



American Heart Association

Vascular Discovery:
From Genes to Medicine

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.



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**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.

(<https://www.massgeneral.org/vascularcenter/>)

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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Program at a Glance

	Monday May 13, 2019	Tuesday May 14, 2019	Wednesday May 15, 2019	Thursday May 16, 2019
7:00 AM		Registration, Breakfast, Exhibits	Early Career Training Session 1	Registration, Continental Breakfast, Exhibits
7:30 AM				Early Career Training Session 2
8:00 AM	8:00 AM-7:00 PM	8:00-10:00 AM	8:00-9:30 AM	7:30-8:30 AM
8:30 AM	Vascular Research Initiatives Conference 2019	Conference Opening and Plenary Session I: Innovative Methods in Vascular Discovery	Plenary Session III: Intersections Between the Vascular System and Cancer	SDG/CDA Showcase
9:00 AM				9:30-10:00 AM
9:30 AM		10:00-10:30 AM	Speakers Corner/Break/Exhibits	Poster Session and Continental Breakfast
10:00 AM		10:30 AM-12:15 PM	Concurrent Session III A – Therapeutic Targets in Atherosclerosis B – Blood Coagulation and Antithrombotic Therapy C – Translational Science in Vascular Medicine: Vascular Dysfunction	10:30 AM-12:00 PM
10:30 AM	Separate registration required	Concurrent Session I A – Molecular and Cellular Mechanisms of Atherosclerosis B – Molecular, Developmental and Cellular Biology of the Vessel Wall C – Translational Science in Vascular Medicine: Research Priorities in Thrombosis	11:45 AM-1:00 PM	Plenary Session V Invited Lecture Series Hoeg Award Lecture Keynote Lecture Distinguished Lecture
11:30 AM			Next-Generation Technology Bootcamp: Single Cell Sequencing <i>Session sponsored by the ATVB Early Career Committee and the Diversity Committee</i>	
12:00 PM	12:00-6:00 PM	12:15-1:30 PM	11:45 AM-1:45 PM	Noon
12:30 PM	KinMet	Next-Generation Technology Bootcamp: Data Science	Or lunch on your own	Closing Remarks/ Adjourn
1:00 PM	1:00-6:00 PM	PVD Annual Business Meeting and Networking Luncheon		1:00-7:00 PM
	CAAC-CSVM Symposium and China Night	12:15-1:45 PM		8:00 AM-Noon
		The Mentor of Women Award Luncheon		HDL Structure- Function Workshop
	Separate registration required	12:15-2:15 PM		Separate registration required
		Or lunch on your own		
1:30 PM			1:45-3:45 PM	
2:00 PM		2:15-3:45 PM	Plenary Session IV Young Investigator Award Competition – Brinkhous Prize and Page Award	
2:30 PM		Plenary Session II: Highlights from the ATVB Journal		
3:00 PM	3:00-7:00 PM	3:45-4:15 PM	3:45-4:15 PM	
3:30 PM	Vascular Discovery Registration	Refreshment Break/Exhibits	Refreshment Break/Exhibits	
4:00 PM		4:15-6:00 PM	4:15-6:00 PM	
4:30 PM		Concurrent Session II A – Apolipoproteins, Lipoproteins and Lipid Metabolism B – Vascular Cells, Inflammation and Thrombosis C – Strategically Focused Research Network on Vascular Disease	Concurrent Session IV A – Metabolic Disorders and Atherosclerosis B – Platelet Production, Signaling and Function C – Translational Science in Vascular Medicine: Pro/Con Debate – The Utility of Genomics in the Future of Medicine	
5:00 PM				
5:30 PM				
6:00 PM		6:00-8:00 PM	6:00-8:00 PM	
6:30 PM		Poster Session 1 and Reception <i>Sponsored by the ATVB Journal</i>	Poster Session 2 and Reception	
7:00 PM	7:00-11:30 PM			
7:30 PM	CAAC Reception			
8:00 PM			8:00-10:30 PM	
8:30 PM			Joint Council Dinner <i>(ticket required)</i>	
9:00 PM				
10:00 PM				

Questions and Information

Questions

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

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

Fax 214.373.3406

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Website professional.heart.org

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As an AHA Professional Member, you are in touch with more than 32,000 like-minded people and are brought **closer to the heart and soul of the AHA and its mission to be a relentless force for a world of longer, healthier lives. Gain access to the best tools and networking opportunities to stay informed, connected and competitive in your specialty. Renew or join today to access these valuable benefits!**

It's quick and easy — renew online. Visit professional.heart.org/membership.

Letter from the Chair and Vice Chair

Dear Colleague,

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



Nancy R. Webb, PhD, FAHA
Chair, Vascular Discovery 2019
Scientific Sessions



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.

Program Committee

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Invited Presenters

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Abstract Reviewers

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

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Naomi M. Hamburg	Gregory Piazza	Dennis Wolf
Robert A. Hegele	J. Geoffrey Pickering	Baohui Xu
Peter Henke	Uwe Raaz	

Room Locator

Monday, May 13		
CAAC Symposium	Grand Ballroom Salons C/D	4th Floor
CAAC China Night Reception and Dinner (ticket required)	Grand Ballroom Salons A/B	4th Floor
Exhibits	Atrium Foyer	4th Floor
Registration	Atrium Foyer	4th Floor
KinMet 2019: 1:00-6:00 P.M.	Grand Ballroom Salons A/B	4th Floor
Speaker Resource Room	Tufts	3rd Floor
Vascular Research Initiatives Conference (VRIC) 2019 (<i>separate registration required</i>)	Grand Ballroom Salon G	4th Floor
Tuesday, May 14		
Continental Breakfast	Atrium Foyer	4th Floor
Concurrent Session A	Grand Ballroom Salon E	4th Floor
Concurrent Session B	Grand Ballroom Salon F	4th Floor
Concurrent Session C	Grand Ballroom Salon G	4th Floor
Early Career Training	Grand Ballroom Salons A-D	4th Floor
Exhibits	Atrium Foyer	4th Floor
Mentor of Women Award Luncheon (<i>ticket required</i>)	Grand Ballroom Salons A-D	4th Floor
Next Generation Technology Bootcamp (<i>ticket required</i>)	Grand Ballroom Salons I-K	4th Floor
Plenary Sessions	Grand Ballroom Salons E-G	4th Floor
Poster Session and Reception	Gloucester/Back Bay	3rd Floor
PVD Annual Business Meeting + Networking Luncheon	Berkeley	3rd Floor
Refreshment Breaks	Atrium Foyer	4th Floor
Registration	Atrium Foyer	4th Floor
Speaker Resource Room	Tufts	4th Floor
Wednesday, May 15		
Continental Breakfast	Atrium Foyer	4th Floor
Concurrent Session A	Grand Ballroom Salon E	4th Floor
Concurrent Session B	Grand Ballroom Salon F	4th Floor
Concurrent Session C	Grand Ballroom Salon G	4th Floor
Early Career Training	Grand Ballroom Salons A-D	4th Floor
Exhibits	Atrium Foyer	4th Floor
Joint Council Dinner (<i>ticket required</i>)	Grand Ballroom Salon G	4th Floor
Next Generation Technology Bootcamp (<i>ticket required</i>)	Grand Ballroom Salons I-K	4th Floor
Plenary Sessions	Grand Ballroom Salons E-G	4th Floor
Poster Session and Reception	Gloucester/Back Bay	3rd Floor
Refreshment Breaks	Atrium Foyer	4th Floor
Registration	Atrium Foyer	4th Floor
Speaker Resource Room	Tufts	4th Floor
Special event sponsored by the Early Career and Diversity Committees	Grand Ballroom Salons C-D	4th Floor
Thursday, May 16		
Continental Breakfast	Gloucester/Back Bay	3rd Floor
Plenary Sessions	Grand Ballroom Salons E-F	4th Floor
Poster Session	Gloucester/Back Bay	3rd Floor
Registration	Atrium Foyer	4th Floor
Speaker Resource Room	Tufts	4th Floor
SDG/CDA Showcase	Grand Ballroom Salons E-F	4th Floor
HDL Workshop 1:00-7:00 PM Thursday 8:00 AM-Noon Friday	Grand Ballroom Salons A-D	4th Floor

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.

General Information (continued)

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

An American Heart Association Journal

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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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:

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 7:30–10:30 AM
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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:

Poster Session Date	Location	Presentation Time	Attendance Time	Set-up Time	Tear-Down Time
Session 1 Tuesday, May 14	Back Bay	6:00-8:00 PM	6:00-8:00 PM	11:00 AM-5:30 PM	8:00-9:00 PM
Session 2 Wednesday, May 15	Back Bay	5:30-7:30 PM	5:30-7:30 PM	11:00 AM-5:30 PM	8:00-10:00 PM
Session 3 Thursday, May 16	Back Bay	8:30-10:30 AM	8:30-10:30 AM	10:00 PM Wednesday- 8:00 AM Thursday	10:30 AM-12:00 PM Thursday

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 Quimet, 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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Discounted Article Publication Charges for AHA Members. For other member benefits, visit professional.heart.org/membership.



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



Visit: www.ahajournals.org/jaha/author-instructions

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 Université 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 FRM (2006), and election as a member of EMBO (2013).

Dr. Eichmann will lecture on ***Vascular Patterning in Development and Disease***.

Conference Highlights – Lectures and Awards (continued)



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

Name	Presentation Number
Ashley C. Brown, PhD	143
Lacramioara Ivanciu, PhD	144
Tine Wyseure, PhD	145
Ze Zheng, MD, PhD	146

ATVB Irvine H. Page Young Investigator Research Award Finalists

Name	Presentation Number
Alison B. Kohan, PhD	147
Ekaterina K. Koltsova, MD, PhD	148
Bhama Ramkhelawon, PhD	149
Robert Wirka, MD	150

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

Name	Presentation Number
Haiyan Chu, PhD	177
Dawn Fernandez, PhD	176
Huiping Lin, BS	175
Cong-Lin Liu, MD, PhD	174
Linfang Zhang, MD	173

Conference Highlights – Lectures and Awards (continued)

The **ATVB Travel Awards for Young Investigators** encourage and support the efforts of early career investigators in cardiovascular research and encourage participation in ATVB and AHA activities by providing travel funds to attend the Vascular Discovery 2019 Scientific Sessions, present research in oral or poster format and engage in discussion with senior investigators.

ATVB Travel Awards for Young Investigators Winners

Name	Presentation Number
Mabruka Alfaidi, MD, PhD	535
Justin Clark, BSc	114
Elizabeth Ha, BS	155
Graeme Koelwyn, MSc	603
Chuan Li, PhD	377
Fang Li, PhD	580
Sizhao Lu, MD, PhD	105
Huize Pan, PhD	324
Daphne Pariser, BA	405
Qing Wan, BS	224

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

Name	Presentation Number
A. Phillip Owens, III, PhD	449

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

Name	Presentation Number
Ashish Sharma, MBBS, PhD	262

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

Name	Presentation Number
Nkiruka Arinze, MD	234
Constance Mietus, BA	249
Justin Kang, PhD	113
Panagiotis Koutakis, PhD	246
Shuai Li, MD, PhD	631
Sunil Saini, PhD	628

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

Name	Presentation Number
Amélie Pinard, PhD	140

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.

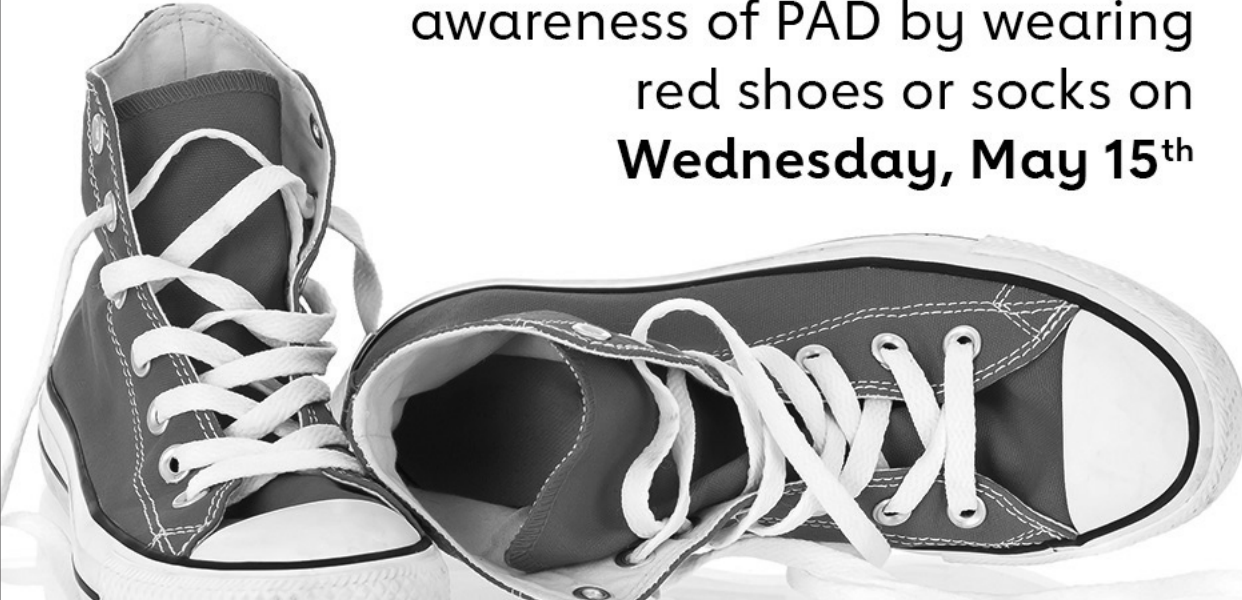
Twitter

Tweet your questions/comments during the meeting or just talk about what's happening at Vascular Discovery 2019. Use hashtag: **#VascularDiscovery19**.



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.

Embargo Guidelines

Abstracts, lectures and presentations at Vascular Discovery 2019 are embargoed for release at the time of presentation. Information may not be released before the scheduled presentation time.

Photography/Recording Policy

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

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

TUESDAY

Program Agenda (continued)

TUESDAY

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** 100
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** 101
Dawn Fernandez, Adeeb Rahman, Nicolas Fernandez, Aleksey Chudnovskiy, El-ad David Amir, Letizia Amadori, Nayaab Kahn, Roza Shamailova, Christopher Faries, Seunghee Kim-Schulze, J. Mocco, Peter Faries, Miriam Merad, Chiara Giannarelli, Mount Sinai Sch of Med, New York, NY
- 11:30 **MicroRNA-33 Inhibition Reprograms Monocyte/macrophage Dynamics in Atherosclerosis to Promote Plaque Regression** 102
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
- 11:45 **Vascular Smooth Muscle Cell PGC1alpha Deletion is Atheroprotective in vivo** 103
Raymundo A. Quintana, Hassan Sellak, Derick Okwan-Duodu, Giji 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** 104
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

10:30 Genomic and Genetic Insight into Blood Pressure Regulation

Christopher P. Mack, PhD, University of North Carolina School of Medicine, Chapel Hill, North Carolina

Oral Abstract Presentations

- 11:00 **Smooth Muscle Cell-derived Vascular Progenitor Cells Promote Arterial Remodeling and Fibrosis Through Loss of Hedgehog/Wnt/B-catenin/Klf4 Activity** 105
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** 106
 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** 107
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** 108
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)

12:00 **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; Jiliang Zhou, Augusta Univ, Augusta, GA

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; Yunfeng 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

109 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; Saiju 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; Kyong-Mi Chang, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Peter W Wilson, Emory Clinical Cardiovascular Res Inst, Atlanta, GA; Nicholas L. Smith, Dept of Epidemiology, Sch of Public Health, Univ of Washington, Seattle, WA; Christopher J. O'Donnell, 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, Perlman 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, Iowa City, IA; Sanjana Dayal, Univ of Iowa, Iowa City, Iowa, 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**
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; Nuria Ruiz-Giménez, Hosp Univrio de La Princesa, Madrid, Spain; Alicia Lorenzo, Hosp Univrio 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; Marijan Bosevski, Inst for Cardiovascular Diseases. Faculty of Med, Clinical Ctr, Skopje, Macedonia, The Former Yugoslav Republic of; Olga Gavin, Dept of Haematology Hosp Clínico Univrio Lozano Blesa, Zaragoza, Spain; Manuel Monreal, Hosp Univri Germans Trias i Pujol, Badalona, Barcelona, Spain

TUESDAY

Program Agenda (continued)

TUESDAY

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, Inserum 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

Presentations by the 2019 *ATVB* Journal Early Career Investigator Award Recipients

2:30 **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** 113

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** 114

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

Program Agenda (continued)

- 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** **115**
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** **116**
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
- 5:45 **Transgelin: A New Gene Involved in LDL Endocytosis in Liver Cells Identified by a Whole-genome Crispr-cas9 Screen** **117**
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
- 5:00 **Neutrophil Extracellular Trap Mediated Increased Thrombin Generation in Aging** **119**
Rahul 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** **120**
 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 **Neuropilin1 and PIGF/VEGF-B: a Novel Neuroimmune Pathway Involved in Angiotensin II-Induced Hypertension and Target Organ Damage** **121**
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
- 5:45 **Macrophage-dependent Lymphangiogenesis and Antigen Trafficking After Experimental Myocardial Infarction** **122**
Kristofor E. Grinton, Wanshu Ma, Xin Yi Yeap, Lubov S. Grigoryeva, Xiaolei Liu, Guillermo Oliver, Edward B. Thorp, Northwestern Univ, Chicago, IL

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

- 44:45 **Assembly of the Nlrp3 Inflammasome Regulates NET Formation and is Promoted by the Vimentin Intermediate Filament Cytoskeletal System** **118**
Patrick Münzer, Roberto Negro, Venkat Magupalli, Boston Childrens Hosp, 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;

4:15-6:00 PM

Grand Ballroom Salon G

Concurrent Session II C

AHA's Strategically Focused Research Network on Vascular Disease

Organized in cooperation with the Council on Peripheral Vascular Disease.

Moderators:

Francis J. Miller, MD, FAHA, Duke University School of Medicine, Durham, North Carolina

Robert Raffai, PhD, University of California San Francisco, San Francisco, California

- 4:15 **Overview of Vascular Diseases SFRN**
 Francis J. Miller, MD, FAHA, Duke University School of Medicine, Durham, North Carolina
- 4:30 **Understanding Pathobiology and Predictors of Limb Ischemia in Peripheral Artery Disease and Diabetes to Improve Outcomes**
 Marc Bonaca, MD, MPH, University of Colorado, Aurora, Colorado
- 4:40 **Identification of microRNA in Diabetic Critical Limb Ischemia from Mice to Human Subjects**
 Henry Cheng, PhD, Brigham and Women's Hospital, Boston, Massachusetts

TUESDAY

Program Agenda (continued)

TUESDAY/WEDNESDAY

4:50 **Ischemia-related Skeletal Muscle Damage in PAD: From Basic Science to Clinical Trials**
Mary McDermott, MD, FAHA, Northwestern University, Chicago, Illinois

5:00 **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

5:10 **The Role of Microvascular Disease in Limb Outcomes in PAD**
Joshua Beckman, MD, FAHA, Vanderbilt University Medical Center, Nashville, Tennessee

5:20 **Vascular Delivery of Insulin is Coupled to Muscle Metabolism by Extracellular Matrix-integrin Signaling**
David Cappel, BA, Vanderbilt University Medical Center, Nashville, Tennessee

5:30 **Current Controversies in Sexual Dimorphism of Aortopathies**
Alan Daugherty, PhD, FAHA, University of Kentucky, Lexington, Kentucky

5:40 **Sexual Dimorphism of Experimental Thoracic Aortic Diseases**
Jeff Chen, BS, University of Kentucky, Lexington, Kentucky

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

6:00-8:00 PM

Gloucester/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

8:00-9:30 AM

Grand Ballroom Salons E-G

Plenary Session III

Intersections Between the Vascular System and Cancer

Moderators:

Kathleen A. Martin, PhD, Yale University, New Haven, Connecticut

Randal J. Westrick, PhD, Oakland University, Rochester, Michigan

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

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

9:00 **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 **The Role of Macrophage Metabolism in Atherosclerosis**

Andrew J. Murphy, PhD, Baker Heart and Diabetes Institute Melbourne, Australia

Oral Abstract Presentations

10:30 **Activation of Oxidized Soluble Guanylate Cyclase Slows Progression of Aortic Valve Calcification** 123

Bin Zhang, Carolyn Roos, Michael Hagler, Grace Verzosa, Heyu Zhang, Hartzell Schaff, Maurice Sarano, Jordan Miller, Mayo Clinic, Rochester, MN

10:45 **Supplementation with the Sialic Acid Precursor N-acetyl-D-Mannosamine Breaks the Link Between Obesity and Hypertension** 124

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 (continued)

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| <p>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</p> <p>11:15 Stent-based Gene Therapy of Restenosis with an Oxidation-resistant Apolipoprotein A1 Mutant
Bahman Hooshdaran, Ben B. Pressly, Ivan Alfriev, Children Hosp of Philadelphia, Philadelphia, PA; Robert L Wilensky, Robert C. Gorman, Univ of Pennsylvania, Philadelphia, PA; Johnatan D. Smith, Stanley Hazen, Cleveland Clinic, Cleveland, OH; Robert J Levy, Ilia Fishbein, Children Hosp of Philadelphia, Philadelphia, PA</p> <p>11:30 Targeting Micrnas to Block Abdominal Aortic Aneurysm Progression in a Novel Yucatan Ldlr-KOMini-pig Model
Ekaterina Chernogubova, Molecular Vascular Med, Bioclinicum, Karolinska Inst, Solna, Sweden; Albert Busch, Philipp Kath, Hanna Winter, Vascular and Endovascular Surgery, Technical Univ Munich, Munich, Germany; Greg Winski, Molecular Vascular Med, Bioclinicum, Karolinska Inst, Solna, Sweden; Hans-Henning Eckstein, Vascular and Endovascular Surgery, Technical Univ Munich, Munich, Germany; Brian Dacken, Exemplar Genetics Inc., Sioux Center, IA; John Svart, Exemplar Genetics Inc., Sioux Center, IA; Reiner Boon, Inst for Cardiovascular Regeneration, Univ Hosp Frankfurt, Frankfurt, Germany; Stefanie Dimmeler, Inst for Cardiovascular Regeneration, Univ Hosp Frankfurt, Frankfurt, Germany; Lars Maegdefessel, Molecular Vascular Med, Bioclinicum, Karolinska Inst and Vascular and Endovascular Surgery, Technical Univ Munich, Solna, Munich, Sweden</p> | <p>125</p> <p>126</p> <p>127</p> | <p>Oral Abstract Presentations</p> <p>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</p> <p>10:45 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</p> <p>11:00 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</p> <p>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</p> <p>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</p> | <p>128</p> <p>129</p> <p>130</p> <p>131</p> <p>132</p> |
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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

Program Agenda (continued)

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** 133

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** 134

Wenzhu Li, Chase W. Kessinger, Makoto Orii, Jie Cui, Stephan M. Kellnberger, Adam W. Mauskopf, 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** 135

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

11:15 **Host Genotype-shaped Gut Microbiome Modulate Atherosclerosis Development in Mice** 136

Kazuyuki Kasahara, Qijun Zhang, Eugenio I. Vivas, Univ Wisconsin Madison, Madison, WI; Aldons J. Lasis, 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** 137

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

11:25 **Cd4+ T Cell Deficiency of KLF10 Impairs Blood Flow and Neovascularization in Response to Tissue Hypoxia** 138
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** 139
Katarina Wadén, Mariette Lengquist, Gabrielle Paulsson-Berne, Ulf Hedin, Joy Roy, Ljubica Matic, Karolinska Inst, Stockholm, Sweden

11:35 **Heterozygous Missense Mutations in PLEKHO2 Predispose to Thoracic Aortic Aneurysms and Dissections** 140
Amélie Pinard, Xue-Yan Duang, Dongchuan Guo, Ellen S. Regalado, Alana C. Cecchi, Limin Gong, Tracy A. Benseid, Ellen M. Hostetler, The Univ of Texas Health Science Ctr at Houston, Houston, TX; University of Washington Center for Mendelian Genomics; Michael J. Bamshad, 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

11:40 **Inhibition of Toll-Like Receptor 7 Attenuates Aortic Pathologies Induced Smooth Muscle Cell Specific Tgfb1 Deletion** 141
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** 142
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

WEDNESDAY

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** 143

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** 144

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** 145

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** 146

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?** 147

Alison B .Kohan, Univ of Connecticut, Storrs, CT

3:00 **Key Role of Cytokines in Regulation of Intestinal Microbial Homeostasis, Inflammation and Atherosclerosis** 148

Alija Fatkhullina, Iuliia 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** 149

Ludovic Boytard, Tarik Hadi, George Miller, Lior Zangi, **Bhama Ramkhalawon**, 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** 150

Robert Wirka, Dhananjay Wagh, David Paik, Milos Pjanic, Trieu Nguyen, Clint Miller, Ramen Kundu, Manabu Nagao, John Collier, 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** 151

Prasad Srikakulapu, Aditi Upadhye, John Davy, Melissa Marshal, Coleen McNamara, Univ of Virginia, Charlottesville, VA

WEDNESDAY

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WEDNESDAY

5:00 **The Role of Macrophage MerTK and its Cleavage in Nonalcoholic Steatohepatitis** **152**
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** **153**
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, 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** **154**
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** **155**
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** **156**
 Özgün Babur, Alexander Melrose, Jennifer Cunliffe, Anna-Liisa Sepp, Anh T. Ngo, Owen McCarty, John Klimek, Larry David, **Joseph E.**

Aslan, Oregon Health and Science Univ, Portland, OR

5:00 **An Integrin αIIbβ3 Intermediate Affinity State Mediates Biomechanical Platelet Aggregation** **157**
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** **158**
Qing Li, Tao You, Li Zhu, Soochow Univ, Suzhou, China

5:30 **The Role of Platelets in Response to Human Influenza Infection** **159**
Milka Koupenova, Heather A. Corkrey, Olga Vitseva, Giorgia Manni, Lauren Clancy, Jennifer P. Wang, Robert W Finberg, Evelyn A. Kurt-Jones, Jane E. Freedman, Univ of MA Medical Sch, Worcester, MA

5:45 **Mitogen Activation Protein Kinase-interacting Kinase 1 Regulates Platelet Production and Activation** **160**
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**

6:00-8:00 PM

Gloucester/Back Bay

Poster Session 2 and Reception

8:00-10:30 PM

Grand Ballroom Salon G

Council Dinner (ticket required)

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

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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

Gloucester/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, 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



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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

E. Cynn: None. **Y. Wang:** None. **H. Zhang:** None. **C. Xue:** None. **J. Shi:** None. **D.Y. Li:** None. **M. Reilly:** None.

