFRN Posters

178 Identification of microRNA in Diabetic Critical Limb Ischemia from Mice to Human Subjects
Henry Cheng, PhD, Brigham and Women's Hospital, Boston, Massachusetts

179 Poly ADP-Ribose Polymerase 1 (PARP-1) in Calf Skeletal Muscle is Associated with Walking Performance in Peripheral Artery Disease
Sunil Saini, PhD, University of Florida, Gainesville, Florida

180 Vascular Delivery of Insulin is Coupled to Muscle Metabolism by Extracellular Matrix-integrin Signaling
David Cappel, BA, Vanderbilt University Medical Center, Nashville, Tennessee

181 Sexual Dimorphism of Experimental Thoracic Aortic Diseases
Jeff Chen, BS, University of Kentucky, Lexington, Kentucky

182 Hyperglycemia Enhances Pro-inflammatory Properties of Macrophage-derived Exosomes to Drive Hematopoiesis in Apolipoprotein E-deficient Mouse
Laura Bouchareychas, University of California San Francisco, San Francisco, California

183 Evaluation of Atrial Fibrillation Outcomes in Heart Failure Patients Taking Sacubitril/valsartan or Ivabradine
Keith D Huff, Butler Univ, Indianapolis, IN; Eric N Huff, Southern Illinois Univ, Edwardsville, Edwardsville, IL
K.D. Huff: None. E.N. Huff: None.
190  Systolic Heart Failure Patients Risk Factors in One-Year Follow-Up Study in Birjand Vali-asr Hospital 2016
Mahdi Abdollahi-karizno, Naeem Ravanbaksh, Neda Partovi, Toba Kazemi, Birjand Univ of Medical Sciences, Birjand, Iran, Islamic Republic of
M. Abdollahi-karizno: None. N. Ravanbaksh: None. N. Partovi: None. T. Kazemi: None.

191  (continued)

192  Aortic Valve Calcification on Lung Cancer Screening CT Predicts Aortic Valve Stenosis and Mortality
Sydney Tan, Jared Christensen, Alice Chu, Wenzheng Yu, Maen Assali, Fabian Vargas, Wen-Chih Wu, Gaurav Choudhary, Alan R. Morrison, Brown Alpert Medical Sch, Providence, RI

193  Changes in Systemic Inflammation are Associated with Frailty Phenotypes and Clinical Outcomes After Open Aortic Repair
Kerri A Omalley, Jared Rozowsky, Grace Shan, Sarah Barbey, Qiongyao Hu, Thomas Huber, Scott Berceli, Salvatore Scali, Univ Florida, Gainesville, FL

194  Discovery of Biological Pathways and Gene Networks for Heart Failure with Preserved and Reduced Ejection Fraction in Women Across Ethnicities
Qing Liu, Brown Univ, Providence, RI; Kei Hang K. Chan, City Univ of Hong Kong, Hong Kong, Hong Kong; Alan R. Morrison, Stephen T. McGarvey, Xi Luo, Brown Univ, Providence, RI; James G. Wilson, Adolfo Correa, Univ of Mississippi Medical Ctr, Jackson, MS; Alexander P. Reiner, Univ of Washington, Seattle, WA; Simin Liu, Wen-Chih Wu, Brown Univ, Providence, RI

195  Mental Stress-Induced Transient Endothelial Dysfunction Associated with Poor Outcomes in Subjects with Coronary Heart Disease
Bruno B Lima, Muhammad Hammadah, Jeong Hwan Kim, Irina Uphoff, Amit Shah, Zakaria Almuwaqqat, Samaah Sullivan, Kasra Moazzami, J Douglas Bremner, Arshed Quyyumi, Viola Vaccarino, Emory Univ, Decatur, GA

196  Effect of Music Television Channels on Smoking and Depression
Francisco E Ramirez, Gyeongjip Kang, Neil Nedley, Nedley Clinic, Colfax, CA; Jonathan Emerson, Vinicius Seidel, Weimar Inst, Colfax, CA
F.E. Ramirez: None. G. Kang: None. N. Nedley: Ownership Interest; Modest; Nedley Health Solutions. J. Emerson: None. V. Seidel: None.

197  Genetic Testing for Secondary Causes in Dysautonomia Patients
Sabahat Usmani, Sami Alam, Amer Suleman, The Heartbeat Clinic, McKinney, TX
S. Usmani: Other Research Support; Modest; Other Research Support; Modest; Invitae Genetic Tests were Sponsored by Alnylam Pharmaceuticals, Inc.. S.B. Alam: None. A. Suleman: Other Research Support; Modest; Invitae Genetic Tests were Sponsored by Alnylam Pharmaceuticals, Inc..

198  DNA Base Editing in Hutchinson-Gilford Progeria Syndrome
Luke W. Koblan, Merkin Inst; Broad Inst of Harvard Univ and MIT; Howard Hughes Medical Inst, Cambridge, MA; Sean P. Doherty, Vanderbilt Univ Medical Ctr, Nashville, TN; Jon M. Levy, Merkin Inst; Broad Inst of Harvard Univ and MIT; Howard Hughes Medical Inst, Cambridge, MA; Michael R. Erdos, Francis S. Collins, NHGRI; NIH, Bethesda, MD; Charles Y. Lin, Baylor Coll of Med, Houston, TX; David R. Liu, Merkin Inst; Broad Inst of Harvard Univ and MIT; Howard Hughes Medical Inst, Cambridge, MA; Jonathan D. Brown, Vanderbilt Univ Medical Ctr, Nashville, TN

199  Identifying the Genetic Determinants of Spontaneous Coronary Artery Dissection with Whole Exome Sequencing
Hannah A Burr, McGill Univ Div of Experimental Med, Montreal, QC, Canada; Louise Pilote, McGill Univ Dept of Med, Montreal, QC, Canada; Asim Cheema, Univ of Toronto Dept of Med, Montreal, QC, Canada; Line Dufresne, Res Inst of the McGill Univ Health Ctr, Montreal, QC, Canada; Hao Yu Chen, George Thanassoulis, James C Engert, McGill Univ Div of Experimental Med, Montreal, QC, Canada
200
Dna Methylation of Lncrna Meg9 Inhibits Angiogenesis
Sudarshan Anand, Cristina Espinosa-Diez, Namita Chatterjee, Rebecca Ruhl, Oregon Health & Science Univ, Portland, OR

201
First Characterization of Extracellular Vesicles Derived From Human Amniotic Stromal Stem Cells and Their Applications for Cardiac Repair and Rejuvenation
Kashif Khan, Bin Yu, Adel Schwertani, Renzo Cecere, McGill Univ, Montreal, QC, Canada
K. Khan: None. B. Yu: None. A. Schwertani: None. R. Cecere: None.

202
Mechanobiological Conditioning of MSCs Into Hybrid Endothelial-Pericyte Augments Therapeutic Angiogenesis in vivo
Jason Lee, Kayla Henderson, Miguel Armenta-Ochoa, Austin Veith, Pablo Maceda, Eun Yoon, Lara Samarneh, Mitchell Wong, Andrew Dunn, Aaron Baker, Univ of Texas at Austin, Austin, TX

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Identification of Immuno-regulatory microRNAs in Cardiac Tissue of Septic Mice Treated with Mesenchymal Stem Cells
Amin M Ektesabi, Keisuke Mori, Christopher Walsh, Claudia C dos Santos, St. Michael’s Hosp, Toronto, ON, Canada
A.M. Ektesabi: None. K. Mori: None. C. Walsh: None. C.C. dos Santos: None.

204
Pattern of Elastic Matrix Alteration Differentiates Adaptive Arterial Diameter Growth in Arteriogenesis From Pathologic Growth in Aneurysm
Ryan M McEnaney, Dylan McCreary, VAPHs, Pittsburgh, PA; Nolan Skirtich, Univ of Pittsburgh, Pittsburgh, PA; Edith Tzeng, VAPHs, Pittsburgh, PA

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Intracellular Notch1 Signaling Determines Fibroblasts-modulated Angiogenic Response in Diabetic Wounds
Hongwei Shao, Yan Li, Irena Pastar, Rochelle Prokupets, Sophia Liu, Marjana Tomic-Canic, Omaida C Velazquez, Zhao-Jun Liu, Univ of Miami Miller, Miami, FL

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Dual-Ligand Modified Liposomal Nanoparticles Multifunctionalized for Spatially Controlled Delivery of Gene Therapeutics
Lauren B Grimsley, Raymond A Dieter III, Joshua D Arnold, Michael R Buckley, Michael M McNally, Michael B Freeman, Oscar H Grandas, Deidra J Mountain, UT Graduate Sch Med, Knoxville, TN

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The Parathyroid Hormone Receptor Limits Arterial Fibrosis in Diabetic Vascular Disease
Abraham Behrmann, Dalian Zhong, Su Li Cheng, Li Li, Megan Mead, Bindu Ramachandaran, Mohammad Goodarzi, Andrew Lemoff, Dwight A Towler, UT Southwestern Medical Ctr, Dallas, TX

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Transcription Signatures of Murine Healthy Aorta and Carotid Arteries
Debora S Faffe, Ernesto Curty da Costa, Luisa Hoffmann, Rosane Silva, Turan P Urmenyi, Federal Univ of Rio de Janeiro, Rio de Janeiro, Brazil

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Distinct Vascular Cell Contribution to the Aortic Internal Elastic Lamina
Chien-Jung Lin, Marius C Staiculescu, Chieh-Yu Lin, Jessica E Wagenseil, Robert P Mecham, Washington Univ in St. Louis, St. Louis, MO

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Transcriptomic Profiling of Experimental Arterial Injury Reveals Temporal Dynamics and New Mechanisms in Vascular Healing Response
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211
Endothelial-to-mesenchymal Transition and Inflammation Play Key Roles in Cyclophilin A Induced Pulmonary Arterial Hypertension
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212
Low Intrinsic Aerobic Capacity Promotes Vascular Dysfunction In Aging
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213
The Ribosome Exit Tunnel Protein Rpl17 Controls Vascular Injury Response, Endoplasmic Reticulum Stress, and Ribosome Number in Vascular Smooth Muscle
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M.E. Wines-Samuelson: None. 214
Novel Rare Genetic Isoform of Bpifb4 Gene Impairs Endothelial Function and Predispose to High Blood Pressure Levels Through Nitric Oxide-dependent Mechanism
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215
P-STAT3 S727-dependent Ripk3 Transcription in Vascular Smooth Muscle Cells Worsens Aaa via A Distal Enhancer Region
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Bcl11b-Mediated Regulation of Vascular Smooth Muscle Specific Gene Expression
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J. May: None. J. Arni Valisno: None. E. Minetti: None. F. Seta: None.

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Protein Kinase D Regulates Vascular Endothelial Growth Factor-induced Vascular Permeability in vitro and in vivo
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Aldosterone and Protein Disulfide Isomerase Activity in Diabetes
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S.J. Romero: None. Y. Inostroza: None. A. Rivera: None.

219
Chemogenetic Approaches to Study Hydrogen Peroxide-Dependent Modulation of Endothelial Nitric Oxide Synthase Signal Transduction
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Regulation of Vascular Smooth Muscle Cell Responses by IL-2/IL-2R Alpha
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222
Periodontal Therapy Improves Serum Soluble E-selectin Levels and Endothelial Function; A Meta-analysis
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Macrophage Depletion Improved Vascular Insulin Resistance and Cardiovascular Remodeling in Salt-sensitive Hypertension
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224 Disruption of Phosphodiesterase-4 Subtype B Improves Microcirculation and Protects Against Myocardial Ischemia-Reperfusion Injury
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225 Pkcδ Promotes Chemokine Production in Vascular Smooth Muscle Cells Independent of its Kinase Activity
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226 CD70 Modulates Endothelial Nitric Oxide Synthase Expression and Vasomotor Tone
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227 Differential Effects of DHA and EPA Supplementation on Serum Inflammatory Markers and Blood Monocyte Inflammatory Response in Subjects with Chronic Inflammation
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228 Neutrophil-derived Extracellular Vesicles Induce Endothelial Inflammation and Damage Through the Transfer of miRNAs
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230 Microglia Involve in Soluble Endoglin-induced Brain Vascular Malformation
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ABSTRACTS

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Inhibition of the Akt1-mTORC1 Axis Alters Venous Remodeling to Improve Arteriovenous Fistula Patency
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The BD2 Domain of BRD4 is a Determinant in EndoMT and Vein Graft Neointima Formation
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Knockdown of TSP-1 and TSP-2 Decreases Intimal Hyperplasia in Rats After Carotid Balloon Injury
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Pervascular Gene Targeted Therapy Using Biodegradable CLICK-Gelatin Hydrogels
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Arterial Spin Labeling Quantifies Regional Foot Perfusion During Sustained Toe Flexion
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240
The Peak Systolic Velocity Ratio May Underestimate Internal Carotid Stenosis in the Presence of a Common Carotid Tandem Lesion
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Novel Human Vein Xenograft Model
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Caspase-1 Mediates Muscle Fiber Typing and Functionality in Response to Ischemia
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244 Periprocedural Hydrogen Sulfide Therapy Impairs Vascular Remodeling and Improves Vein Graft Patency

245 Short-term Methionine Restriction Protects from Vein Graft Disease via Perivascular Adipose Dependent Mechanisms

246 Mitochondrial Dysfunction in a Novel, In vitro, Cell-based Model of Intermittent Claudication
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249 Microvascular Pathology Influences Walking Performance in Patients with Peripheral Artery Disease
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250 Increased Ceramide Content in the Peripheral Arterial Plaque of Patients with Diabetes Can Cause Endothelial Cell Dysfunction
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251 Atorvastatin Inhibits Plaque Angiogenesis and Induces Neovessel Maturation in Murine Vein Grafts
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252 Risk of Undiagnosed Coronary Artery Disease associated with Infrapopliteal Artery Occlusion from a Multicenter Study
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253 Seasonal Variation for Acute Limb Ischemia Related Hospitalizations
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254 Autophagy is Impaired in Thoracic Aortic Aneurysms
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257 Interleukin-6 is Necessary but Not Sufficient for Abdominal Aortic Aneurysm Development Jean Marie Ruddy, Randall T. Grespin, Nicholas Ward, Christine Couch, Rupak Mukherjee, Jeffrey A. Jones, Medical Univ South Carolina, Charleston, SC J. Ruddy: None. R.T. Grespin: None. N. Ward: None. C. Couch: None. R. Mukherjee: None. J.A. Jones: None.

258 Characterization of Endovascular Abdominal Aortic Aneurysm Repair Surveillance Using Vascular Quality Initiative and Medicare Claims Linked Data Zachary Wanken, Spencer W Trooboff, Barbara Gladders, Kayla O Moore, Jesse A Columbo, Niveditta Ramkumar, Dartmouth-Hitchcock Medical Ctr, West Lebanon, NH; Art Sedrakyan, Weill-Cornell Medical Ctr, New York, NY; Philip Goodney, Dartmouth-Hitchcock Medical Ctr, West Lebanon, NH Z. Wanken: None. S.W. Trooboff: None. B. Gladders: None. K.O. Moore: None. J.A. Columbo: None. N. Ramkumar: None. A. Sedrakyan: Research Grant; Significant; FDA grant 1U01FD005478-01. P.P. Goodney: Research Grant; Significant; FDA grant 1U01FD005478-01.

261 AT1a Receptor Deficiency Attenuates Thoracic Aortic Aneurysm Progression in FBN1Col10A1/−/− Mice Jeff Chen, Jessica Moorleghen, Mary Sheppard, Alan Daugherty, Univ of Kentucky, Lexington, KY J. Chen: None. J. Moorleghen: None. M. Sheppard: None. A. Daugherty: None.


263 A Retrievable Rescue Stent for Thoracic or Abdominal Traumatic Hemorrhage Catherine Go, Univ of Pittsburgh Med Ctr, Pittsburgh, PA; Jenna Kuhn, Moataz Elsissy, Youngjoo Chun, Univ of Pittsburgh, Pittsburgh, PA; Bryan Tillman, Univ of Pittsburgh Med Ctr, Pittsburgh, PA C. Go: None. J. Kuhn: None. M. Elsissy: None. Y. Chun: None. B. Tillman: None.

