



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.



MASSACHUSETTS
GENERAL HOSPITAL



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

**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.

Contents

Abstracts	
Abstracts	33
Author Index	90
Abstract Topic List	33
Conference Highlights	
Early Career Activities.....	13
Lectures and Awards	15
Faculty	
Abstract Reviewers	8
Invited Moderators	7
Invited Presenters	6
Program Committee.....	5
General Information	10
Learning Objectives.....	10
Exhibits	10
Information for Presenters	
Speaker Resource Room	12
Poster Set-up/Tear-Down Schedule	12
ePosters	12
Policy Information	20
Program at a Glance.....	2
Program Agenda	
Tuesday, May 14	21
Wednesday, May 15.....	25
Thursday, May 16.....	31
Room Locator	9
Ticketed Events	
Joint Council Dinner	14
Mentor of Women Luncheon.....	14
Next Generation Technology Bootcamp	14

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	Registration, Continental Breakfast, Exhibits	
7:30 AM		Early Career Training Session 1	Early Career Training Session 2	7:30-8:30 AM SDG/CDA Showcase
8:00 AM	8:00 AM-7:00 PM	8:00-10:00 AM	8:00-9:30 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	8:30-10:30 AM Poster Session and Continental Breakfast
9:00 AM			9:30-10:00 AM Speakers Corner/Break/Exhibits	
9:30 AM				
10:00 AM	Separate registration required	10:00-10:30 AM Speakers Corner/Break/Exhibits	10:00-11:45 AM Concurrent Session III	
10:30 AM		10:30 AM-12:15 PM 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	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 Plenary Session V Invited Lecture Series Hoeg Award Lecture Keynote Lecture Distinguished Lecture
11:30 AM			11:45 AM-1:00 PM Next-Generation Technology Bootcamp: Single Cell Sequencing	
12:00 PM		12:00-6:00 PM KinMet	Session sponsored by the ATVB Early Career Committee and the Diversity Committee	Noon Closing Remarks/ Adjourn
12:30 PM			11:45 AM-1:45 PM Or lunch on your own	
1:00 PM	1:00-6:00 PM CAAC-CSVM Symposium and China Night Separate registration required	PVD Annual Business Meeting and Networking Luncheon 12:15-1:45 PM The Mentor of Women Award Luncheon 12:15-2:15 PM Or lunch on your own		1:00-7:00 PM 8:00 AM-Noon HDL Structure- Function Workshop Separate registration required
1:30 PM			1:45-3:45 PM	
2:00 PM		2:15-3:45 PM	Plenary Session IV	
2:30 PM		Plenary Session II: Highlights from the ATVB Journal	Young Investigator Award Competition – Brinkhous Prize and Page Award	
3:00 PM				
3:30 PM		3:45-4:15 PM	3:45-4:15 PM	
4:00 PM		Refreshment Break/Exhibits	Refreshment Break/Exhibits	
4:30 PM		4:15-6:00 PM	4:15-6:00 PM	
5:00 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	
5:30 PM				
6:00 PM		6:00-8:00 PM	6:00-8:00 PM	
6:30 PM		Poster Session 1 and Reception Sponsored by the ATVB Journal	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 (ticket required)	
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

Email scientificconferences@heart.org

Website professional.heart.org

For information on upcoming American Heart Association Scientific Conferences, visit professional.heart.org

To access a schedule of future conferences sponsored by AHA, follow these simple steps:

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



Professional Membership Customer Service

Lippincott Williams & Wilkins

Telephone 800.787.8984 (inside the United States)
 301.223.2307 (outside the United States)

Fax 301.223.2327

Email ahaonline@lww.com

Join the American Heart Association as a Professional Member

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

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

Lars Maegdefessel, MD, PhD, Conference Vice Chair, Technical University Munich, Munich, Germany