101

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

Dawn Fernandez, Adeeb Rahman, Nicolas Fernandez, Aleksey Chudnovskiy, El-ad David Amir, Letizia Amadori, Nayaab Kahn, Roza Shamailova, Christopher Faries, Seunghee Kim-Schulze, J Mocco, Peter Faries, Miriam Merad, Chiara Giannarelli, Mount Sinai Sch of Med, New York, NY

D. Fernandez: None. **A. Rahman:** None. **N. Fernandez:** None. **A. Chudnovskiy:** None. **E. Amir:** None. **L. Amadori:** None. **N. Kahn:** None. **R. Shamailova:** None. **C. Faries:** None. **S. Kim-Schulze:** None. **J. Mocco:** None. **P. Faries:** None. **M. Merad:** None. **C. Giannarelli:** None.

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

M.S. Afonso: None. **M. Sharma:** None. **P. Schlegel:** None. **C. Van Solingen:** None. **G.J. Koelwyn:** None. **M. Ouimet:** None. **L. Beckett:** None. **K. Rahman:** None. **E.A. Fisher:** None. **K.J. Moore:** None.

103

Vascular Smooth Muscle Cell PGC1alpha Deletion is Atheroprotective *in vivo*

Raymundo A Quintana, Hassan Sellak, Derick Okwan-Duodu, Giji 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

R.A. Quintana: None. **H. Sellak:** None. **D. Okwan-Duodu:** None. **G. Joseph:** None. **H.C. Williams:** None. **F. Paredes:** None. **A. San Martin:** None. **B. Lassegue:** None. **W.R. Taylor:** None.

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

S. Lu: None. **A.J. Jolly:** None. **K.A. Strand:** None. **K.S. Moulton:** None. **M.F. Mutryn:** None. **R.M. Tucker:** None. **R.A. Nemenoff:** None. **M.C.M. Weiser-Evans:** None.

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 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

C.S. Kwartler: None. **J. Chen:** None. **X. Duan:** None. **S. Ma:** None. **C. Wang:** None. **D. Milewicz:** None.

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

Y. Xie: None. **A.C. Ostriker:** None. **J. Yu:** None. **J. Hwa:** None. **K.A. Martin:** None.

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; Jiliang Zhou, Augusta Univ, Augusta, GA

I. Osman: None. **L. Yu:** None. **X. Kang:** None. **A. Ahmed:** None. **G. Hu:** None. **W. Zhang:** None. **J. Zhou:** None.

110

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; Yunfeng 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; Saiju 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; Kyong-Mi Chang, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Peter W Wilson, Emory Clinical Cardiovascular Res Inst, Atlanta, GA; Nicholas L Smith, Dept of Epidemiology, Sch of Public Health, Univ of Washington, Seattle, WA; Christopher J O'Donnell, 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, Perlman Sch of Med, Univ of Pennsylvania, Philadelphia, PA; VA Million Veteran Program
D. Klarin: None. **E. Busenkell:** None. **R. Judy:** None. **J. Lynch:** None. **K. Aragam:** None. **M. Chaffin:** None. **M. Haas:** None. **T.L. Assimes:** None. **J. Huang:** None. **K. Lee:** None. **Q. Shao:** None. **J.E. Huffman:** None. **Y. Huang:** None. **Y.V. Sun:** None. **M. Vujkovic:** None. **D. Saleheen:** None. **D.R. Miller:** None. **P. Reaven:** None. **S. DuVall:** None. **W. Boden:** None. **S. Pyarajan:** None. **J. Gaziano:** None. **J. Concato:** None. **D.J. Rader:** None. **K. Cho:** None. **K. Chang:** None. **P.W.F. Wilson:** None. **N.L. Smith:** None. **C.J. O'Donnell:** None. **P.S. Tsao:** None. **S. Kathiresan:** None. **P. Natarajan:** None. **S.M. Damrauer:** None.

111

Hematopoietic Nox2 Regulates Susceptibility to Venous Thrombosis in Mice

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

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

112

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; Nuria Ruiz-Giménez, Hosp Univ de La Princesa, Madrid, Spain; Alicia Lorenzo, Hosp Univ de 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; Marijan Bosevski, Inst for Cardiovascular Diseases. Faculty of Med, Clinical Ctr, Skopje, Macedonia, The Former Yugoslav Republic of; Olga Gavin, Dept of Haematology. Hosp Clínico Univ de Lozano Blesa, Zaragoza, Spain; Manuel Monreal, Hosp Univ 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.. **J. Nieto:** None. **F. Moustafa:** None. **N. Ruiz-Giménez:** None. **A. Lorenzo:** None. **S. Schellong:** None. **S. Soler:** None. **M. Morales:** None. **M. Bosevski:** None. **O. Gavin:** None. **M. Monreal:** None.

113

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

J.J. Kang: None. **K. Chambliss:** None. **K.C. Vickers:** None. **P.W. Shaul:** None. **C. Mineo:** None.

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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, Cardiovas. Speakers Bureau; Modest; Amgen. Honoraria; Modest; Eli Lilly. Consultant/Advisory Board; Modest; Amgen.

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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
K. Quiroz-Figueroa: None. **A.M. Berrido:** None. **M. Smith:** None. **C. Vitali:** None. **J.S. Millar:** None. **R.C. Bauer:** None. **D.J. Rader:** None.

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

M. De Giorgi: None. **K.E. Jarrett:** None. **J.C. Burton:** None. **A.M. Doerfler:** None. **A. Hurley:** None. **A. Li:** None. **R.H. Hsu:** None. **M. Furgurson:** None. **J. Han:** None. **C.H. Borchers:** None. **W.R. Lagor:** None.

117

Transgelin: A New Gene Involved in LDL Endocytosis in Liver Cells Identified by a Whole-genome Crispr-cas9 Screen

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D. Lucero: None. **M. Mendelson:** None. **P. Islam:** None. **L.A. Freeman:** None. **E.B. Neufeld:** None. **J. Tang:** None. **C. Combs:** None. **Y. Li:** None. **A.T. Remaley:** None.

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, 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

P. Münzer: None. **R. Negro:** None. **V. Magupalli:** None. **M. Kittisopikul:** None. **A. Vahabikashi:** None. **S. Wong:** None. **R. Goldman:** None. **H. Wu:** None. **K. Ridge:** None. **D. Wagner:** None.

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, Srilakshmi Yalavarthi, Andrew P Vreede, Paula L Bockenstedt, David J Pinsky, **Yogendra Kanthi**, Jason S Knight, Univ of Michigan, Ann Arbor, MI

R. Ali: None. **H. Meng:** None. **S. Yalavarthi:** None. **A.P. Vreede:** None. **P.L. Bockenstedt:** None. **D.J. Pinsky:** None. **Y. Kanthi:** None. **J.S. Knight:** None.

121

Neuropilin1 and PIGF/VEGF-B: a Novel Neuroimmune Pathway Involved in Angiotensin II-Induced Hypertension and Target Organ Damage

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D. Carnevale: None. **D. Iodice:** None. **S. Perrotta:** None. **F. Pallante:** None. **R. Iacobucci:** None. **G. Cifelli:** None. **G. Lembo:** None.

122

Macrophage-dependent Lymphangiogenesis and Antigen Trafficking After Experimental Myocardial Infarction

Kristofor 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

B. Zhang: None. **C. Roos:** None. **M. Hagler:** None. **G. Verzosa:** None. **H. Zhang:** None. **H. Schaff:** None. **M. Sarano:** None. **J. Miller:** None.

124

Supplementation with the Sialic Acid Precursor N-acetyl-D-Mannosamine Breaks the Link Between Obesity and Hypertension

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J. Peng: None. **W. Vongpatanasin:** None. **I. Yuhanna:** None. **S. Banerjee:** None. **K. Tanigaki:** None. **A. Sacharidou:** None. **H. Chu:** None. **N. Sundgren:** None. **K. Chambliss:** None. **C. Mineo:** None. **P. Shaul:** None.

125

Improving Drug-eluting Stents Using Novel Cell-targeting Ligands

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L. Lin: None. **W.H. Thiel:** None.

126

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

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B. Hooshdaran: None. **B.B. Pressly:** None. **I. Alfriev:** None. **R.L. Wilensky:** None. **R.C. Gorman:** None. **J.D. Smith:** None. **S. Hazen:** None. **R.J. Levy:** None. **I. Fishbein:** None.

127

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

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E.-. Chernogubova: None. **A. Busch:** None. **P. Kath:** None. **H. Winter:** None. **G. Winski:** None. **H. Eckstein:** None. **B. Dacken:** Employment; Significant; 100% salary. **J. Svart:** Employment; Significant; 100% salary. **R. Boon:** None. **S. Dimmeler:** None. **L. Maegdefessel:** None.

128

Aging Impairs Wound Healing by Hematopoietic Stem Cell Autonomous Mechanism

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J. Yan: None. **G. Tie:** None. **A. Tutto:** None. **K. Hayes:** None. **L. Khair:** 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

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M. Bortot: None. **K. Bark:** None. **K. Neeves:** None. **N. Clendenen:** None. **D.J. Bark:** None. **J. DiPaola:** None.

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

H. Chu: None. **A. Sacharidou:** None. **A. Nguyen:** None. **D. Natale:** None. **P. Shaul:** None. **C. Mineo:** None.

133

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

E.B. Chen: None. **K.E. Shapiro:** None. **T. Kuntz:** None. **B. Theriault:** None. **M.J. Nooromid:** None. **K.H. Wun:** None. **V. Leone:** None. **K. Harris:** None. **Q. Jiang:** None. **M. Spedale:** None. **L. Xiong:** None. **O.M. Eskandari:** None. **E.B. Chang:** None. **K.J. Ho:** None.

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, Stephan M. Kellnberger, Adam W. Mauskapf, Lang Wang, Xiaoxin Zheng, Ahmed Tawakol, Peter Libby, Peter K. Henke, Farouc A. Jaffer, CVRC, MGH, Boston, MA

W. Li: None. **C.W. Kessinger:** None. **M. Orii:** None. **J. Cui:** None. **S.M. Kellnberger:** None. **A.W. Mauskapf:** None. **L. Wang:** None. **X. Zheng:** None. **A. Tawakol:** None. **P. Libby:** None. **P.K. Henke:** None. **F.A. Jaffer:** None.

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

C. Chu: None. **W.J. Moorhead:** None. **J. Callahan:** None. **C.K. Boufford:** None. **S. Sur:** None. **J.N. MacTaggart:** None. **A. Kamenskiy:** None. **C. St Hilaire:** None.

136

Host Genotype-shaped Gut Microbiome Modulate Atherosclerosis Development in Mice

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137

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

C. Tang: None. **L. Wang:** None. **S. Gupta:** None. **C.N. Matzko:** None. **L.F. Brass:** None. **L. Zhu:** None. **T.J. Stalker:** None.

138

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

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

K. Wadén: None. **M. Lengquist:** None. **G. Paulsson-Berne:** None. **U. Hedin:** None. **J. Roy:** None. **L. Matic:** None.

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 Bensead, Ellen M Hostetler, The Univ of Texas Health Science Ctr at Houston, Houston, TX; University of Washington Center for Mendelian Genomics; Michael J Bamshad, 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

A. Pinard: None. **X. Duang:** None. **D. Guo:** None. **E.S. Regalado:** None. **A.C. Cecchi:** None. **L. Gong:** None. **T.A. Bensead:** None. **E.M. Hostetler:** None. **M.J. Bamshad:** None. **D.A. Nickerson:** None. **D.M. Milewicz:** None.

141

Inhibition of Toll-Like Receptor 7 Attenuates Aortic Pathologies Induced Smooth Muscle Cell Specific Tgfr1 Deletion

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X. Qi: None. **G. Zhou:** None. **F. Wang:** None. **G. Upchurch Jr:** None. **Z. Jiang:** None.

142

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

A.M. Flores: None. **J. Ye:** None. **N. Hosseini-Nassab:** None. **K. Jarr:** None. **X. Zhu:** None. **B.R. Smith:** None. **N.J. Leeper:** None.

143

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*

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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

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T. Wyseure: None. **R. Agashe:** None. **A. von Drygalski:** None. **S. Henderson:** None. **L.O. Mosnier:** None.

146

Tipping the Balance of Hepatocyte-Derived tPA and PAI1 Contributes to Defective Fibrinolysis in Obesity

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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.

148

Key Role of Cytokines in Regulation of Intestinal Microbial Homeostasis, Inflammation and Atherosclerosis
Aliia Fatkhullina, Iuliia 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 Aneurysm by Modulating Mitochondrial Fission in Transmural Macrophages
Ludovic Boytard, Tarik Hadi, George Miller, Lior Zangi, **Bhama Ramkhelawon**, NYU Medical Ctr, New York, NY
L. Boytard: None. **T. Hadi:** None. **G. Miller:** None. **L. Zangi:** None. **B. Ramkhelawon:** None.

150

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
R. Wirka: None. **D. Wagh:** None. **D. Paik:** None. **M. Pjanic:** None. **T. Nguyen:** None. **C. Miller:** None. **R. Kundu:** None. **M. Nagao:** None. **J. Coller:** None. **T. Koyano:** None. **R. Fong:** None. **J. Woo:** None. **B. Liu:** None. **S. Montgomery:** None. **J. Wu:** None. **K. Zhu:** None. **R. Chang:** None. **M. Alamprese:** None. **M. Tallquist:** None. **J. Kim:** None. **T. Quertermous:** 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 Marshal, Coleen McNamara, Univ of Virginia, Charlottesville, VA
P. Srikakulapu: Research Grant; Significant; AHA Career Development Award. **A. Upadhye:** None. **J. Davy:** None. **M. Marshal:** 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
B. Cai: None. **P. Dongiovanni:** None. **X. Wang:** None. **K. Corey:** None. **Z. Zheng:** None. **R. Chung:** None. **R. Birge:** None. **L. Valenti:** None. **I. Tabas:** None.

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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
L. Huang: None. **L. Xu:** None. **M. Ahmed:** None. **B. Thompson:** None. **J. McDonald:** None. **E. Nelson:** None. **S. Park:** None. **D.P. McDonnell:** None. **C. Mineo:** None. **P.W. Shaul:** None.

154

Sexual Dimorphism of Atherosclerosis and Plasma Lipids: Analysis of Complex Traits in a Diversity Outbred F1 Mouse Population
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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.

156

Quantitative Phosphoproteomic Profiling and Causality Pathway Mapping the Platelet Response to Vascular Injury
Özgün Babur, Alexander Melrose, Jennifer Cunliffe, Anna-Liisa Sepp, Anh T Ngo, Owen McCarty, John Klimek, Larry David, **Joseph E Aslan**, Oregon Health and Science Univ, Portland, OR
Ö. Babur: None. **A. Melrose:** None. **J. Cunliffe:** None. **A. Sepp:** None. **A.T.P. Ngo:** None. **O. McCarty:** None. **J. Klimek:** None. **L. David:** None. **J.E. Aslan:** None.

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An Integrin $\alpha_{IIb}\beta_3$ 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
Y. Chen: None. **L. Ju:** None. **F. Zhou:** None. **J. Liao:** None. **L. Xue:** None. **Q. Su:** None. **D. Jin:** None. **Y. Yuan:** None. **H. Lu:** None. **S. Jackson:** None. **C. Zhu:** None.

Oral Abstracts

158

Attenuation of Platelet Activation and Thrombus Formation by Tannic Acid: Inhibition of Protein Disulfide Isomerase

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Q. Li: None. **T. You:** None. **L. Zhu:** None.

159

The Role of Platelets in Response to Human Influenza Infection

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M. Koupenova: None. **H.A. Corkrey:** None. **O. Vitseva:** None. **G. Manni:** None. **L. Clancy:** None. **J.P. Wang:** None. **R.W. Finberg:** None. **E.A. Kurt-Jones:** None. **J.E. Freedman:** None.

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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

B.K. Manne: None. **R. Campbell:** None. **E. Middleton:** None. **S. Bhatlaker:** None. **R. Fukunaga:** None. **C. Proud:** None. **A. Weyrich:** None. **M. Rondina:** None.

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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.

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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

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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

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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

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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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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

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174

Na⁺-H⁺ Exchanger 1 Determines Atherosclerotic Lesion Acidification and Promotes Atherogenesis

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175

Receptor-independent Ldl Macropinocytosis by Macrophages Contributes to the Pathogenesis of Atherosclerosis

Huiping Lin, Bhupesh Singla, Pushpankur Ghoshal, Mary C Shaw, David Fulton, Gabor Csanyi, Augusta Univ, Augusta, GA

H. Lin: None. **B. Singla:** None. **P. Ghoshal:** None. **M.C. Shaw:** None. **D. Fulton:** None. **G. Csanyi:** None.

176

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

Dawn Fernandez, Adeeb Rahman, Nicolas Fernandez, Aleksey Chudnovskiy, El-ad David Amir, Letizia Amadori, Nayaab Kahn, Roza Shamailova, Christopher Faries, Seunghee Kim-Schulze, J Mocco, Peter Faries, Miriam Merad, Chiara Giannarelli, Mount Sinai Sch of Med, New York, NY

D. Fernandez: None. **A. Rahman:** None. **N. Fernandez:** None. **A. Chudnovskiy:** None. **E. Amir:** None. **L. Amadori:** None. **N. Kahn:** None. **R. Shamailova:** None. **C. Faries:** None. **S. Kim-Schulze:** None. **J. Mocco:** None. **P. Faries:** None. **M. Merad:** None. **C. Giannarelli:** None.

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

H. Chu: None. **A. Sacharidou:** None. **A. Nguyen:** None. **D. Natale:** None. **P. Shaul:** None. **C. Mineo:** None.

Vascular Diseases SFRN Posters

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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

189

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.

Poster Abstracts (continued)

190

Systolic Heart Failure Patients Risk Factors in One-Year Follow-Up Study in Birjand Valiasr Hospital 2016

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M. Abdollahi-karizno: None. **N. Ravanbakhsh:** None. **N. Partovi:** None. **T. Kazemi:** None.

191

¹⁸F-Sodium Fluoride PET-CT Measures Plaque Burden in Gene Modified Minipigs with Atherosclerosis

Paula Nogales, Carlos Velasco, Leticia Rocío González-Cintado, Adriana Mota-Cobián, Jesús Mateo, Samuel España, Jacob Fog Bentzon, CNIC, Madrid, Spain

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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

S. Tan: None. **J. Christensen:** None. **A. Chu:** None. **W. Yu:** None. **M. Assali:** None. **F. Vargas:** None. **W. Wu:** None. **G. Choudhary:** None. **A.R. Morrison:** None.

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

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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

Q. Liu: None. **K.K. Chan:** None. **A.R. Morrison:** None. **S.T. McGarvey:** None. **X. Luo:** None. **J.G. Wilson:** None. **A. Correa:** None. **A.P. Reiner:** None. **S. Liu:** None. **W. Wu:** None.

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

B.B. Lima: None. **M. Hammadah:** None. **J. Kim:** None. **I. Uphoff:** None. **A. Shah:** None. **Z. Almuwaqqat:** None. **S. Sullivan:** None. **K. Moazzami:** None. **J. Bremner:** None. **A. Quyyumi:** None. **V. Vaccarino:** None.

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

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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

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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

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200

Dna Methylation of Lncrna Meg9 Inhibits Angiogenesis
Sudarshan Anand, **Cristina Espinosa-Diez**, Namita Chatterjee, Rebecca Ruhl, Oregon Health & Science Univ, Portland, OR

S. Anand: None. **C. Espinosa-Diez:** None. **N. Chatterjee:** None. **R. Ruhl:** None.

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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203

Identification of Immunoregulatory 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

R.M. McEnaney: None. **D. McCreary:** None. **N. Skirtich:** None. **E. Tzeng:** None.

205

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

H. Shao: None. **Y. Li:** None. **I. Pastar:** None. **R. Prokupets:** None. **S. Liu:** None. **M. Tomic-Canic:** None. **O.C. Velazquez:** None. **Z. Liu:** None.

206

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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207

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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208

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

D.S. Faffe: None. **E. Curty da Costa:** None. **L. Hoffmann:** None. **R. Silva:** None. **T.P. Urmenyi:** None.