264 Epigenetic Modifications Influence Macrophage-mediated Inflammation in Abdominal Aortic Aneurysms Frank M. Davis, Aaron Dendekker, Amrita Joshi, Christopher Audu, Andrea Obi, Steven Kunkel, Jonathan Eliason, Univ of Michigan, Ann Arbor, MI; Hong Lu, Alan Daugherty, Univ of Kentucky, Lexington, KY; Katherine Gallagher, Univ of Michigan, Ann Arbor, MI F.M. Davis: None. A. Dendekker: None. A. Joshi: None. C. Audu: None. A. Obi: None. S. Kunkel: None. J. Eliason: None. H. Lu: None. A. Daugherty: None. K. Gallagher: None.


268 Exogenous Vasohibin-2 Influences Development of Angiotensin II-induced Ascending Aortic Aneurysms but Not Abdominal Aortic Aneurysms in Either Normolipidemic or Apolipoprotein E-Deficient Mice

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269 Myeloid Cell-derived Interferon Regulatory Factor 5 Promotes Experimental Abdominal Aortic Aneurysms

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270 Alternative Macrophage Activation Limits Experimental Abdominal Aortic Aneurysms

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271 Deletion of Nr4a1 is Associated With Increased Vein Wall Injury After Venous Thrombosis

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272 A Novel Design for Shear Rate Optimization of the Venous-End Anastomosis of an Arteriovenous Graft

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273 Measurement of Transcutaneous Oxygen Pressure in Patients With Post-thrombotic Syndrome and Possible Clinical Applications

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274 3d Cylindrical Lymphangion-on-a-chip: a New Method to Model Lymphatic Inflammatory & Therapeutic Responses

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275 The Journey of the Basilic Vein After Arteriovenous Anastomosis: The Transcriptomic Landscape of Hemodialysis Fistulas with Distinct Maturation Outcomes

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Loss of C-kit Impairs Nitric Oxide Mediated Vasodilation
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278
High Hospitalization Rates but Steady Improvement in Outcomes of US Older Adults with Pulmonary Embolism
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279
Development of an Individual Patient Database of Participants from Randomized Trials of Periprocedural Anticoagulation with Bivalirudin versus Heparin in Percutaneous Coronary Intervention: Rationale and Methodological Considerations
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A Mathematical Model of Flow-mediated Coagulation Identifies Factor V as a Modifier of Thrombin Generation in Factor VIII Deficiencies
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281
Thrombolysis With Streptokinase is an Effective and Safe Therapy in Stuck Mitral Valves With Hemodynamically Unstable Patients and in Delayed Presentation - Single Centre Study From India

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S. Shaikh: None. N. Bansal: None.

283
Expression of the Pan-Neurotrophic Receptor p75NTR in Human Platelets

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Anupama Singh, Heather Corkrey, Milka Koupenova, Jane E Freedman, Univ of Massachusetts Medical Sch, Worcester, MA

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Short- and Long-term Treatment of Pyridoxamine, an Inhibitor of Advanced Glycation End Products, Attenuates Platelet-neutrophil Interactions and Vascular Occlusion in Sickle Cell Disease

Jing Li, Si-Yeon Jeong, Bei Xiong, Alan Tseng, UIC, Chicago, IL; Andrew Mahon, Steven Isaacman, PHD Biosciences, New York City, NY; Jaehyung Cho, UIC, Chicago, IL
J. Li: None. S. Jeong: None. B. Xiong: None. A. Tseng: None. A. Mahon: None. S. Isaacman: None. J. Cho: None.

286
ARTD8/PARP14 Suppresses Pro-inflammatory Macrophage Activation Through ADP-ribosylation Signaling

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Influence of Local Myocardial Infarction on Endothelial Function, Neointimal Progression, and Inflammation in Target and Non-target Vascular Territories in a Porcine Model of Acute Myocardial Infarction

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Eosinophil Attenuates Pressure Overload-induced Cardiac Hypertrophy by Releasing Eosinophil Cationic Protein and Interleukin 4

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C. Yang: None. J. Li: None. Z. Deng: None. F. Liu: None. P. Libby: None. G. Shi: None.

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Inhibition of Xanthine Oxidoreductase Accelerates Diabetic Wound Healing

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K. Gonzalez: None. K.M. Salem: None. G. Hong: None. E. Tzeng: None.

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Epicardial Adipose Depot Proteome and Secretome Reveal Distinct Biology and Nutrient Utilization

Rachel Drake, Deanna L Plubell, Alexandra M Fenton, Phillip A Wilmarth, Jessica Minnier, Wohaib Hasan, Oleg Varlamov, Jonathan Q Purnell, Nathalie Pamir, Oregon Health & Science Univ, Portland, OR

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The Promise of a Small Molecule Derivative of Fluorocatechol Ester of 3-Hydroxy-benzoic Acid in Preventing Diabetes Induced Microvasculopathy

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Liposomal Drug Delivery Enriches Macrophage Research Grant; Modest; Jiangsu STA BE2016785.


301 Vascular Calcification Biomarkers in Obesity and Diabetes: Effects of Antidiabetic Therapies Francesca Schinzari, Poli clinico A. Gemelli IRCCS, Roma, Italy; Manfredi Tesauro, Univ Tor Vergata, Roma, Italy; Carmine Cardillo, Univ Cattolica del Sacro Cuore, Roma, Italy; Umberto Campia, Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA

302 Ige-deficiency Reduces Atherosclerosis and Obesity in Aper-/- Mice by Regulating Macrophage Polarization and Sterol Response Xian Zhang, Jie Li, Qin Huang, Zhiyong Deng, Guo-Ping Shi, Brigham and women’s hospital, Boston, MA

303 Endothelial-to-Mesenchymal Transition is Regulated by Substrate Stiffness Maedeh Zamani, Frank Charbonier, Ngan F Huang, Stanford Univ, Stanford, CA

M. Zamani: Research Grant; Modest; AHA Postdoctoral Fellowship. F. Charbonier: None. N.F. Huang: Research Grant; Modest; NIH: R01 HL127113, and R01 HL142718.
304 Proteoglycan 4 is Implicated in Osteo-chondrogenic Smooth Muscle Cell Differentiation During Vascular Remodelling and Intimal Calcification
Till Seime, Eva Karlöf, Karolinska Inst, Stockholm, Sweden; Asim C Akbulut, Rick H van Gorp, Maastricht Univ, Maastricht, Netherlands; Mariette Lengquist, Malin Kronqvist, Karolinska Inst, Stockholm, Sweden; Nuno Dias, Skåne Univ Hosp, Malmö, Sweden; Anton Razuvaev, Gabrielle Paulsson-Berne, Göran K. Hansson, Lars Maegdefessel, Per Eriksson, Ulf Hedin, Daniel F. Ketelhuth, Joy Roy, Ljubica Matic, Karolinska Inst, Stockholm, Sweden

306 The Atherogenic Metalloprotease ADAMTS7 Secretion Requires Propeptide and Substrate Screening Suggests Broad Specificity
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307 Regression of Calcified Atherosclerosis Leads to Adverse Remodeling of the Aortic Root in a Mouse Model of Familial Hypercholesterolemia
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311 Fibronectin-Binding Integrins Differentially Regulate ER Stress to Activate JNK Signaling and Atherogenic Inflammation
Zaki Al-Yafeai, Jonette Peretik, Lsu Health Sciences Ctr, Shreveport, LA; Brian Petrich, Emory Univ, Atlanta, GA; William DeGrado, UCSF, San Francisco, CA; Shenuarin Bhuiany, A. Wayne Orr, Lsu Health Sciences Ctr, Shreveport, LA

312 Restoration of Endothelial Autophagic Flux in Vascular Endothelial Cells Exposed to Low Shear Stress
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S. Chatterjee: None.
315 Moderate Alcohol Consumption Targets S100B+ Vascular Stem Cells and Protects Against Arteriosclerotic Carotid Remodeling
Weimin Liu, Amanda M Wahl, Univ Rochester Med Ctr, Rochester, NY; Paul A Cahill, Dublin City Univ, Dublin, Ireland; Eileen M Redmond, Univ Rochester Med Ctr; Rochester, NY

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317 Chitinase-3-like Protein 1 is an Inhibitor of Vascular Smooth Muscle Cell Dedifferentiation in Advanced Atherosclerosis

318 Cardiovascular Toxic Cancer Treatments (CTCT) Prime Monocyte and Macrophages to Oxidative Stress and Accelerate Atherogenesis
Sivareddy Kotla, The Univ of Texas MD Anderson Cancer Ctr, Houston, TX
S. Kotla: None.

319 Lipoproteins and Their Modified Forms Regulate Early Stage Vascular Smooth Muscle Cell Calcification
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320 The Key Role of Endothelial Sumoylation in Regulating Sustained Nadph Oxidase Activation Under Disturbed Flow: Involvement of Feedback Loop Formed by Fak-sumoylation
Hang Thi Vu, Kyung-Sun Heo, Masaki Imanishi, Kyung Ae Ko, Tamlyn N Thomas, Young Jin Gi, Hira Mazhar, Keigi Fujiwara, MD Anderson Cancer Ctr, Houston, TX; Nhat-Tu Le, Houston Methodist, Houston, TX; Jun-ichi Abe, Sivareddy Kotla, MD Anderson Cancer Ctr, Houston, TX

321 Role of TLR2 in Endothelial Permeability and Atherosclerosis

322 The Functional Relevance Between MicroRNA-128 and Atrial Natriuretic Peptides in Smooth Muscle Cells Regulation
Hanqing Zhao, Tulane Univ, New Orleans, LA; Dr. Kailash N. Pandey's group
H. Zhao: Employment; Significant; Tulane University.

323 Macrophages From the Atherosclerosis-prone DBA/2 Mouse Strain Carry a Null Allele of the Gprmb Gene That Reduces Lysosome Function
Peggy Robinet, Brian Ritchey, Shuhui Lorkowski, Alexander M Alzayed, Sophia DeGeorgia, Eve Schodowski, Jonathan D Smith, Cleveland Clinic, Cleveland, OH
P. Robinet: None. B. Ritchey: None. S. Lorkowski: None. A.M. Alzayed: None. S. DeGeorgia: None. E. Schodowski: None. J.D. Smith: None.

324 A Single Cell Survey of Smooth Muscle Cell Fate in Atherosclerosis
Huize Pan, Chenyi Xue, Jian Cui, Erin C. Bush, Hanrui Zhang, Robert C. Bauer, Wen Liu, Peter A. Sims, Muredach P. Reilly, Columbia Univ Medical Ctr, New York, NY
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Transgenic Protein Disulfide Isomerase-A1 Overexpression Mitigates Vascular Calcification in vivo and in vitro
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Disturbed Flow-induced Endothelial Senescence, but Not Inflammation, Plays a Major Role in Plaque Formation Mediated by Telomeric Repeat Binding Factor 2-Interacting Protein (TERF2IP) K240 SUMOylation
Masaki Imanishi, Kyung Ae Ko, Yin Wang, UT MD Anderson Cancer Ctr, Houston, TX; Kyung-Sun Hec, Chungnam Natl Univ, Daeseon, Korea; Republic of; Yuka Fujii, Houtston Methodist, Houston, TX; Tamlyn N Thomas, Young Jin Gi, Hira Mazhar, Keigi Fujiwara, UT MD Anderson Cancer Ctr, Houston, TX; Nhat-Tu Le, Houtston Methodist, Houston, TX; Sivarreddy Kota, Jun-ichi Abe, UT MD Anderson Cancer Ctr, Houston, TX; M. Imanishi: None. K. Ko: None. Y. Wang: None. K. Heo: None. Y. Fujii: None. T.N. Thomas: None. Y. Gi: None. H. Mazhar: None. K. Fujiwara: None. N. Le: None. S. Kota: None. J. Abe: None.

327
High-density Lipoprotein From Coronary Artery Disease Inhibits Angiogenesis by Decrease Vinculin Expression
Jingsong Ou, Hua-Ming Li, Wei-Ping Dai, Yan Li, Zhi-Wei Mo, Yue-Ming Peng, Zhi-Jun Ou, Sun Yet-Sen Univ, Guangzhou, China
J. Ou: None. H. Li: None. W. Dai: None. Y. Li: None. Z. Mo: None. Y. Peng: None. Z. Ou: None.

328
Assessing the Molecular Basis for Variation in Extremes of ABCA-1 Specific Cholesterol Efflux
Ayea El-Ghazali, Anand Rohatgi, Sneha Deodhar, Suzanne Saldanha, Aseruchi Chindah, UT Southwestern, Dallas, TX
A. El-Ghazali: None. A. Rohatgi: Research Grant; Significant; Merck research grant. Other Research Support; Significant; AHA 17UNPG3384000, NIH/NHLBI R21HL137450, NIH/NHLBI R01HL136724. Consultant/Advisory Board; Modest; Merck consultant, CSL Limited consultant, HLD Diagnostics advisory board. S. Deodhar: None. S. Saldanha: None. A. Chindah: None.

329
ApoA-I nanoparticles (CSL-111) Directly Modulates Inflammatory Cells After Myocardial Infarction in Mice
Adele Richart, Medini Reddy, Baker Heart and Diabetes Inst, Melbourne, Australia; Alaina Natoli, Univ of Melbourne, Melbourne, Australia; Sarah Heywood, Mina Khalaji, Graeme Lancaster, Baker Heart and Diabetes Inst, Melbourne, Australia; Svetlana Diditchenko, Alexei Navdaev, CSL Behring, Bern, Switzerland; Bronwyn Kingwell, Baker Heart and Diabetes Inst, Melbourne, Australia
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330
Circadian Rhythms, Hypoxia Response and Fatty Acid Metabolism in the Onset of Liver Diseases
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X. Pan: None. J. Queiroz: None. M. Hussain: None.

331
Anti-apolipoprotein A-I Antibody Profile Correlates with Cardiovascular Disease Outcomes
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D. Henson: None. A. Samman Tahhan: None. A. Quyyumi: None. V. Venditto: None.

332
Effects of Fish Oil Enriched in Omega-11 Fatty Acid on Lipoprotein Metabolism in Healthy Adults
Alexander V. Sorokin, SUNY Downstate Medical Ctr, Brooklyn, NY; Zhi-Hong Yang, Clarence Ling, Kwame Donkor, Emma Staller, Marcelo J. Amar, Alan T. Remaley, NIH, NHLBI, Bethesda, MD

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Stable Isotopic Metabolic Labeling with Heavy Water (H2O) to Assess the Kinetics of LDL apoB100 in NASH Patients
Mohamad Dandan, Marc Hellerstein, UC Berkeley, Berkeley, CA
M. Dandan: None. M. Hellerstein: None.

335
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Darcy A Knaack, Rebecca L Schill, Medical Coll of Wisconsin, Milwaukee, WI; Yiliang Chen, Roy L Silverstein, Blood Res Inst, Milwaukee, WI; Daisy Sahoo, Medical Coll of Wisconsin, Milwaukee, WI
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Marine Oil Supplementation Alters Lipid Mediator and Lipoxigenase Content of HDL in Patients with Peripheral Arterial Disease
Thomas A Sorrentino, Kate Townsend Creasy, Melinda S Schaller, UCSF, San Francisco, CA; Brian E Sansbury, Pete Mitchell, Matthew Spite, Brigham and Women’s Hosp, Boston, MA; John P Kane, Michael S Conte, UCSF, San Francisco, CA

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Thomas A Sorrentino, UCSF, San Francisco, CA; Phat Duong, Laura Bouchareychas, San Francisco VA Medical Ctr, San Francisco, CA; Mian Chen, UCSF, San Francisco, CA; Allen Chung, San Francisco VA Medical Ctr, San Francisco, CA; Melinda S Schaller, Adam Z Oskowitz, Robert L Raffai, Michael S Conte, UCSF, San Francisco, CA

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Amanda Ribeiro Martins da Silva, Grazilla Eliza Ronsein, Univ of São Paulo, São Paulo, Brazil

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Danielle L Michell, Wanying Zhu, Kasey C Vickers, Vanderbilt Univ Medical Ctr, Nashville, TN

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Greater Intraoperative HDL Particle Loss Is Associated With Less Acute Kidney Injury After Cardiac Surgery
Loren E Smith, Derek K Smith, Patricia G Yancey, Vanderbilt Univ Medical Ctr, Nashville, TN; Alan T Remaley, NIH, Bethesda, MD; Frederic T Billings IV, Macrae F Linton, Vanderbilt Univ Medical Ctr, Nashville, TN

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Assembly and Secretion of Fluorescent Tagged Apolipoprotein B Peptides
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Novel Regulation of Cholesterol Metabolism Using a Systems Biology Approach
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Dennis Wolf, Teresa Gerhard, Maximilian Schell, Univ Heart Ctr Freiburg, Freiburg, Germany; Holger Winkels, Koji Kobiyama, Klaus Ley, La Jolla Inst for Immunology, La Jolla, CA

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Jessica Jia-Hui Zhang, Nicholas Hogan, Calvin Yeang, Marten Hoeksema, Phuong Miu, Sotrios Tsimikas, Christopher Glass, Univ of California, San Diego Sch of Med, San Diego, CA

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Cason D Christensen, Michael J Duryee, Geoffrey M Thiele, David E Barton, Daniel R Anderson, Univ of Nebraska Medical, Omaha, NE

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Kevin D Real, Michael J Duryee, Evan M Ryan, Logan M Duryee, Ted R Mikuls, Dahn L Clemens, Geoffrey M Thiele, Daniel R Anderson, Univ of Nebraska Medical, Omaha, NE

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High-dimensional Map of IL-1 beta Signaling in Human Immune Cells
Hema Kothari, Chantel McSkimming, Corey Williams, Mythili Vigneshwar, Eli Zunder, Coleen McNamara, Univ of Virginia, Charlottesville, VA
H. Kothari: None. C. McSkimming: None. C. Williams: None. M. Vigneshwar: None. E. Zunder: None. C. McNamara: None.