Luke P. Brewster, MD, PhD, FAHA, Emory University, Atlanta, Georgia

Yabing Chen, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama

Scott M. Damrauer, MD, University of Pennsylvania, Philadelphia, Pennsylvania

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

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

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

Delphine A. Gomez, PhD, University of Pittsburgh, Pittsburgh, Pennsylvania

Isabella Grumbach, MD, University of Iowa, Carver College of Medicine, Iowa City, Iowa

Naomi M. Hamburg, MD, FAHA, Boston University, Boston, Massachusetts

Peter Henke, MD, FAHA, University of Michigan, Ann Arbor, Michigan

Ngan F. Huang, PhD, FAHA, Stanford University, Stanford, California

Steven R. Lentz, MD, PhD, FAHA, University of Iowa, Iowa City, Iowa

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

Coleen A. McNamara, MD, FAHA, University of Virginia, Charlottesville, Virginia

Sanjay Misra, MD, FAHA, Mayo Clinic, Rochester, Minnesota

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

Manuel F. Navedo, PhD, University of California-Davis, Davis, California

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

A. Phillip Owens, PhD, University of Cincinnati, Cincinnati, Ohio

Aruna Pradhan, MD, MPH, FAHA, Brigham and Women's Hospital, Boston, Massachusetts

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

Babak Razani, MD, Washington University School of Medicine, St. Louis, Missouri

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

Alan T. Remaley, MD, PhD, FAHA, NIH/NHLBI, Bethesda, Maryland

Gissette Reyes-Soffer, MD, Columbia University Medical Center, New York, New York

Kerry Anne Rye, PhD, FAHA, University of New South Wales, Kensington, NSW, Australia

Nalini Santanam, PhD, FAHA, Marshall University School of Medicine, Huntington, West Virginia

Oliver Soehnlein, MD, PhD, German Center for Cardiovascular Research, Munich, Germany

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

Philip S. Tsao, PhD, Stanford University School of Medicine and VA Palo Alto Health Care System, Stanford, California

Thomas A. Vallim, PhD, University of California-Los Angeles, Los Angeles, California