209

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

C. Lin: None. **M.C. Staiculescu:** None. **C. Lin:** None. **J.E. Wagenseil:** None. **R.P. Mecham:** None.

210

Transcriptomic Profiling of Experimental Arterial Injury Reveals Temporal Dynamics and New Mechanisms in Vascular Healing Response

Ljubica Matic, Samuel Röhl, Urszula Rykaczewska, Till Seime, Bianca Suur, Maria Gonzalez Diez, Jesper R Gådin, Karolinska Inst, Stockholm, Sweden; Alexey A Sergushichev, ITMO Univ, St Petersburg, Russian Federation; Robert Wirka, Stanford, Stanford, CA; Mariette Lengquist, Malin Kronqvist, Otto Bergman, Karolinska Inst, Stockholm, Sweden; Jacob Odeberg, Royal Inst of Technology, Stockholm, Sweden; Jan H Lindeman, Leiden Univ, Leiden, Netherlands; Thomas Quertermous, Stanford, Stanford, CA; Anders Hamsten, Per Eriksson, Ulf Hedin, Anton Razuvaev, Karolinska Inst, Stockholm, Sweden

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211

Endothelial-to-mesenchymal Transition and Inflammation Play Key Roles in Cyclophilin A Induced Pulmonary Arterial Hypertension

Chao Xue, Sharon Senchanthisai, Mark Sowden, Bradford Berk, Univ of Rochester, Rochester, NY

C. Xue: None. **S. Senchanthisai:** None. **M. Sowden:** None. **B. Berk:** None.

212

Low Intrinsic Aerobic Capacity Promotes Vascular Dysfunction In Aging

Chandrika Canugovi, Mark D Stevenson, Andrey Lozhkin, Aleksandr E Vendrov, Takayuki Hayami, Univ of Michigan, Ann Arbor, MI; Lauren G Koch, Univ of Toledo, Toledo, OH; Steven L Britton, Nageswara R Madamanchi, Marschall S Runge, Univ of Michigan, Ann Arbor, MI

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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

Mary E Wines-Samuelson, Univ of Rochester, Rochester, NY
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

Albino Carrizzo, IRCCS Neuromed and Univ of Salerno, Baronissi, Italy; Antonio Damato, Mariateresa Ambrosio, Massimiliano De Lucia, IRCCS Neuromed, Pozzilli, Italy; Francesco Villa, Chiara Spinelli, IRCCS MultiMedica, Milano, Italy; Annibale A Puca, IRCCS MultiMedica and Univ of Salerno, Baronissi, Italy; Carmine Vecchione, IRCCS Neuromed and Univ of Salerno, Baronissi, Italy

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215

P-STAT3 S727-dependent Ripk3 Transcription in Vascular Smooth Muscle Cells Worsens Aaa via A Distal Enhancer Region

Kartik Gupta, Bo Liu, Satish Pilli, Univ of Wisconsin-Madison, Madison, WI

K. Gupta: None. **B. Liu:** None. **S. Pilli:** None.

216

Bcl11b-Mediated Regulation of Vascular Smooth Muscle Specific Gene Expression

Joel May, Jeff Arni Valisno, Erika Minetti, Francesca Seta, Boston Univ, Boston, MA

J. May: None. **J. Arni Valisno:** None. **E. Minetti:** None. **F. Seta:** None.

217

Protein Kinase D Regulates Vascular Endothelial Growth Factor-induced Vascular Permeability *in vitro* and *in vivo*

Huan Liu, Jinjing Zhao, Shuya Zhang, Suowen Xu, Zheng Gen Jin, Univ of Rochester, Rochester, NY

H. Liu: None. **J. Zhao:** None. **S. Zhang:** None. **S. Xu:** None. **Z. Jin:** None.

218

Aldosterone and Protein Disulfide Isomerase Activity in Diabetes

Sebastian J Romero, Brigham Womens Hosp, Boston, MA; Yaritza Inostroza, San Juan Bautista Sch of Med, Caguas, PR; Alicia Rivera, Brigham Womens Hosp, Boston, MA

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

Seyed Soheil Saeedi Saravi, Emrah Eroglu, Benjamin Steinhorn, Thomas Michel, Harvard Medical Sch, Boston, MA

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221

Regulation of Vascular Smooth Muscle Cell Responses by IL-2/IL-2R Alpha

Victoria Wong, Wright State Univ, Dayton, OH; David Hui, Univ of Cincinnati, Cincinnati, OH; John Matsuura, **Lucile Wrenshall,** Wright State Univ, Dayton, OH

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222

Periodontal Therapy Improves Serum Soluble E-selectin Levels and Endothelial Function; A Meta-analysis

Khalid Chngal, Mercy St Vincent Medical Ctr, Toledo, OH; Rehana Bashir, Chaudhary Charan Singh Univ, Meerut, India; Mujeeb Abdul Sheikh, Univ of Toledo Medical Ctr, Toledo, OH

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223

Macrophage Depletion Improved Vascular Insulin Resistance and Cardiovascular Remodeling in Salt-sensitive Hypertension

Xuefeng Yang, Jianghua Huang, Chunxiang Tan, Jinzhou Medical Univ, Jinzhou, China; Ruiping Cai, Lei Huang, Zhihang Yang, Yueyang Liu, Shenyang Medical Univ, Shenyang, China; Aimei Wang, Jlnzhou Medical Univ, Jinzhou, China; **Ming-Sheng Zhou,** Shenyang Medical Univ, Shenyang, China

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Poster Abstracts (continued)

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Disruption of Phosphodiesterase-4 Subtype B Improves Microcirculation and Protects Against Myocardial Ischemia-Reperfusion Injury

Qing Wan, Li yuan Zhu, Miao Wang, State Key Lab of Cardiovascular Disease, Fuwai Hosp, Peking Union Medical Coll, Beijing, China

Q. Wan: None. **L.Y. Zhu:** None. **M. Wang:** None.

225

Pkc δ Promotes Chemokine Production in Vascular Smooth Muscle Cells Independent of its Kinase Activity

Vijaya S Pilli, Jun Ren, Ting Zhou, Sarah Franco, Kartik Gupta, Bo Liu, Univ of Wisconsin Madison, Madison, WI

V.S.S. Pilli: None. **J. Ren:** None. **T. Zhou:** None. **S. Franco:** None. **K. Gupta:** None. **B. Liu:** None.

226

CD70 Modulates Endothelial Nitric Oxide Synthase Expression and Vasomotor Tone

Arvind Pandey, Brigham and Women's Hosp, Boston, MA; Jonathan Brown, VUMC, Nashville, TN; David Harrison, David Harrison, VUMC, TN; **Hana A. Itani**, American Univesrity of Beirut, Beirut, Lebanon

A. Pandey: None. **J. Brown:** None. **D. Harrison:** None. **H.A. Itani:** None.

227

Differential Effects of DHA and EPA Supplementation on Serum Inflammatory Markers and Blood Monocyte Inflammatory Response in Subjects with Chronic Inflammation

Jisun So, Dayong Wu, Alice H Lichtenstein, Stefania Lamon-Fava, Tufts Univ, Boston, MA

J. So: None. **D. Wu:** None. **A.H. Lichtenstein:** None. **S. Lamon-Fava:** None.

228

Neutrophil-derived Extracellular Vesicles Induce Endothelial Inflammation and Damage Through the Transfer of miRNAs
Alexandre Glémain, Mélanie Néel, INSERM U1064, Nantes, France; Gwennan Andre-Gregoire, INSERM U1232, Nantes, France; Bernard Martinet, Rozenn Le Bloas, INSERM U1064, Nantes, France; Antoine Néel, Mohamed Hamidou, CHU de Nantes, Nantes, France; Julie Gavard, INSERM U1232, Nantes, France; Fadi Fakhouri, **Sarah Bruneau**, INSERM U1064, Nantes, France

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230

Microglia Involve in Soluble Endoglin-induced Brain Vascular Malformation

Eunsu Park, UT Health Science Ctr at Houston, Houston, TX; P. Roc Chen, UT Health Science Ctr at Houston, Memorial Hermann Texas Medical Ctr, Houston, TX; Eunhee Kim, UT Health Science Ctr at Houston, Houston, TX

E. Park: None. **P. Chen:** None. **E. Kim:** None.

231

Direct Cd137 Costimulation of Cd8 T Cells Promotes Retention in Nascent and Developed Atherogenic Foci
Maria M Xu, Antoine Ménoret, Sarah-Anne E Nicholas, UCONN Health, Farmington, CT; Sebastian Günther, Eric J Sundberg, Univ of Maryland Sch of Med, Baltimore, MD; Beiyan Zhou, Annabelle Rodriguez, **Patrick A Murphy**, Anthony T Vella, UCONN Health, Farmington, CT

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232

Transient Intermittent Hyperglycemia Promotes Myelopoiesis and Accelerates Atherosclerosis in an S100A8/A9-RAGE Dependent Manner

Michelle C Flynn, Baker Heart and Diabetes Inst, Melbourne, Australia; Michael Kraakman, Columbia Univ, New York, NY; Man Kit Sam Lee, Baker Heart and Diabetes Inst, Melbourne, Australia; Christos Tikellis, Monash Univ, Melbourne, Australia; Helene Kammoun, Baker Heart and Diabetes Inst, Melbourne, Australia; Nordin Hanssen, Maastricht Univ, Maastricht, Netherlands; Raelene Pickering, Monash Univ, Melbourne, Australia; Dragana Dragoljevic, Annas Al-Sharea, Baker Heart and Diabetes Inst, Melbourne, Australia; Prabhakara Nagareddy, Univ of Alabama at Birmingham, Birmingham, AL; Mark Cooper, Merlin Thomas, Monash Univ, Melbourne, Australia; Andrew Murphy, Baker Heart and Diabetes Inst, Melbourne, Australia

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233

Methotrexate Attenuates Vascular Inflammation Through an Adenosine-microrna-181b Dependent Pathway in Endothelial Cells

Dafeng Yang, Stefan Haemmig, Lei Chen, Mark Feinberg, Brigham and Women's Hosp, Boston, MA

D. Yang: None. **S. Haemmig:** None. **L. Chen:** None. **M. Feinberg:** None.

234

c-Cbl Augments Ischemia Induced Angiogenesis in Hindlimb Ischemia Model in Uremic Milieu

Nkiruka Arinze, Sean Richards, Joshua Walker, Sung Bok Yoo, Chimera Lyle, Marc Napoleon, Nader Rahimi, Alik Farber, Vipul Chitalia, Boston Medical Ctr, Boston, MA

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235

Inhibition of the Akt1-mTORC1 Axis Alters Venous Remodeling to Improve Arteriovenous Fistula Patency
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A. Fereydooni: Research Grant; Modest; HHMI. **X. Guo:** None. **T. Isaji:** None. **J. Gorecka:** None. **S. Ono:** None. **H. Hu:** None. **S. Liu:** None. **N. Nassiri:** None. **L. Zhang:** None. **A. Dardik:** None.

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The BD2 Domain of BRD4 is a Determinant in EndoMT and Vein Graft Neointima Formation
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M. Zhang: None. **B. Wang:** None. **G. Urabe:** None. **Y. Huang:** None. **J. Plutzky:** None. **K.C. Kent:** None. **L. Guo:** None.

237

Knockdown of TSP-1 and TSP-2 Decreases Intimal Hyperplasia in Rats After Carotid Balloon Injury
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F. Muqri: None. **M. Kassem:** None. **A. Helkin:** None. **D. Bruch:** None. **K.G. Maier:** Research Grant; Significant; NIH R01 HL 133577. **V. Gahtan:** Research Grant; Significant; NIH R01 HL 133577.

238

Perivascular Gene Targeted Therapy Using Biodegradable CLICK-Gelatin Hydrogels
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P. Liang: None. **M. Sewall:** None. **N. Momi:** None. **D. Mooney:** None. **L. Pradhan-Nabzdyk:** None. **F. LoGerfo:** None.

239

Arterial Spin Labeling Quantifies Regional Foot Perfusion During Sustained Toe Flexion
Joe Luis Pantoja, Fadil Ali, Jiaxin Shao, Donald Baril, Erik Dutson, John Paul Finn, Peng Hu, Peter F Lawrence, Univ of California Los Angeles, Los Angeles, CA
J.L. Pantoja: None. **F. Ali:** None. **J. Shao:** None. **D. Baril:** None. **E. Dutson:** None. **J.P. Finn:** None. **P. Hu:** None. **P.F. Lawrence:** None.

240

The Peak Systolic Velocity Ratio May Underestimate Internal Carotid Stenosis in the Presence of a Common Carotid Tandem Lesion
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J.L. Pantoja: None. **E. Aguayo:** None. **P.A. Pellionisz:** None. **E. Dutson:** None. **P.F. Lawrence:** None. **D.A. Rigberg:** None.

241

Novel Human Vein Xenograft Model
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G.L. Tang: None. **L. Wang:** None. **M. Sobel:** None. **T.N. Wight:** None. **I. Harten:** None. **R.D. Kenagy:** None.

242

Microvascular Stenosis in End-Stage Peripheral Artery Disease: Role of Partial Endothelial to Mesenchymal Transition
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243

Caspase-1 Mediates Muscle Fiber Typing and Functionality in Response to Ischemia
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R.J. Ferrari: None. **X. Cui:** None. **A. Pius:** None. **A. Sahu:** None. **S.N. Shinde:** None. **F. Ambrosio:** None. **H. Liao:** None. **M.J. Scott:** None. **U. Sachdev:** None.

244

Periprocedural Hydrogen Sulfide Therapy Impairs Vascular Remodeling and Improves Vein Graft Patency

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P. Kip: None. **M. Tao:** None. **K.M. Trocha:** None. **M.R. MacArthur:** None. **S.J. Mitchell:** None. **S. Patterson:** None. **J. Jung:** None. **P.H.A. Quax:** None. **M.R. de Vries:** None. **J.R. Mitchell:** None. **C.K. Ozaki:** None.

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

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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

Constance J Mietus, Matthew A Fuglestad, Timothy J Lackner, Gregory T Willcockson, Peter Karvelis, Hernan Hernandez, Yue Gao, Katyarina Brunette, Holly Despiegelaere, Feng Xie, Thomas Porter, Iraklis Pipinos, George Casale, UNMC, Omaha, NE

C.J. Mietus: None. **M.A. Fuglestad:** None. **T.J. Lackner:** None. **G.T. Willcockson:** None. **P. Karvelis:** None. **H. Hernandez:** None. **Y. Gao:** None. **K. Brunette:** None. **H. Despiegelaere:** None. **F. Xie:** Consultant/Advisory Board; Modest; Lantheus Medical Imaging Inc. **T. Porter:** Research Grant; Modest; Theodore F. Hubbard Foundation. Other Research Support; Modest; Bracco Diagnostics Inc. Consultant/Advisory Board; Modest; Lantheus Medical Imaging Inc. Other; Modest; equipment support from Philips Research North America. **I. Pipinos:** None. **G. Casale:** None.

250

Increased Ceramide Content in the Peripheral Arterial Plaque of Patients with Diabetes Can Cause Endothelial Cell Dysfunction

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N. Harroun: None. **M. Zayed:** None. **C. Yang:** None. **C. Semenkovich:** None. **L. Sanchez:** None.

251

Atorvastatin Inhibits Plaque Angiogenesis and Induces Neovessel Maturation in Murine Vein Grafts

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M.R. de Vries: None. **F. Baganha:** None. **E.A.B. Peters:** None. **P.H.A. Quax:** None.

252

Risk of Undiagnosed Coronary Artery Disease associated with Infrapopliteal Artery Occlusion from a Multicenter Study

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Seasonal Variation for Acute Limb Ischemia Related Hospitalizations

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R.G. Soni: None. **S. Patel:** None. **M. Pahuja:** None. **K. Chngal:** None. **M. Sheikh:** None.

254

Autophagy is Impaired in Thoracic Aortic Aneurysms

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E.L. Chou: None. **F. Cherbonneau:** None. **M.F. Conrad:** None. **C.L. Lino Cardenas:** None. **M.E. Lindsay:** None.

Poster Abstracts (continued)

255

Collagen Type I and III in Serum of Patients with Abdominal Aortic Aneurysm: Potential Biomarker of Risk Stratification?

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256

Aerobic Exercise Attenuates Arterial Wall Remodeling in a Smooth Muscle Cell LRP1-Deficient Mouse Model

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B.O. Aicher: None. **S.C. Muratoglu:** None. **A.A. Ucuzian:** None. **D.K. Strickland:** None.

258

Interleukin-6 is Necessary but Not Sufficient for Abdominal Aortic Aneurysm Development

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J. Ruddy: None. **R.T. Grespin:** None. **N. Ward:** None. **C. Couch:** None. **R. Mukherjee:** None. **J.A. Jones:** None.

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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 P Goodney, Dartmouth-Hitchcock Medical Ctr, West Lebanon, NH

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AT1a Receptor Deficiency Attenuates Thoracic Aortic Aneurysm Progression in FBN1^{C1041G/+} Mice

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J. Chen: None. **J. Moorleghen:** None. **M. Sheppard:** None. **A. Daugherty:** None.

262

Noninvasive Spect Imaging Using a Novel Formyl Peptide Receptor Ligand Can be Used to Diagnose and Monitor Abdominal Aortic Aneurysms

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A.H. Shannon: None. **M.D. Chordia:** None. **M. Spinosa:** None. **D. Pan:** None. **G.R. Upchurch:** None. **A.K. Sharma:** None.

263

A Retrievable Rescue Stent for Thoracic or Abdominal Traumatic Hemorrhage

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C. Go: None. **J. Kuhn:** None. **M. Elsisy:** None. **Y. Chun:** None. **B. Tillman:** None.

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Epigenetic Modifications Influence Macrophage-mediated Inflammation in Abdominal Aortic Aneurysms

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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.

265

Endothelial Krüppel Like Factor 11 Inhibits Abdominal Aortic Aneurysm

Guizhen Zhao, Ziyi Chang, Yang Zhao, Haocheng Lu, Wenyang Liang, Tianqing Zhu, Jifeng Zhang, Y. Eugene Chen, Univ Mich, Ann Arbor, MI

G. Zhao: None. **Z. Chang:** None. **Y. Zhao:** None. **H. Lu:** None. **W. Liang:** None. **T. Zhu:** None. **J. Zhang:** None. **Y. Chen:** None.

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Nicotine and Epigenetic Transgenerational Risk of Abdominal Aortic Aneurysm

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J. Mulorz: None. **P. Mulorz:** None. **M.U. Wagenhaeuser:** None. **P.S. Tsao:** None. **J.M. Spin:** None.

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Macrophage Overactivation Promotes Aortic Dissection Associated with Medial Expression of Arf and Impaired Proliferation of Smooth Muscle Cells in Mice

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S. Ohno-Urabe: None. **M. Kase:** None. **H. Aoki:** None. **M. Nishihara:** None. **A. Furusho:** None. **S. Hirakata:** None. **N. Nishida:** None. **S. Ito:** None. **M. Hayashi:** None. **Y. Hashimoto:** None. **R. Majima:** None. **Y. Fukumoto:** 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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Myeloid Cell-derived Interferon Regulatory Factor 5 Promotes Experimental Abdominal Aortic Aneurysms

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B. Xu: None. **Y. Li:** None. **X. Zheng:** None. **X. Chen:** None. **S. Zhao:** None. **J. Guo:** None. **T. Shoji:** None. **M. Miyata:** None. **A. Daugherty:** None. **H.S. Lu:** None. **R.L. Dalman:** None.

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Alternative Macrophage Activation Limits Experimental Abdominal Aortic Aneurysms

Baohui Xu, Naoki Fujimura, Hongping Deng, Gang Li, Yankui Li, Xiaoya Zheng, Fanru Shen, Takahiro Shoji, Jia Guo, Sihai Zhao, Stanford Univ Sch of Med, Stanford, CA; Xiaofeng Chen, Taizhou Hosp Wenzhou Medical Univ, Linhai, China; Masaaki Miyata, Kagoshima City Hosp, Kagoshima, Japan; Alan Daugherty, Hong S Lu, SAHA Cardiovascular Res Ctr Univ of Kentucky, Lexington, KY; Ronald L Dalman, Stanford Univ Sch of Med, Stanford, CA

B. Xu: None. **N. Fujimura:** None. **H. Deng:** None. **G. Li:** None. **Y. Li:** None. **X. Zheng:** None. **F. Shen:** None. **T. Shoji:** None. **J. Guo:** None. **S. Zhao:** None. **X. Chen:** None. **M. Miyata:** None. **A. Daugherty:** None. **H.S. Lu:** None. **R.L. Dalman:** None.

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

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A. Kimball: None. **A. Obi:** None. **C. Luke:** None. **Q. Cai:** None. **A. Dowling:** None. **F. Jaffer:** None. **K. Gallagher:** None. **P. Henke:** Research Grant; Significant; NIH.

272

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

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D. Williams: None. **M. Zayed:** None. **G. Genin:** None. **E. Leuthardt:** None.

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

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C. Cuen-Ojeda: None. **J. Anaya-Ayala:** None. **H. Laparra-Escareno:** None. **R. García-Alva:** None. **C. Hinojosa:** None.

274

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

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A. Selahi: None. **M. Muthuchamy:** None. **A. Jain:** None.

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

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R.I. Vazquez Padron: None. **L. Martinez:** None. **M. Tabbara:** None. **J. Duque:** None. **G. Selman:** None. **L. Salman:** None. **O. Velazquez:** None.

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Hypoxia and Trained Innate Immunity

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B.L. Rodriguez: None. **M.G. Rojas:** None. **J. Ling:** None. **R.I. Vazquez-Padron:** None. **O.C. Velazquez:** None. **R.M. Lassance-Soares:** None.

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Loss of C-kit Impairs Nitric Oxide Mediated Vasodilation
Diana R Hernandez, Boris L Rodriguez, Miguel G Rojas, Omaidia C Velazquez, Roberto I Vazquez-Padron, **Roberta M Lassance-Soares**, Univ of Miami, Miami, FL

D.R. Hernandez: None. **B.L. Rodriguez:** None. **M.G. Rojas:** None. **O.C. Velazquez:** None. **R.I. Vazquez-Padron:** None. **R.M. Lassance-Soares:** None.

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High Hospitalization Rates but Steady Improvement in Outcomes of US Older Adults with Pulmonary Embolism
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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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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. **T. McAndrew:** None. **A. Crowley:** None. **S. Chen:** None. **G. Mehdiipoor:** None. **Y. Liu:** None. **Z. Zhang:** None. **M. Liu:** None. **Y. Zhang:** None. **B. Redfors:** None. **D. Erlinge:** Research Grant; Significant; The VALIDATE-SWEDEHEART study was supported by the Swedish Heart-Lung Foundation, the Swedish Research Council, AstraZeneca and the Medicines Company, and the Swedish Foundation for Strategic Research. **Y. Han:** Research Grant; Significant; The BRIGHT trial was supported by a general research fund from the General Hospital of Shenyang Military Region, as well as profit grants from the Chinese Government National Key Research and Developm. **A. Kastrati:** Research Grant; Significant; ISAR-REACT-4 was supported in part by Nycomed Pharma, Unterschleissheim, Germany (former distributor of bivalirudin in Europe), and a grant (KKF 04-06 [974404]) from Deutsches Herzzentrum. **R. Stables:** Research Grant; Significant; HEAT-PPCI was funded by Liverpool Heart and Chest Hospital, UK National Institute of Health Research, The Medicines Company, AstraZeneca, The Bentley Drivers Club (UK). **P. Steg:** Research Grant; Significant; The EUROMAX trial was funded by the Medicines Company. Other; Significant; Dr. Steg reports research grants from Bayer, Merck, Sanofi, and Servier; speaking or consulting fees from Amarin, Amgen, AstraZeneca, Bayer/Janssen, Boehringer Ingelheim, Bristol-Myers Squibb, Lilly,. **M. Valgimigli:** Research Grant; Significant; The MATRIX trial was supported by the Medicines Company and Terumo Medical.. Other; Significant; Dr. Valgimigli reports grants and personal fees from Abbott, personal fees from Chiesi, personal fees from Bayer, personal fees from Daiichi Sankyo, personal fees from Amgen, grants and personal fees. **G.W. Stone:** Research Grant; Significant; The data pooling and analysis was funded by The Medicines Company.

280

A Mathematical Model of Flow-mediated Coagulation Identifies Factor V as a Modifier of Thrombin Generation in Factor VIII Deficiencies

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K. Link: None. **M.S. Stobb:** None. **M. Sorrells:** None. **M. Bortot:** None. **K. Ruegg:** None. **M. Manco-Johnson:** None. **J. Di Paola:** Research Grant; Modest; NIH (R01HL120728). **S. Sindi:** None. **A. Fogelson:** Research Grant; Modest; NIH (R01HL120728). **K. Leiderman:** Research Grant; Modest; NIH (R01HL120728). **K.B. Neeves:** Research Grant; Modest; NIH (R01HL120728).. Consultant/Advisory Board; Modest; CSL Behring.

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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 p75^{NTR} in Human Platelets

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S. Fleury: None. **I. Boukhatem:** None. **M. Welman:** None. **J. Le Blanc:** None. **L. Villeneuve:** None. **M. Lordkipanidzé:** None.

284

The Role of Platelets in Pollen miRNA Uptake

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A. Singh: None. **H. Corkrey:** None. **M. Koupenova:** None. **J.E. Freedman:** None.

285

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

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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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H. Higashi: None. **T. Maejima:** None. **L.H. Lee:** None. **M.C. Whelan:** None. **Y. Yamazaki:** None. **M.O. Hottiger:** None. **S.A. Singh:** None. **M. Aikawa:** Research Grant; Significant; Kowa Company, Ltd.

287

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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H. Kim: None. **S. Kim:** None. **K. Lim:** None.

288

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.

290

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.

291

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

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R. Drake: None. **D.L. Plubell:** None. **A.M. Fenton:** None. **P.A. Wilmarth:** None. **J. Minnier:** None. **W. Hasan:** None. **O. Varlamov:** None. **J.Q. Purnell:** None. **N. Pamir:** None.