351
The Cumulative Deleterious Effects of Aircraft Noise Exposure on Developing High Blood Pressure
Katie Frensis, Swenja Kröller-Schön, Sanela Kalinovic, Johanna Helmstätter, Miroslava Kvandova, Matthias Oelze, Andreas Daiber, Thomas Münzel, Sebastian Steven, Johannes Gutenberg Univ, Mainz, Germany

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Gabrielle Fredman, Brennan D Gerlach, Michael Marinello, Justin Heinz, Nicholas Rymut, Albany Medical Coll, Albany, NY; Brian Sansbury, Colin Riley, Brigham and Women’s Hosp, Boston, MA; Sudeshna Sadhu, Albany Medical Coll, Albany, NY; Matthew Spite, Brigham and Women’s Hosp, Boston, MA; Margarida Barroso, Albany Medical Coll, Albany, NY; Katey J Rayner, Univ of Ottawa, Ottawa, ON, Canada

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Lili Qu, Chuan Li, Uconn Health, Farmington, CT; Danielle Peters, Princeton Univ, Princeton, NJ; Nicholas Wasko, Anthony T. Vella, Annabelle Rodriguez, Patrick A. Murphy, Robert B. Clark, Beiyan Zhou, Uconn Health, Farmington, CT

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Lupus-associated Immune Complexes Prime Macrophages to Promote Inflammatory Responses - Plausible Mechanism Contributing to Lupus-induced Atherosclerosis
Masako Tsukamoto, Pamela E Fraugruber, Univ of North Carolina at Chapel Hill, Chapel Hill, NC; Branimir Popovic, Murugesan Velayutham, Univ of Pittsburgh Sch of Med, Pittsburgh, PA; Saira Z Sheikh, Shunmugam Nagarajan, Univ of North Carolina at Chapel Hill, Chapel Hill, NC

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Ryan M Allen, Wanying Zhu, Carrie B Wiese, Bradley W Richmond, Shilin Zhao, Marisol A Ramirez-Solano, Quanhu Sheng, MacRae F Linton, Kasey C Vickers, Vanderbilt Univ Medical Ctr, Nashville, TN

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Efficacy of Dual Antiplatelet Therapy in Coronary Artery Bypass Graft Patients with Acute Coronary Syndrome
Iftikhar Ali Ch, Naeeem Tahirkheli, Ahmad Usmani, Raja Ullah, Hunter Weitzel, Abul Qadar, Bukhtaram Ananya, Aldon Whitehead, Pei-Tzu Wu, Oklahoma Heart Res Fndn, Oklahoma City, OK
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Alternate Route for Multiple Doses of Liposomal Administration Through Percutaneous Retro Orbital Injections in Apeo -/- Mice
Priyanka Prathipati, UTHSC-Houston, Houston, TX; Cristian Rodriguez-Aguayo, UT MD Anderson Cancer Ctr, Houston, TX; Jamieson Greaver, Brian Walton, UTHSC-Houston, Houston, TX; Anil Sood, Gabriel Lopez-Berestein, UT MD Anderson Cancer Ctr, Houston, TX

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Effects of Mitochondrial Antioxidant Capacity on Initiation and Progression of Calcific Aortic Valve Disease
Carolyn M Roos, Arman Arghami, Michael A Hagler, Elise A Oehler, Grace C Verzosa, Bin Zhang, Jordan Miller, Mayo Clinic, Rochester, MN

360
Modified Endothelial Progenitor Cell (EPC) Better Than MSC Transplantation in Diabetic Kidney Disease (DKD)
N. Kundu: None. L. Asico: None. C. Domingues: None. P. Jose: None. S. Sen: None.

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Effects of Chronic, Intermittent Senescent Cell Clearance in Combination with Lipid Lowering on Inflammation in Pivascular Adipose Tissue
Evan N. Nicolai, Mayo Clinic Graduate Sch, Rochester, MN; Michael A. Hagler, Carolyn M. Roos, Bin Zhang, Jordan D. Miller, Mayo Clinic, Rochester, MN

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The Relationship Between Wall Shear Strain and Morphology Plaque in Coronary Artery Disease: A Systematic Review and Meta-analysis
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I. Bytyci: None. S. Bytyqi: None. A. Bajraktari: None. S. Elezi: None.

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Fast, Non-invasive, and Patient-specific Assessment for Ischemic Severity of Arterial Stenosis
Huidan Whitney YU, Monsurul Khan, Indiana Univ-Purdue Univ, Indianapolis, Indianapolis, IN; Alan Sawchuk, Sch of Med, Indiana Univ, Indianapolis, IN; Qiwen Wang, Dept of Cardiology, The first Affiliated Hosp, Sch of Med, Zhejiang Univ, Hangzhou, China; Xin Fang, Dept of Vascular Surgery, Hangzhou First People's Hosp, Hangzhou, China; Li Zhang, Dept of Cardiology, The first Affiliated Hosp, Sch of Med, Zhejiang Univ, Hangzhou, China; Hui Liang, Dept of Neurology, The First Affiliated Hosp, Medical Sch, Zhejiang Univ, Hangzhou, China; Michal C Daling, Dept of Surgery, Indiana Univ Sch of medicine, Indianapolis, IN; Raghu L Motaganahalli, Dept of Surgery, Indiana Univ Sch of Med, Indianapolis, IN

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Beta-1,3 / 1,6-D-Glucan Chemical Structure Characterization of Indonesian Ganoderma lucidum Mycelium Extract
Peter Sugita, PT Sahabat Lingkungan Hickup, Surabaya, Indonesia; Djanggan Sargowo, Saiful Anwar General Hosp, Malang - East Java, Indonesia
P. Sugita: None. D. Sargowo: None.

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Alice J Chu, Warren Alpert Medical Sch, Providence, RI; Jared L Christensen, Providence VA Medical Ctr, Providence, RI; Syndey Tan, Wenzheng Yu, Fabian Vargas, Warren Alpert Medical Sch, Providence, RI; Maen Assali, Wen-Chih Wu, Gaurav Choudhary, Providence VA Medical Ctr, Providence, RI; Alan R Morrison, Ocean State Res Institue, Inc., Providence, RI

367
The Effectiveness of Treatment for Patients With Chronic Lower Limb Ischemia Using a Plasmid Vegf65-gene Therapy Drug in the Long-term Period
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369 Blood Levels of Heme Oxygenase-1 (HO-1) versus Bilirubin in Patients with Coronary Artery Disease (CAD) Yoshimi Kishimoto, Ochanomizu Univ, Tokyo, Japan; Hanako Niki, Tokyo Medical Ctr, Tokyo, Japan; Emi Saita, Ochanomizu Univ, Tokyo, Japan; Susumu Ibe, Tomohiko Umei, Yukinori Ikegami, Tokyo Medical Ctr, Tokyo, Japan; Kazuo Kondo, Ochanomizu Univ, Tokyo, Japan; Yuhiiko Momiyama, Tokyo Medical Ctr, Tokyo, Japan Y. Kishimoto: None. H. Niki: None. E. Saita: None. S. Ibe: None. T. Umei: None. Y. Ikegami: None. K. Kondo: None. Y. Momiyama: None.

370 Genomic Analysis of Neurofibromatosis-Related Vasculopathy

371 Large-scale Identity-by-decent Mapping in More Than 95,000 Dna Biobank Participants Identifies Novel Genes Associated With Blood Lipid Levels

372 Psychoactive Substance Use on Individuals With Hyperlipidemia and Its Effects on Mental Health
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374 Induced Pluripotent Stem Cell Derived Smooth Muscle Cells Accelerate Diabetic Wound Healing

375 Regulation of the Long Non-coding RNA Transcriptome in Endothelial Cells in Response to Shear Stress

376 Supercharging Mesenchymal Stem Cells with E-selectin/AAV to Augment Postnatal Neovascularization in the Murine Ischemic Hindlimb

377 Macspectrum Yields Unprecedented Resolution of Full Spectrum Macrophage Activation States in Atherosclerosis

378 Creation of Four Congenic Mouse Strains Confirms and Localizes an Atherosclerosis Modifying Gene on Chromosome 15
Juying Han, Heather L Andro, Jonathan D Smith, Cleveland Clinic, Cleveland, OH J. Han: None. H.L. Andro: None. J.D. Smith: None.

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390 ENH Promotes Vascular Remodeling as a Negative Regulator of AKT Activation in Mouse Endothelium
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Y. Hu: None.

392 Endothelial ERα Promotes Insulin Sensitivity by Enhancing Endothelial Insulin Transcytosis and Insulin Delivery to Skeletal Muscle
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393 Single Cell Profiling of Aortic Endothelium Identifies Hierarchy From Endovascular Progenitors to Differentiated Cells
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394 Heterozygous Deletion of Transferrin Receptor 1 Attenuates Angiotensin II-induced Abdominal Aortic Aneurysm
Seiki Yasumura, Yoshiro Naito, Keisuke Okuno, Hisashi Sawada, Masanori Asakura, Masaharu Ishihara, Cardiovascular Div, Dept of Internal Med, Hyogo Coll of Med, Nishinomiya Hyogo, Japan

395 A Novel Approach for Storage of Vascular Cells at -20°C Using a Cryopreservation Medium That Minimizes Ice Recrystallization
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396 Protective Effects of Exercise on Vascular Function are Mediated by NADPH Oxidase 4
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397 Comparative Effects of Obesity and Hypercholesterolemia on Endothelial Dysfunction in Arteries of Visceral Adipose Through Impairment of K+ Channels
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398 Therapeutic Potential of Angiotensin-Receptor-Nephrilysin Inhibitors (ARNI) to Reduce Age-related Arterial Fibrosis and Stiffening
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399 Characterization of Vascular Exosomes: Potential Role in Inflammation
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400 Smooth Muscle Cell Mitochondrial Complex I and Metabolism in Vascular Remodeling
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402 Glutathione Regulates Arterial Calcification via Altered Matrix Remodeling
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405 Lung Megakaryocytes Present Antigen to CD4 T Cells

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407 Apabetalone (RVX-208) Inhibits Key Pro-Atherogenic Mediators and Pathways in Diabetes and Inflammatory Conditions; in vitro and in Patients

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410 Pten Protects Against Angiotensin II-induced Pathological Vascular Fibrosis and Remodeling

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J. Cui: None. M. Grau: None. F.M. Jaffer: None.

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417 Resistin Regulates Inflammatory Adhesion Molecules by Disassembling CAP1-Adenylyl Cyclase-Caveolin Complex in Human Endothelial Cells

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419 Regulation of VSMC Phenotype in Allograft Vasculopathy by the miR-29-TET2 Axis

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A. Ostriker: None. K. Martin: None.
425
Spatially Patterned Scaffolds Enhance Vascular Perfusion and Integration in Injured Muscle
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426
Inhibition of RIPK3/MLKL-dependent Necroptosis by SAP-12 in Ischemic Brain
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Q. Guo: None. J. Xie: None.

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The Landmarks of Vascular Recovery
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Transitioning From ICD-9 to ICD-10 in Administrative Claims Based Research for Cardiovascular Procedures
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Infammosome Mediated Reduction of Myeloperoxidase in Ischemic Stroke by intra-arterial Mesenchymal Stem Cell Therapy
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430
Endothelial Pparδ is Involved in Functional Recovery in Mouse Model of Hindlimb Ischemia
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431
Total Vascular Resistance and Augmentation Pressure in Patients with Peripheral Artery Disease
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432
Impact of Genomic Differences Among Arterial Beds in Atherosclerosis and Vascular Calcification Heterogeneity
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Neural Jnk3 Controls Blood Flow Recovery After Hindlimb Ischemia in Mice via an Fosq3α Regulated Pathway
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Quantitative Susceptibility Mapping on Magnetic Resonance Imaging Distinguishes Intraplaque Hemorrhage & Iron Deposition from Calcification in Carotid Atherosclerosis
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K. Maekawa: None.
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Stent Design Affects Femoropopliteal Artery Stenosis Rates
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437
Diabetic Men Suffer Poorer Long-Term Outcomes After Peripheral Vascular Intervention Than Women
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439
In vivo Imaging Assessment of Arterial Permeability Using Indocyanine Green: Implications for Optimizing Drug-Coated Balloon Treatment of Atherosclerosis
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CD47 Surface Functionalization Increases the Biocompatibility of Metal Stents

442
Quantitative Characterization of a Porcine Peripheral Artery Disease Model to Test an Encapsulated Mesenchymal Stromal Cell Therapy
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443
Vascular Outcomes of Transcarotid versus Alternative Approaches to Transcatheter Aortic Valve Replacement: A Systematic Review and Meta-analysis
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W2476, a Novel Thioredoxin Interacting Protein Inhibitor Attenuates Post-stroke Hemorrhagic Conversion in Hyperglycemic Mice Subjected to Thrombolytic Therapy
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L. Li: None. S. Ismael: None. T. Ishrat: None.

445
Insights from a Short-term Protein-Calorie Restriction Exploratory Trial in Elective Carotid Endarterectomy Patients

446
E-cigarette Vapor Accelerates Abdominal Aortic Aneurysm in Mice
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454 Videopresentation: Transabdominal Antegrade Mesenteric Bypass
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A. Javidan: None. W. Jiang: None. L. Yang: None. V. Subramanian: None.

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M. Franklin: None.

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460 Vascular Smooth Muscle Sirtuin-1 Regulates Tgf-b1 Signaling Pathway in Angiotensin II-induced Aortic Aneurysm and Dissection
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E. Budbazar: None. F. Seta: None.

461 Cd4+ T Cell Deficiency of KLF10 Impairs Blood Flow and Neovascularization in Response to Tissue Hypoxia
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A. Wara: None.

462 Microbial Colonization Restores Neointimal Hyperplasia Development After Arterial Injury in Germ-Free Mice
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463 Heterozygous Missense Mutations in PLEKHO2 Predispose to Thoracic Aortic Aneurysms and Dissections
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471 Dvt-on-chip: in-vitro Model of Venous Thrombosis Including Valves, Endothelium & Blood Flow
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Adams 13/- Zebrafish Depends on Endothelial von Willebrand Factor

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482 Old Substances Used as Novel Approach for Urgent 
Management of Post Cath Lab Patients Bleeding

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D.S.B. Šarenac: None. B. Calija: None.

483 Exercise Stimulates Specialized Prorresolving Lipid Mediator 
Production in Visceral Adipose Tissue

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J. Zheng: None. E. Pena Calderin: None. L.A. McNally: 
None. A. Bhatnagar: None. B.G. Hill: None. J. Hellmann: 
None.