Miao Wang, PhD, Chinese Academy of Medical Sciences, Beijing, China

Thomas Wang, MD, FAHA, Vanderbilt University, Nashville, Tennessee

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

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

Dennis Wolf, MD, University Heart Center Freiburg, Freiburg, Germany

Invited Presenters

Joshua Beckman, MD, FAHA, Vanderbilt University Medical Center, Nashville, Tennessee
Ivor J. Benjamin, MD, FACC, FAHA, Medical College of Wisconsin and President, American Heart Association
Joel Boerckel, PhD, University of Pennsylvania, Philadelphia, Pennsylvania
Marc Bonaca, MD, MPH, University of Colorado, Aurora, Colorado
David Cappel, BA, Vanderbilt University Medical Center, Nashville, Tennessee
Lisa Cassis, PhD, University of Kentucky, Lexington, Kentucky
Jeff Chen, BS, University of Kentucky, Lexington, Kentucky
Yabing Chen, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama
Henry Cheng, PhD, Brigham and Women's Hospital, Boston, Massachusetts
Alan Daugherty, PhD, FAHA, University of Kentucky, Lexington, Kentucky
Anne Eichmann, PhD, Yale University School of Medicine, New Haven, Connecticut
Carlos Fernández-Hernando, PhD, Yale University School, New Haven, Connecticut
Katherine A. Gallagher, MD, FAHA, University of Michigan, Ann Arbor, Michigan
Cecilia Giachelli, PhD, University of Washington, Seattle, Washington
Delphine A. Gomez, PhD, University of Pittsburgh, Pittsburgh, Pennsylvania
Rebecca A. Haeusler, PhD, Columbia University, New York, New York
Siddhartha Jaiswal, MD, PhD, Stanford University, Stanford, California
Michael J. Joyner, MD, Mayo Clinic, Rochester, Minnesota
Sekar Kathiresan, MD, FAHA, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts
Rosandra N. Kaplan, MD, National Cancer Institute, Bethesda, Maryland
Rebecca Levit, MD, Emory University, Atlanta, Georgia
Emma Lundberg, PhD, Stanford University, Stanford, California and KTH Royal Institute of Technology and Uppsala University, Stockholm, Sweden
Christopher P. Mack, PhD, University of North Carolina School of Medicine, Chapel Hill, North Carolina
Julia J. Mack, PhD, University of California Los Angeles, Los Angeles, California
Nigel Mackman, PhD, FAHA, University of North Carolina School of Medicine, Chapel Hill, North Carolina
Calum A. MacRae, MD, PhD, FAHA, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts
Ziad Mallat, MD, PhD, University of Cambridge, Cambridge, United Kingdom
Alan E. Mast, MD, PhD, Blood Center of Wisconsin, Milwaukee, Wisconsin
Mary McDermott, MD, FAHA, Northwestern University, Chicago, Illinois
Francis Miller, MD, FAHA, Duke University, Durham, North Carolina
Kathryn J. Moore, PhD, FAHA, New York University Medical Center, New York, New York
Craig Morrell, DVM, PhD, University of Rochester, Rochester, New York
Andrew J. Murphy, PhD, Baker Heart and Diabetes Institute, Melbourne, Australia
Elizabeth G. Nabel, MD, Harvard University, Boston, Massachusetts
Keith B. Neeves, PhD, Colorado School of Mines, Golden, Colorado
Katya Ravid, MD, PhD, Whitaker Cardiovascular Institute, Boston University School of Medicine, Boston, Massachusetts
Katey Rayner, PhD, FAHA, University of Ottawa Heart Institute, Ottawa, Ontario, Canada
Sunil Saini, PhD, University of Florida, Gainesville, Florida
Vijay G. Sankaran, MD, PhD, Harvard Medical School, Harvard Stem Cell Institute, Boston, Massachusetts
Oliver Soehnlein, MD, PhD, University of Munich, Munich, Germany
Peter Tontonoz, MD, PhD, UCLA, Howard Hughes Medical Institute, Los Angeles, California
Jeffrey Zwicker, MD, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts

Invited Moderators

Chantal Boulanger, PharmD, PhD, Cardiovascular Research Center HEGP, Inserum U-970, Paris, France
Luke P. Brewster, MD, PhD, FAHA, Emory University, Atlanta, Georgia
Hugo Ten Cate, MD, PhD, FAHA, Maastricht University, Maastricht, Netherlands
Yabing Chen, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama
Jane E. Freedman, MD, FAHA, University of Massachusetts Medical School, Worcester, Massachusetts
Delphine A. Gomez, PhD, University of Pittsburgh, Pittsburgh, Pennsylvania
Rebecca A. Haeusler, PhD, Columbia University, New York, New York
Peter Henke, MD, FAHA, University of Michigan, Ann Arbor, Michigan
Jing Li, PhD, University of Illinois at Chicago, Chicago, Illinois
Hong S. Lu, MD, PhD, FAHA, University of Kentucky, Lexington, Kentucky
Christopher P. Mack, PhD, University of North Carolina School of Medicine, Chapel Hill, North Carolina
Lars Maegdefessel, MD, PhD, Conference Vice Chair, Technical University Munich, Munich, Germany
Kathleen A. Martin, PhD, Yale University, New Haven, Connecticut
Alan E. Mast, MD, PhD, Blood Center of Wisconsin, Milwaukee, Wisconsin
Coleen A. McNamara, MD, FAHA, University of Virginia, Charlottesville, Virginia
Francis J. Miller, MD, FAHA, Duke University School of Medicine, Durham, North Carolina
Craig Morrell, DVM, PhD, University of Rochester, Rochester, New York
Andrew J. Murphy, PhD, Baker Heart and Diabetes Institute, Melbourne, Australia
Kiran Musunuru, MD, PhD, MPH, FAHA, University of Pennsylvania, Philadelphia, Pennsylvania
Marvin T. Nieman, PhD, FAHA, Case Western Reserve University, Cleveland, Ohio
A. Phillip Owens, PhD, University of Cincinnati, Cincinnati, Ohio
Aruna Pradhan, MD, MPH, FAHA, Brigham and Women's Hospital, Boston, Massachusetts
Robert Raffai, PhD, University of California San Francisco, San Francisco, California
Katya Ravid, MD, PhD, Whitaker Cardiovascular Institute, Boston University School of Medicine, Boston, Massachusetts
Katey Rayner, PhD, FAHA, University of Ottawa Heart Institute, Ottawa, Ontario, Canada
Gisette Reyes-Soffer, MD, Columbia University Medical Center, New York, New York
Kerry Ann Rye, PhD, FAHA, University of New South Wales, Kensington, NSW, Australia
Oliver Soehnlein, MD, PhD, University of Munich, Munich, Germany
Mary G. Sorci-Thomas, PhD, FAHA, Medical College of Wisconsin, Milwaukee, Wisconsin
Peter Tontonoz, MD, PhD, UCLA, Howard Hughes Medical Institute, Los Angeles, California
Thomas A. Vallim, PhD, University of California-Los Angeles, Los Angeles, California
Nancy R. Webb, PhD, FAHA, Conference Chair, University of Kentucky, Lexington, Kentucky
Randal J. Westrick, PhD, Oakland University, Rochester, Michigan
Alisa Wolberg, PhD, FAHA, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
Dennis Wolf, MD, University Heart Center Freiburg, Freiburg, Germany