293

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

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Poster Abstracts (continued)

294

Small Dense Low Density Lipoprotein Cholesterol Predict Carotid Intimal Medial Thickness Progression

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H. Ikezaki: None. **N. Furusyo:** None. **Y. Yokota:** None. **M. Ai:** None. **B.F. Asztalos:** None. **M. Murata:** None. **J. Hayashi:** None. **E.J. Schaefer:** None.

295

Protection Against Metaflammation in Perivascular Adipose Tissue Surrounding the Internal Thoracic Artery, A Vessel Resistant to Atherosclerosis

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M. Furuhashi: None. **R. Numaguchi:** None. **M. Matsumoto:** None. **N. Kawaharada:** None. **T. Miura:** None.

296

Vascular Remodeling and Gestational Diabetes Mellitus

Maria Evseyeva, Oksana Sergeeva, Irina Prokhorenko-Kolomoytseva, Evgenij Shchetinin, Stavropol State Medical Univ, Stavropol, Russian Federation

M. Evseyeva: None. **O. Sergeeva:** None. **I. Prokhorenko-Kolomoytseva:** None. **E. Shchetinin:** None.

297

In vivo Liposomal Drug Delivery Enriches Macrophage Targeting and Limits Liver and Kidney Drug Effects

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V. Osinski: None. **D.K. Bauknight:** None. **S.S.K. Dasa:** None. **M. Harms:** None. **M.A. Marshall:** None. **J.C.**

Garney: None. **A.T. Nguyen:** None. **J. Hartman:** None. **A. Upadhye:** None. **P. Srikakulapu:** None. **A. Zhou:** None. **G. O'Mahony:** None. **A.L. Klibanov:** None. **K.A. Kelly:** None. **J. Boucher:** None. **C.A. McNamara:** None.

298

Canonical and Non-canonical Inflammasomes are Differentially Regulated in Nafld, Which May Play Important Roles in Non-canonical Inflammasome Signaling in the Pathogenesis of Nonalcoholic Fatty Liver Disease and Vascular Inflammation

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299

A Potential MicroRNA Signature of Early Atherosclerosis in Obese Adolescents

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G. Karere: None. **A. Bishop:** None. **L. Cox:** None. **M. Mercado-Deane:** None. **S. Cuda:** None.

300

Combining Intravascular Ultrasound and Optical Coherence Tomography Coronary Data with Follow-Up led to Better Plaque Progression Prediction: A Fluid-Structure Interaction Study

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Matsumura: None. **D. Molony:** None. **H. Samady:** None.

J. Zheng: None. **L. Wang:** None. **C. Yang:** None. **G. Mintz:**

None. **D. Giddens:** None.

301

Vascular Calcification Biomarkers in Obesity and Diabetes: Effects of Antidiabetic Therapies

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F. Schinzari: None. **M. Tesaro:** None. **C. Cardillo:** None.

U. Campia: None.

302

Ige-deficiency Reduces Atherosclerosis and Obesity in *Apoe^{-/-}* Mice by Regulating Macrophage Polarization and Sterol Response

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X. Zhang: None. **J. Li:** None. **Q. Huang:** None. **Z. Deng:**

None. **G. Shi:** None.

303

Endothelial-to-Mesenchymal Transition is Regulated by Substrate Stiffness

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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

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T. Seime: None. **E. Karlöf:** None. **A.C. Akbulut:** None. **R.H. van Gorp:** None. **M. Lengquist:** None. **M. Kronqvist:** None. **N. Dias:** None. **A. Razuvaev:** None. **J. Odeberg:** None. **J.H.N. Lindeman:** None. **L. Maegdefessel:** None. **L.J. Schurgers:** None. **U. Hedin:** None. **L. Matic:** None.

306

The Atherogenic Metalloprotease ADAMTS7 Secretion Requires Propeptide and Substrate Screening Suggests Broad Specificity

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J. Muia: None. **J. Sadler:** None. **J. Zhu:** None. **M. Abdi:** None. **L. Westfield:** None.

307

Regression of Calcified Atherosclerosis Leads to Adverse Remodeling of the Aortic Root in a Mouse Model of Familial Hypercholesterolemia

Edward Kong, Alexandra H Tsvitis, Mohnish Singh, Abraheem Ahmad, Hoshimjon Begmatov, New York Inst of Technology, Old Westbury, NY; Jose Luis Millan, Sanford Burnham Prebys Medical Discovery Inst, La Jolla, CA; **Olga V Savinova**, New York Inst of Technology, Old Westbury, NY

E. Kong: None. **A.H. Tsvitis:** None. **M. Singh:** None. **A. Ahmad:** None. **H. Begmatov:** None. **J. Millan:** None. **O.V. Savinova:** None.

308

Foxc1 is a Major Transcription Factor Influencing Smooth Muscle Cell Activation in Atherosclerotic Plaques

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309

Expression Landscape of the Proprotein Convertase Subtilisin/Kexin Family in Vascular Disease

Bianca E. Suur, Moritz Lindquist Liljeqvist, Otto Bergman, Karolinska Inst, Stockholm, Sweden; Yuhuang Li, Columbia Univ, New York, NY; Mariette Lengquist, Anton Razuvaev, Jacob Odeberg, Gabrielle Paulsson-Berne, Göran K. Hansson, Lars Maegdefessel, Per Eriksson, Ulf Hedin, Daniel F. Ketelhuth, Joy Roy, Ljubica Matic, Karolinska Inst, Stockholm, Sweden

B.E. Suur: None. **M. Lindquist Liljeqvist:** None. **O. Bergman:** None. **Y. Li:** None. **M. Lengquist:** None. **A. Razuvaev:** None. **J. Odeberg:** None. **G. Paulsson-Berne:** None. **G.K. Hansson:** None. **L. Maegdefessel:** None. **P. Eriksson:** None. **U. Hedin:** None. **D.F.J. Ketelhuth:** None. **J. Roy:** None. **L. Matic:** None.

311

Fibronectin-Binding Integrins Deferentially Regulate ER Stress to Activate JNK Signaling and Atherogenic Inflammation

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Z. Al-Yafeai: None. **J. Peretik:** None. **B. Petrich:** None. **W. DeGrado:** None. **S. Bhuiyan:** None. **A. Orr:** None.

312

Restoration of Endothelial Autophagic Flux in Vascular Endothelial Cells Exposed to Low Shear Stress

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S. Chatterjee: None.

313

A Major Role for TWEAK as a Therapeutic Target in Post Angioplasty Restenosis

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314

Discovery of a LncRNA That Regulates Atherosclerotic Lesion Formation by Modulating NF-κB and MAPK Signaling Pathways

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V. Simion: None. **H. Zhou:** None. **S. Haemmig:** None. **Y. Tesmenitsky:** None. **M.W. Feinberg:** None.

Poster Abstracts (continued)

315

Moderate Alcohol Consumption Targets S100B⁺ Vascular Stem Cells and Protects Against Arteriosclerotic Carotid Remodeling

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W. Liu: None. **A.M. Wahl:** None. **P.A. Cahill:** None. **E.M. Redmond:** None.

316

Transcriptional Activation of Nox1 NADPH Oxidase by Protein Disulfide Isomerase in Chronic Inflammation

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S.M. Sartoretto: None. **B.M. Schickling:** None. **L. Garcia:** None. **J.L. Lucitti:** None. **F.J. Miller:** None.

317

Chitinase-3-like Protein 1 is an Inhibitor of Vascular Smooth Muscle Cell Dedifferentiation in Advanced Atherosclerosis
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P. Tsantilas: None. **S. Lao:** None. **M. Vaerst:** None. **Y. Li:** None. **V. Nanda:** None. **Y. Wang:** None. **Y. Kojima:** None. **J. Ye:** None. **A. Flores:** None. **K. Jarr:** None. **J. Pelisek:** None. **H. Eckstein:** None. **L. Maegdefessel:** None. **N. Leeper:** None.

318

Cardiovascular Toxic Cancer Treatments (CTCT) Prime Monocyte and Macrophages to Oxidative Stress and Accelerate Atherogenesis

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S. Kotla: None.

319

Lipoproteins and Their Modified Forms Regulate Early Stage Vascular Smooth Muscle Cell Calcification

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E.J. Akers: None. **J. Mulangala:** None. **L.A. Wilsdon:** None. **P.J. Psaltis:** None. **C.A. Bursill:** None. **S.J. Nicholls:** None. **B.A. Di Bartolo:** None.

320

The Key Role of Endothelial Sumoylation in Regulating Sustained NADPH Oxidase Activation Under Disturbed Flow: Involvement of Feedback Loop Formed by Fak-sumoylation

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H.T. Vu: None. **K. Heo:** None. **M. Imanishi:** None. **K. Ko:** None. **T. Thomas:** None. **Y. Gi:** None. **H. Mazhar:** None. **K. Fujiwara:** None. **N. Le:** None. **J. Abe:** None. **S. Kotla:** None.

321

Role of TLR2 in Endothelial Permeability and Atherosclerosis

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J. Jeong: None. **S. Cho:** None. **M. Seo:** None. **S. Park:** None. **C. Lee:** None.

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 *Gpnmb* Gene That Reduces Lysosome Function

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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
H. Pan: None. **C. Xue:** None. **J. Cui:** None. **E.C. Bush:** None. **H. Zhang:** None. **R.C. Bauer:** None. **W. Liu:** None. **P.A. Sims:** None. **M.P. Reilly:** None.

325

Transgenic Protein Disulfide Isomerase-A1 Overexpression Mitigates Vascular Calcification *in vivo* and *in vitro*

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326

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

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327

High-density Lipoprotein From Coronary Artery Disease Inhibits Angiogenesis by Decrease Vinculin Expression

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328

Assessing the Molecular Basis for Variation in Extremes of ABCA-1 Specific Cholesterol Efflux

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A. El-Ghazali: None. **A. Rohatgi**: Research Grant; Significant; Merck research grant. Other Research Support; Significant; AHA 17UNPG33840006, NIH/NHLBI R21HL137450, NIH/NHLBI R01HL136724. Consultant/ Advisory Board; Modest; Merck consultant, CSL Limited consultant, HDL 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

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330

Circadian Rhythms, Hypoxia Response and Fatty Acid Metabolism in the Onset of Liver Diseases

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331

Anti-apolipoprotein A-I Antibody Profile Correlates with Cardiovascular Disease Outcomes

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332

Effects of Fish Oil Enriched in Omega-11 Fatty Acid on Lipoprotein Metabolism in Healthy Adults

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333

Stable Isotopic Metabolic Labeling with Heavy Water ($^2\text{H}_2\text{O}$) to Assess the Kinetics of LDL apoB100 in NASH Patients

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M. Dandan: None. **M. Hellerstein**: None.

335

The Roles of SR-BI and CD36 in Maintenance of Macrophage Cholesterol Homeostasis

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D.A. Knaack: None. **R.L. Schill**: None. **Y. Chen**: None. **R.L. Silverstein**: None. **D. Sahoo**: None.

336

Marine Oil Supplementation Alters Lipid Mediator and Lipoxygenase Content of HDL in Patients with Peripheral Arterial Disease

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337

Circulating Exosomes in PAD Patients: Disease Severity Correlates with Effects on Vascular Cell Migration and miRNA Content

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338

High-Density Lipoprotein Subclasses Mapping by Targeted Quantitative Proteomics

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A. Ribeiro Martins da Silva: None. **G. Eliza Ronsein:** None.

339

Microscale Thermophoresis Demonstrates Binding Capacity of Apolipoprotein A-I and HDL

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D.L. Michell: None. **W. Zhu:** None. **K.C. Vickers:** None.

340

Greater Intraoperative HDL Particle Loss is Associated With Less Acute Kidney Injury After Cardiac Surgery

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341

Assembly and Secretion of Fluorescent Tagged Apolipoprotein B Peptides

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M.T. Walsh: None. **O.M. Celestin:** None. **J.H. Thierer:** None. **S.A. Farber:** None. **M.M. Hussain:** None.

342

Perimenopausal Transdermal Estrogen Replacement Therapy Reduces Serum High-density Lipoprotein Cholesterol Efflux Capacity but Improves Cardiovascular Risk Factors

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343

Novel Regulation of Cholesterol Metabolism Using a Systems Biology Approach

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345

Polyclonal B Cells are Required for Atheroprotective Immunization With ApoB-peptides

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D. Wolf: None. **T. Gerhard:** None. **M. Schell:** None. **H. Winkels:** None. **K. Kobiyama:** None. **K. Ley:** None.

346

Monocytes and Their Contributions to Atherogenesis Associated with Hypertriglyceridemia

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Poster Abstracts (continued)

347

Effects of Lipoprotein(a) on the Transcriptome of THP-1 Human Monocyte-like Cells

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J.J. Zhang: None. **N. Hogan:** None. **C. Yeang:** None. **M. Hoeksema:** None. **P. Miu:** None. **S. Tsimikas:** None. **C. Glass:** None.

348

Increased Th-1 Cytokine Response in Patients With Coronary Microvascular Dysfunction

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C.D. Christensen: None. **M.J. Duryee:** None. **G.M. Thiele:** None. **D.E. Barton:** None. **D.R. Anderson:** None.

349

Increased Accumulation of Malondialdehyde-Acetaldehyde Modified HDL in Macrophage without Decreased Cholesterol Efflux

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K.D. Real: None. **M.J. Duryee:** None. **E.M. Ryan:** None. **L.M. Duryee:** None. **T.R. Mikuls:** None. **D.L. Clemens:** None. **G.M. Thiele:** None. **D.R. Anderson:** None.

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High-dimensional Map of IL-1 beta Signaling in Human Immune Cells

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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 Frenis, Swenja Kröller-Schön, Sanela Kalinovic, Johanna Helmstädter, Miroslava Kvandova, Matthias Oelze, Andreas Daiber, Thomas Münzel, Sebastian Steven, Johannes Gutenberg Univ, Mainz, Germany

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352

Resolvin D1 Enhances the Clearance of Necroptotic Cells

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353

Induction of TLR2 Tolerance Suppresses Foam Cell Formation

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354

Lupus-associated Immune Complexes Prime Macrophages to Promote Inflammatory Responses - Plausible Mechanism Contributing to Lupus-induced Atherosclerosis

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M. Tsukamoto: None. **P.E. Fraungruber:** None. **B. Popovic:** None. **M. Velayutham:** None. **S.Z. Sheikh:** None. **S. Nagarajan:** None.

355

The Secretory Component of the Polymeric Immunoglobulin Receptor Mediates Alternative Lipoprotein Functions and Inflammation in Atherosclerosis

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R.M. Allen: None. **W. Zhu:** None. **C.B. Wiese:** None. **B.W. Richmond:** None. **S. Zhao:** None. **M.A. Ramirez-Solano:** None. **Q. Sheng:** None. **M.F. Linton:** None. **K.C. Vickers:** None.

356

High-Throughput Screening-Based Identification of Novel, Small Molecule Inducers of Phosphatase and Tensin Homolog (PTEN) Upregulation in Smooth Muscle Cells

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K.A. Strand: None. **S. Lu:** None. **M.F. Mutryn:** None. **R.M. Tucker:** None. **K.S. Moulton:** None. **D.V. LaBarbera:** None. **M.C.M. Weiser-Evans:** None.

357

Efficacy of Dual Antiplatelet Therapy in Coronary Artery Bypass Graft Patients with Acute Coronary Syndrome

Iftikhar Ali Ch, Naeem Tahirkheli, Ahmad Usmani, Raja Ullah, Hunter Weitzel, Abul Qadar, Bukhtaram Ananya, Aldon Whitehead, Pei-Tzu Wu, Oklahoma Heart Res Fndn, Oklahoma City, OK

I.A. Ch: None. **N. Tahirkheli:** None. **A. Usmani:** None. **R. Ullah:** None. **H. Weitzel:** None. **A. Qadar:** None. **B. Ananya:** None. **A. Whitehead:** None. **P. Wu:** None.

358

Alternate Route for Multiple Doses of Liposomal Administration Through Percutaneous Retro Orbital Injections in Apoe $-/-$ Mice

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P. Prathipati: None. **C. Rodriguez-Aguayo:** None. **J. Greaver:** None. **B. Walton:** None. **A. Sood:** None. **G. Lopez-Berestein:** None.

359

Effects of Mitochondrial Antioxidant Capacity on Initiation and Progression of Calcific Aortic Valve Disease

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C.M. Roos: None. **A. Arghami:** None. **M.A. Hagler:** None. **E.A. Oehler:** None. **G.C. Verzosa:** None. **B. Zhang:** None. **J. Miller:** None.

360

Modified Endothelial Progenitor Cell (EPC) Better Than MSC Transplantation in Diabetic Kidney Disease (DKD)

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N. Kundu: None. **L. Asico:** None. **C. Domingues:** None. **P. Jose:** None. **S. Sen:** None.

361

Effects of Chronic, Intermittent Senescent Cell Clearance in Combination with Lipid Lowering on Inflammation in Perivascular Adipose Tissue

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Poster Session 2 Abstracts

363

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.

364

Fast, Non-invasive, and Patient-specific Assessment for Ischemic Severity of Arterial Stenosis

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H.W. Yu: None. **M. Khan:** None. **A. Sawchuk:** None. **Q. Wang:** None. **H. Lou:** None. **X. Fang:** None. **L. Zhang:** None. **H. Liang:** None. **M.C. Dalsing:** None. **R.L. Motaganahalli:** None.

365

Computed Tomography Coronary Angiography: Trust-able Non-invasive Imaging Tool to Detect Myocardial Bridging in Coronary Artery Disease

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H. Tun: None. **S. Raza:** None. **M. Khan:** None. **T. Abbas:** None. **N. Ahmed:** None. **M. Zaffar:** None.

366

Beta-1,3 / 1,6-D-Glucan Chemical Structure Characterization of Indonesian *Ganoderma lucidum* Mycelium Extract

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P. Sugita: None. **D. Sargowo:** None.

367

Quantifying the Number of Calcified Lesions Increases Predictive Value of Coronary Artery Calcium Scoring for Outcomes

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368

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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Poster Abstracts (continued)

369

Blood Levels of Heme Oxygenase-1 (HO-1) versus Bilirubin in Patients with Coronary Artery Disease (CAD)

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370

Genomic Analysis of Neurofibromatosis-Related Vasculopathy

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D.M. Coleman: None. **Y. Wang:** None. **H. Hill:** None. **M. Yang:** None. **B. Susan:** None. **H. Kristina:** None. **J.C. Stanley:** None. **S.K. Ganesh:** Research Grant; Modest; NHLBI, Doris Duke Charitable Foundation.

371

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

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H. Chen: None. **L.E. Petty:** None. **J.E. Below:** None.

372

Psychoactive Substance Use on Individuals With Hyperlipidemia and Its Effects on Mental Health

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F.E. Ramirez: None. **G. Kang:** None. **N. Nedley:** Ownership Interest; Modest; Nedley Health Solutions. **J. Redd:** None.

373

Genetic Variation in Kruppel Like Factor 15 and Left Ventricular Hypertrophy Predicts All-Cause Mortality in Patients With Aortic Stenosis

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S.K. Patel: None. **J. Ramchand:** None. **L.G. Kearney:** None. **P.M. Srivastava:** None. **L.M. Burrell:** None.

374

Induced Pluripotent Stem Cell Derived Smooth Muscle Cells Accelerate Diabetic Wound Healing

Jolanta Gorecka, Arash Fereydooni, Jiesi Luo, Biraja Dash, Toshihiko Isaji, Shun Ono, Luis Gonzalez, Shin Rong Lee, Yibing Qyang, Henry Hsia, Alan Dardik, Yale Sch of Med, New Haven, CT
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Regulation of the Long Non-coding RNA Transcriptome in Endothelial Cells in Response to Shear Stress

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A.N. Sukumar: None. **H.S. Man:** None. **M.K. Dubinsky:** None. **P.J. Turgeon:** None. **K.H. Ku:** None. **D. Teitelbaum:** None. **M.K. Lee:** None. **P.A. Marsden:** None.

376

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

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H.J. Quiroz: None. **H. Shao:** None. **P.P. Parikh:** None. **M.M. Regueiro:** None. **Y. Li:** None. **R.M. Soares:** None. **Z. Liu:** None. **O.C. Velazquez:** None.

377

Macspectrum Yields Unprecedented Resolution of Full Spectrum Macrophage Activation States in Atherosclerosis
Chuan Li, Antoine Menoret, Uconn Health, Farmington, CT; Cullen Farragher, Univ of Connecticut, Storrs, CT; Zhengqing Ouyang, The Jackson Lab for Genomic Med, Farmington, CT; Anthony T. Vella, Beiyan Zhou, Uconn Health, Farmington, CT

C. Li: None. **A. Menoret:** None. **C. Farragher:** None. **Z. Ouyang:** None. **A.T. Vella:** None. **B. Zhou:** None.

378

Creation of Four Congenic Mouse Strains Confirms and Localizes an Atherosclerosis Modifying Gene on Chromosome 15

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J. Han: None. **H.L. Andro:** None. **J.D. Smith:** None.

379

A Mouse ENU Mutagenesis Screen Identifies Spontaneous Mutations as Thrombosuppressors

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M.A. Brake: None. **M. Allen:** None. **A.E. Siebert:** None. **R.J. Westrick:** None.

390

ENH Promotes Vascular Remodeling as a Negative Regulator of AKT Activation in Mouse Endothelium

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J. Huang: None. **C. Cai:** None. **X. Wu:** None. **T. Zheng:** None. **J. Zhang:** None. **H. Gong:** None. **X. Zhang:** None. **Y. Ke:** None. **H. Cheng:** None.

Poster Abstracts (continued)

391

Impact of Perivascular Adipose Tissue Stem Cells in Vascular Remodelling

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Y. Hu: None.

392

Endothelial ER α Promotes Insulin Sensitivity by Enhancing Endothelial Insulin Transcytosis and Insulin Delivery to Skeletal Muscle

Ken Chambliss, Jun Peng, Anastasia Sacharidou, Keiji Tanigaki, Jose Barrera, UT Southwestern Medical Ctr, Dallas, TX; Sohaib Khan, Univ of Cincinnati Coll of Med, Cincinnati, OH; Chieko Mineo, Philip W Shaul, UT Southwestern Medical Ctr, Dallas, TX

K. Chambliss: None. **J. Peng:** None. **A. Sacharidou:** None. **K. Tanigaki:** None. **J. Barrera:** None. **S. Khan:** None. **C. Mineo:** None. **P.W. Shaul:** None.

393

Single Cell Profiling of Aortic Endothelium Identifies Hierarchy From Endovascular Progenitors to Differentiated Cells

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J. Patel: None. **S.L. Lukowski:** None. **I. Winkler:** None. **J. Tay:** None. **K. Khosrotehrani:** None.

394

Heterozygous Deletion of Transferrin Receptor 1 Attenuates Angiotensin II-induced Abdominal Aortic Aneurysm

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S. Yasumura: None. **Y. Naito:** None. **K. Okuno:** None. **H. Sawada:** None. **M. Asakura:** None. **M. Ishihara:** None.

395

A Novel Approach for Storage of Vascular Cells at -20°C Using a Cryopreservation Medium That Minimizes Ice Recrystallization

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H.B. Khoukaz: None. **X. Han:** Ownership Interest; Modest; CryoCrate. **Y. Ji:** None. **M.A. Hill:** None. **W.P. Fay:** None.

396

Protective Effects of Exercise on Vascular Function are Mediated by NADPH Oxidase 4

Heike Langbein, Amna Shahid, Anja Hofmann, Jennifer Mittag, Stefan R. Bornstein, **Henning Morawietz**, Coy Brunssen, Univ of Technology Dresden, Dresden, Germany

H. Langbein: None. **A. Shahid:** None. **A. Hofmann:** None. **J. Mittag:** None. **S.R. Bornstein:** None. **H. Morawietz:** None. **C. Brunssen:** None.

397

Comparative Effects of Obesity and Hypercholesterolemia on Endothelial Dysfunction in Arteries of Visceral Adipose Through Impairment of K⁺ Channels

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I. Fancher: None. **S. Phillips:** None. **I. Levitan:** None.

398

Therapeutic Potential of Angiotensin-Receptor-Nepriylsin Inhibitors (ARNI) to Reduce Age-related Arterial Fibrosis and Stiffening

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I. Schellinger: None. **A. Dannert:** None. **G. Chodiseti:** None. **K. Mattern:** None. **J. Jakubiczka-Smorag:** None. **A. Schuster:** None. **G. Hasenfuß:** None. **U. Raaz:** Research Grant; Modest; Novartis Pharma.