484 Apolipoprotein (a) Isoform Size Regulates Both the 
Production and Clearance of Circulating Lipoprotein (a)

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Renu Nandakumar, Santicia Marcovina, Stephen Holleran, 
Rajasekar Ramakrishnan, Henry Ginsberg, Gisette Reyes-soffer, 
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A. Matveyenko: None. C. Ngai: None. T. Thomas: None. 
R. Nandakumar: None. S. Marcovina: None. S. Holleran: 
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490 Characterization of Gait Phenotype and Skeletal Muscle 
Perturbations in a Novel Renal Dysfunction Murine Hind Limb 
Ischemia Model

Sarah E Gray, Kyle M Staton, Terence E Ryan, Fabian Berru, 
Trace Thome, Kenneth C Harland, Kerri A O'Malley, Jared M 
Rozowsky, Scott A Berceli, Andrew J Martin, Qiongyao Hu, 
Salvatore T Scalì, Univ of Florida, Gainesville, FL

S.E. Gray: None. K.M. Staton: None. T.E. Ryan: None. F. 
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O'Malley: None. J.M. Rozowsky: None. S.A. Berceli: 
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491 High Fat Diet-induced Diabetic Atherosclerotic Disease in 
Apo e KO, ZDF Rats Has a Potential Estrogen-dependent 
Protective Development

Roberto I Mota, Samuel E Morgan, Edward Moreira 
Bahnson, Univ of North Carolina, Chapel Hill, NC

R.I. Mota: None. S.E. Morgan: None. E. Moreira Bahnson: 
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492 Reduction in Angiopoietin-Like Protein 3 via RNA Interference 
Improves Dyslipidemias and Hepatic Steatosis

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CA; James Hamilton, Arrowhead Pharmaceuticals Inc., 
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Graham: Other Research Support; Modest; Arrowhead 
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L. Trilling: Employment; Significant; Arrowhead 
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Arrowhead Pharmaceuticals. B. Given: Employment; 
Significant; Arrowhead Pharmaceuticals. Z. Li: Employment; 
Significant; Arrowhead Pharmaceuticals.

493 Adipose Specific Loss of Procollagen C-endopeptidase 
Enhancer 2 Impairs Mitochondrial Function and Promotes 
Endothelial Dysfunction

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Hader: None. H. Xu: None. K. Fredrich: None. M. Sorci 
Thomas: None.

494 Direct Lipoprotein Measurements and Cardiovascular 
Disease Risk Assessment in the Framingham Offspring Study

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ABSTRACTS

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497 A Novel Mass Spectrometry Platform Captures the Heterogeneous Metabolic Properties of CETP, PLTP and LCAT on HDL


499 Exercise Training Alters the Plasma Lipidomic Profile

500 Dissection of a Putative Juxtamembrane Domain in Scavenger Receptor BI
Sarah Proudfoot, Daisy Sahoo, Medical Coll of Wisconsin, Milwaukee, WI S. Proudfoot: None. D. Sahoo: None.

501 Amphipols: Peptide-like Synthetic Amphipathic Polymers That Promote Cellular Cholesterol Efflux

502 Elevated Lipoprotein(a) Levels Impair Abca1 Cholesterol Efflux Capacity

503 Association of Exercise-Induced Changes in Cholesterol Efflux Capacity with Changes in the HDL Proteome
Jacob Barber, Jonathan Ruiz-Ramie, William Clarkson, Univ of South Carolina, Columbia, SC; Michael Olivier, Wake Forest Sch of Med, Winston-Salem, NC; Claude Bouchard, Pennington Biomedical Res Ctr, Baton Rouge, LA; Anand Rohatgi, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Mark Sarzynski, Univ of South Carolina, Columbia, SC J. Barber: None. J. Ruiz-Ramie: None. W. Clarkson: None. M. Olivier: None. C. Bouchard: None. A. Rohatgi: None. M. Sarzynski: None.

504 Tethering State Determines High-Density Lipoprotein Action During Macrophage Catabolism of Aggregated Low-Density Lipoprotein
506
The Role of Apolipoprotein A-V in Chylomicron Metabolism
Xenia Davis, Chih-Wei Ko, Sarah Fourman, Qing Yang, Min Liu, Patrick Tso, Univ of Cincinnati, Cincinnati, OH

507
Physiologic and Genetic Role for C/ebp in Plasma Lipid Metabolism
Kavita Jadhav, Noel Walsh, Gabriella Quartuccia, Robert Bauer, Columbia Univ, New York City, NY
K. Jadhav: None. N. Walsh: None. G. Quartuccia: None. R. Bauer: None.

508
Smoking Alters High-Density Lipoprotein Subspecies and Associated Cytokine Profiles
Kate Townsend Creasy, James Feng, Thomas Lin, Tamar Gubeladze, Eveline O. Stock, Mary J. Malloy, John P. Kane, Univ of California San Francisco, San Francisco, CA

509
Apolipoprotein(a) and Apolipoprotein B Co-localize and Interact Intracellularly in Lipoprotein(a) Biosynthesis
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A. Youssef: Employment; Significant; University of Western Ontario. M. Boffa: Employment; Significant; University of Western Ontario. Research Grant; Significant; Natural Sciences and Engineering Research Council. Other Research Support; Moderate; Ionis. M.L. Koschinsky: Employment; Significant; University of Western Ontario. Research Grant; Significant; Natural Sciences and Engineering Research Council. Heart and Stroke Foundation of Ontario, Pfizer/ASPIRE Cardiovascular. Other Research Support; Significant; Eli Lilly, Sanofi/Regeneron, Cardiovas. Speakers Bureau; Moderate; Amgen. Honoraria; Moderate; Eli Lilly, Consultant/Advisory Board; Moderate; Amgen.

510
4-oxo-2-nonenal Adducts in HDL are Elevated in Familial Hypercholesterolemia: Identification of Modified Sites and Functional Consequences
Linda S May-Zhang, Valery Yermalitsky, Keri A Tallman, Vanderbilt Univ, Nashville, TN; Mark S. Borja, California State Univ East Bay, Hayward, CA; Venkataraman Amarnath, Vanderbilt Univ Medical Ctr, Nashville, TN; John T Melchoir, Jamie Morris, Univ of Cincinnati, Cincinnati, OH; Patricia G Yancey, Vanderbilt Univ Medical Ctr, Nashville, TN; W. Sean Davidson, Univ of Cincinnati, Cincinnati, OH; MacRae F. Linton, Vanderbilt Univ Medical Ctr, Nashville, TN; Sean S Davies, Vanderbilt Univ, Nashville, TN

511
Beta-carotene Conversion to Vitamin A Delays Atherosclerosis Progression by Reducing Very-Low Density Lipoprotein Lipidation
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512
Inflammatory Expression of Monocyte Chemoattractant Protein 1 by Macrophages is Regulated by ATP-Binding Cassette A1-dependent Efflux of 12Hydroxyeicosatrienoic Acid
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B. Harsch: None. K. Borkowski: None. T.L. Pedersen: Ownership Interest; Significant; Advanced Analytics. J.W. Newman: None. G.C. Shearer: Consultant/Advisory Board; Moderate; Soy Nutrition Institute. Consultant/Advisory Board; Significant; Amarin Pharmaceuticals.

513
Endothelial Lipase is a Critical Regulator of Triglyceride-Rich Lipoprotein Clearance
Cecilia Vitali, John Millar, Jeffrey Billeimer, Nicholas J Hand, Daniel J Rader, Univ of Pennsylvania, Philadelphia, PA

514
Treatment of Mice with ApoA1 Protects Them Against Doxorubicin Induced Cardiotoxicity in a Scavenger Receptor Class B Type I Dependent Manner
George G Kluck, Kristina K Durham, Kei C Mak, Yak D Deng, Bernardo L Trigatti, McMaster Univ, Hamilton, ON, Canada
515 Coronary Atheroma Regression from Serial Infusions of Autologous Selectively Delipidated Preβ-HDL-enriched Plasma on Coronary Atheroma in Patients With Homozygous Familial Hypercholesterolemia in the HALO-FH Trial
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B. Ghoshhajra: Other Research Support; Modest; Siemens Healthcare (institutional), National Institutes of Health. B. Foldyna: None. D. Gaudet: Research Grant; Modest; Aegerion (Novelion Therapeutics), Amgen, Regeneron, Sanofi, Consultant/Advisory Board; Modest; Akcea. Amgen, Aegerion, Esperion, HDL-therapeutics, Regeneron, Sanofi. E. Khoury: None. S.R. Sloan: None. P.K. Shah: None. S.R. Jones: Research Grant; Modest; David and June Trone Family Foundation. R. Waksman: Consultant/Advisory Board; Modest; Abbott Vascular, Amgen, Astra Zeneca, Biosensors, Biotronik, Boston Scientific, Cardioset, Cardiovascular Systems, Chiesi, MedAlliance, Medtronic, Philips Volcano, Pi-Cardia LTD. R. Torguson: None. E. Schaefer: Employment; Modest; Boston Heart Diagnost. Company. H. Brewer: Ownership Interest; Modest; HDL Therapeutics, Inc..

516 Re-programming of Neutrophils Modulates Inflammation Resolution During Atherosclerosis
Shuo Geng, Yao Zhang, Christina Lee, Lihu Li, Virginia Tech, Blacksburg, VA
S. Geng: None. Y. Zhang: None. C. Lee: None. L. Li: None.

517 Fast, Accurate And Reliable Detection of Extracellular Vesicles in Human Plasma by Flow Cytometry: a Step Toward Personalized Medicine
Maya Farhat, Carl Fortin, Catherine Martel, Montreal Heart Inst, Montreal, QC, Canada
M. Farhat: None. C. Fortin: None. C. Martel: None.

518 Apolipoprotein E Receptor-2 Deficiency Impairs Proliferation/Maturation and Functions of Dendritic Cells
Patrick Wolfkiew, Anja Jaeschke, David Y Hui, Univ of Cincinnati Coll of Med, Cincinnati, OH

519 Identification on Preventive Mechanism of Sodium-glucose Cotransporter 2 inhibitor for Atherosclerosis in Normoglycemic Rabbit Model
Seulgee Lee, Jung-Sun Kim, Oh-Hyun Lee, Jung-Jae Lee, Yongsei Univ, Seoul, Korea, Republic of
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520 Deficiency of the Immune Checkpoint Inhibitor Lymphocyte Activation Gene 3 Associated With Altered Energy Metabolism in Murine Bone Marrow Derived Dendritic Cells
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D.M. Garcia-Cruz: None. R. Giri: None. A. Rodriguez: Ownership Interest; Modest; Lipid Genomics. Ownership Interest; Significant; Significant.

521 Myeloid Cell-specific Deficiency of Hif-1α or Vegf-a Attenuates Experimental Atherosclerosis
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522 Downregulation of the Glucose Transporter Glut-1 and Glycolytic Function in Macrophages in a Mouse Model of Diabetes
Yunosuke Matsuura, Shelley Barnhart, Vishal Kothari, Farah Kramer, Jenny E. Kanter, Masami Shimizu-Albergine, Rong Tian, Karin E. Bornfeldt, Univ of Washington, Seattle, WA

523 In vivo Effects of Toll-like Receptor 7 Ligand in Experimental Atherosclerosis
Glykeria Karadimou, Anton Gistera, Monica Centa, Goren K. Hansson, Gabrielle Paulsson-Berne, Karolinska Inst, Stockholm, Sweden
524
Statins Enhance Macrophage Rac1 Activation Leading to Increased Atherosclerotic Calcification
Abigail Healy, Joshua M. Berus, Chris Mantsounga, Jared L. Christensen, Jerome P. Watts Jr., Maen Assali, Nicolle Ceneri, Rachael Nilson, Jade Neverson, Wen-Chih Wu, Gaurav Choudhary, Alan R. Morrison, Brown Univ, Providence, RI

525
Effecrocytosis is Involved in Progression but Not Regression of Atherosclerosis
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526
Smooth Muscle Specific Reticulon-4B Deficiency Protects Against Atherosclerosis
Dan Shan, Ya Ru Cui, Cheng Zhang, Jun Yu, Temple Univ, Philadelphia, PA
D. Shan: None. Y. Cui: None. C. Zhang: None. J. Yu: None.

527
Effects of Heart Failure and Diabetes Mellitus on Perioperative Myocardial Infarction
Tanya Wilcox, Boyangzi Li, Nathaniel Smilowitz, Jonathan Newman, Jeffrey Berger, New York Univ Sch of Med, New York, NY
T. Wilcox: None. B. Li: None. N. Smilowitz: Research Grant; Significant: Dr. Smilowitz is supported by an NYU CTSA grant, UL1 TR001445 and KL2 TR001446, from the National Center for Advancing Translational Sciences, National Institutes of Health. J. Newman: Research Grant; Significant: Dr. Newman was partially funded by the National Heart, Lung, and Blood Institute (NHLBI) of the NIH (K23HL125991). J. Berger: Research Grant; Significant: JSB was supported, in part, by the National Heart, Lung, and Blood Institute of the National Institutes of Health (R01HL114978) and NRS was supported by the National Heart, Lung, and Blood Institute o.

528
Pressure Overload in ApoE knockout Mice Leads to Coronary Plaque Formation, Disruption and Myocardial Events
Alice Marino, Yi Zhang, James Ip, Annarita Di Lorenzo, Weill Cornell Medical Coll, New York, NY
A. Marino: None. Y. Zhang: None. J. Ip: None. A. Di Lorenzo: None.

529
Clinical Determinants of Myocardial Injury, Detectable and Serial Troponin Levels Among Patients with Hypertensive Crisis
Giancarlo Acosta, Ahmed Amro, Wail Abusnina, Rodrigo Aguilar, Niharka Bhardwaj, George Koromia, Mark Studeny, Afsan Irfan, Marshall Univ, Huntington, WV

530
Scavenging Dicarbonyls With 5’-o-pentyl-pyridoxamine Improves Insulin Sensitivity and Reduces Atherosclerosis Through Modulating Inflammatory Ly6c<sup>+</sup> Monocytosis and Macrophage Polarization
Jiansheng Huang, Patricia Yancey, Vanderbilt Univ Medical Ctr, Nashville, TN; Linda May-Zhang, Vanderbilt Univ, Nashville, TN; Huan Tao, Youmin Zhang, Lei Ding, John A Oates, Venkataraman Amarnath, Jackson Roberts, Sean S Davies, MacRae F Linton, Vanderbilt Univ Medical Ctr, Nashville, TN

531
Predicting Coronary Plaque Vulnerability Change Using Machine Learning Methods and Patient-Specific FSI Modeling Based on IVUS Follow-up Data

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ANGPTL3 in Type 2 Diabetes Mellitus
Xiao Wang, Wenjian Lv, Alexandra C Chadwick, Chris McDermott-Roe, Kiran Musunuru, Univ of Pennsylvania, Philadelphia, PA

533
Wnt-Mediated Cross-Talk Between Arterial Smooth Muscle and Macrophages
Abraham Behnmann, Li Li, Bindu Ramachandran, Mohammad Goodarzi, Andrew Lemoff, Dwight A Towler, UT Southwestern Medical Ctr, Dallas, TX
534
Bone Marrow Transplantation Impacts the Earliest Stage of Atherosclerotic Lesion Formation
Jiro Ikeda, Corey Scipione, Sharon Hyduk, Marwan G. Althagafi, Xiaotang Gao, Jenny Jongstra-Bilen, Myron I. Cybulsky, Lab Med and Pathobiology, Univ of Toronto, Toronto, ON, Canada

535
Nck1 but not Nck2 Regulates Atherogenic Endothelial Activation via its First SH3 Domain’s Specific Interactions
Mabruka Alfaidi, Jessica Lindquist, Anthony W Orr, LSU Health Sciences Ctr-Shrevepo, Shreveport, LA
M. Alfaidi: None. J. Lindquist: None. A. Orr: None.

536
Multi-isotope Imaging Mass Spectrometry Reveals Heterogeneity of Cell Proliferation and Glucose Utilization in Atherosclerotic Plaques
Sean P. Doherty, Vanderbilt Univ Medical Ctr, Nashville, TN; Christelle Guillermier, Adam G. Whitney, Brigham and Women’s Hosp; Harvard Medical Sch, Boston, MA; Vladimir R. Babaev, MacRae F. Linton, Vanderbilt Univ Medical Ctr Nashville, TN; Matthew L. Steinhauser, Brigham and Women’s Hosp; Harvard Medical Sch, Boston, MA; Jonathan D. Brown, Vanderbilt Univ Medical Ctr Nashville, TN

537
Neutrophil Extracellular Trap (NET)-borne miR-10b Contributes to Atherosclerosis Lesion Destabilization
Hanna Winter, Klinikum rechts der Isar der TUM, Munich, Germany; Joana R. Viola, Oliver Soehnlein, Inst for Cardiovascular Prevention (IPEK), Ludwig-Maximilians-Univ München, Munich, Germany; Lars Maegdefessel, Klinikum rechts der Isar der TUM, Munich, Germany
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539
Examining the Signaling Pathways Connecting Endothelial-Mesenchymal Transition (EndMT) and Smooth Muscle Cells in Vascular Calcification
Cameron Roach, Claire Travis, C. LaShan Simpson, Mississippi State Univ, Mississippi State, MS
C. Roach: None. C. Travis: None. C. Simpson: None.