Abstract Reviewers

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

Jun-ichi Abe	Ngan F. Huang	Bhama Ramkhelawon
Michael Autieri	Murray W. Huff	Katey Rayner
Matthias Barton	Ion S. Jovin	Babak Razani
Reinier Boon	Thorsten Kessler	Catherine Reardon
Dennis Bruemmer	Victoria L. King	Muredach P. Reilly
Lisa A. Cassis	Ekaterina Koltsova	Gisette Reyes-Soffer
Anil K. Chauhan	Jean-Pyo Lee	Anand Rohatgi
Yabing Chen	Stephanie Lehoux	Kerry Anne Rye
Edward M. Conway	Steven R. Lentz	Nalini Santanam
Alan Dardik	Zhenyu Li	Preetha Shridas
Alan Daugherty	Hong Lu	Oliver Soehnlein
W. Sean Davidson	Christopher P. Mack	Mary G. Sorci-Thomas
Mark G. Davies	Ziad Mallat	Filip K. Swirski
Xiaoping Du	Kathleen A. Martin	Lisa Tannock
William P. Fay	Alan E. Mast	Elizabeth J. Tarling
Sergio Fazio	Francis J. Miller	Hagai Tavori
Maria Febbraio	Jordan D. Miller	Peter Tontonoz
Aloke V. Finn	Sumitra Miriyala	Dwight A. Towler
Gabrielle Fredman	Craig Morrell	Bernado L. Trigatti
Jane E. Freedman	Andrew Murphy	Thomas A. Vallim
Mahdi O. Garelnabi	Kiran Musunuru	Eric P. van der Veer
Norbert Gerdes	Rama Natarajan	Hong Wang
Delphine A. Gomez	Manuel F. Navedo	Miao Wang
Ming C. Gong	Marvin T. Nieman	Jeffrey I. Weitz
Isabella M. Grumbach	Anthony Wayne Orr	Geoff H. Werstuck
Zhenheng Guo	A. Phillip Owens	Randal J. Westrick
Rebecca Haeusler	John S. Parks	Holger Winkels
Milton H. Hamblin	Urvish K. Patel	Alisa S. Wolberg
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.



Wolters Kluwer

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

WEBSITE

www.ahajournals.org/journal/atvb

MANUSCRIPT SUBMISSION SITE

atvb-submit.aha-journals.org

PUBLISHING METRICS

www.ahajournals.org/metrics



Annual Early Career Awards and Cover Art Contest

Now Publishing Visual Abstracts

Open Access Options for Original Research

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
--------------------------------	------------------------------------	--------------------------------------	-----------------------------------

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	6:00-8:00 PM	6:00-8:00 PM	11:00 AM-5:30 PM	8:00-9:30 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-12:30 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).