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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D.F. Riascos Bernal: None. **C. deMayo:** None. **B. Mendelson:** None. **S. Jayakumar:** None. **L.L. Cao:** None. **N.E.S. Sibinga:** None.

401

Mechanical Tension in Syndecan-1 is Regulated by Extracellular Mechanical Cues and Fluidic Shear Stress

Victoria P. Le, Lei Mei, Peter Voyvodic, Chi Zhao, David Busch, Jeanne Stachowiak, Univ of Texas at Austin, Austin, TX; Aaron B. Baker, Univ of Texas at Austin, AUSTIN, TX

V.P. Le: None. **L. Mei:** None. **P. Voyvodic:** None. **C. Zhao:** None. **D. Busch:** None. **J. Stachowiak:** None. **A.B. Baker:** None.

402

Glutathione Regulates Arterial Calcification via Altered Matrix Remodeling

Nabil A Rashdan, Bandana Shrestha, Christen J Boyer, J. Steven Alexander, A. Wayne Orr, Christopher B Pattillo, LSU Health Sciences Ctr Shreveport, Shreveport, LA

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Poster Abstracts (continued)

403

Extracellular Vesicles Influence the Pulmonary Arterial Extracellular Matrix in Congenital Diaphragmatic Hernia
Madeline Noel Monroe, Rice Univ, Houston, TX; Siqin Zhaorigetu, Ana Segura, Univ of Texas McGovern Medical Sch, Houston, TX; Jane Grande-Allen, Rice Univ, Houston, TX; Matthew Harting, Univ of Texas McGovern Medical Sch, Houston, TX

M.N. Monroe: None. **S. Zhaorigetu:** None. **A. Segura:** None. **J. Grande-Allen:** None. **M. Harting:** None.

404

Gremlin1-Induced Endothelial Cell Proliferation is Mediated via Antagonism of Bone Morphogenetic Protein Receptor 2-Induced Repression of CXCL12

Evan DeVallance, Daniel de Jesus, Sanghamitra Sahoo, Patrick J Pagano, Univ of Pittsburgh, Pittsburgh, PA
E. DeVallance: None. **D. de Jesus:** None. **S. Sahoo:** None. **P.J. Pagano:** None.

405

Lung Megakaryocytes Present Antigen to CD4 T Cells
Daphne Pariser, Zack Hilt, Sara Ture, Craig Morrell, Univ of Rochester, Rochester, NY

D. Pariser: None. **Z. Hilt:** None. **S. Ture:** None. **C. Morrell:** None.

406

Association Between VCAM-1 Expression in Freshly Isolated Arterial Endothelial Cells From Radial Catheter Sheath and Chronic Kidney Disease

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N. Masaki: None. **Y. Ido:** None. **B. Takase:** None. **T. Adachi:** None.

407

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

Laura M. Tsujikawa, Brooke Rakai, Shovon Das, Christopher Halliday, Stephanie C. Stotz, Resverlogix Corp, Calgary, AB, Canada; Michael Sweeney, Jan O. Johansson, Resverlogix Inc., San Francisco, CA; **Norman C. Wong**, Ewelina Kulikowski, Resverlogix Corp, Calgary, AB, Canada
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408

Phosphodiesterase 10A Regulates Lung Inflammation and Cytokine Secretion in Macrophages Following Lipopolysaccharide Treatment

Chia George Hsu, Chen Yan, Bradford C Berk, URMC, Rochester, NY

C. Hsu: None. **C. Yan:** None. **B.C. Berk:** None.

409

Novel Pathobiologic Link Between Shear Stress and Triggering Receptor Expressed on Myeloid Cells 1 (TREM1) Promotes Inflammation and Matrix Degradation

Martin (Xiang-der) Liu, Univ of Nebraska Medical Ctr, Omaha, NE; Devendra K Agrawal, Creighton Univ, Omaha, NE; **Yiannis S Chatzizisis**, Univ of Nebraska Medical Ctr, Omaha, NE

M. Liu: None. **D.K. Agrawal:** None. **Y.S. Chatzizisis:** None.

410

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

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411

Modulation of Endothelial Adhesiveness by Lipid Droplets

Chieko Saito, Gavin Landesberg, Tatsuo Kawai, Satoru Eguchi, **Rosario Scalia**, Temple Univ, Philadelphia, PA
C. Saito: None. **G. Landesberg:** None. **T. Kawai:** None. **S. Eguchi:** None. **R. Scalia:** None.

412

The Endothelial GLP-1 Receptor is Critical for the Cardiovascular Protective Effects of GLP-1 (Liraglutide) Treatment in Experimental Arterial Hypertension

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J. Helmstädter: None. **K. Filippou:** None. **F. Pawelke:** None. **K. Frenis:** None. **K. Vujacic-Mirski:** None. **S. Kalinovic:** None. **S. Kröller-Schön:** None. **M. Oelze:** None. **T. Münzel:** None. **A. Daiber:** None. **S. Steven:** None.

Poster Abstracts (continued)

413

Prolyl Endopeptidase Links Inflammatory Matrix-derived Chemokines With Arterial Remodeling in Response to Injury
Gregory Allen Payne, Dongqi Xing, Chunyan Song, J. Edwin Blalock, Amit Gaggar, Univ of Alabama at Birmingham, Birmingham, AL

G.A. Payne: None. **D. Xing:** None. **C. Song:** None. **J. Blalock:** None. **A. Gaggar:** None.

414

Monocytic Glutaredoxin 1 Protects Mice Against Atherosclerosis and Obesity by Preventing Diet-Induced Monocyte Reprogramming and Dysfunction

Yong Joo Ahn, Luxi Wang, Joshua Hayes, Reto Asmis, Wake Forest Medical Sch, Winston-Salem, NC

Y. Ahn: None. **L. Wang:** None. **J. Hayes:** None. **R. Asmis:** None.

415

Resolvin D1 Favorably Impacts Arteriovenous Fistula Healing and Maturation in Mice with Chronic Kidney Disease

Jie Cui, Madeleine Grau, Farouc M. Jaffer, Massachusetts General Hosp, Boston, MA

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

416

Resolvin D1 Engages Macrophages to Promote Ischemic Revascularization via its Receptor, ALX/FPR2

Brian E. Sansbury, Xiaofeng Li, Blenda Wong, Brigham and Women's Hosp and Harvard Medical Sch, Boston, MA; Andreas Patsalos, Johns Hopkins All Children's Hosp, St. Petersburg, FL; Nikolas Giannakis, Univ of Debrecen, Debrecen, Hungary; Laszlo Nagy, Johns Hopkins All Children's Hosp, St. Petersburg, FL; Matthew Spite, Brigham and Women's Hosp and Harvard Medical Sch, Boston, MA

B.E. Sansbury: None. **X. Li:** None. **B. Wong:** None. **A. Patsalos:** None. **N. Giannakis:** None. **L. Nagy:** None. **M. Spite:** None.

417

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

Sahmin Lee, Asan Medical Ctr, Seoul, Korea, Republic of; Hyun-Chae Lee, Soobeom Lee, Dasom Shin, Joonoh Kim, Jaewon Lee, Han-Mo Yang, Hyo-Soo Kim, Seoul Natl Univ Coll of Med, Seoul, Korea, Republic of

S. Lee: None. **H. Lee:** None. **S. Lee:** None. **D. Shin:** None. **J. Kim:** None. **J. Lee:** None. **H. Yang:** None. **H. Kim:** None.

419

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

Allison Ostriker, Kathleen Martin, Yale, New Haven, CT

A. Ostriker: None. **K. Martin:** None.

421

Inhibition of Interleukin-6 Signaling on Aortitis in Interleukin-1 Receptor Antagonist Deficient Mice

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Y. Hada: None. **H.A. Uchida:** None. **T. Mukai:** None. **F. Kojima:** None. **N. Otaka:** None. **Y. Onishi:** None. **Y. Morita:** None. **Y. Iwakura:** None. **J. Wada:** None.

422

Identification of Splice Regulators of Fn-IIIa and IIIb by Direct Measurement of Exon Usage in a Flow-Cytometry Based CRISPR Screen

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423

Heparin-Binding EGF-like Growth Factor (HB-EGF) Mediates the Myelopoiesis During the Development of Metabolic Disease

Seonwook Kim, Lihua Yang, Saha CVRC, Univ of Kentucky, Lexington, KY; Richard G Lee, Mark J Graham, Ionis Pharmaceuticals, Inc., Carlsbad, CA; Aldons J Lusis, Med-Cardiology & Human Genetics, UCLA, Los Angeles, CA; Judith A Berliner, Pathology & Lab Med, UCLA, Los Angeles, CA; Ryan E Temel, Saha CVRC, Physiology, Univ of Kentucky, Lexington, KY; Himi Tripathi, Ahmed Abdel-Latif, Gill Heart Inst and Div of Cardiovascular Med, Univ of Kentucky, Lexington, KY; **Sangderk Lee**, Saha CVRC, Univ of Kentucky, Lexington, KY

S. Kim: None. **L. Yang:** None. **R.G. Lee:** Employment; Significant; Full time employee of Ionis Pharmaceuticals. **M.J. Graham:** Employment; Significant; Full time employee of Ionis Pharmaceuticals. **A.J. Lusis:** None. **J.A. Berliner:** None. **R.E. Temel:** None. **H. Tripathi:** None. **A. Abdel-Latif:** None. **S. Lee:** None.

Poster Abstracts (continued)

425

Spatially Patterned Scaffolds Enhance Vascular Perfusion and Integration in Injured Muscle

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K.H. Nakayama: None. **M. Quarta:** None. **P. Paine:** None. **C. Alcazar:** None. **I. Karakikes:** None. **V. Garcia:** None. **O. Abilez:** None. **N. Calvo:** None. **C. Simmons:** None. **T. Rando:** None. **N. Huang:** None.

426

Inhibition of RIPK3/MLKL-dependent Necroptosis by SAP-12 in Ischemic Brain

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Q. Guo: None. **J. Xie:** None.

427

The Landmarks of Vascular Recovery

Jamila Hedhli, Kim Minwoo, John Cole, Hailey Knox, Iwona Dobrucki, Jefferson Chan, Univ of Illinois at Urbana Champaign, Champaign, IL; Albert Sinusas, Yale Univ Sch of Med, New Haven, CT; Michael Insana, Lawrence Dobrucki, Univ of Illinois at Urbana Champaign, Champaign, IL
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428

Transitioning From ICD-9 to ICD-10 in Administrative Claims Based Research for Cardiovascular Procedures

Zachary J Wanken, Spencer W Trooboff, Jesse A Columbo, Peter B Anderson, Sarah Y Bessen, John B Rode, Kayla O Moore, Philip P Goodney, Dartmouth-Hitchcock Medical Ctr, Lebanon, NH
Z.J. Wanken: None. **S.W. Trooboff:** None. **J.A. Columbo:** None. **P.B. Anderson:** None. **S.Y. Bessen:** None. **J.B. Rode:** None. **K.O. Moore:** None. **P.P. Goodney:** None.

429

Inflammasome Mediated Reduction of Myeloperoxidase in Ischemic Stroke by Intra-arterial Mesenchymal Stem Cell Therapy

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D. Sarmah: None. **H. Kaur:** None. **K. Vats:** None. **K. Kalia:** None. **D.R. Yavagal:** None. **P. Bhattacharya:** None.

430

Endothelial Ppar δ is Involved in Functional Recovery in Mouse Model of Hindlimb Ischemia

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Y. Wu: None. **K.O. Lui:** None. **Y. Hung:** None. **X. Tian:** None.

431

Total Vascular Resistance and Augmentation Pressure in Patients with Peripheral Artery Disease

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R. Takemoto: None. **H.A. Uchida:** None. **N. Otaka:** None. **Y. Hada:** None. **Y. Onishi:** None. **N. Matsuoka:** None. **S. Okamoto:** None. **M. Nishiwaki:** None. **H. Toda:** None. **F. Otsuka:** None. **H. Ito:** None. **J. Wada:** None.

432

Impact of Genomic Differences Among Arterial Beds in Atherosclerosis and Vascular Calcification Heterogeneity
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O. Espitia: None. **M. Steenman:** None. **B. Maurel:** None. **B. Guyomarch:** None. **B. Ory:** None. **F. Lamoureux:** None. **D. Heymann:** None. **Y. Gouëffic:** None. **T. Quillard:** None.

433

Neural Jnk3 Controls Blood Flow Recovery After Hindlimb Ischemia in Mice via an Foxo3a Regulated Pathway
Shashi Kant, Siobhan Craige, UMASS Medical Sch, Worcester, MA; Kai Chen, Univ of Connecticut Health Ctr, Farmington, CT; Roger Davis, John Keaney, UMASS Medical Sch, Worcester, MA
S. Kant: None. **S. Craige:** None. **K. Chen:** None. **R. Davis:** None. **J. Keaney:** None.

435

Quantitative Susceptibility Mapping on Magnetic Resonance Imaging Distinguishes Intraplaque Hemorrhage & Iron Deposition from Calcification in Carotid Atherosclerosis
Kazunari Maekawa, Univ of Miyazaki, Miyazaki, Japan
K. Maekawa: None.

436

Stent Design Affects Femoropopliteal Artery Stenosis Rates
Paul Aylward, Univ of Nebraska Medical Cent, Omaha, NE; Alexey Kamenskiy, Christopher Wichman, Univ of Nebraska Medical Ctr, Omaha, NE; Sruti Prathivadi-Bhay, Carter Lyons, Univ of Nebraska Medical Cent, Omaha, NE; Margarita Pipinos, Vikram Venkataraman, Univ of Nebraska Medical Ctr, Omaha, NE; William Poulson, Univ of Nebraska Medical Cent, Omaha, NE; Jason MacTaggart, Univ of Nebraska Medical Ctr, Omaha, NE

P. Aylward: None. **A. Kamenskiy:** None. **C. Wichman:** None. **S. Prathivadi-Bhay:** None. **C. Lyons:** None. **M. Pipinos:** None. **V. Venkataraman:** None. **W. Poulson:** None. **J. MacTaggart:** None.

437

Diabetic Men Suffer Poorer Long-Term Outcomes After Peripheral Vascular Intervention Than Women
Niveditta Ramkumar, The Dartmouth Inst, Lebanon, NH; Bjoern D Suckow, Dartmouth-Hitchcock Medical Ctr, Lebanon, NH; Todd A Mackenzie, The Dartmouth Inst, Lebanon, NH; Art Sedrakyan, Weill Cornell Medical Coll, New York, NY; Philip P Goodney, Dartmouth-Hitchcock Medical Ctr, Lebanon, NH; Jeremiah R Brown, The Dartmouth Inst, Lebanon, NH

N. Ramkumar: None. **B.D. Suckow:** None. **T.A. Mackenzie:** None. **A. Sedrakyan:** None. **P.P. Goodney:** None. **J.R. Brown:** None.

439

In vivo Imaging Assessment of Arterial Permeability Using Indocyanine Green: Implications for Optimizing Drug-Coated Balloon Treatment of Atherosclerosis

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M. Albaghdadi: None. **Z. Piao:** None. **A. Mauskapf:** None. **M. Chowdhury:** None. **R. Tzafirri:** None. **E. Edelman:** None. **G. Tearney:** Research Grant; Significant; NIH. Other Research Support; Significant; Merck Sharp & Dohme, VivoLight, and Canon. Consultant/Advisory Board; Modest; Samsung and SpectraWAVE. **F. Jaffer:** Research Grant; Significant; NIH. Other Research Support; Significant; Kowa, Merck Sharp & Dohme, Canon, and Siemens;. Consultant/Advisory Board; Modest; Boston Scientific, Abbott Vascular, Siemens, and Philips.

440

CD47 Surface Functionalization Increases the Biocompatibility of Metal Stents

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V. Inamdar: None. **E. Fitzpatrick:** None. **I. Alferiev:** None. **C. Nagaswami:** None. **R. Levy:** None. **I. Fishbein:** None. **S. Stachelek:** None.

442

Quantitative Characterization of a Porcine Peripheral Artery Disease Model to Test an Encapsulated Mesenchymal Stromal Cell Therapy

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J.N. Deppen: None. **S.C. Ginn:** None. **L. Wang:** None. **M.M. Goodman:** None. **R.J. Voll:** None. **R.D. Levit:** None.

443

Vascular Outcomes of Transcarotid versus Alternative Approaches to Transcatheter Aortic Valve Replacement: A Systematic Review and Meta-analysis

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P.M. Ndunda: None. **M. Vindhyaal:** None. **T. Muutu:** None. **S. Khayyat:** None. **Z. Fanari:** None.

444

W2476, a Novel Thioredoxin Interacting Protein Inhibitor Attenuates Post-stroke Hemorrhagic Conversion in Hyperglycemic Mice Subjected to Thrombolytic Therapy
Lexiao Li, Saifudeen Ismael, Tauheed Ishrat, The Univ of Tennessee Health Science Ctr, Memphis, TN

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

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446

E-cigarette Vapor Accelerates Abdominal Aortic Aneurysm in Mice

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J. Mulorz: None. **P. Mulorz:** None. **M.U. Wagenhaeuser:** None. **J.M. Spin:** None. **P.S. Tsao:** None.

448

Pepptide-siRNA Nanocomplexes Targeting NF- κ B Subunit p50 Mitigate Experimental Abdominal Aortic Aneurysm
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H. Yan: None. **Y. Hu:** None. **A. Akk:** None. **H. Pan:** None. **S. Wickline:** None. **C. Pham:** None.

449

Pepducin Inhibition of Protease-activated Receptor 2 Attenuates a Mouse Model of Abdominal Aortic Aneurysm
Hannah M. Russell, Kelsey A. Conrad, Joshua A. Benoit, Univ of Cincinnati, Cincinnati, OH; Anders Wanhainen, Uppsala Univ, Uppsala, Sweden; Doran S. Mix, Scott J. Cameron, Univ of Rochester, Rochester, NY; Lidija Covic, Athan Kuliopulos, Tufts Medical Ctr, Boston, MA; **A. Phillip Owens III**, Univ of Cincinnati, Cincinnati, OH

H.M. Russell: None. **K.A. Conrad:** None. **J.A. Benoit:** None. **A. Wanhainen:** None. **D.S. Mix:** None. **S.J. Cameron:** None. **L. Covic:** Research Grant; Significant; Oasis Pharmaceuticals. Ownership Interest; Significant; Oasis Pharmaceuticals. **A. Kuliopulos:** Research Grant; Significant; Oasis Pharmaceuticals. Ownership Interest; Significant; Oasis Pharmaceuticals. **A. Owens III:** Other Research Support; Modest; Receipt of compound from Oasis Pharmaceuticals.

450

TGF- β Signalling During Ascending Aortic Aneurysm Differs in Patients with a Bicuspid or Tricuspid Aortic Valve
Flore-Anne A Poujade, Otto Bergman, Valentina Paloschi, Jesper R Gådin, Hanna M Björck, Shohreh Maleki, Karin Lång, Anders Franco-Cereceda, Per Eriksson, Karolinska Univ Hosp, Stockholm, Sweden

F.A. Poujade: None. **O. Bergman:** None. **V. Paloschi:** None. **J.R. Gådin:** None. **H.M. Björck:** None. **S. Maleki:** None. **K. Lång:** None. **A. Franco-Cereceda:** None. **P. Eriksson:** None.

452

Low Rates of Influenza Vaccine and Higher Occurrence of Acute Type A Aortic Dissection in the Winter Months- a Call for Action to Incorporate Influenza Vaccine Into Preventive Strategies for High Risk Patients

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M.A. Hofmann Bowman: None. **C. Ashur:** None. **E.L. Norton:** None. **L. Farhat:** None. **C. Willer:** None. **J.B. Froehlich:** None. **D.J. Pinsky:** None. **K.M. Kim:** None. **S. Fukuhara:** None. **M.G. Deeb:** None. **H. Patel:** None. **K.A. Eagle:** None. **B. Yang:** None.

453

Senescent Cell Depletion via Abt263 Augments Experimental Aortic Aneurysm Progression

Takahiro Shoji, Jia Guo, Xiaoya Zheng, Yankui Li, Baohui Xu, Ronald L Dalman, Stanford Univ Sch of Med, Stanford, CA
T. Shoji: None. **J. Guo:** None. **X. Zheng:** None. **Y. Li:** None. **B. Xu:** None. **R.L. Dalman:** None.

454

Videopresentation: Transabdominal Antegrade Mesenteric Bypass

Elizabeth Ramos Duran, Jorge Rey, Univ of Miami, Miami, FL
E. Ramos Duran: None. **J. Rey:** None.

455

Enhanced Autophagy by Celastrol Supplementation Profoundly Increases Angiotensin II-induced Abdominal Aortic Aneurysm Formation in Male and Female Mice

Aida Javidan, Weihua Jiang, Lihua Yang, Venkateswaran Subramanian, Univ of Kentucky, Lexington, KY
A. Javidan: None. **W. Jiang:** None. **L. Yang:** None. **V. Subramanian:** None.

456

miR-146a Deficiency Accelerates Abdominal Aortic Aneurysms in Male Mice Co-infused with Lysyl Oxidase Inhibitor and Angiotensin II

Weihua Jiang, Aida Javidan, Michihiro Okuyama, Jessica J Moorleghen, Lihua Yang, **Venkateswaran Subramanian**, Univ of Kentucky, Lexington, KY
W. Jiang: None. **A. Javidan:** None. **M. Okuyama:** None. **J.J. Moorleghen:** None. **L. Yang:** None. **V. Subramanian:** None.

457

Clearance of Senescent Cells Reduces TGF β Signaling and Aortic Dilatation in a Mouse Model of Marfan Syndrome

Michael A Hagler, Runqing Huang, Tamara Tchkonja, Tamar Pirtskhalava, Christina Inman, Carolyn M Roos, Bin Zhang, James L Kirkland, Jordan D Miller, Mayo Clinic, Rochester, MN
M.A. Hagler: None. **R. Huang:** None. **T. Tchkonja:** None. **T. Pirtskhalava:** None. **C. Inman:** None. **C.M. Roos:** None. **B. Zhang:** None. **J.L. Kirkland:** None. **J.D. Miller:** None.

458

Prolonged Pharmacological Inhibition of Lysyl Oxidase Induces Heterogeneous Aortic Pathologies in Juvenile Male and Female Mice

Michael Franklin, Univ of Kentucky, Lexington, KY
M. Franklin: None.

459

Differential Effects of Arterial Resident Cell-specific Angiotensin-converting Enzyme on Angiotensin I-induced Aortic Pathologies

Ya Wang, Xiao Feng Chen, Deborah A Howatt, Jessica J Moorleghen, Alan Daugherty, Hong S Lu, Saha Cardiovascular Res Ctr, Lexington, KY
Y. Wang: None. **X.F. Chen:** None. **D.A. Howatt:** None. **J.J. Moorleghen:** None. **A. Daugherty:** None. **H.S. Lu:** None.

Poster Abstracts (continued)

460

Vascular Smooth Muscle Sirtuin-1 Regulates Tgf- β 1 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

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

E.B. Chen: None. **K.E. Shapiro:** None. **T. Kuntz:** None. **B. Theriault:** None. **M.J. Nooromid:** None. **K.H. Wun:** None. **V. Leone:** None. **K. Harris:** None. **Q. Jiang:** None. **M. Spedale:** None. **L. Xiong:** None. **O.M. Eskandari:** None. **E.B. Chang:** None. **K.J. Ho:** None.

463

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 Hostetler, The Univ of Texas Health Science Ctr at Houston, Houston, TX; University of Washington Center for Mendelian Genomics; Michael J Bamshad, 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

A. Pinard: None. **X. Duang:** None. **D. Guo:** None. **E.S. Regalado:** None. **A.C. Cecchi:** None. **L. Gong:** None. **T.A. Bensend:** None. **E.M. Hostetler:** None. **M.J. Bamshad:** None. **D.A. Nickerson:** None. **D.M. Milewicz:** None.

471

Dvt-on-chip: *in-vitro* Model of Venous Thrombosis Including Valves, Endothelium & Blood Flow

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N. Rajeeva Pandian: None. **R. Suresh:** None. **P. Gadangi:** None. **A. Jain:** None.