540
Stress Granules Form in Response to and May Mediate Inflammation in Vascular Smooth Muscle Cells
Allison Herman, Sheri Kelemen, Mittali Ray, Christine Vrakas, Rosario Scalia, Michael Autieri, Temple Univ, Philadelphia, PA

541
Hepatocyte-specific Deletion of the Circadian Clock Gene Bmal1 Impairs Perivascular Adipose Tissue Anti-contractile Function
Paramita Pati, John M. Allan, Telisha M. Swain, Dingguo Zhang, Chunhua Jin, David M. Pollock, Shannon Bailey, Jennifer S. Pollock, Univ of Alabama at Birmingham, Birmingham, AL

542
Correlation of Computed Tomography with Carotid Plaque Transcripts Associates Calcification to Lesion-Stabilization
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543
The in vivo Role of Smooth Muscle Cell Notch2 in Atherosclerotic Plaque Burden and Composition
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544
A Novel Micropeptide, IMP, Directs Inflammation Through Interaction with Transcriptional Co-activators
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546 Local, Rather Than Systemic, Increase in Abca1 Promotes Regression of Atherosclerosis
Courtney R Papen, Azzdine Ammi, Paul Mueller, Jonathan Lindner, Hagai Tavori, OHSU, Portland, OR

547 Scavenger Receptor SR-BI Splice Variants 1 and 2 Differ by Cellular Localization and Interaction with HDL and LDL in Endothelial Cells
Lucia Rohrer, Anton Potapenko, Silvija Radosavljevic, Arnold von Eckardstein, Univ Hosp, Zurich, Switzerland

548 Alteration in Vascular Smooth Muscle Cell Biomechanics and Cytoskeletal Architecture is Collectively Coordinated by Substrate Stiffness and Membrane Cholesterol
Hanna Joseph Sanyour, Na Li, Alex P Rickel, Courtney N Kinser, Zhongkui Hong, Univ of South Dakota, Sioux Falls, SD
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549 Alternative Splicing of Fibronectin Regulates Extracellular Matrix Composition of the Inflamed Arterial Wall
Patrick A Murphy, UCONN Health, Farmington, CT; Noor Jalilkhani, MIT, Cambridge, MA; Sarah-Anne Nicholas, UCONN Health, Farmington, CT; Amanda Del Rosario, MIT, Cambridge, MA; Jeremy Balsbaugh, UCONN, Storrs, CT; Stewart Levine, MIT, Cambridge, MA; Shahinoor Begum, Amy Kimble, UCONN Health, Farmington, CT; Richard O Hynes, MIT, Cambridge, MA

550 Divergent Roles of Macrophage mTORC1 and mTORC2 Signaling in Atherosclerosis
Xiangyu Zhang, Sunny Chen, Astrid Rodríguez-Vélez, Trent Evans, Babak Razani, Washington Univ, Saint Louis, MO
X. Zhang: None. S. Chen: None. A. Rodríguez-Vélez: None. T. Evans: None. B. Razani: None.

551 Macrophage-microRNA-147 Protects Against Atherosclerosis in Mice
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552 Dissecting Vascular and Platelet Function in Ovarian Cancer With Organ-on-a-chip Methodology
Biswajit Saha, Texas AnM Univ, College Station, TX; Justin Bui, Piyashi Biswas, Texas A&M Univ, College Station, TX; Anil K Sood, Vahid Afshar-Khargan, MD Anderson Cancer Ctr, Houston, TX; Abhishek Jain, Texas AnM Univ, College Station, TX

553 Platelet Volume Indices as Markers of Platelet Reactivity in Atherosclerotic Coronary Artery Disease
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554 Impact of Dual Anti-platelet Therapy in Coronary Artery Bypass Graft Patients on Graft Outcomes and Mortality
Iftikhar Ali Ch, Naeem Tahirkheli, Pei-Tzu Wu, Abdul Qadar, Ahmad Usmani, Raja Ullah, Hunter Weitzel, Oklahoma Heart Res Fndn, Oklahoma City, OK

555 Design and Development of Activators of Human Hepatocyte Growth Factor Receptor, c-MET, for Critical Limb Ischemia
Alexandra E. Panaitiu, Dept of Chemistry, Dartmouth Coll, Hanover, NH; Christopher O. Audu, Section of Vascular Surgery, Univ of Michigan, Ann Arbor, MI
A.E. Panaitiu: None. C.O. Audu: None.

556 CETP Inhibitor Increases HDL-C and Cholesterol Efflux Capacity, but Reduces Subsequent Cholesterol Esterification and Hepatic Cell Uptake
Heidi L Collins, VascularStrategies, LLC, Plymouth Meeting, PA; Steven J Nichols, Monash Cardiovascular Res Ctr, Monash Univ, Melbourne, Australia; Daniel J Rader, Univ of Pennsylvania, Philadelphia, PA; Jeffrey S Riesmeyer, Debra L Miller, Giacomo Ruotolo, Eli Lilly and Company, Indianapolis, IN; Steven J Adelman, VascularStrategies, LLC, Plymouth Meeting, PA
ABSTRACTS

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ABSTRACTS

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559
The Effect of Echinocochrane A on Vascular Smooth Muscle Cell Proliferation Through mTOR Signaling Pathway
Kyo Won Seo, Nari Kim, Dept of Physiology, Coll of Med, Cardiovascular and Metabolic Disease Ctr, Inje Univ, Busan, Korea, Republic of
K. Seo: None. N. Kim: None.

560
Genetic and Pharmacological Disruption of Epsins Attenuates Atherosclerosis
Hong Chen, Harvard Medical Sch, Boston, MA
H. Chen: None.

561
Diagnostic Potential of an LyP-1 Peptide Aptamer for the Detection of Atherosclerotic Plaque
Chun Ming TEOH, Ngee Ann Polytechnic, Singapore; Rufaijah Abdul Jaili, Marek Kukumberg, Wei Kai Ng, Natl Univ of Singapore, Singapore, Singapore
C. Teoh: None. R. Abdul Jaili: None. M. Kukumberg: None. W. Ng: None.

Poster Session 3 Abstracts

565
Diabetes Induces Inducible Nitric Oxide Synthase Expression to Impair Ischemia Postconditioning Cardioprotection
Zhi-Jun Ou, Tian-Tian Wang, Yan Li, Da-Sheng Ning, Fan Yang, Sun Yet-Sen Univ, Guangzhou, China; Zheng-Yuan Xia, The Univ of Hong Kong, Hong Kong, China; Jing-Song Ou, Sun Yet-Sen Univ, Guangzhou, China
Z. Ou: Research Grant; Significant; National Natural Science Foundation of China (Grants 81670392). T. Wang: None. Y. Li: Research Grant; Significant; National Natural Science Foundation of China (Grants 81600382). D. Ning: None. F. Yang: None. Z. Xia: None. J. Ou: Research Grant; Significant; the National Natural Science Foundation of China (Grants 81770241, 81830013).International Cooperation project (2015DFA31070) from the Ministry of Science and Technology of China.

566
Characterization of Expressed Quantitative Trait Loci Within the Clopidogrel Metabolism Pathway on Antiplatelet Response Variability in African Americans
Tania De, Cristina Alarcon, Northwestern Univ, Chicago, IL; Erin Smithberger, Univ of Chicago, Chicago, IL; Minoli Perera, Mohammed Shaazuddin, Mohammed Nooruddin, Paul Friedman, Northwestern Univ, Chicago, IL; Diana Moreno, Edith Nutescu, Univ of Illinois, Chicago, IL; April Barbour, George Washington Univ, Washington DC, VA; Matthew Tuck, Washington DC VA Medical Ctr, Washington DC, VA; Arthur Harralson, Shenandoah Univ, Winchester, VA; Tharani Jeyaram, Mary Harris, Sarah Bradbury, Univ of Chicago, Chicago, IL; Ramesh Subrahmanyam, U.S. Dept of Veterans Affairs, Washington DC, VA; Jeff Banagan, Georgetown Univ, Washington DC, VA; Olivia Gordon, George Washington Univ, Washington DC, VA; Juan Avitia, Bianca Lec, Bianca Lec, Northwestern Univ, Chicago, IL

567
Bispecific Antibody Therapy for Effective Cardiac Repair Through Redirection of Endogenous Stem Cells
Ke Huang, NCSU, Apex, NC; Zhenhua Li, Teng Su, Shiqi Hu, Deliang Shen, Ke Cheng, NCSU, Raleigh, NC
K. Huang: None. Z. Li: None. T. Su: None. S. Hu: None. D. Shen: None. K. Cheng: None.

568
Nocturnal Dipping as a Function of RS5370 Carrier Status X Everyday Discrimination in the Jackson Heart Study
Mathew J Gregoski, Campbell Univ, Buia Creek, NC; Rasaki A Aranmolate, Kendrick M Walker, Sarah G Buxbaum, Jackson State Univ, Jackson, MS
M.J. Gregoski: Research Grant; Significant; 15SDG25700010 funded this research. R.A. Aranmolate: None. K.M. Walker: None. S.G. Buxbaum: Research Grant; Modest; 15SDG25700010 funds covered some salary support.

569
Screening for Specific Heart Valve Conditions Using a Rules-Based Search Engine in U.S. Healthcare Systems
Daniel O’Hair, Boulder Community Health, Boulder, CO; Joe Kohli, Cara Brigman, Jessica Ripnourw, [m]pirik, Milwaukee, WI
D. O’Hair: Ownership Interest; Significant; [m]pirik. J. Kohli: Ownership Interest; Significant; [m]pirik. C. Brigman: Employment; Significant; [m]pirik. J. Ripnour: Employment; Significant; [m]pirik.
570
Qingyu Wang, Southeast Univ, Nanjing, China; Dalin Tang, Worcester Polytechnic Inst, Worcester, MA; Gadot Canton, Thomas S Hatsukami, Univ of Washington, Seattle, WA; Kristen L Billiar, Zheyang Wu, Worcester Polytechnic Inst, Worcester, MA; Chun Yuan, Univ of Washington, Seattle, WA
Q. Wang: Research Grant; Modest; Postgraduate Research & Practice Innovation Program of Jiangsu Province KYCX18_0156. D. Tang: Research Grant; Modest; NSF grant DMS-0540684, NIH grant R01 EB004759, Jiangsu Province Science and Technology Agency grant BE2016785. G. Canton: None. T.S. Hatsukami: Research Grant; Modest; NIH R01 HL61851, NIH P01 HL072262. K.L. Billiar: None. Z. Wu: None. C. Yuan: None.

571
Genome-Wide Interaction Study with Sex Identifies Novel Loci for Intracerebral Hemorrhage Risk
Jaeyeon Chung, Bailey Montgomery, Sandro Marini, Jonathan Rosand, Christopher D Anderson, Massachusetts General Hosp, Boston, MA

572
Inflammatory Connective Tissue Diseases Independently Associate with Atherosclerotic Cardiovascular Disease
Francis J Alenghat, Univ of Chicago, Chicago, IL.
F.J. Alenghat: None.

573
Plasma Legumain Levels in Patients with Coronary Artery Disease (CAD)
Tomohiko Umei, Tokyo Medical Ctr, Tokyo, Japan; Yoshimi Kishimoto, Ochanomizu Univ, Tokyo, Japan; Hanako Niki, Tokyo Medical Ctr, Tokyo, Japan; Emi Saita, Ochanomizu Univ, Tokyo, Japan; Susumu Ibe, Yukinori Ikegami, Tokyo Medical Ctr, Tokyo, Japan; Kazue Kondo, Ochanomizu Univ, Tokyo, Japan; Yukihiko Momiyama, Tokyo Medical Ctr, Tokyo, Japan
T. Umei: None. Y. Kishimoto: None. H. Niki: None. E. Saita: None. S. Ibe: None. Y. Ikegami: None. K. Kondo: None. Y. Momiyama: None.

574
Atherogeneity of Volatile Organic Compounds
Marina V Malovichko, Daniel W Riggs, Abhinav Agrawal, Timothy E O’Toole, Rachel J Keith, Andrew DeFilippis, Shesh N Rai, Univ of Louisville, Louisville, KY; Karen Valle, Wondowsen K Yimer, Univ of Mississippi Medical Ctr, Jackson, MS; Aruni Bhatnagar, Daniel J Conklin, Univ of Louisville, Louisville, KY; Michael E Hall, Univ of Mississippi Medical Ctr, Jackson, MS; Sanjay Srivastava, Univ of Louisville, Louisville, KY

575
Rare Variants in ABCG5/8 Genes Contribute to Mimic and Worsen the Phenotype of Familial Hypercholesterolemia
Hayato Tada, Masa-aki Kawashiri, Akhiror Nomura, Atsushi Nohara, Masayuki Takamura, Kanazawa Univ, Kanazawa, Japan

576
Immunosuppression Agent Cyclosporine Reduces Self-Renewal and Vessel Regeneration Potentiation of Human Endothelial Colony Forming Cells
Seon-Ling Sim, Josue Alexis, Abbas Shafiee, Kirash Khosrotehrani, Jatin Patel, The Univ of Queensland, Brisbane, Australia
S. Sim: None. J. Alexis: None. A. Shafiee: None. K. Khosrotehrani: None. J. Patel: None.

577
Altered DNA Methylation in Hypertensive Pulmonary Vascular Smooth Muscle Underlies Phenotypic Changes and Upregulation of Galectin-3
Xueyi Li, Augusta Univ, Augusta, GA; Feng Chen, Dept of Forensic Med, Nanjing Medical Univ, Nanjing, China; Steven Haigh, David W. Step, Zsuzsanna Bordan, Yunchao Su, Scott A. Barman, David J Fulton, Augusta Univ, Augusta, GA
X. Li: None. F. Chen: None. S. Haigh: None. D. Step: None. Z. Bordan: None. Y. Su: None. S. Barman: None. D.J. Fulton: None.

578
Coronary Artery Disease-associated Genetic Variants Increased Lipa Expression and Overexpression of Lipa Induced Atherogenic Phenotypes in Macrophages
Fang Li, Jianting Sh, Chenyi Xue, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY; Elise Flynn, New York Genome Ctr, Dept of Systems Biology at Columbia Univ, New York, NY; Huize Pan, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY; Zhihu Gu, Data Science Inst, Columbia Univ, New York, NY; Trent Evans, Washington Univ at St Louis, St Louis, MO; Muredach P Reilly, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY; Danial Saleheen, Department of Biostatistics and Epidemiology, Univ of Pennsylvania, Philadelphia, PA; Babak Razani, Washington Univ at St Louis, St Louis, MO; Tuuli E Lappalainen, New York Genome Ctr, Dept of Systems Biology at Columbia Univ, New York, NY; Hanni Zhang, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY

582
Enhancing Pluripotency of Fibroblasts Through Combined Biomechanical and Pharmaceutical Treatments
Jason Lee, Miguel Armenta-Ochoa, Pablo Maceda, Eun Yoon, Lara Samarneh, Mitchell Wong, Aaron Baker, Univ of Texas at Austin, Austin, TX
Poster Abstracts (continued)

583 Adenosine Monophosphate-activated Protein Kinase Mutations Cause Glycogen Storage Disease Mimicking Hypertrophic Cardiomyopathy

Sahmin Lee, Asan Medical Ctr, Seoul, Korea, Republic of; Han-Mo Yang, Seoul Natl Univ Coll of Med, Seoul, Korea, Republic of; Naaleum Song, Kyong-Hee Choi, Asan Medical Ctr, Seoul, Korea, Republic of; Ju-Young Kim, Seoul Natl Univ Coll of Med, Seoul, Korea, Republic of; Eun-Ju Kang, Asan Medical Ctr, Seoul, Korea, Republic of; Dae-Won Sohn, Seoul Natl Univ Coll of Med, Seoul, Korea, Republic of


584 Cerebrovascular Repair via Endothelial Cell Epigenetics

Peeyush Thankamani Pandit, Devin McBride, Kanako Matsumura, Tejesh Guddanti, Stephanie A Ihezie, Spiros L Blackburn, UTH Houston, Houston, TX


585 Transcription Factor EB is a Novel Regulator of Endothelial Cell Metabolism

Jinjia Sun, Univ of Michigan, Ann, MI; Haocheng Lu, Wenyong Liang, Ziyi Chang, Die Hu, Jifeng Zhang, Yinuge Chen, Yanbo Fan, Univ of Michigan, Ann Arbor, MI