WILEY

JAHA — Journal of the American Heart Association



16 Days to First Decision. Rapid online publication of accepted articles after payment of the Article Publication Charge.



AHA's Open Access, Online-Only Journal. All articles are free to read, download, and share. You retain copyright for noncommercial use of your article and are fully compliant with Open Access mandates.



The Journal's Impact Factor Is 4.450, which ranks *JAHA* 36 among 128 journals in the Cardiac & Cardiovascular subject category (2017 Journal Citation Reports Science Edition, Clarivate Analytics, 2018).



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 Ramkhalawon, 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.

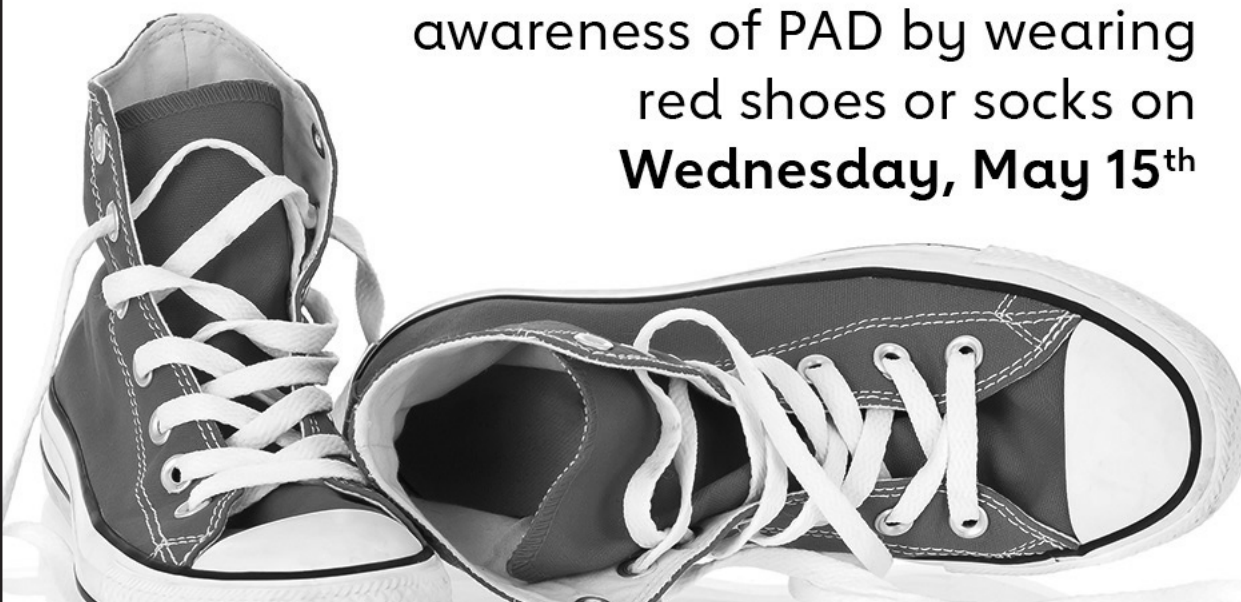
Twitter

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 A/V materials and of poster presentations and supporting poster materials.

Science information shared by investigators during a meeting is confidential and often unpublished data. Taking photos of or recording the content of meeting room slides is also prohibited and is considered intellectual piracy and unethical. Attendees who ignore this policy will be asked to leave the educational session and are at risk of losing their badge credentials.

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

No Smoking Policy

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

Seating/Badge Requirement

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

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



Americans with Disabilities Act (ADA)

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

Please Note: The American Heart Association shall not be liable for cancellation of the Vascular Discovery 2019 Scientific Sessions caused by labor strikes, civil disorders, fires, weather conditions or other acts of God for any damages or losses resulting from such cancellations.