472

Establishment of Femoral Vein Ligation Model: a New DVT Imaging Model

Tetsuya Hara, Mitsumasa Okano, Makoto Nishimori, Koichi Watanabe, Yasuhiro Irino, Seimi Kobayashi, Masakazu Shinohara, Ryuji Toh, Tatsuro Ishida, Ken-ichi Hirata, Kobe Univ Sch of Med, Kobe, Japan

T. Hara: None. **M. Okano:** None. **M. Nishimori:** None. **K. Watanabe:** None. **Y. Irino:** None. **S. Kobayashi:** None. **M. Shinohara:** None. **R. Toh:** None. **T. Ishida:** None. **K. Hirata:** None.

474

Unprovoked Bilateral Phlegmasia Cerulea Dolens: A Case Report

Jason Kaplan, McLaren Oakland/MSU, Pontiac, MI; Zeid Nesheiwat, Univ of Toledo, Toledo, OH; Arjun Kanwal, MedStar Health, Baltimore, MD; Justin Bahoor, McLaren Oakland/MSU, Pontiac, MI

J. Kaplan: None. **Z. Nesheiwat:** None. **A. Kanwal:** None. **J. Bahoor:** None.

475

Near Infrared Fluorescence Imaging of Thrombosis Using a Novel Activated Platelet Targeted Probe

Khanh Ha, Xiaoxin Zheng, Chase Kessinger, Jason McCarthy, Mass General Hosp, Boston, MA; Elijah Marris, Alayna Trice, Hamilton Coll, Clinton, NY; Farouc Jaffer, Mass General Hosp, Boston, MA

K. Ha: None. **X. Zheng:** None. **C. Kessinger:** None. **J. McCarthy:** None. **E. Marris:** None. **A. Trice:** None. **F. Jaffer:** None.

476

Managing Anti-coagulation in Patients with Left Ventricular Assist Device Who Present with Intracranial Hemorrhage

Godly Jack, Phil Barker, Ryan Searcy, Jason Katz, Univ of North Carolina Hospit, Chapel Hill, NC

G. Jack: None. **P. Barker:** None. **R. Searcy:** None. **J. Katz:** None.

477

Concomitant Large Arterial and Venous Thrombosis in a Patient Presenting as Catastrophic Antiphospholipid Syndrome

Muhammad S Khan, Marek Siorek, Marshfield Clinic Health System, Marshfield City, WI

M.S. Khan: None. **M. Siorek:** None.

478

Receptor Interacting Protein Kinase 3 Plays a Role in Thrombus Formation

Mitri Khoury, Vijaya Pilli, Kartik Gupta, Bo Liu, Univ of Wisconsin, Madison, WI

M. Khoury: None. **V. Pilli:** None. **K. Gupta:** None. **B. Liu:** None.

479

Sepsis Induces Stable Epigenetic Modifications Resulting in Prolonged Impairment in Macrophage Function and Delayed Wound Healing

Frank M. Davis, Aaron Dendekker, Amrita Joshi, Andrew Kimball, Carol Wilke, Holly Evanoff, Peter Henke, Bethany Moore, Steven Kunkel, Katherine Gallagher, Univ of Michigan, Ann Arbor, MI

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A. Kimball: None. **C. Wilke:** None. **H. Evanoff:** None.
P. Henke: None. **B. Moore:** None. **S. Kunkel:** None. **K. Gallagher:** None.

481

Lysine Histone-induced Thrombotic Thrombocytopenic Purpura in *Adamts13^{-/-}* Zebrafish Depends on Endothelial von Willebrand Factor

Liang Zheng, Mohammad Abdelgawwad, Di Zhang, Leimeng Xu, Wenjing Cao, X. Long Zheng, Univ of Alabama at Birmingham, Birmingham, AL

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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 Proresolving Lipid Mediator Production in Visceral Adipose Tissue

Jing-Juan Zheng, Ernesto Pena Calderin, Lindsey A. McNally, Aruni Bhatnagar, Bradford G. Hill, **Jason Hellmann,** Univ of Louisville, Louisville, KY

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)

Anastasiya Matveyenko, Colleen Ngai, Tiffany Thomas, Renu Nandakumar, Santica Marcovina, Stephen Holleran, Rajasekhar Ramakrishnan, Henry Ginsberg, Gisette Reyes-soffer, Columbia Univ Medical Ctr, New York, NY

A. Matveyenko: None. **C. Ngai:** None. **T. Thomas:** None. **R. Nandakumar:** None. **S. Marcovina:** None. **S. Holleran:** None. **R. Ramakrishnan:** None. **H. Ginsberg:** None. **G. Reyes-soffer:** None.

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 Berceci, Andrew J Martin, Qiongyao Hu, Salvatore T Scali, Univ of Florida, Gainesville, FL

S.E. Gray: None. **K.M. Staton:** None. **T.E. Ryan:** None. **F. Berru:** None. **T. Thome:** None. **K.C. Harland:** None. **K.A. O'Malley:** None. **J.M. Rozowsky:** None. **S.A. Berceci:** None. **A.J. Martin:** None. **Q. Hu:** None. **S.T. Scali:** None.

491

High Fat Diet-induced Diabetic Atherosclerotic Disease in Apoe KO, ZDF Rats Has a Potential Estrogen-dependent Protective Development

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

R.I. Mota: None. **S.E. Morgan:** None. **E. Moreira Bahnsen:** None.

492

Reduction in Angiopoietin-Like Protein 3 via RNA Interference Improves Dyslipidemias and Hepatic Steatosis

So C Wong, Rui Zhu, Arrowhead Pharmaceuticals Inc., Madison, WI; Peter J Havel, Univ of California, Davis, CA; James Hamilton, Arrowhead Pharmaceuticals Inc., Pasadena, CA; James Graham, Univ of California, Davis, CA; Julia Hegge, Casi Schienebeck, Gary Christensen, Lucas Trilling, Holly Hamilton, Jeremy Briggs, Meredith Hinkes, Stephanie Bertin, Mark Seefeld, Bruce Given, Zhen Li, Arrowhead Pharmaceuticals Inc., Madison, WI

S.C. Wong: Employment; Significant; Arrowhead Pharmaceuticals. **R. Zhu:** Employment; Significant; Arrowhead Pharmaceuticals. **P.J. Havel:** Other Research Support; Modest; Arrowhead Pharmaceuticals. **J. Hamilton:** Employment; Significant; Arrowhead Pharmaceuticals. **J. Graham:** Other Research Support; Modest; Arrowhead Pharmaceuticals. **J. Hegge:** Employment; Significant; Arrowhead Pharmaceuticals. **C. Schienebeck:** Employment; Significant; Arrowhead Pharmaceuticals. **G. Christensen:** Employment; Significant; Arrowhead Pharmaceuticals.

L. Trilling: Employment; Significant; Arrowhead Pharmaceuticals. **H. Hamilton:** Employment; Significant; Arrowhead Pharmaceuticals. **J. Briggs:** Employment; Significant; Arrowhead Pharmaceuticals. **M. Hinkes:** Employment; Significant; Arrowhead Pharmaceuticals. **S. Bertin:** Employment; Significant; Arrowhead Pharmaceuticals. **M. Seefeld:** Employment; Significant; 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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A.M. Beyer: None. **L. Brandt:** None. **S. Kaul:** None. **S.N. 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

Hiroaki Ikezaki, HNRCA at Tufts Univ, Boston, MA; Virginia A Fisher, Ching-ti Liu, L. Adrienne Cupples, Boston Univ Sch of Public Health, Boston, MA; Katsuyuki Nakajima, Gunma Univ, Maebashi, Japan; Masayuki Murata, Norihiro Furusyo, Kyushu Univ Hosp, Fukuoka, Japan; Bela F Asztalos, Ernst J Schaefer, HNRCA at Tufts Univ, Boston, MA

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495

Myeloid Cell-derived Hif-2alpha Promotes High Fat Diet-induced Insulin Resistance and Aortic Remodeling in Mice
Xiaoya Zheng, Yan Wang, Stanford Univ Sch of Med, Stanford, CA; Xiaofeng Chen, Taizhou Hosp Wenzhou Medical Univ, Linhai, China; Michael L Tao, Jia Guo, Takahiro Shoji, Sihai Zhao, Yankui Li, Guozhong Tao, **Baohui Xu**, Ronald L Dalman, Stanford Univ Sch of Med, Stanford, CA
X. Zheng: None. **Y. Wang:** None. **X. Chen:** None. **M.L. Tao:** None. **J. Guo:** None. **T. Shoji:** None. **S. Zhao:** None. **Y. Li:** None. **G. Tao:** None. **B. Xu:** None. **R.L. Dalman:** None.

496

Advanced Glycation End-products Attenuate Abdominal Aortic Aneurysms in Diabetes
Xiaoya Zheng, Yankui Li, Jia Guo, Takahiro Shoji, Stanford Univ Sch of Med, Stanford, CA; Xiaofeng Chen, Taizhou Hosp Wenzhou Medical Univ, Linhai, China; Sihai Zhao, Stanford Univ Sch of Med, Stanford, CA; Masaaki Miyata, Kagoshima City Hosp, Kagoshima, Japan; **Baohui Xu**, Ronald Dalman, Stanford Univ Sch of Med, Stanford, CA
X. Zheng: None. **Y. Li:** None. **J. Guo:** None. **T. Shoji:** None. **X. Chen:** None. **S. Zhao:** None. **M. Miyata:** None. **B. Xu:** None. **R. Dalman:** None.

497

A Novel Mass Spectrometry Platform Captures the Heterogeneous Metabolic Properties of CETP, PLTP and LCAT on HDL
Sasha A Singh, Allison B. Andraski, Lang Ho Lee, Hideyuki Higashi, Frank Sacks, Masanori Aikawa, Harvard BWH, Boston, MA
S.A. Singh: None. **A.B. Andraski:** None. **L. Lee:** None. **H. Higashi:** None. **F. Sacks:** None. **M. Aikawa:** Research Grant; Modest; Kowa Company Ltd. Research Grant; Significant; Significant.

498

A Novel Human APOC2 Mutation Causes Severe Hypertriglyceridemia Due to Decreased Fractional Clearance Rates of Very Low Density Lipoprotein apoB and Triglyceride and Increased Production Rates of Very Low Density Lipoprotein Triglyceride
Gisette Reyes-soffer, Anastasiya Matveyenko, Heather Seid, Colleen Ngai, Tiffany Thomas, Stephen Holleran, Rajasekhar Ramakrishnan, Henry Ginsberg, Columbia Univ Medical Ctr, New York, NY
G. Reyes-soffer: None. **A. Matveyenko:** None. **H. Seid:** None. **C. Ngai:** None. **T. Thomas:** None. **S. Holleran:** None. **R. Ramakrishnan:** None. **H. Ginsberg:** None.

499

Exercise Training Alters the Plasma Lipidomic Profile
Mark A Sarzynski, Jonathan J Ruiz-Ramie, Jacob L Barber, Univ of South Carolina, Columbia, SC; Jeremy M Robbins, Harvard Medical Sch, Boston, MA; Clary B Clish, Broad Inst, Boston, MA; Robert E Gerszten, Harvard Medical Sch, Boston, MA; Dinesh K Barupal, Megan R Showalter, Oliver Fiehn, UC Davis Genome Ctr, Davis, CA; Claude Bouchard, Pennington Biomedical Res Ctr, Baton Rouge, LA
M.A. Sarzynski: None. **J.J. Ruiz-Ramie:** None. **J.L. Barber:** None. **J.M. Robbins:** None. **C.B. Clish:** None. **R.E. Gerszten:** None. **D.K. Barupal:** None. **M.R. Showalter:** None. **O. Fiehn:** None. **C. Bouchard:** None.

501

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.

502

Amphipols: Peptide-like Synthetic Amphipathic Polymers That Promote Cellular Cholesterol Efflux
Rami A. Ballout, Denis Sviridov, Alan T. Remaley, Natl Insts of Health, Bethesda, MD
R.A. Ballout: None. **D. Sviridov:** None. **A.T. Remaley:** None.

503

Elevated Lipoprotein(a) Levels Impair Abca1 Cholesterol Efflux Capacity
Rayna Gaisik, Shanthi Nagarajan, Alexandra M Fenton, Deanna L Plubell, Sara Rosario, Elisabeth Yerkes, Joshua Miles, Paige Bergstrom, Hagai Tavori, Anthony Barnes, Sergio Fazio, **Nathalie Pamir**, Oregon Health & Science Univ, Portland, OR
R. Gaisik: None. **S. Nagarajan:** None. **A.M. Fenton:** None. **D.L. Plubell:** None. **S. Rosario:** None. **E. Yerkes:** None. **J. Miles:** None. **P. Bergstrom:** None. **H. Tavori:** None. **A. Barnes:** None. **S. Fazio:** None. **N. Pamir:** None.

504

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.

505

Tethering State Determines High-Density Lipoprotein Action During Macrophage Catabolism of Aggregated Low-Density Lipoprotein
Rajesh K Singh, Frederik W Lund, Abigail S Haka, Frederick R Maxfield, Weill Cornell Medical Coll, New York, NY
R.K. Singh: None. **F.W. Lund:** None. **A.S. Haka:** None. **F.R. Maxfield:** None.

Poster Abstracts (continued)

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
X. Davis: None. **C. Ko:** None. **S. Fourman:** None. **Q. Yang:** None. **M. Liu:** None. **P. Tso:** None.

507

Physiologic and Genetic Role for C/ebpa 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
K. Creasy: None. **J. Feng:** None. **T. Lin:** None. **T. Gubeladze:** None. **E.O. Stock:** None. **M.J. Malloy:** None. **J.P. Kane:** None.

509

Apolipoprotein(a) and ApolipoproteinB 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; 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, Cardiovox. Speakers Bureau; Modest; Amgen. Honoraria; Modest; Eli Lilly. Consultant/Advisory Board; Modest; 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
L.S. May-Zhang: None. **V. Yermalitsky:** None. **K.A. Tallman:** None. **M.S. Borja:** None. **V. Amarnath:** None. **J.T. Melchoir:** None. **J. Morris:** None. **P.G. Yancey:** None. **W. Davidson:** None. **M.F. Linton:** None. **S.S. Davies:** None.

511

Beta-carotene Conversion to Vitamin A Delays Atherosclerosis Progression by Reducing Very-Low Density Lipoprotein Lipidation
Jaume Amengual, Xiaoyun Wu, Ivan Pinos, Univ of Illinois, Urbana, IL; Felix Zhou, New York Univ, New York City, NY; Benjamin Abraham, Univ of Illinois, Urbana, IL; Tessa J Barrett, New York Univ, New York City, NY; Johannes von Lintig, Case Western Reserve Univ, Cleveland, OH; Edward A Fisher, New York Univ, New York City, NY
J. Amengual: None. **X. Wu:** None. **I. Pinos:** None. **F. Zhou:** None. **B. Abraham:** None. **T.J. Barrett:** None. **J. von Lintig:** None. **E.A. Fisher:** None.

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; Modest; 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 Billheimer, Nicholas J Hand, Daniel J Rader, Univ of Pennsylvania, Philadelphia, PA
C. Vitali: None. **J. Millar:** None. **J. Billheimer:** None. **N.J. Hand:** None. **D.J. Rader:** None.

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
G.G.E. Kluck: None. **K.K. Durham:** None. **K.C. Mak:** None. **Y.D. Deng:** None. **B.L. Trigatti:** None.

515

Coronary Atheroma Regression from Serial Infusions of Autologous Selectively Delipidated Pre β -HDL-enriched Plasma on Coronary Atheroma in Patients With Homozygous Familial Hypercholesterolemia in the HALO-FH Trial

Brian Ghoshhajra, Borek Foldyna, Massachusetts General Hosp, Harvard Medical Sch, Boston, MA; Daniel Gaudet, Etienne Khoury, Univ de Montréal and ECOGENE-21 Clinical and Translational Res Ctr, Chicoutimi, QC, Canada; Steven R Sloan, Boston Children's Hosp, Harvard Medical Sch, Boston, MA; Prediman K Shah, Cedars-Sinai Smidt Heart Inst, Los Angeles, CA; Steven R Jones, Johns Hopkins Univ, Baltimore, MD; Ron Waksman, Rebecca Torguson, Medstar Washington Hosp Ctr, Washington, DC; Ernst Schaefer, Tufts Univ, Boston, MA; H. Bryan Brewer, HDL Therapeutics, Inc., Vero Beach, FL

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 Diagnostic 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, Liwu 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

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P. Wolfkiel: None. **A. Jaeschke**: None. **D.Y. Hui**: None.

519

Identification on Preventive Mechanism of Sodium-glucose Cotransporter 2 inhibitor for Atherosclerosis in Normoglycemic Rabbit Model

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S. Lee: Research Grant; Modest; No.2017R1A2B2003191, 2017M3A9E9073585. **J. Kim**: Research Grant; Modest; No.2017R1A2B2003191, 2017M3A9E9073585. **O. Lee**: None. **J. Lee**: None.

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-1 α 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

Y. Matsuura: None. **S. Barnhart**: None. **V. Kothari**: None. **F. Kramer**: None. **J. Kanter**: None. **M. Shimizu-Albergine**: None. **R. Tian**: None. **K. Bornfeldt**: None.

523

In vivo Effects of Toll-like Receptor 7 Ligand in Experimental Atherosclerosis

Glykeria Karadimou, Anton Gisterå, Monica Centa, Göran K. Hansson, Gabrielle Paulsson-Berne, Karolinska Instt, Stockholm, Sweden

G. Karadimou: None. **A. Gisterå**: None. **M. Centa**: None. **G.K. Hansson**: None. **G. Paulsson-Berne**: None.

Poster Abstracts (continued)

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

A. Healy: None. **J.M. Berus:** None. **C. Mantsounga:** None. **J.L. Christensen:** None. **J.P. Watts:** None. **M. Assali:** None. **N. Ceneri:** None. **R. Nilson:** None. **J. Neverson:** None. **W. Wu:** None. **G. Choudhary:** None. **A.R. Morrison:** None.

525

Efferocytosis is Involved in Progression but Not Regression of Atherosclerosis

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P.A. Mueller: None. **Y. Kojima:** None. **K. Huynh:** None. **H. Tavori:** None. **N. Leeper:** None. **S. Fazio:** None.

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, Waiel Abusnina, Rodrigo Aguilar, Niharika Bhardwaj, George Koromia, Mark Studeny, Affan Irfan, Marshall Univ, Huntington, WV

G. Acosta: None. **A. Amro:** None. **W. Abusnina:** None. **R. Aguilar:** None. **N. Bhardwaj:** None. **G. Koromia:** None. **M. Studeny:** None. **A. Irfan:** None.

530

Scavenging Dicarboxyls With 5'-o-pentyl-pyridoxamine Improves Insulin Sensitivity and Reduces Atherosclerosis Through Modulating Inflammatory Ly6c^{hi} 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

J. Huang: None. **P. Yancey:** None. **L. May-Zhang:** None. **H. Tao:** None. **Y. Zhang:** None. **L. Ding:** None. **J.A. Oates:** None. **V. Amarnath:** None. **J. Roberts:** None. **S.S. Davies:** None. **M.F. Linton:** None.

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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L. Wang: Research Grant; Modest; NSFC No. 11802060; NSF of Jiangsu No. BK20180352. **D. Tang:** Research Grant; Modest; NIH R01 EB004759, Jiangsu STA BE2016785..

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532

ANGPTL3 in Type 2 Diabetes Mellitus

Xiao Wang, Wenjian Lv, Alexandra C Chadwick, Chris McDermott-Roe, Kiran Musunuru, Univ of Pennsylvania, Philadelphia, PA

X. Wang: None. **W. Lv:** None. **A.C. Chadwick:** None. **C. McDermott-Roe:** None. **K. Musunuru:** None.

533

Wnt-Mediated Cross-Talk Between Arterial Smooth Muscle and Macrophages

Abraham Behrmann, Li Li, Bindu Ramachandran, Mohammad Goodarzi, Andrew Lemoff, **Dwight A Towler**, UT Southwestern Medical Ctr, Dallas, TX

Poster Abstracts (continued)

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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

J. Ikeda: None. **C. Scipione:** None. **S. Hyduk:** None. **M.G. Althagafi:** None. **X. Gao:** None. **J. Jongstra-Bilen:** None. **M. Cybulsky:** None.

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-Shreveport, 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

S.P. Doherty: None. **C. Guillermier:** None. **A.G. Whitney:** None. **V.R. Babaev:** None. **M.F. Linton:** None. **M.L. Steinhauser:** None. **J.D. Brown:** None.

537

Neutrophil Extracellular Trap (NET)-borne miR-10b Contributes to Atherosclerosis Lesion Destabilization

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H. Winter: None. **J. R. Viola:** None. **O. Soehnlein:** None. **L. Maegdefessel:** None.

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, Mitali Ray, Christine Vrakas, Rosario Scalia, **Michael Autieri,** Temple Univ, Philadelphia, PA

A. Herman: None. **S. Kelemen:** None. **M. Ray:** None. **C. Vrakas:** None. **R. Scalia:** None. **M. Autieri:** None.

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

P. Pati: None. **J.M. Allan:** None. **T.M. Swain:** None. **D. Zhang:** None. **C. Jin:** None. **D.M. Pollock:** None. **S. Bailey:** None. **J.S. Pollock:** None.

542

Correlation of Computed Tomography with Carotid Plaque Transcriptomes 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

Jessica H Davis-Knowlton, Tufts Univ, Boston, MA; Jacqueline E Turner, Anne Harrington, Lucy Liaw, Maine Medical Ctr Res Inst, Scarborough, ME

J.H. Davis-Knowlton: None. **J.E. Turner:** None. **A. Harrington:** None. **L. Liaw:** Research Grant; Significant; NIH.

544

A Novel Micropeptide, IMP, Directs Inflammation Through Interaction with Transcriptional Co-activators

Coen van Solingen, Monika Sharma, NYUMC Langone Medical Ctr, New York, NY; Roel Bijkerk, Leiden Univ Medical Ctr, Leiden, Netherlands; Milessa S. Afonso, Graeme J Koelwyn, NYUMC Langone Medical Ctr, New York, NY; Kaitlyn R Scacalossi, NYUMC Langone Medical Ctr, NEW YORK, NY; Lesca M Holdt, Ludwig-Maximilians-Univ Munich, Munich, Germany; Lars Maegdefessel, Klinikum Rechts der Isar, Technical Univ Munich, Munich, Germany; Anton Jan van Zonneveld, Leiden Univ Medical Ctr, Leiden, Netherlands; Kathryn J Moore, NYUMC Langone Medical Ctr, New York, NY

C. van Solingen: None. **M. Sharma:** None. **R. Bijkerk:** None. **M.S. Afonso:** None. **G.J. Koelwyn:** None. **K.R. Scacalossi:** None. **L.M. Holdt:** None. **L. Maegdefessel:** None. **A. van Zonneveld:** None. **K.J. Moore:** None.

Poster Abstracts (continued)

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

C.R. Papen: None. **A. Ammi:** None. **P. Mueller:** None. **J. Lindner:** None. **H. Tavori:** None.

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

L. Rohrer: None. **A. Potapenko:** None. **S. Radosavljevic:** None. **A. von Eckardstein:** None.

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

H.J. Sanyour: None. **N. Li:** None. **A.P. Rickel:** None. **C.N. Kinser:** None. **Z. Hong:** None.

549

Alternative Splicing of Fibronectin Regulates Extracellular Matrix Composition of the Inflamed Arterial Wall

Patrick A Murphy, UCONN Health, Farmington, CT; Noor Jaikhan, 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

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551

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.

553

Macrophage-microRNA-147 Protects Against Atherosclerosis in Mice

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554

Dissecting Vascular and Platelet Function in Ovarian Cancer With Organ-on-a-chip Methodology

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B. Saha: None. **J. Bui:** None. **P. Biswas:** None. **A.K. Sood:** None. **V. Afshar-Khargan:** None. **A. Jain:** None.

555

Platelet Volume Indices as Markers of Platelet Reactivity in Atherosclerotic Coronary Artery Disease

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A. Goel: None. **M. Singhal:** None. **A. Goel:** None. **L.H. Ghotekar:** None. **H. Paydak:** None. **J.L. Mehta:** None.