586 Hydroxycarboxylic Acid Receptor 2 Regulates Angiogenic Function of Retinal Endothelial Cells in a Mouse Model of Oxygen Induced Retinopathy

Ammar A Abdelrahman, Falami L Powell, Ravirajsinh N Jadeja, Malita A Jones, Menaka C Thounaojam, Manuela Bartoli, Pamela M Martin, Augusta Univ, Augusta, GA


587 Human Interleukin-8 Promotes Inflammation and Exacerbates Vascular Pathology in Transgenic Mice

Wei Zhang, Jinjing Zhao, Alyssa Jones, Xiaochun Long, Albany Medical Coll, Albany, NY

W. Zhang: None. J. Zhao: None. A. Jones: None. X. Long: None.

588 Common Molecular Signature for Human Endothelial Dysfunction Associated With Abnormalities in Blood Flow, Lipids, Inflammation and Hypoxia

Iguarapy Pinheiro de Sousa, Vinicius de Souza, Samantha Kuwada Teixeira, José Eduardo Krieger, Univ of São Paulo/Heart Inst - InCOR, Sao Paulo, Brazil


589 Role of PDE10A in Vascular Smooth Muscle Cell Hyperplasia and Pathological Vascular Remodeling

Lingfeng Luo, Vyacheslav A Korshunov, Bradford C Berk, Chen Yan, Univ of Rochester, Rochester, NY

L. Luo: None. V.A. Korshunov: None. B.C. Berk: None. C. Yan: None.

590 Mir-155 is a Negative Regulator of Acute Oscillatory Shear Stress-induced AT1R/ETS-1 Pathway and Downstream Vascular Inflammation and Barrier Dysfunction

Islam Mohamed, California Northstate Univ, Elk Grove, CA; Sheena Thomas, Kimberly Rooney, Div of Cardiology, Emory Univ Sch of Med and Atlanta VA Medical Ctr, Atlanta, GA; Nick Willett, Dept of Orthopedics, Emory Univ Sch of Med and Atlanta VA Medical Ctr, Atlanta, GA; W. Robert Taylor, Charles Searles, Div of Cardiology, Emory Univ Sch of Med and Atlanta VA Medical Ctr, Atlanta, GA


591 Calcium Signaling of Endoplasmic Reticulum Could Predict Spasm of Coronary Artery

Han Mo Yang, Jooeon Lee, Ju-Young Kim, Seoul Natl Univ Hosp, Seoul, Korea, Republic of; Sahmin Lee, Dept of Internal Med, Asan Medical Ctr, Seoul, Korea, Republic of

H. Yang: None. J. Lee: None. J. Kim: None. S. Lee: None.

592 Histone Modification H3K4 di-methylation (H3K4me2) Regulates Vascular Smooth Muscle Cells Differentiation Through Interaction with TET2

Mingjun Liu, Sidney Mahan, Univ of Pittsburgh, Pittsburgh, PA; Kathleen Martin, Yale Univ, New Haven, CT; Delphine Gomez, Univ of Pittsburgh, Pittsburgh, PA


593 OPNa and OPNc Contribute to PDGF-Induced Vascular Smooth Muscle Cell Migration and Proliferation

Grace Sanghee Lee, Zoe Shin Lok, Hector F Salazar, Michelle Z Tsai, Bernard Lassêgue, Sarah Harirforoosh, Kathy K Griending, Alicia N Lyle, Emory Univ, Atlanta, GA


594 SM22 Interacts with SRF to Provide Negative Feedback Control to Regulate Myocardin/SRF Mediated Smooth Muscle Cell Differentiation

Xiaohua Dai, Shuping Yin, Wayne State Univ, Detroit, MI; Maozhou Yang, Henry Ford Health System, Detroit, MI; Jingye Fang, Wayne State Univ, Detroit, MI; Hui Li, Univ of Mass, Worcester, MA; Da-zhi Wang, Harvard Univ, Boston, MA; Zhe Yang, Li Li, Wayne State Univ, Detroit, MI

595
Constructing a Tissue Engineered Blood Vessel Using a Self-folding Biodegradable Hydrogel Bilayer
Ding-Yang Tsai, Kuan-Lun Ho, Jyong-Huei Lee, Dept of Mechanical Engineering, Natl Taiwan Univ, Taipei, Taiwan; Wei-Tien Chang, Dept of Emergency Med, Natl Taiwan Univ Hosp and Coll of Med, Taipei, Taiwan; Shih-Kang Fan, Dept of Mechanical Engineering, Natl Taiwan Univ, Taipei, Taiwan
D. Tsai: None. K. Ho: None. J. Lee: None. W. Chang: None. S. Fan: None.

596
What Should be the “Key” to the Placenta, So That It Speaks About the Secrets of the Cardiological Fate of a Person?
Tigran Hakob Ghevondyan, Orbeli Inst of Physiology NAS, Yerevan, Armenia
T.H. Ghevondyan: None.

598
Thymine DNA Glycosylase Regulates CaMKIIα Promoter Methylation and Vascular Smooth Muscle Phenotype Switching
Yongfeng Liu, Harold Singer, Albany Medical Ctr, Albany, NY
Y. Liu: None. H. Singer: None.

599
Novel Pharmacological Approach to Treat Vascular Leakage
Xinyan Qu, Univ of Illinois at Chicago, chicago, IL; Ben Hutchinson, Univ of Illinois at Chicago, Chicago, IL; Avik Banerjee, Univ of Illinois at Chicago, Chicago, IL; Shuangping Zhao, Chongxu Zhang, Vadim Gaponenko, Yulia Komarova, Univ of Illinois at Chicago, Chicago, IL
X. Qu: None. B. Hutchinson: None. A. Banerjee: None. S. Zhao: None. C. Zhang: None. V. Gaponenko: None. Y. Komarova: None.

600
Antioxidant Glutathione Regulation of Pro-angiogenic Immune Factors During Ischemia
Bandana Shrestha, Christopher B Pattillo, Louisiana Health Science Ctr -SH, Shreveport, LA
B. Shrestha: None. C.B. Pattillo: None.

601
Identifying Monocyte and Neutrophil Extracellular Traps in vivo by Flow Cytometry
Kathryn Hally, Univ of Otago, Wellington, New Zealand; Anne La Flamme, Victoria Univ of Wellington, Wellington, New Zealand; Peter Larsen, Univ of Otago, Wellington, New Zealand
K. Hally: None. A. La Flamme: None. P. Larsen: None.

602
Baff-br3 Signaling Promotes Aortic Aneurysm Formation via Metabolic Reprogramming of B Cells
Michael Spinosa, Vlad Serbulea, William Montgomery, Clint M Upchurch, Sribani Sahu, Prasad Sriakulapu, Coleen A McNamara, Univ of Virginia, Charlottesville, VA; Gilbert R Upchurch Jr., Univ of Florida, Gainesville, FL; Gorav Ailawadi, Norbert Leitinger, Akshaya Kumar Meher, Univ of Virginia, Charlottesville, VA

603
Acute Myocardial Infarction Accelerates Breast Cancer Progression Through Innate Immunity

604
Loss of PCPE2 Alternates Bone Marrow-derived Macrophage Functions
Hao Xu, Katherine Fredrich, Sushma Kaul, Medical Coll Wisconsin, Milwaukee, WI; Ryan Llewellyn, Catherine C Hedrick, La Jolla Inst for Immunology, La Jolla, CA; Rachel Kallinger, Kaniz Fatema, Michael Thomas, Mary G Sorci Thomas, Medical Coll Wisconsin, Milwaukee, WI

605
Macrophage-derived Netrin-1 Reshapes the Immune Cell Repertoire in the Atherosclerotic Plaque and Impairs Plaque Regression
Paul Martin Schlegel, Monika Sharma, Emily Brown, Milessa Afonso, Graeme Koelwyn, Emma Corr, Coen van Solingen, Lianne Shannley, Kathryn J Moore, New York Univ, New York, NY

606
Role of Circulating Caveolin-1+ Endothelial Cell-derived Extracellular Vesicles in Mediating Inflammation-induced Pulmonary Arterial Hypertension
Suellen Darce Oliveira, Jiawang Chen, Marcia Castellon, Usha Raj, Univ of Illinois at Chicago, Chicago, IL; Suzy Comhair, Serpil Erzurum, Lerner Res Inst, Cleveland Clinic Fndn, Cleveland, OH; Claudia Lucia Martins Silva, Federal Univ of Rio de Janeiro, Rio de Janeiro, Brazil; Roberto F Machado, Indiana Univ, Indiana, IN; Marcelo G Bonini, Medical Coll of Wisconsin, Milwaukee, WI; Richard Minshall, Univ of Illinois at Chicago, Chicago, IL
607  
Effect of EPA and DHA Supplementation on Plasma Concentrations of Specialized Pro-resolving Lipid Mediators and their Association with Blood Monocyte Inflammatory Response in Subjects with Chronic Inflammation  
Jisun So, Nirupa R Matthan, Tufts Univ, Boston, MA; Krishna Rao Maddipati, Wayne State Univ, Detroit, MI; Alice H Lichtenstein, Dayong Wu, Stefania Lamon-Fava, Tufts Univ, Boston, MA  
J. So: None. N.R. Matthan: None. K.R. Maddipati: None.  
A.H. Lichtenstein: None. D. Wu: None. S. Lamon-Fava: None.

608  
Anti-Inflammatory and Vascular Protective Effects of Glucagon-like Peptide 1 (GLP-1) in Polymicrobial Septic Mice Induced by Cecal Ligation and Puncture (CLP)  
Johanna Helmstäder, Franziska Pawelke, Konstantina Filippow, Katie Freinis, Ksenija Vujacic-Mirska, Sanela Kalinovic, Swenja Kröller-Schön, Matthias Oelze, Ctr for Cardiology, Univ Medical Ctr of the Johannes Gutenberg Univ, Mainz, Germany; Thomas Münzel, Andreas Daiber, Ctr for Cardiology, Univ Medical Ctr of the Johannes Gutenberg Univ and German Ctr for Cardiovascular Res (DZHK), Partner Site Rhine-Main, Mainz, Germany; Sebastian Steven, Ctr for Cardiology and Ctr for Thrombosis and Hemostasis, Univ Medical Ctr of the Johannes Gutenberg Univ, Mainz, Germany  

609  
Induction of a Prohealing Macrophage Phenotype with Stent-eluted Gene Vectors for the Prevention of Restenosis  

610  
Acute Myocardial Infarction Induces Long Term Reprogramming of Monocytes Inflammatory and Functional Responses  
Emma May Corr, Graeme J Koelwyn, Monika Sharma, Coen Van Solingen, Martin Schiegel, Milesa Afonso, Lianne Shanley, Kathryn J Moore, New York Univ Medical Ctr, New York, NY  

611  
PI3Kgamma Regulates the Cross-Talk of CD8 T Cell and the Vasculature in Hypertension  
Daniela Carnevale, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy; Daniele Iodice, Roberta Iacobucci, Lorenzo Carnevale, IRCCS Neuromed, Pozzilli, Italy; Sara Perrotta, Sapienza Univ, Pozzilli, Italy; Fabio Pallante, IRCCS Neuromed, Pozzilli, Italy; Giuseppe Lembo, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy  

612  
In vivo Molecular-Structural Imaging of Endothelial Permeability and Inflammation Assesses Injury Following Stent Implantation  
Eric A Osborn, Beth Israel Deaconess Medical Ctr, Boston, MA; Zhonglie Piao, Kanwarpal Singh, Adam Maukspf, Guillermo J Tearney, Farouc A Jaffer, Massachusetts General Hosp, Boston, MA  
E.A. Osborn: Consultant/Advisory Board; Modest; Dynamed. Consultant/Advisory Board; Significant; Abbott Vascular. Z. Piao: None. K. Singh: None. A. Maukspf: None. G.J. Tearney: Research Grant; Modest; VivoLight. Research Grant; Significant; Merck Sharp & Dohme, Canon. Other Research Support; Modest; Terumo. Consultant/Advisory Board; Modest; SpectraWAVE. F.A. Jaffer: Research Grant; Modest; Siemens, Research Grant; Significant; Kowa, Merck Sharp & Dohme, Canon, Consultant/Advisory Board; Modest; Siemens, Philips, Consultant/Advisory Board; Significant; Boston Scientific, Abbott Vascular. Other; Modest; Terumo, Spectrawave.

613  
Endothelial Ttk1 Deficiency Accelerates Atherosclerotic Plaque Formation  
Tae Kyeong Kim, Sejin Jeon, Goo Taeg Oh, EWHA Womans Univ, Seoul, Korea, Republic of  
T. Kim: None. S. Jeon: None. G. Oh: None.

620  
Circulating Sex-specific Markers of Plaque Instability in Women and Men with Severe Carotid Atherosclerosis  
Karina Gasbarrino, Huaichen Zheng, Edward Daly, Stella S. Daskalopoulou, The Res Inst of the McGill Univ Health Ctr, McGill Univ, Montreal, QC, Canada  

621  
Chronic Periodontitis is Linked with Cerebral Atherosclerosis Among the Population of United States  
Urvish K Patel, Creighton Univ Sch of Med, Omaha, NE; Nishanth Kodumuri, Univ of South Carolina Sch of Med, Columbia, SC; Preeti Malik, Saleha Saiyed, Icahn Sch of Med at Mount Sinai, New York, NY; Nirav Patel, Bhavin H Gajjar, Vishal Pandya, Herman Rowst Sch of Dentistry of USC, Los Angeles, CA; Prutha Soni, Shashvat Soni, Rutgers Sch of Dental Med, Newark, NJ; Liseth Lavado, Rutgers Sch of Nursing, Newark, NJ; Karan Patel, Johns Hopkins Univ, Baltimore, MD; Abhishek Lunagariya, Vishal B Jani, Creighton Univ Sch of Med, Omaha, NE  
623
Role of Cbp and P300 in Smooth Muscle Cell Plasticity
Raja Chakraborty, Allison Ostriker, John Hwa, Kathleen Martin, Yale Univ, New Haven, CT
R. Chakraborty: None. A. Ostriker: None. J. Hwa: None. K. Martin: None.

624
Heterozygous Deletion of Transferrin Receptor 1 Impairs Angiogenesis with Reduced Mitochondrial Complex I in a Mouse Model of Hind Limb Ischemia
Keisuke Okuno, Yoshiro Naito, Seiki Yasumura, Hisashi Sawada, Masanori Asakura, Masaharu Ishihara, Hyogo Coll of Med, Nishinomiya, Japan

625
Intra-arterial Delivery of Mesenchymal Stem Cells Modulates Neuronal Calcineurin Expression in a Rodent Model of Ischemic Stroke
Harpreet Kaur, NIPER Ahmedabad, Ahmedabad, India
H. Kaur: None.