556

Impact of Dual Anti-platelet Therapy in Coronary Artery Bypass Graft Patients on Graft Outcomes and Mortality

Ifthikhar Ali Ch, Naeem Tahirkheli, Pei-Tzu Wu, Abdul Qadar, Ahmad Usmani, Raja Ullah, Hunter Weitzel, Oklahoma Heart Res Fndn, Oklahoma City, OK

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557

Design and Development of Activators of Human Hepatocyte Growth Factor Receptor, c-MET, for Critical Limb Ischemia

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A.E. Panaitiu: None. **C.O. Audu:** None.

558

CETP Inhibitor Increases HDL-C and Cholesterol Efflux Capacity, but Reduces Subsequent Cholesterol Esterification and Hepatic Cell Uptake

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Poster Abstracts (continued)

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559

The Effect of Echinochrome A on Vascular Smooth Muscle Cell Proliferation Through mTOR Signaling Pathway
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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
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C. Teoh: None. **R. Abdul Jalil:** None. **M. Kukumberg:** None. **W. Ng:** None.

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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; Jingsong 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
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T. De: None. **C. Alarcon:** None. **E. Smithberger:** None. **M. Perera:** None. **M. Shaazuddin:** None. **M. Nooruddin:** None. **P. Friedman:** None. **D. Moreno:** None. **E. Nutescu:** None. **A. Barbour:** None. **M. Tuck:** None. **A. Harralson:** None. **T. Jeyaram:** None. **M. Harris:** None. **S. Bradbury:** None. **R. Subrahmanyam:** None. **J. Banagan:** None. **O. Gordon:** None. **J. Avitia:** None. **B. Lec:** None. **B. Lec:** None.

567

Bispecific Antibody Therapy for Effective Cardiac Repair Through Redirection of Endogenous Stem Cells
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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, Buis 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
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Poster Abstracts (continued)

570

Combining Morphological and Biomechanical Factors Led to Better Carotid Plaque Progression Prediction: Using 3D Thin Layer Models for Faster Model Construction

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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

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J. Chung: None. **B. Montgomery:** None. **S. Marini:** None. **J. Rosand:** None. **C.D. Anderson:** None.

572

Inflammatory Connective Tissue Diseases Independently Associate with Atherosclerotic Cardiovascular Disease

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F.J. Alenghat: None.

573

Plasma Legumain Levels in Patients with Coronary Artery Disease (CAD)

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574

Atherogenicity 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, Wondwosen 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

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575

Rare Variants in ABCG5/8 Genes Contribute to Mimic and Worsen the Phenotype of Familial Hypercholesterolemia

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H. Tada: None. **M. Kawashiri:** None. **A. Nomura:** None. **A. Nohara:** None. **M. Takamura:** None.

576

Immunosuppression Agent Cyclosporine Reduces Self-Renewal and Vessel Regeneration Potentiation of Human Endothelial Colony Forming Cells

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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

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580

Coronary Artery Disease-associated Genetic Variants Increased *Lipa* Expression and Overexpression of *Lipa* Induced Atherogenic Phenotypes in Macrophages

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F. Li: None. **J. Shi:** None. **C. Xue:** None. **E. Flynn:** None. **H. Pan:** None. **Z. Gu:** None. **T. Evans:** None. **M.P. Reilly:** None. **D. Saleheen:** None. **B. Razani:** None. **T.E. Lappalainen:** None. **H. Zhang:** None.

582

Enhancing Pluripotency of Fibroblasts Through Combined Biomechanical and Pharmacological Treatments

Jason Lee, Miguel Armenta-Ochoa, Pablo Maceda, Eun Yoon, Lara Samarneh, Mitchell Wong, Aaron Baker, Univ of Texas at Austin, Austin, TX
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Poster Abstracts (continued)

583

Adenosine Monophosphate-activated Protein Kinase Mutations Cause Glycogen Storage Disease Mimicking Hypertrophic Cardiomyopathy
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S. Lee: None. **H. Yang:** None. **N. Song:** None. **K. Choi:** None. **J. Kim:** None. **E. Kang:** None. **D. Sohn:** None.

584

Cerebrovascular Repair *via* Endothelial Cell Epigenetics
Peeyush Thankamani Pandit, Devin McBride, Kanako Matsumura, Tejesh Guddanti, Stephanie A Ihezue, Spiros L Blackburn, UTH Houston, Houston, TX
P. Thankamani Pandit: None. **D. McBride:** None. **K. Matsumura:** None. **T. Guddanti:** None. **S.A. Ihezue:** None. **S.L. Blackburn:** None.

585

Transcription Factor EB is a Novel Regulator of Endothelial Cell Metabolism
Jinjian Sun, Univ of Michigan, Ann, MI; Haocheng Lu, Wenying Liang, Ziyi Chang, Die Hu, Jifeng Zhang, Y. Eugene Chen, Yanbo Fan, Univ of Michigan, Ann Arbor, MI
J. Sun: None. **H. Lu:** None. **W. Liang:** None. **Z. Chang:** None. **D. Hu:** None. **J. Zhang:** None. **Y. Chen:** None. **Y. Fan:** None.

586

Hydroxycarboxylic Acid Receptor 2 Regulates Angiogenic Function of Retinal Endothelial Cells in a Mouse Model of Oxygen Induced Retinopathy
Ammar A Abdelrahman, Folami L Powell, Ravirajsinh N Jadeja, Malita A Jones, Menaka C Thounaojam, Manuela Bartoli, Pamela M Martin, Augusta Univ, Augusta, GA
A.A. Abdelrahman: None. **F.L. Powell:** None. **R.N. Jadeja:** None. **M.A. Jones:** None. **M.C. Thounaojam:** None. **M. Bartoli:** None. **P.M. Martin:** None.

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
Iguaracy Pinheiro de Sousa, Vinicius de Souza, Samantha Kuwada Teixeira, José Eduardo Krieger, Univ of São Paulo/Heart Inst - InCOR, Sao Paulo, Brazil
I.P. Sousa: None. **V. de Souza:** None. **S.K. Teixeira:** None. **J.E. Krieger:** None.

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
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591

Calcium Signaling of Endoplasmic Reticulum Could Predict Spasm of Coronary Artery
Han Mo Yang, Joeun 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
M. Liu: None. **S. Mahan:** None. **K. Martin:** None. **D. Gomez:** None.

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 Lassègue, Sarah Harirforoosh, Kathy K Griendling, **Alicia N Lyle**, Emory Univ, Atlanta, GA
G.S. Lee: None. **Z.S.Y. Lok:** None. **H.F. Salazar:** None. **M.Z. Tsai:** None. **B. Lassègue:** None. **S. Harirforoosh:** None. **K.K. Griendling:** None. **A.N. Lyle:** None.

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
X. Dai: None. **S. Yin:** None. **M. Yang:** None. **J. Fang:** None. **H. Li:** None. **D. Wang:** None. **Z. Yang:** None. **L. Li:** None.

Poster Abstracts (continued)

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 Cardiometabolic Fate of a Person?

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T.H. Ghevondyan: None.

598

Thymine DNA Glycosylase Regulates CaMKII 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

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X. Qu: None. **B. Hitchinson:** 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 vitro* by Flow Cytometry

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602

Baff-br3 Signaling Promotes Aortic Aneurysm Formation via Metabolic Reprogramming of B Cells

Michael Spinoso, Vlad Serbulea, William Montgomery, Clint M Upchurch, Srabani Sahu, Prasad Srikakulapu, 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

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603

Acute Myocardial Infarction Accelerates Breast Cancer Progression Through Innate Immunity

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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
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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
P.M. Schlegel: None. **M. Sharma:** None. **E. Brown:** None. **M. Afonso:** None. **G. Koelwyn:** None. **E. Corr:** None. **C. van Solingen:** None. **L. Shannley:** None. **K.J. Moore:** None.

606

Role of Circulating Caveolin-1+ Endothelial Cell-derived Extracellular Vesicles in Mediating Inflammation-induced Pulmonary Arterial Hypertension

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S.D.S. Oliveira: None. **J. Chen:** None. **M. Castellon:** None. **U. Raj:** None. **S. Comhair:** None. **S. Erzurum:** None. **C.L. Silva:** None. **R.F. Machado:** None. **M.G. Bonini:** None. **R. Minshall:** None.

Poster Abstracts (continued)

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 Helmstädter, Franziska Pawelke, Konstantina Filippou, Katie Frenis, Ksenija Vujacic-Mirski, 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

J. Helmstädter: None. **F. Pawelke:** None. **K. Filippou:** None. **K. Frenis:** None. **K. Vujacic-Mirski:** None. **S. Kalinovic:** None. **S. Kröller-Schön:** None. **M. Oelze:** None. **T. Münzel:** None. **A. Daiber:** None. **S. Steven:** None.

609

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

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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 Schlegel, Milessa Afonso, Lianne Shanley, Kathryn J Moore, New York Univ Medical Ctr, New York, NY

E.M. Corr: None. **G.J. Koelwyn:** None. **M. Sharma:** None. **C.V. Solingen:** None. **M. Schlegel:** None. **M. Afonso:** None. **L. Shanley:** None. **K.J. Moore:** None.

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

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612

In vivo Molecular-Structural Imaging of Endothelial Permeability and Inflammation Assesses Injury Following Stent Implantation

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E.A. Osborn: Consultant/Advisory Board; Modest; Dynamed. Consultant/Advisory Board; Significant; Abbott Vascular. **Z. Piao:** None. **K. Singh:** None. **A. Mauskapf:** None. **G.J. Tearney:** Research Grant; Modest; VivoLight. Research Grant; Significant; Merck Sharp & Dohme, Canon. Other Research Support; Modest; Terumo. Consultant/Advisory Board; Modest; Samsung. Consultant/Advisory Board; Significant; 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 *Tkk1* Deficiency Accelerates Atherosclerotic Plaque Formation

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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

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K. Gasbarrino: None. **H. Zheng:** None. **E. Daly:** None. **S.S. Daskalopoulou:** None.

621

Chronic Periodontitis is Linked with Cerebral Atherosclerosis Among the Population of United States

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U.K. Patel: None. **N. Kodumuri:** None. **P. Malik:** None. **S. Saiyed:** None. **N. Patel:** None. **B.H. Gajjar:** None. **V. Pandya:** None. **P. Soni:** None. **S. Soni:** None. **L. Lavado:** None. **K. Patel:** None. **A. Lunagariya:** None. **V.B. Jani:** None.

Poster Abstracts (continued)

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

K. Okuno: None. **Y. Naito:** None. **S. Yasumura:** None. **H. Sawada:** None. **M. Asakura:** None. **M. Ishihara:** None.

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 Svinglin, FDA, Bethesda, MD; Gauri Dandi, Nashwan Farooque, Laboni Hoque, Nuha Gani, Zyannah Mallick, 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

V. Xin: None. **A. Dey:** None. **R. Wang:** None. **R. Shalhoub:** None. **Y. Gu:** None. **C. Wu:** None. **X. Tian:** None. **T. Patel:** None. **J. Fleg:** None. **A. Kettermann:** None. **G. Csako:** None. **G. Sopko:** None. **H. Svinglin:** None. **G. Dandi:** None. **N. Farooque:** None. **L. Hoque:** None. **N. Gani:** None. **Z. Mallick:** None. **I. Chowdhury:** None. **K. Burkhart:** None. **A. Szarfman:** None. **S. Coady:** None. **N. Mehta:** None. **E. Navarro:** None. **F. Pucino:** None. **Y. Rosenberg:** None. **A. Hasan:** None.

627

Claudication Distances and Muscle Oxygen Saturation Best Describe the Home Daily Activity of Claudicating Patients with Peripheral Artery Disease

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M. Fuglestad: None. **H. Hernandez:** None. **Y. Gao:** None. **K.E. Brunette:** None. **H. DeSpiegelaere:** None. **G. Casale:** None. **I. Pipinos:** None.

628

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

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S.K. Saini: None. **T.S. Polonsky:** None. **T. Lu:** None. **C.B. Peek:** None. **M.H. Criqui:** None. **L. Ferrucci:** None. **J. Guralnik:** None. **M. Kibbe:** None. **C.A. Peterson:** None. **R.L. Sufit:** None. **C. Leeuwenburgh:** None. **M.M. McDermott:** None.

629

Effects of L-Arginine or L-N^G-Nitroarginine methyl ester Treatment on Recovery from Hind Limb Ischemia in Sickle Cell Mice

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C. Lewis: None. **D. Okwan-Duodo:** None. **L. Hansen:** None. **G. Joseph:** None. **D.R. Archer:** None. **W. Taylor:** None.

630

Purinergic Signaling via Pannexin-1 Channels is Altered in a Rat Model of Peripheral Artery Disease

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M.T. Kuroki: None. **J.A. Estrada:** None. **G.D. Thomas:** None. **L.I. Sinoway:** None. **M.P. Kaufman:** None.

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, Katyarina 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

S. Li: None. **T. Lackner:** None. **G. Willcockson:** None. **C. Shields:** None. **K. Brunette:** None. **Z. Zhu:** None. **J. Kim:** None. **S. Myers:** None. **M. Williams:** None. **H. Despiegelaere:** None. **I. Pipinos:** None. **G. Casale:** None.

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

M.J. Nooromid: Research Grant; Significant; NIH T32HL094293 Vascular Surgery Scientist Training Program. **L. Xiong:** None. **E.B. Chen:** Research Grant; Significant; NIH T32HL094293 Vascular Surgery Scientist Training Program. **K.E. Shapiro:** None. **K. Wun:** None. **Q. Jiang:** None. **O.M. Eskandari:** None. **K.J. Ho:** Research Grant; Significant; NIH K08HL130601 - The Role of Gut Microbiota in Neointimal Hyperplasia After Vascular Surgery, SVS Foundation/American College of Surgeons Mentored Clinical Scientist Research Career Development Award.

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**, UTHealth at Houston, Houston, TX

R.A. Veettil: None. **K. Matsumura:** None. **P. Kumar T.:** None. **S.L. Blackburn:** None. **D.W. McBride:** None.

634

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

Jason J Lee, John-Michael Arpino, Zengxuan Nong, Alexis Szpakowski, Hao Yin, Abdul Aziz Hashi, Jacqueline Chevalier, Caroline O'Neil, J. Geoffrey Pickering, Robarts Res Inst, Western Univ, London, ON, Canada

J.J. Lee: None. **J. Arpino:** None. **Z. Nong:** None. **A. Szpakowski:** None. **H. Yin:** None. **A. Hashi:** None. **J. Chevalier:** None. **C. O'Neil:** None. **J. Pickering:** None.

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

L.M. Hansen: None. **W. Liu:** None. **G. Joseph:** None. **W. Taylor:** None.

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

A. Shariati: None. **R. McLeod:** None. **J. Dunn:** None. **K. Sangal:** None. **J. Boyle:** None. **I.S. Jovin:** None.

637

Dual-Filter Cerebral Protection Device for Stroke Prevention During Transcatheter Aortic Valve Replacement: An Updated Meta-Analysis

Paul M. Ndunda, Mohinder Vindhyaal, Sinan Khayyat, Tabitha Muutu, Zaker Fanari, Univ of Kansas Sch of Med-Wichita, Wichita, KS

P.M. Ndunda: None. **M. Vindhyaal:** 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

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S.K. Samal: None. **M. Volkova:** None. **M. Vikström:** None. **J. Frostegård:** None.

639

Altered Metabolomic Profile in Peripheral Artery Disease Patients

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A. Ismaeel: None. **M.E. Franco:** None. **E. Papoutsis:** None. **R. Lavado:** None. **G.P. Casale:** None. **M. Fuglestad:** None. **R.S. Smith:** None. **W.T. Bohannon:** None. **R.S. Brumberg:** None. **I.I. Pipinos:** None. **P. Koutakis:** Research Grant; Significant; AHA Scientist Development Grant.

641

New Insights on Marfan Syndrome From Comparative N-terminomics of Human Marfan and Non-diseased Aortas

Daniel R Martin, Frank Cikach, Emidio 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

H. Cooper: None. **T. Kawai:** None. **K. Elliott:** None. **K. Preston:** None. **R. Scalia:** None. **V. Rizzo:** None. **S. Eguchi:** None.

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 Hambly, Richmond W Jeremy, Univ of Sydney, Sydney, Australia

C. Malecki: None. **E.N. Robertson:** None. **K.A. Liddy:** None. **A. Sahagian:** None. **Y. Lu:** None. **M. Kekic:** None. **D. Lai:** None. **B.D. Hambly:** None. **R.W. Jeremy:** None.

645

Anti-high Density Lipoproteins Antibodies are Elevated in Abdominal Aortic Aneurysm and Associated With Clinical Features and Lipid Profile

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J. Rodriguez-Carrio: None. **J. Lindholt:** None. **M. Canyelles:** None. **D. Martinez-Lopez:** None. **M. Tondo:** None. **L.M. Blanco-Colio:** None. **J. Escola-Gil:** None. **A. Suarez:** None. **J.L. Martin-Ventura:** None.

646

High Mobility Group Box 1 is Increased in the Abdominal Aortic Adventitia of Angiotensin II-Infused Hypercholesterolemic Male Mice

Shayan Mohammadmoradi, Deborah A Howatt, Jessica J. Moorleghen, Hisashi Sawada, Hong S Lu, Alan Daugherty, Univ of Kentucky, Lexington, KY

S. Mohammadmoradi: None. **D.A. Howatt:** None. **J.J. Moorleghen:** None. **H. Sawada:** None. **H.S. Lu:** None. **A. Daugherty:** None.

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

J. Guo: None. **T. Shoji:** None. **X. Zheng:** None. **Y. Li:** None. **B. Xu:** None. **R.L. Dalman:** None.

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

N.D. Ward: None. **T. Grespin:** None. **C. Couch:** None. **R. Mukherjee:** None. **J. Jones:** None. **J. Ruddy:** None.

650

Surfactant Protein A Deficiency Attenuates Angiotensin II-induced Abdominal Aortic Aneurysm in Mice

Chenxiao Li, Xia Guo, Univ of Georgia, Athens, GA; Ran Ran, Renmin Hosp, Hubei Univ of Med, Shiyan, Hubei, China; Shiyu Chen, Univ of Georgia, Athens, GA

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 Rateri, Deborah A Howatt, Jessica J Moorleghen, 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

H. Sawada: None. **H. Higashi:** Research Grant; Significant; Kowa Company, Ltd.. **D.L. Rateri:** None. **D.A. Howatt:** None. **J.J. Moorleghen:** None. **B.C. Wright:** None. **L.H. Lee:** Research Grant; Significant; Kowa Company, Ltd. **S.A. Singh:** Research Grant; Significant; Kowa Company, Ltd. **M. Aikawa:** Research Grant; Significant; Kowa Company, Ltd.. **M.W. Majesky:** None. **A. Daugherty:** None.

Poster Abstracts (continued)

652

Pharmacological Inhibition of Hippo-YAP Signaling Attenuates Angiotensin 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
M. Okuyama: None. **W. Jiang:** None. **L. Yang:** None. **A. Javidan:** None. **D. Thiagarajan:** None. **V. Subramanian:** None.

654

Calpain-2 Knockdown Prevents Angiotensin II-induced Cytoskeletal Structural Protein Degradation and Protects ECM Integrity in Primary Aortic Smooth Muscle Cells
Devi Thiagarajan, Weihua Jiang, **Venkateswaran Subramanian**, Univ of Kentucky, Lexington, KY
D. Thiagarajan: None. **W. Jiang:** None. **V. Subramanian:** None.

655

Pharmacological Inhibition of Notch Signaling Stabilizes Experimental Abdominal Aortic Aneurysm via NF B Dependent Mechanism
Neekun Sharma, Rishabh Dev, Univ of Missouri, Columbia, MO; Juan de Dios Ruiz Rosado, The Res Inst at Nationwide Children's Hosp, Columbus, OH; Santiago Partida-Sanchez, Univ of Missouri, Columbus, OH; Mireia Guerau-de-Arellano, The Res Inst at Nationwide Children's Hosp, Columbus, OH; Chetan Hans, Univ of Missouri, Columbia, MO
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, Riekelt H Houtkooper, Carlie J de Vries, Jan H Lindeman, Academic Medical Ctr Amsterdam, Amsterdam, Netherlands
V. de Waard: None. **S. Wanga:** Other Research Support; Modest; AMC Foundation. **R.C.I. Wust:** None. **R. Balm:** None. **R.H. Houtkooper:** None. **C.J.M. de Vries:** None. **J.H.N. Lindeman:** None.

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 Burrridge, Edward Thorp, Guillermo Oliver, Northwestern Univ, Chicago, IL
X. Liu: None. **W. Ma:** None. **X. Yeap:** None. **H. Kuo:** None. **M. Oxendine:** None. **T. Bansal:** None. **P. Burrridge:** None. **E. Thorp:** None. **G. Oliver:** None.

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
J. Cashin: None. **A. Wirtz:** None. **D. Williams:** None. **M. Zayed:** None.

660

Histological Features of Ruptured Plaque and Thrombus Interface in Acute Myocardial Infarction
Atsushi Yamashita, Miyazaki Univ, Miyazaki, Japan; Kensaku Nishihira, Miyazaki Medical Association Hosp, Miyazaki, Japan; Kazunari Maekawa, Toshihiro Gi, Miyazaki Univ, Miyazaki, Japan; Kinta Hatakeyama, Nara Medical Univ, Kashihara, Japan; Yoshisato Shibata, Miyazaki Medical Association Hosp, Miyazaki, Japan; Yujiro Asada, Miyazaki Univ, Miyazaki, Japan
A. Yamashita: None. **K. Nishihira:** None. **K. Maekawa:** None. **T. Gi:** None. **K. Hatakeyama:** None. **Y. Shibata:** None. **Y. Asada:** None.

661

Role of Coagulation Factor XI in Regulating Endothelial Cell Barrier Function
Anh T. P. Ngo, Cristina Puy, Jiaqing Pang, Erik Tucker, Christina Lorentz, Norah Verbout, András Gruber, Courtney Howard, Hagai Tavori, Owen J. T. McCarty, Oregon Health & Science Univ, Portland, OR
A.T. Ngo: None. **C. Puy:** None. **J. Pang:** None. **E. Tucker:** None. **C. Lorentz:** None. **N. Verbout:** None. **A. Gruber:** None. **C. Howard:** None. **H. Tavori:** None. **O.J. McCarty:** None.

662

Microfluidic Global Thrombus and Hemostasis Monitoring System Applied in Pediatric Critical Care
David Luna, Navaneeth KR Pandian, Tanmay Mathur, Justin Bui, Pranav Gadangi, Travis Pyle, Texas A&M Univ, College Station, TX; Vadim V Kostousov, Shiu-Ki Hui, Texas Childrens Hosp, Houston, TX; Jun Teruya, Baylor Coll of Med, Houston, TX; **Abhishek Jain**, Texas A&M Univ, College Station, TX
D. Luna: None. **N.K. Pandian:** None. **T. Mathur:** None. **J. Bui:** None. **P. Gadangi:** None. **T. Pyle:** None. **V.V. Kostousov:** None. **S. Hui:** None. **J. Teruya:** None. **A. Jain:** None.

663

Contribution of Intrinsic Pathway Factors XI and XII to Venous Thrombosis in Mouse Models
Steven P Grover, Brian Cooley, Nigel Mackman, Univ of North Carolina CH, Chapel Hill, NC
S.P. Grover: None. **B. Cooley:** None. **N. Mackman:** None.

670

Protease-activated Receptor 4 Limits Influenza A Virus Infection
Kohei Tatsumi, Clare M Schmedes, Emily Butler, Nigel Mackman, **Silvio Antoniak**, Univ of North Carolina, Chapel Hill, NC
K. Tatsumi: None. **C.M. Schmedes:** None. **E. Butler:** None. **N. Mackman:** None. **S. Antoniak:** None.

Poster Abstracts (continued)

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

Sylwia Wasiak, Dean Gilham, Emily Daze, Christopher Halliday, Laura M. Tsujikawa, Stephanie Stotz, Ravi Jahagirdar, Resverlogix Corp, Calgary, AB, Canada; Michael Sweeney, Jan O. Johansson, Resverlogix Inc., San Francisco, CA; Norman C. Wong, Ewelina Kulikowski, Resverlogix Corp, Calgary, AB, Canada

S. Wasiak: Employment; Significant; Resverlogix Corp.

D. Gilham: Employment; Significant; Resverlogix Corp.

E. Daze: None. **C. Halliday:** Employment; Significant; Resverlogix Corp. **L.M. Tsujikawa:** Employment; Significant;

Resverlogix Corp. **S. Stotz:** Employment; Significant;

Resverlogix Corp. **R. Jahagirdar:** Employment; Significant; Resverlogix Corp, Zenith Epigenetics Ltd. **M. Sweeney:**

Employment; Significant; Resverlogix Inc. **J.O. Johansson:**

Employment; Significant; Resverlogix Inc. **N.C.W. Wong:**

Employment; Significant; Resverlogix Corp. **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

Seulgee Lee, Yonsei Univ, Seoul, Korea, Republic of; Darae Kim, Samsung Medical Ctr, Seoul, Korea, Republic of;

Jung-Sun Kim, Geu-Ru Hong, Yonsei Univ, Seoul, Korea, Republic of

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 Heteromerization

Vasanthi Narayanaswami, Devan Abhari, Kai-Han Tu, Cal State Univ Long Beach, Long Beach, CA

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

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N. Patel: None. **P.M.M. Weers:** None.

678

Vascular Smooth Muscle Cell Dynamics in Atherosclerosis

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Sioux Falls, SD; Jing Liu, Indiana Univ-Purdue Univ

Indianapolis, Indianapolis, IN; **Zhongkui Hong**, Univ of South

Dakota, Sioux Falls, SD

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

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Nagoya, Japan; Takeshi Yamazaki, Hiroshima Univ Graduate

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Univ, Kasugai, Japan

M. Tsujita: None. **H. Takase:** None. **N. Akita:** None. **N.**

Ohte: None. **T. Yamazaki:** None. **S. Yokoyama:** None.

680

Lipoproteins Large to Small Particle Size Ratio is Significant Predictor in CAD and Stroke Outcomes

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Steve Buddington, Dillard Univ, New Orleans, LA; Abdallah

Taha, Clifton Medical Ctr, Clifton, NJ

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 Rocio 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

J. Liu: None. **R. Perry:** None. **C. Ngai:** None. **H. Ginsberg:**

None.

Poster Abstracts (continued)

684

Nobiletin Corrects Intestinal Lipid Metabolism in *Ldlr*^{-/-} Mice Fed a High-fat Diet

Nadya M Morrow, Dawn E Telford, Brian G Sutherland, Jane Y Edwards, Murray W Huff, Robarts Res Inst (UWO), London, ON, Canada

N.M. Morrow: None. **D.E. Telford:** None. **B.G. Sutherland:** None. **J.Y. Edwards:** None. **M.W. Huff:** None.

685

Elevated HDL Free Cholesterol Bioavailability Drives HDL Dysfunction

Baiba Kurins Gillard, Dedipya Yelamanchili, Jing Liu, Antonio M Gotto Jr, Corina Rosales, Henry J Pownall, Houston Methodist Res Inst, Houston, TX

B.K. Gillard: Research Grant; Significant; NIH HL056865. **D. Yelamanchili:** Research Grant; Significant; NIH HL056865. **J. Liu:** Research Grant; Modest; NIH HL056865. **A.M. Gotto:** Consultant/Advisory Board; Significant; Esperion Board Member, Kowa consultant, Akea DSMB Chair. **C. Rosales:** Research Grant; Significant; NIH HL056865. **H.J. Pownall:** Research Grant; Significant; NIH HL056865.

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

M. Castleberry: None. **J.T. Melchior:** None. **M. Liu:** None. **T.B. Thompson:** None. **W. Davidson:** None.

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

Kavisha Singh, Colby Ayers, Anand Rohatgi, UT Southwestern Medical Ctr, Dallas, TX

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

689

The Role of the Mevalonate Pathway in Intestinal Lipid Absorption

Alexandria M. Doerfler, Li Tang, Kelsey E. Jarrett, Marco De Giorgi, Ang Li, Ayrea Hurley, Mia Furgurson, James F. Martin, Noah F. Shroyer, William R. Lagor, Baylor Coll of Med, Houston, TX

A.M. Doerfler: None. **L. Tang:** None. **K.E. Jarrett:** None. **M. De Giorgi:** None. **A. Li:** None. **A. Hurley:** None. **M. Furgurson:** None. **J.F. Martin:** None. **N.F. Shroyer:** None. **W.R. Lagor:** None.

690

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

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A. Wolska: Research Grant; Significant; Corvidia Therapeutics, Inc., Waltham, MA, USA. Other; Significant; co-inventor on US patents for apoC-II mimetic peptides.

L. Lo: Employment; Significant; Full-time employee at Corvidia Therapeutics, Inc.. Other; Significant; co-inventor on US patents for apoC-II mimetic peptides. **D.O. Sviridov:** Research Grant; Significant; Corvidia Therapeutics, Inc., Waltham, MA, USA. Other; Significant; co-inventor on US patents for apoC-II mimetic peptides. **M. Pourmoussa:** None.

M. Pryor: None. **S.S. Ghosh:** Consultant/Advisory Board; Significant; Consultant for Corvidia Therapeutics, Inc.. Other; Significant; co-inventor on US patents for apoC-II mimetic peptides. **R. Kakkar:** Employment; Significant; Full-time employee at Corvidia Therapeutics, Inc.. Other; Significant; stock holders of AstraZeneca. **M. Davidson:** Employment; Significant; Full-time employee at Corvidia Therapeutics, Inc.. Other; Significant; stock holders of AstraZeneca. **S. Wilson:** None. **R.W. Pastor:** None. **J. Tang:** None. **M. Amar:** None. **M. Devalaraja:** Employment; Significant; Full-time employee at Corvidia Therapeutics, Inc.. Other; Significant; co-inventor on US patents for apoC-II mimetic peptides, stock holders of AstraZeneca. **A.T. Remaley:** Research Grant; Significant; Corvidia Therapeutics, Inc., Waltham, MA, USA. Other; Significant; co-inventor on US patents for apoC-II mimetic peptides.

691

Single-Cell Dissection of *APOL1*'s Role in Kidney Organoid Injury

Esther Liu, Behram S Radmanesh, Jennie Lin, Northwestern Univ, Chicago, IL

E. Liu: None. **B.S. Radmanesh:** None. **J. Lin:** None.

692

Liver Heparan Sulfate Proteoglycans Participate in Clearing LDL and PCSK9

Carlota Oleaga, OHSU, Portland, OR; Bastian Ramms, UCSD, San Diego, CA; Joshua Miles, Joshua Hay, Sergio Fazio, Hagai Tavori, OHSU, Portland, OR; Philip L. S. Gordts, UCSD, San Diego, CA

C. Oleaga: None. **B. Ramms:** None. **J. Miles:** None. **J. Hay:** None. **S. Fazio:** None. **H. Tavori:** None. **P.S.M. Gordts:** None.

Poster Abstracts (continued)

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

Alexander A Karakashian, Univ of Kentucky, Lexington, KY; Denis Sviridov, NHLBI, Bethesda, MD; Toshihiro Sakurai, Hokkaido Univ, Hokkaido, Japan; Lita A Freeman, NHLBI, Bethesda, MD; Gang Ren, Lawrence Berkeley Natl Lab, Berkeley, CA; Alan T Remaley, NHLBI, Bethesda, MD; **Scott M Gordon**, Univ of Kentucky, Lexington, KY

A.A. Karakashian: None. **D. Sviridov:** None. **T. Sakurai:** None. **L.A. Freeman:** None. **G. Ren:** None. **A.T. Remaley:** None. **S.M. Gordon:** None.

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

Bianca Scolaro, Univ of Sao Paulo, Sao Paulo, Brazil; Tomas Vaisar, Univ of Washington Sch of Med, Seattle, WA; Edward Fisher, NYU Sch of Med, New York, NY; Inar Castro, Univ of São Paulo, Sao Paulo, Brazil

B. Scolaro: None. **T. Vaisar:** None. **E. Fisher:** None. **I. Castro:** None.

697

Apoa-I Deficiency Increases Cortical Amyloid Deposition, Cerebral Amyloid Angiopathy, Cortical and Hippocampal Astroglia and Amyloid-associated Astrocyte Reactivity in APP/PS1 Mice

Emily B Button, Univ of British Columbia, Vancouver, BC, Canada; Guialine K Boyce, Providence Health Care Res Inst, Vancouver, BC, Canada; Anna Wilkinson, Sophie Stukas, Arooj Hayat, Jianjia Fan, Brennan J Wadsworth, Jerome Robert, Univ of British Columbia, Vancouver, BC, Canada; Kris M Martins, West Virginia Univ, Morgantown, WV; Cheryl L Wellington, Univ of British Columbia, Vancouver, BC, Canada

E.B. Button: None. **G.K. Boyce:** None. **A. Wilkinson:** None. **S. Stukas:** None. **A. Hayat:** None. **J. Fan:** None. **B.J. Wadsworth:** None. **J. Robert:** None. **K.M. Martins:** None. **C.L. Wellington:** None.

698

The Structurally Engineered Fatty Acid, Icosabutate, Improves Lipid Metabolism and Reduces Severity of Atherogenesis in Mice

Geurt Stokman, Anita M van den Hoek, Elsbet J Pieterman, José W van der Hoorn, TNO Metabolic Health Res, Leiden, Netherlands; Tore Skjæret, David A Fraser, NorthSea Therapeutics, Naarden, Netherlands; Hans M Princen, TNO Metabolic Health Res, Leiden, Netherlands

G. Stokman: None. **A.M. van den Hoek:** None. **E.J. Pieterman:** None. **J.W. van der Hoorn:** None. **T.**

Skjæret: Employment; Significant; employee of Northsea Therapeutics. **D.A. Fraser:** Employment; Significant; employee of Northsea Therapeutics. **H.M.G. Princen:** None.

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

P. Shridas: None. **A. Trumbauer:** None. **A. Ji:** None. **V. Noffsinger:** None. **M. Rich:** None. **M. de Beer:** None. **F.C. de Beer:** None. **N.R. Webb:** None. **L.R. Tannock:** None.

701

Pharmaceutical Inhibition of CETP Perturbs HDL Subspecies Profile, Increasing HDL That Contains ApoC3

Jeremy D Furtado, Harvard T.H. Chan Sch Pub Health, Boston, MA; Giacomo Ruotolo, Eli Lilly & Company, Indianapolis, IN; Stephen J Nicholls, MonashHeart, Clayton, Australia; Philip J Barter, Univ of New South Wales, Sydney, Australia; Frank M Sacks, Harvard T.H. Chan Sch Pub Health, Boston, MA

J.D. Furtado: None. **G. Ruotolo:** Employment; Significant; employed by Eli Lilly & Company. **S.J. Nicholls:** Research Grant; Significant; Eli Lilly, Pfizer. Consultant/Advisory Board; Significant; Eli Lilly, Merck, Pfizer, Roche. **P.J. Barter:** Consultant/Advisory Board; Modest; no compensation, but chairman of the steering committees for ILLUMINATE and a member of the steering committees for ACCELERATE, dalOUTCOMES and REVEAL. **F.M. Sacks:** None.

702

New Insights Into the Lipid/protein Composition of HDL Particles

Zsuzsanna Kuklennyik, Ctrs for Disease Control, Atlanta, GA; Katrin Niisuke, Tufts Univ, Boston, MA; Michael S Gardner, Antony Lehtikoski, Christopher Toth, John R Barr, Ctrs for Disease Control, Atlanta, GA; Tomas Vaisar, Univ of Washington, Seattle, WA; Bela F Asztalos, Tufts Univ, Boston, MA

Z. Kuklennyik: None. **K. Niisuke:** None. **M.S. Gardner:** None. **A. Lehtikoski:** None. **C. Toth:** None. **J.R. Barr:** None. **T. Vaisar:** None. **B.F. Asztalos:** None.

Poster Abstracts (continued)

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; Modest; 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
J. Feng: None. **K.T. Creasy:** None. **S. Saharan:** None. **M. Richie:** None. **M. Malloy:** None. **J. Kane:** None.

705

Investigating the Clinical Presentation and Progression of Familial LCAT Deficiency: An Analysis of the Literature

Cecilia Vitali, Archana 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 Intl 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
P.J. Opperman: None. **E.M. Ryan:** None. **M.J. Duryee:** None. **T.R. Mikuls:** None. **G.M. Thiele:** None. **L.M. Duryee:** None. **D.L. Clemens:** None. **D.R. Anderson:** None.

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
M. Sharma: None. **M. Schelgel:** None. **E. Brown:** None. **M. Afonso:** None. **E. Corr:** None. **C.V. Solingen:** None. **L. Shanley:** None. **L. Beckett:** None. **E. Fisher:** None. **P. Loke:** None. **K. Moore:** None.

709

Germinal Center-derived Antibodies Promote Atherosclerosis Plaque Stability

Hong Jin, Monica Centa, Sanna Hellberg, Karolinska Inst, Solna, Sweden; Albert Busch, Technical Univ Munich, Munich, Germany; Ljubica P Matic, Roland Baumgartner, Karolinska Inst, Solna, Sweden; Yuhuang Li, Columbia Univ, New York, NY; Göran K Hansson, Daniel Ketelhuth, Ulf Hedin, Karolinska Inst, Solna, Sweden; Esther Lutgens, Univ Of Amsterdam, Amsterdam, Netherlands; Lars Maegdefessel, Stephen Malin, Karolinska Inst, Solna, Sweden

H. Jin: None. **M. Centa:** None. **S. Hellberg:** None. **A. Busch:** None. **L.P. Matic:** None. **R. Baumgartner:** None. **Y. Li:** None. **G.K. Hansson:** None. **D. Ketelhuth:** None. **U. Hedin:** None. **E. Lutgens:** None. **L. Maegdefessel:** None. **S. Malin:** None.

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

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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

Aditi Upadhye, Prasad Srikakulapu, Univ of Virginia, Charlottesville, VA; Ayelet Gonen, Sabrina Hendrikx, Univ of California, San Diego, La Jolla, CA; Heather Perry, Chantel McSkimming, Melissa Marshall, James Garmey, Angela Taylor, Timothy Bender, Univ of Virginia, Charlottesville, VA; Sotirios Tsimikas, Joseph Witztum, Univ of California, San Diego, La Jolla, CA; Coleen McNamara, Univ of Virginia, Charlottesville, VA

A. Upadhye: None. **P. Srikakulapu:** None. **A. Gonen:** None. **S. Hendrikx:** None. **H. Perry:** None. **C. McSkimming:** None. **M. Marshall:** None. **J. Garmey:** None. **A. Taylor:** None. **T. Bender:** None. **S. Tsimikas:** None. **J. Witztum:** None. **C. McNamara:** None.

713

Subclass Composition of Anti-Apolipoprotein AI 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.

Poster Abstracts (continued)

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

Masayoshi Kukida, Cardiology, Pulmonology, Hypertension, and Nephrology, Ehime Univ Graduate Sch of Med, Toon, Ehime, Japan; Ituski Miyake, Tomoaki Nagao, Ken-ichi Miyoshi, Jun Aono, Dept of Cardiology, Pulmonology, Hypertension and Nephrology, Ehime Univ Graduate Sch of Med, Toon, Japan; Alan Daugherty, Hong Lu, Saha Cardiovascular Res Ctr, Lexington, KY; Osamu Yamaguchi, Dept of Cardiology, Pulmonology, Hypertension and Nephrology, Ehime Univ Graduate Sch of Med, Toon, Japan
M. Kukida: None. **I. Miyake:** None. **T. Nagao:** None. **K. Miyoshi:** None. **J. Aono:** None. **A. Daugherty:** None. **H. Lu:** None. **O. Yamaguchi:** None.

716

Oxidized LDL Repurposes Mitochondria to Drive Immune Activation Through CD36-Regulated Fatty Acid Trafficking and Metabolism

Yiliang Chen, Wenxin 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

Nalini Santanam, Marshall Univ Sch of Med, Huntington, WV; Cara Taylor, Marshall Univ, Huntington, WV; Paul Chantler, WVU Sch of Med, Morgantown, WV

N. Santanam: None. **C. Taylor:** None. **P. Chantler:** None.

719

KLF2 Suppresses Vascular Calcification Through Inhibition of Endothelial BMP/Smad1/5 Pathway

Juan Huang, Jiang-Yun Luo, Yu Huang, Inst of Vascular Med, The Chinese Univ of Hong Kong, Sch of Biomedical Sciences, The Chinese Univ of Hong Kong, Hong Kong, China

J. Huang: None. **J. Luo:** None. **Y. Huang:** None.

720

Adar1 Deficiency Protects Against High-fat Diet-induced Obesity and Insulin Resistance in Mice

Xiao-Bing Cui, Jia Fei, Sisi Chen, Gaylen Edwards, Shi-You Chen, Univ of Georgia, Athens, GA

X. Cui: None. **J. Fei:** None. **S. Chen:** None. **G. Edwards:** None. **S. Chen:** None.

721

An Unexpected Role for Growth Arrest Specific Gene 3 (GAS3)/Peripheral Myelin Protein 22 (PMP22) in Hepatic Lipid Metabolism

Ye Zhou, UF, Gainesville, FL; Joshua Miles, OHSU, Portland, OR; Sooyeon Lee, UF, Gainesville, FL; Sergio Fazio, OHSU, Portland, OR; Lucia Notterpack, UF, Gainesville, FL; **Hagai Tavori**, OHSU, Portland, OR

Y. Zhou: None. **J. Miles:** None. **S. Lee:** None. **S. Fazio:** None. **L. Notterpack:** None. **H. Tavori:** None.

722

Relationships Among Thermogenic, Fibrotic, and White Adipose Tissue Cells in the Perivascular Niche

Nabil Rabhi, Beth C Bragdon, Matthew D Layne, Stephen R Farmer, Boston Univ Sch of Medicine, Boston, MA

N. Rabhi: None. **B.C. Bragdon:** None. **M.D. Layne:** None. **S.R. Farmer:** None.

723

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

Candice Johnson, Charles Drummer IV, Hong Wang, Xiaofeng Yang, Temple Univ, Philadelphia, PA

C. Johnson: None. **C. Drummer IV:** None. **H. Wang:** None. **X. Yang:** None.

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 Damiani, Univ of Milan and IRCCS Multimedica, Milan, Italy; Laura Canclini, 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. Damiani:** None. **L. Canclini:** None. **A. Rizzi:** None. **A. Corsini:** None. **S. Bellosta:** None.

Poster Abstracts (continued)

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
D.L. Clemens: None. **M.J. Duryee:** None. **J.H. Hall:** None. **G.M. Thiele:** None. **T.R. Mikuls:** None. **M.C. Zimmerman:** None. **D.R. Anderson:** None.

729

Tissue Specific Reductions in Sirtuin-6 Expression Affect Calcium Burden and Pro-osteogenic 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

S. Puvvala: None. **L.A. Smith:** None. **B. Zhang:** None. **G.C. Verzosa:** None. **R. Huang:** None. **C.M. Roos:** None. **J.D. Miller:** None.

730

Stress Can Inhibit Vascular NO Production Probably via ER Stress by Activation of CRH

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H. Jin: None. **S. Park:** None. **Y. Lee:** None. **I. Chung:** None.

731

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

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732

CD36 Mediates Endothelial Stiffening in Young and Aged Mice

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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

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I. Harding: None. **W. Cisneros:** None. **E. Ebong:** None.

734

Altered Loading of Protein Cargoes in Tissue-Entrapped Human Vascular and Valvular Extracellular Vesicles

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735

Oxidized Phospholipid Induced Redox Imbalance Promoted Inflammation in Atherosclerosis

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M. Rahman: None. **S. Ahmed:** None. **J. Steuer:** None. **P. Gillgren:** None. **A. Liu:** None. **J. Frostegård:** None.

736

Common Pathways of Protease-Induced Plaque Rupture Identified by Parallel Analyses of Unstable Human Carotid Artery Plaques and Mouse Model of Plaque Rupture

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737

The Low-Density Lipoprotein Receptor-Related Protein 4 (Lrp4) Inhibits Immortalized Vascular Smooth Muscle Cell Calcium Deposition

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Poster Abstracts (continued)

738

Conserved Sequence in the Loop Region of Angiotensinogen Affects Plasma Angiotensinogen Concentrations but Has No Effects on Angiotensin II-mediated Functions

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739

Endothelial Uncoupling Protein 2 Protects against Endothelial Dysfunction and Atherosclerosis Enhanced by Disturbed Flow

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740

From Genotype to Phenotype: Characterization of the ID3 Gene in Vascular Smooth Muscle Cell Inflammation and Atherogenesis

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C. Henderson: None. **J. Hartman:** None. **A. Nguyen:** None. **A. Patel:** None. **M. Marshall:** None. **J. Garmey:** None. **C. McNamara:** None.

741

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

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742

Butyrate Protects Against Endothelial Dysfunction Through Ppar-delta

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Q. Tian: None. **F. Leung:** None. **F.M. Chen:** None. **X. Tian:** None. **G. Tse:** None. **W. Wong:** None.

743

Statin Use is Independently Associated with Premature Mortality, Cardiovascular-specific Mortality and Cardiovascular Events in Renal Transplant Recipients

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744

Target Lesion Preparation Improves Outcomes of Atheroprotective Plasmonic Photothermal Therapy with Noble Metal Nanoparticles

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A.N. Kharlamov: None.

745

Inhibition of Acid Sphingomyelinase Reduces High Fat Diet-Induced Hyperlipidemia, Insulin Resistance and Atherosclerosis in LDL Receptor-Deficient Mice

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746

Effects of Catalase Overexpression on Advanced Atherosclerotic Plaque Composition

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B. Cangut: None. **M.A. Hagler:** None. **C.M. Roos:** None. **H. Zhang:** None. **B. Zhang:** None. **J. Zhao:** None. **B.B. Roos:** None. **J.D. Miller:** None.

747

Using the Wifi Classification System in No-option Patients With Chronic Limb-Threatening Ischemia

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748

β_3 -Adrenergic Receptor Stimulation Enhances bFGF-Induced Migration and Proliferation of Aortic Smooth Muscle Cells in Rat

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749

Igg1 Antibodies Against Phosphorylcholine are Associated With Protection in Systemic Lupus Erythmatosus and Atherosclerosis: Potential Underlying Mechanisms

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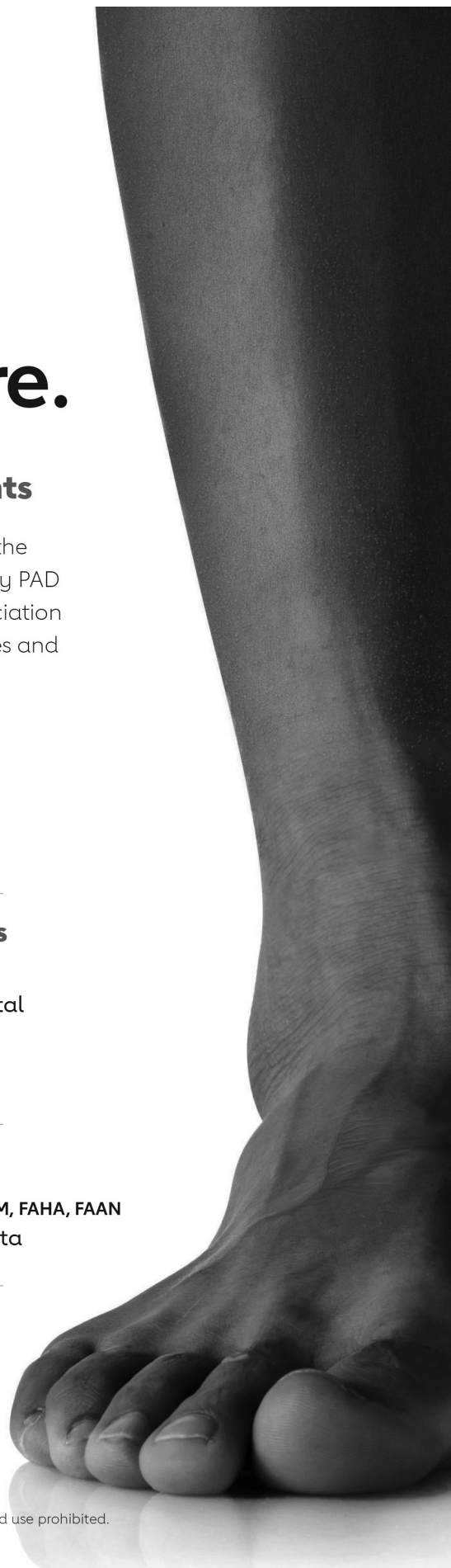
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