626
Predictors of Hard Outcomes in the ALLHAT Trial Identified With Machine Learning
Victoria Xin, Amit Dey, Runqiu Wang, Ruba Shalhoub, Yuan Gu, Colin Wu, Xin Tian, NHLBI, Bethesda, MD; Tejas Patel, FDA, Bethesda, MD; Jerome Fleg, NHLBI, Bethesda, MD; Anna Kettermann, FDA, Bethesda, MD; Gyorgy Csako, George Sopko, NHLBI, Bethesda, MD; Helena Sviglin, FDA, Bethesda, MD; Gauri Dandi, Nashwan Farooque, Laboni Hoque, Nuha Gani, Zynah Mallick, NHLBI, Bethesda, MD; M.T. Kuroki, NHLBI, Bethesda, MD; Iffat Chowdhury, Keith Burkhart, Ana Szarfman, FDA, Bethesda, MD; Sean Coady, Nehal Mehta, NHLBI, Bethesda, MD; Eileen Navarro, Frank Pucino, FDA, Bethesda, MD; Yves Rosenberg, Ahmed Hasan, NHLBI, Bethesda, MD

627
Claudication Distances and Muscle Oxygen Saturation Best Describe the Home Daily Activity of Claudicating Patients with Peripheral Artery Disease
Matthew Fuglestad, Hernan Hernandez, Yue Gao, Kataryina E Brunette, Univ of NE Medical Ctr, Omaha, NE; Holly DeSpiegelaere, VA Medical Ctr, Omaha, NE; George Casale, Iraklis Pipinos, Univ of NE Medical Ctr, Omaha, NE

628
Poly ADP-Ribose Polymerase 1 (PARP-1) in Calf Skeletal Muscle Is Associated With Walking Performance in Peripheral Artery Disease

629
Effects of L-Arginine or L-NO3-Nitroarginine methyl ester Treatment on Recovery from Hind Limb Ischemia in Sickle Cell Mice
Caitlin Lewis, Derick Okwan-Duodo, Laura Hansen, Giji Joseph, David R Archer, W. Robert Taylor, Emory Univ, Atlanta, GA

630
Purinergic Signaling via Pannexin-1 Channels is Altered in a Rat Model of Peripheral Artery Disease
Marcos T Kuroki, Dept of Surgery, Penn State Univ Coll of Med, Penn State Health Milton S. Hershey Medical Ctr, Hershey, PA; Juan A Estrada, Gail D Thomas, Lawrence I Sinoway, Marc P Kaufman, Penn State Hershey Heart and Vascular Inst, Penn State Univ Coll of Med, Penn State Health Milton S. Hershey Medical Ctr, Hershey, PA
Poster Abstracts (continued)

631
Histopathological Study of Calf Muscle in Claudicating Patients with Peripheral Artery Disease, After Supervised Exercise Therapy
Shuai Li, Timothy Lackner, Gregory Willcockson, Christina Shields, Katarina Brunette, Zhen Zhu, Julian Kim, Univ of Nebraska Med Ctr, Omaha, NE; Sara Myers, Univ of Nebraska Omaha, Omaha, NE; Mark Williams, Creighton Univ Sch of Med, Omaha, NE; Holly Despiegelaere, VA Nebraska-Western Iowa Health Care System, Omaha, NE; Iraklis Pipinos, George Casale, Univ of Nebraska Med Ctr, Omaha, NE

632
Regulation of Neointimal Hyperplasia by the Free Fatty Acid Receptor FFAR3
Michael J Nooromid, Liqun Xiong, Edmund B Chen, Katherine E Shapiro, Kelly Wun, Qun Jiang, Owen M Eskandari, Karen J Ho, Northwestern Univ, Chicago, IL

633
Inhibition of Platelet Aggregation Promotes Functional Recovery After Subarachnoid Hemorrhage in Mice
Remya A. Veettil, Kanako Matsumura, Peeyush Kumar T., Spiros L. Blackburn, Devin W. McBride, UHealth at Houston, Houston, TX

634
Hindlimb Mapping and Systematic Review of Angiogenesis Following Mouse Hindlimb Ischemia: New Insights Into Quality Assurance Imperatives

635
Satellite Cells Play a Role in Revascularization of Ischemic Tissue
Laura M Hansen, Wenxue Liu, Giji Joseph, W. Robert Taylor, Emory Univ, Atlanta, GA

636
The Transition From Femoral-first to Radial-first Access Coronary Angiography/Percutaneous Coronary Intervention is Associated With a Decrease in Major Vascular Access Site Complications
Aryon Shariati, McGuire VAMC VCU, Richmond, VA; Rebecca McLeod, Jennifer Dunn, McGuire VAMC, Richmond, VA; Kunal Sangal, McGuire VAMC VCU, Richmond, VA; John Boyle, McGuire VAMC, Richmond, VA; ION S Jovin, McGuire VAMC VCU, Richmond, VA; McGuire Cardiac Catheterization Laboratory Group

637
Dual-Filter Cerebral Protection Device for Stroke Prevention During Transcatheter Aortic Valve Replacement: An Updated Meta-Analysis
Paul M. Ndunda, Mohinder Vindhyal, Sinan Khayyat, Tabitha Muutu, Zaher Fanari, Univ of Kansas Sch of Med-Wichita, Wichita, KS
P.M. Ndunda: None. M. Vindhyal: None. S. Khayyat: None. T. Muutu: None. Z. Fanari: None.

638
Low Human IgG Antibodies Against Phosphorylcholine Conjugated With Albumin Associates With Higher Risk of Cardiovascular Disease Among 60-year-olds
Shailesh Samal, Maria Volkova, Max Vikström, Johan Frostegård, Karolinska Instt, Stockholm, Sweden

639
Altered Metabolomic Profile in Peripheral Artery Disease Patients
Ahmed Ismael, Florida State Univ, Tallahassee, FL; Marco E Franco, Baylor Univ, Waco, TX; Evlampia Papoutsi, Florida State Univ, Tallahassee, FL; Ramon Lavado, Baylor Univ, Waco, TX; George P Casale, Matthew Fuglestad, Univ of Nebraska at Medical Ctr, Omaha, NE; Robert S Smith, William T Bohannon, Baylor Scott and White Hosp, Temple, TX; Robert S Brumberg, Vascular Surgery Associates, Tallahassee, FL; Iraklis I Pipinos, Univ of Nebraska at Medical Ctr, Omaha, NE; Panagiotis Koutakis, Florida State Univ, Tallahassee, FL

641
New Insights on Marfan Syndrome From Comparative N-terminomics of Human Marfan and Non-diseased Aortas
Daniel R Martin, Frank Cikach, Ernidio Germano, Eric Roselli, Suneel Apte, Cleveland Clinic, Cleveland, OH
D.R. Martin: None. F. Cikach: None. E. Germano: None. E. Roselli: None. S. Apte: None.
Poster Abstracts (continued)

642  Mitochondrial Fission Mediates Hypertensive Abdominal Aortic Aneurysm Development
Hannah Cooper, Tatsuo Kawai, Kathy Elliott, Kyle Preston, Rosario Scalia, Victor Rizzo, Satoru Eguchi, Temple Univ, Philadelphia, PA

643  An Impending Fatality: A Case of Asymptomatic Aortic Dissection[AD]
Christopher Nnaoma, Ogechukwu Chika-nwosuh, Sergio Waxman, Newark Beth Israel Medical Ctr, Newark, NJ
C. Nnaoma: None. O. Chika-nwosuh: None. S. Waxman: None.

644  Changes in DNA Methylation Indicate a Role of Oxidative Stress in Marfan Syndrome
Cassandra Malecki, Elizabeth N Robertson, Kiersten A Liddy, Alex Sahagian, Yaxin Lu, Murat Kekic, Donna Lai, Brett D Hamby, Richmond W Jeremy, Univ of Sydney, Sydney, Australia

645  Anti-high Density Lipoproteins Antibodies are Elevated in Abdominal Aortic Aneurysm and Associated With Clinical Features and Lipid Profile
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646  High Mobility Group Box 1 is Increased in the Abdominal Aortic Adventitia of Angiotensin II-Infused Hypercholesterolemic Male Mice
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647  Pharmacologic Inhibition of Prolyl Hydroxylase Accelerates Experimental Aneurysm Progression in Diabetic Mice
Jia Guo, Takahiro Shoji, Xiaoya Zheng, Yankui Li, Baohui Xu, Ronald L Dalman, Stanford Univ Sch of Med, Stanford, CA

648  Endothelial Mineralocorticoid Receptor Mediates Aldosterone and High Salt-Induced Abdominal Aortic Aneurysm in Mice
Shu Liu, Yu Zhong, Xufang Mu, Ming Gong, Zhenheng Guo, Univ of Kentucky, Lexington, KY
S. Liu: None. Y. Zhong: None. X. Mu: None. M. Gong: None. Z. Guo: None.

649  AT1R Blockade With Losartan Attenuates Abdominal Aortic Aneurysm Development in Spontaneously Hypertensive Mice
Nicholas D Ward, Tyler Grespin, Christine Couch, Rupak Mukherjee, Jeffrey Jones, Jean Marie Ruddy, Medical Univ of South Carolina, Charleston, SC

650  Surfactant Protein A Deficiency Attenuates Angiotensin II-induced Abdominal Aortic Aneurysm in Mice
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C. Li: None. X. Guo: None. R. Ran: None. S. Chen: None.

651  Protective Role of LRP1 in Second Heart Field-derived Smooth Muscle Cells Against Angiotensin II-induced Thoracic Aortic Aneurysm
Hisashi Sawada, Univ of Kentucky, Lexington, KY; Hideyuki Higashi, Harvard Medical Sch, Boston, MA; Debra L Raten, Deborha A Howatt, Jessica J Moorleighen, Bradley C Wright, Univ of Kentucky, Lexington, KY; Lang H Lee, Sasha A Singh, Masanori Aikawa, Harvard Medical Sch, Boston, MA; Mark W Majesky, Univ of Washington, Seattle, WA; Alan Daugherty, Univ of Kentucky, Lexington, KY
652 Pharmacological Inhibition of Hippo-YAP Signaling Attenuates Angiotsin II-induced Ascending Aortic Aneurysms in Male LDL Receptor Deficient Mice
Michihiro Okuyama, Weihua Jiang, Lihua Yang, Aida Javidan, Devi Thiagarajan, Saha Cardiovascular Res Ctr, Univ of Kentucky, Lexington, KY; Venkateswaran Subramanian, Saha Cardiovascular Res Ctr, Univ of Kentucky, Dept of Physiology, Univ of Kentucky, Lexington, KY

654 Calpain-2 Knockdown Prevents Angiotsin II-induced Cytoskeletal Structural Protein Degradation and Protects ECM Integrity in Primary Aortic Smooth Muscle Cells
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D. Thiagarajan: None. W. Jiang: None. V. Subramanian: None.

655 Pharmacological Inhibition of Notch Signaling Stabilizes Experimental Abdominal Aortic Aneurysm via NRF2-dependent Mechanism
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N. Sharma: None. R. Dev: None. J. Rosado: None. S. Partida-Sanchez: None. M. Guerau-de-Arellano: None. C. Hans: Research Grant; Significant; R01HL124155.

656 Doxycycline Inhibits Mitochondrial and Cellular Function in Aorta Smooth Muscle Cells
Vivian de Waard, Shaynah Wanga, Rob C Wust, Ron Balm, Riekelth H Houtkooper, Carlie J de Vries, Jan H Lindeman, Academic Medical Ctr Amsterdam, Amsterdam, Netherlands

657 Cardiac Associated Lymphatic Endothelial Cells Regulate Cardiomyocytes Survival During Heart Development and Repair
Xiaolei Liu, Wanshu Ma, Xin Yi Yeap, Hui-Hsuan Kuo, Michael Oxendine, Trisha Bansal, Paul Burridge, Edward Thorp, Guillermo Oliver, Northwestern University, Chicago, IL

658 Fenestrated Balloon Expandable Stent System for the Treatment of Aortoiliac Occlusive Disease
John Cashin, Alex Wirtz, Dillon Williams, Mohamed Zayed, Washington Univ in St. Louis, St Louis, MO

660 Histological Features of Ruptured Plaque and Thrombus Interface in Acute Myocardial Infarction
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661 Role of Coagulation Factor XI in Regulating Endothelial Cell Barrier Function
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662 Microfluidic Global Thrombus and Hemostasis Monitoring System Applied in Pediatric Critical Care
David Luna, Navaneeth KP Pandian, Tammay Mathur, Justin Bui, Pranav Gadangi, Travis Pyle, Texas A&M Univ, College Station, TX; Vadim V Kostousov, Shi-Ki Hui, Texas Childrens Hosp, Houston, TX; Jun Teruya, Baylor Coll of Med, Houston, TX; Abhishek Jain, Texas A&M Univ, College Station, TX

663 Contribution of Intrinsic Pathway Factors XI and XII to Venous Thrombosis in Mouse Models
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S.P. Grover: None. B. Cooley: None. N. Mackman: None.

670 Protease-activated Receptor 4 Limits Influenza A Virus Infection
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K. Tatsumi: None. C.M. Schmedes: None. E. Butler: None. N. Mackman: None. S. Antoniak: None.
671
Hepatic Expression of C-Reactive Protein is Epigenetically Regulated by BET Proteins and Inhibited by Apabetalone (RVX-208) in vitro and in CVD Patients
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D. Gilham: Employment; Significant; Resverlogix Corp.
E. Daze: None. C. Halliday: Employment; Significant; Resverlogix Corp.
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R. Jahagirdar: Employment; Significant; Resverlogix Corp.
M. Sweeney: Employment; Significant; Resverlogix Corp.
J.O. Johansson: Employment; Significant; Resverlogix Inc.
N.C.W. Wong: Employment; Significant; Resverlogix Inc.
E. Kulikowski: Employment; Significant; Resverlogix Corp.

672
Arterial Wrinkles: A Unique Antiplatelet Mechanism
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N. Nath: None. L. Pocivavsek: None. S. Velankar: None. T. Edith: None.

673
Effect of Sodium Glucose Cotransporter 2 Inhibitor on Left Ventricular Diastolic Function in Rabbit Diabetic Model
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S. Lee: Research Grant; Modest; No.2017R1A2B2003191, 2017M3A9E9073585.
D. Kim: None. J. Kim: Research Grant; Modest; No.2017R1A2B2003191, 2017M3A9E9073585.
G. Hong: None.

675
High-Density Lipoproteins Demonstrate Proteomic Changes in a Murine Model of Sepsis, and Proteomic Differences Between Mouse Strains
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B.E. Whitacre: None. J.T. Melchior: None. V. Wolfe: None. B. Zingarelli: None. W. Davidson: None.

676
Conformational Analysis of Apolipoprotein (apo) E3/apoE4 Chimera Proteins
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V. Narayanaswami: Research Grant; Significant; NIH.
D. Abhari: None. K. Tu: None.

677
Probing the Lipid Binding and Self-association Properties of N-terminal and C-terminal Helices of Apolipoprotein A-I Using Chimera Proteins
Nairuti Patel, Paul M Weers, California State Univ of Long Beach, Long Beach, CA
N. Patel: None. P.M.M. Weers: None.

678
Vascular Smooth Muscle Cell Dynamics in Atherosclerosis
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H. Sanyour: None. N. Li: None. A. Rickel: None. J. Liu: None. Z. Hong: None.

679
Probucol Feeding Repaired Propagation Between LCAT Heterozygote Parents but not With LCAT Null Male Mice
Maki Tsujita, Hiroshi Takase, Nobukatsu Akita, Nobuyuki Ohte, Nagoya City Univ Graduate Sch of Medical Sciences, Nagoya, Japan; Takeshi Yamazaki, Hiroshima Univ Graduate Sch of Integrated Arts and Sciences, Higashi-Hiroshima, Japan; Shinji Yokoyama, Inst of Biological Functions, Chubu Univ, Kasugai, Japan

680
Lipoproteins Large to Small Particle Size Ratio is Significant Predictor in CAD and Stroke Outcomes
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R.S. Michelin: None. S. Santosa: None. S. Buddington: None. A. Taha: None.

681
Dynamics of LDL Accumulation in the Pre-lesional Phase of Atherosclerosis
Esmeralda Armando Lewis, Leticia Rocío Gonzalez-Cintado, Veronica Labrador, Jacob Fog Bentzon, CNIC, Madrid, Spain
E.A. Lewis: None. L. Gonzalez-Cintado: None. V. Labrador: None. J.F. Bentzon: None.

682
TM6SF2 is Necessary for the Late Addition of Lipid and Secretion of Fully-lipidated Very Low Density Lipoproteins From HepG2 Cell
Jing Liu, Robert C Perry, Colleen Ngai, Henry N Ginsberg, Columbia Univ, New York, NY
684
Nobiletin Corrects Intestinal Lipid Metabolism in LDLr<sup>-/-</sup> Mice Fed a High-fat Diet

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685
Elevated HDL Free Cholesterol Bioavailability Drives HDL Dysfunction

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686
Functional Recombinant Apolipoprotein A5 That is Stable at High Concentrations at Physiological pH

**Mark Castleberry, John T Melchior, Min Liu, Thomas B Thompson, W. Sean Davidson**, Univ of Cincinnati, Cincinnati, OH


688
Differential Associations Between Novel HDL Markers and Incident Atherosclerotic Cardiovascular Disease by Gender and Vascular Territory: A Meta-analysis of Large Population-based Cohorts

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K. Singh: None. C. Ayers: None. A. Rohatgi: None.

689
The Role of the Mevalonate Pathway in Intestinal Lipid Absorption


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A Dual apoc-II mimetic-apoC-III Antagonist Peptide for Lowering Plasma Triglycerides

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691
Single-Cell Dissection of APOL1’s Role in Kidney Organoid Injury

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692
Liver Heparan Sulfate Proteoglycans Participate in Clearing LDL and PCSK9

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693
SAA is not Incorporated into HDL During HDL Biogenesis
Ailing Ji, Xuebing Wang, Victoria P Noffsinger, Maria C de Beer, Frederick C de Beer, Lisa R Tannock, Nancy R Webb, Univ Kentucky, Lexington, KY
A. Ji: None. X. Wang: None. V.P. Noffsinger: None. M.C. de Beer: None. F.C. de Beer: None. L.R. Tannock: None. N.R. Webb: None.

694
High Density Lipoprotein Preserves the Function of Alpha-1-antitrypsin by Shielding the Reactive Center Loop from Oxidation
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695
Role of Polyphenol Quercetin and Exercise in Fatty Acid Modulation in C57BL LDLr-/- Mice
Emily Punch, Halleh Mahini, Chinedu Ochin, Mahdi Garelnabi, Univ of Massachusetts Lowell, Lowell, MA
E. Punch: None. H. Mahini: None. C. Ochin: None. M. Garelnabi: None.

696
Reduced-Dose Statin Therapy Complemented With Nutraceuticals Alters HDL Proteomics
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697
Apoa-I Deficiency Increases Cortical Amyloid Deposition, Cerebral Amyloid Angiopathy, Cortical and Hippocampal Astrogliosis and Amyloid-associated Astrocyte Reactivity in APP/PS1 Mice
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698
The Structurally Engineered Fatty Acid, Icosabutate, Improves Lipid Metabolism and Reduces Severity of Atherogenesis in Mice
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700
Adipocyte-derived Serum Amyloid A Promotes Angiotensin II-induced Abdominal Aortic Aneurysms in Obese C57BL/6 Mice
Preetha Shridas, Andrea Trumbauer, Ailing Ji, Victoria Noffsinger, Madison Rich, Maria de Beer, Frederick C de Beer, Nancy R Webb, Lisa R Tannock, Univ of Kentucky, Lexington, KY

701
Pharmaceutical Inhibition of CETP Perturbs HDL Subspecies Profile, Increasing HDL That Contains ApoC3
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702
New Insights Into the Lipid/protein Composition of HDL Particles
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703 Effect of Anacetrapib on ABCA1-specific Cholesterol Efflux Capacity: a Substudy of the DEFINE Trial
Mark P Metzinger, Suzanne Saldanha, Ayea El-Ghazali, Colby Ayers, Anand Rohatgi, UT Southwestern, Dallas, TX
M.P. Metzinger: None. S. Saldanha: None. A. El-Ghazali: None. C. Ayers: None. A. Rohatgi: Research Grant; Significant; Merck. Consultant/Advisory Board; Moderate; Merck, CSL Limited, HDL Diagnostics.

704 High-density Lipoproteins Transport Cytokines and Chemokines in the Cerebrospinal Fluid and Plasma of Patients with Alzheimer’s Disease
James Feng, Kate T Creasy, Univ of California, San Francisco, San Francisco, CA; Seema Saharan, Univ of California, Berkeley, Berkeley, CA; Megan Richie, Mary Malloy, John Kane, Univ of California, San Francisco, San Francisco, CA

705 Investigating the Clinical Presentation and Progression of Familial LCAT Deficiency: An Analysis of the Literature
Cecilia Vitali, Archna Bajaj, Daniel J Rader, Marina Cuchel, Univ of Pennsylvania, Philadelphia, PA
C. Vitali: None. A. Bajaj: None. D.J. Rader: None. M. Cuchel: None.

706 Dietary Lectins Contribute to Coronary Artery Disease in Humans via an 1L-16 Autoimmune Mediated Response as Shown by the PULS ACS Risk Score
Steven R Gundry, The Inti Heart and Lung Inst, Palm Springs, CA
S.R. Gundry: None.

707 Malondialdehyde-acetaldehyde Modified Proteins Alter Endothelial and Macrophage Cytokine Expression
Patrick J Opperman, Evan M Ryan, Michael J Duryee, Ted R Mikuls, Geoffrey M Thiele, Logan M Duryee, Dahn L Clemens, Daniel R Anderson, Univ of Nebraska Medical Ctr, Omaha, NE

708 Role of Regulatory T Cells in Atherosclerosis Regression
Monika Sharma, Martin Schelgel, Emily Brown, Milessa Afonso, Emma Corr, Coen Van Solingen, Lianne Shanley, Lauren Beckett, Edward Fisher, P’ng Loke, Kathryn Moore, NYU Langone Medical Ctr, NY, New York City, NY

709 Germinal Center-derived Antibodies Promote Atherosclerosis Plaque Stability
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710 Hyperlipidemia Induces a Novel Tissue Compartmentation Change of CD4+Foxp3+ Regulatory T Cells, Which Weakens Regulatory T Cells Suppression of Atherogenic immune Responses in Aorta
Ying Shao, Xiaohua Jiang, Hong Wang, Xiao-feng Yang, Temple Univ, Philadelphia, PA
Y. Shao: None. X. Jiang: None. H. Wang: None. X. Yang: None.

711 Potential Role of Receptor for Advanced Glycation End Products (RAGE) in Lipid Driven Regulation of the Interferon Signaling Pathway in Regression of Diabetic Atherosclerosis
Laura M Senatus, Raquel Lopez-Diez, NYU Langone Health, New York, NY; Richard Friedman, Columbia Univ, New York, NY; Ravichandran Ramasamy, Ann Marie Schmidt, NYU Langone Health, New York, NY
L.M. Senatus: None. R. Lopez-Diez: None. R. Friedman: None. R. Ramasamy: None. A. Schmidt: None.

712 CXCR4 Maintains B1 Cell Production of Atheroprotective IgM Antibody in the Bone Marrow
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713 Subclass Composition of Anti-Apolipoprotein Al Antibodies in Mice in Response to Inflammatory Stimuli
Michelle Pitts, Michelle Marti, Vincent J Venditto, Univ of Kentucky, Lexington, KY
M. Pitts: None. M. Marti: None. V.J. Venditto: None.
714
Intravenous Infusion of Adenosine After Primary Percutaneous Coronary Intervention improves Clinical Outcomes in Hyperglycemic Patients with ST-Segment Elevation Myocardial Infarction
Pasquale Mone, Antonella Pansini, Univ of Campania Luigi Vanvitelli, Avellino, Italy
P. Mone: None. A. Pansini: None.

715
Inhibition of Sodium-glucose Cotransporter-2 Prevents the Progression of Kidney Injury and Vascular Calcification in a Rat Model

716
Oxidized LDL Repurposes Mitochondria to Drive Immune Activation Through CD36-Regulated Fatty Acid Trafficking and Metabolism
Yiliang Chen, Wenzhen Huang, Moua Yang, Yiqiong Zhao, Roy Silverstein, Blood Ctr of Wisconsin, Brookfield, WI Y. Chen: None. W. Huang: None. M. Yang: None. Y. Zhao: None. R. Silverstein: None.

717
Fabp4 Inhibition Reduces Insulin Receptors in Livers of Atherosclerotic Mice
Priyanka Prathipati, UTHSC-Houston, Houston, TX; Cristian Rodriguez-Aguayo, UT MD Anderson Cancer Ctr, Houston, TX; Brian Walton, UTHSC-Houston, Houston, TX; Anil Sood, Gabriel Lopez-Berestein, UT MD Anderson Cancer Ctr, Houston, TX P. Prathipati: None. C. Rodriguez-Aguayo: None. B. Walton: None. A. Sood: None. G. Lopez-Berestein: None.

718
Effects of Stroke Plasma and Perivascular Fat Conditioned Media on Endothelial Function

719
KLF2 Suppresses Vascular Calcification Through Inhibition of Endothelial BMP/Smad1/5 Pathway
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720
Adar1 Deficiency Protects Against High-fat Diet-induced Obesity and Insulin Resistance in Mice

721
An Unexpected Role for Growth Arrest Specific Gene 3 (GAS3)/Peripheral Myelin Protein 22 (PMP22) in Hepatic Lipid Metabolism
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722
Relationships Among Thermogenic, Fibrotic, and White Adipose Tissue Cells in the Perivascular Niche

723
Increased Resistin Levels in MicroRNA-155-Knockout White Adipose Tissue May Potentially Promote Metabolically Healthy Obesity Switch to Classical Obesity

724
Thymidine Phosphorylase Enhances Western Diet Induced Obesity in Male Mice
Hong Yue, Abu Hasanat Md Zulfiker, Wei Li, Marshall Univ, SOM, Huntington, WV H. Yue: None. A. Zulfiker: None. W. Li: None.

725
Stem/Progenitor Cells Differentiate into Smooth Muscle Cells in Transplant Arteriosclerosis
Zhichao Ni, Jiacheng Deng, Yanhua Hu, King’s Coll London, London, United Kingdom; Bin Zhou, Chinese Academic of Sciences, Shanghai, China; Li Zhang, Zhejiang Univ, Zhejiang, China; Qingbo Xu, King’s Coll London, London, United Kingdom Z. Ni: None. J. Deng: None. Y. Hu: None. B. Zhou: None. L. Zhang: None. Q. Xu: None.

726
Cigarette Smoke-Induced Smooth Muscle Cell Phenotypic Switch: Effects of HDL3 and ABCA1 Silvia Castiglioni, Univ of Milan, Milan, Italy; Isabella Darniani, Univ of Milan and IRCCS Multimedica, Milan, Italy; Laura Cancini, IRCCS Multimedica, Milan, Italy; Alessia Rizzi, Univ of Milan, Milan, Italy; Alberto Corsini, Stefano Bellosta, Univ of Milan and IRCCS Multimedica, Milan, Italy S. Castiglioni: None. I. Darniani: None. L. Cancini: None. A. Rizzi: None. A. Corsini: None. S. Bellosta: None.
727  Characterising Extracellular Matrix Remodelling Using a Multimarker Approach in Acute Myocardial Infarction  
Morgane Brunton-O’Sullivan, Ana Holley, Kathryn Hally, Univ of Otago, Wellington, New Zealand; Scott Harding, Capital and Coast District Health Board, Wellington, New Zealand; Peter Larsen, Univ of Otago, Wellington, New Zealand  
M. Brunton-O’Sullivan: None.  A. Holley: None.  K. Hally: None.  S. Harding: None.  P. Larsen: None.

728  Association of Free Radicals with Atherosclerosis  
Dahn L Clemens, Michael J Duryee, Johnathan H Hall, Geoffrey M Thiele, Ted R Mikuls, Matthew C Zimmerman, Daniel R Anderson, Univ of Nebraska Medical, Omaha, NE  

729  Tissue Specific Reductions in Sirtuin-6 Expression Affect Calcium Burden and Pro-osteoigenic Signaling in the Aortic Valve  
Sahithi Puvvala, Leslie A Smith, Bin Zhang, Grace C Verzosa, Runqing Huang, Carolyn M Roos, Jordan D Miller, Mayo Clinic, Rochester, MN  

730  Stress Can Inhibit Vascular No Production Probably via ER Stress by Activation of CRH  
H. Jin: None.  S. Park: None.  Y. Lee: None.  I. Chung: None.

731  Effect of Oral Homoarginine Supplementation on Survival, Cardiac Structure and Function in a Mouse Model of Calcified Coronary Artery Disease  

732  CD36 Mediates Endothelial Stiffening in Young and Aged Mice  
Elizabeth Le Master, Ibra S Fancher, James Lee, Irena Levitan, Univ Illinois at Chicago, Chicago, IL  
E. Le Master: None.  I.S. Fancher: None.  J. Lee: None.  I. Levitan: None.

733  The Role of the Endothelial Glycocalyx in Atherosclerosis Development via ROS Production and Downstream Endothelial Activation  
Ian Harding, Will Csneros, Eno Ebong, Northeastern Univ, Boston, MA  
I. Harding: None.  W. Csneros: None.  E. Ebong: None.

734  Altered Loading of Protein Cargoes in Tissue-Entrapped Human Vascular and Valvular Extracellular Vesicles  
Mark C Blaser, Fabrizio Buffalo, Hideyuki Hijashi, Maximillian A Rogers, Lang H Lee, Tan Pharm, Eugenia Shvartz, Galina K Sukhova, Brigham and Women’s Hosp, Boston, MA; Silvia Monticone, Giovanni Camussi, Univ of Turin, Turin, Italy; Jochen D Muehlschlegel, Brigham and Women’s Hosp, Boston, MA; Simon C Body, Beth Israel Deaconess Medical Ctr, Boston, MA; Peter Libby, Sasha A Singh, Masanori Aikawa, Elena Aikawa, Brigham and Women’s Hosp, Boston, MA  

735  Oxidized Phospholipid Induced Redox Imbalance Promoted Inflammation in Atherosclerosis  
Mizanur Rahman, Sabbir Ahmed, Johnny Steuer, Peter Gillgren, Anquan Lü, Johan Frostegård, Karolinska Inist, Stockholm, Sweden  

736  Common Pathways of Protease-Induced Plaque Rupture Identified by Parallel Analyses of Unstable Human Carotid Artery Plaques and Mouse Model of Plaque Rupture  
Tomas Vaisar, Jie H Hu, Nathan Airhart, Kate Fox, Jay W Heinecke, Univ Washington, Seattle, WA; Roberto Nicolsia, VA Puget Sound Health Care System, Seattle, WA; Ted Kohler, Sina A Gharib, David A Dichek, Univ Washington, Seattle, WA  

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Eric Johnson, Alabama Coll of Osteopathic Medi, Dothan, AL  
E. Johnson: None.
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Conserved Sequence in the Loop Region of Angiotensinogen Affects Plasma Angiotensinogen Concentrations but Has No Effects on Angiotensin II-mediated Functions
Chia-Hua Wu, Deborah Howatt, Jessica Mooleghan, Craig Vander Kooi, Alan Daugherty, Hong Lu, Univ of Kentucky, Lexington, KY

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Jiangyun Luo, Chak Kwong Cheng, Yu Huang, Xiao Yu Tian, Chinese Univ Hong Kong, Sha Tin N T, Hong Kong
J. Luo: None. C. Cheng: None. Y. Huang: None. X. Tian: None.

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From Genotype to Phenotype: Characterization of the ID3 Gene in Vascular Smooth Muscle Cell Inflammation and Atherosclerosis
Christopher Henderson, Julia Hartman, Anh Nguyen, Aneesh Patel, Melissa Marshall, James Garney, Coleen McNamara, Univ of Virginia, Charlottesville, VA

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Identification of Sca1-Positive Vascular Smooth Muscle Cells in Healthy and Diseased Vessels Using Single-Cell Profiling

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Qin Qin Tian, Fung Ping Leung, Francis M Chen, Xiao Yu Tian, Gary Tse, Wing Tak Wong, The Chinese Univ of Hong Kong, Hong Kong, China
Q. Tian: None. F. Leung: None. F.M. Chen: None. X. Tian: None. G. Tse: None. W. Wong: None.

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Statin Use is Independently Associated with Premature Mortality, Cardiovascular-specific Mortality and Cardiovascular Events in Renal Transplant Recipients
Josephine L Anderson, Stephan J Bakker, Uwe J Tietge, Univ Medical Ctr Groningen, Groningen, Netherlands

744
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Alexander N Kharlamov, DE HAAR Res Fndn, Amsterdam, Netherlands
A.N. Kharlamov: None.

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Inhibition of Acid Sphingomyelinase Reduces High Fat Diet-Induced Hyperlipidemia, Insulin Resistance and Atherosclerosis in LDL Receptor-Deficient Mice
Zhongyang Lu, Yanchun Li, Maria F Lopes-Virella, Yan Huang, Medical Univ of South Carolin, Charleston, SC
Z. Lu: None. Y. Li: None. M.F. Lopes-Virella: None. Y. Huang: None.

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Busra Cangut, Michael A Hagler, Carolyn M Roos, Heyu Zhang, Bin Zhang, Junyun Zhao, Benjamin B Roos, Jordan D Miller, Mayo Clinic, Rochester, MN

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Using the Wifi Classification System in No-option Patients With Chronic Limb-Threatening Ischemia
Hoai Nam Ha, Peoples’ Friendship Univ of Russia (RUDN Univ), Moscow, Russian Federation; Yury Valentinovich Chervyakov, Yaroslavl State Medical Univ of the Public Health Ministry of the Russian Federation, Yaroslavl, Russian Federation
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Yingzi Chang, At Still Univ, Kirksville, MO; Emma L. Worley, Truman State Univ, Kirksville, MO
Y. Chang: None. E.L. Worley: None.

749
Igg1 Antibodies Against Phosphorylcholine are Associated With Protection in Systemic Lupus Erythmatosus and Atherosclerosis: Potential Underlying Mechanisms
Divya Thiagarajan, Johan Frostegård, Anna Frostegård, Karolinska Instt, Stockholm, Sweden
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