Program Agenda

TUESDAY, MAY 14

7:00 AM

Fourth Floor Atrium

Registration, Continental Breakfast and Exhibits

7:00–8:00 AM

Grand Ballroom Salons A-D

Early Career Training Session 1

*Organized in cooperation with the
ATVB Early Career Committee*

Getting Your First Grant: Insights from Study Section

Cynthia St. Hilaire, PhD, University of Pittsburgh,
Pittsburgh, Pennsylvania

Thomas Vallim, PhD, UCLA, Los Angeles, California

Building a Successful International Research Program

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

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

**Clinical Practice and Research Lab Management:
A Balancing Act**

Nick Leeper MD, Stanford University,
Stanford, California

Uwe Raaz, MD, Universitätsmedizin Göttingen,
Göttingen, Germany

**Hit the Ground Running: Setting Up Your Lab
and Hiring**

Alison B. Kohan, PhD, University of Connecticut,
Storrs, Connecticut

Mireille Ouimet, PhD, University of Ottawa, Ottawa,
Ontario, Canada

The Importance of Mentoring and Being Mentored

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

Eric P. van der Veer, PhD, Leiden University
Medical Center, Leiden, Netherlands

Career Transition Awards

Alicia N. Lyle, PhD, Emory University, Atlanta, Georgia

Genesio Karere, PhD, Wake Forest School of
Medicine, Winston-Salem, North Carolina

Milka Koupenova-Zamor, PhD, University of
Massachusetts Medical School, Worcester,
Massachusetts

Work-Life Balance in Science

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

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

Transitioning to Industry

Cynthia Hong, PhD, Novartis,
Cambridge, Massachusetts

Rachel Roth Flach, PhD, Pfizer, Inc.,
Cambridge, Massachusetts

8:00–8:30 AM

Grand Ballroom Salons E-G

Conference Opening Welcome

Ivor J. Benjamin, MD, FACC, FAHA, Medical College
of Wisconsin, Milwaukee, Wisconsin and

President, American Heart Association

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

8:30–10:00 AM

Grand Ballroom Salons E-G

Plenary Session I

**Innovative Methods in Vascular Discovery
(Go Red for Women Session)**

Moderators:

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

Thomas A. Vallim, PhD, University of California-
Los Angeles, Los Angeles, California

8:30 **Dissecting the Spatiotemporal Subcellular
Organization of the Human Proteome**

Emma Lundberg, PhD, Stanford University, Stanford,
California and KTH Royal Institute of Technology and
Uppsala University, Stockholm, Sweden

9:00 **Sex Differences in Vascular Diseases**

Lisa Cassis, PhD, University of Kentucky,
Lexington, Kentucky

9:30 **Genetic Studies of Blood Production and Disease**

Vijay G. Sankaran, MD, PhD, Harvard Medical
School, Harvard Stem Cell Institute, Boston,
Massachusetts

10:00–10:30 AM

Fourth Floor Atrium

Speakers Corner, Break and Exhibits

10:30 AM–12:15 PM

Grand Ballroom Salon E

Concurrent Session I A

**Molecular and Cellular Mechanisms of
Atherosclerosis**

Moderators:

Oliver Soehnlein, MD, PhD, University of Munich,
Munich, Germany

Coleen A. McNamara, MD, FAHA, University of
Virginia, Charlottesville, Virginia

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
Milesssa 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, Inserm U-970, Paris, France

Hong S. Lu, MD, PhD, FAHA, University of Kentucky, Lexington, Kentucky

2:15 *ATVB* Journal Report

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

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

5:30 **Acute Liver-Specific Deletion of HMG-CoA Reductase Results in Depletion of Essential Isoprenoids and ER Stress**
Marco De Giorgi, Kelsey E. Jarrett, Jason C. Burton, 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**
Diego Lucero, NHLBI-NIH, Bethesda, MD; Michael Mendelson, Boston Children's Hosp, Dept of Cardiology., Boston, MA; Promotto Islam, Lita A. Freeman, Edward B. Neufeld, Jingrong Tang, Christian Combs, Yuesheng Li, Alan T. Remaley, NHLBI-NIH, Bethesda, MD

4:15-6:00 PM

Grand Ballroom Salon F

Concurrent Session II B

Vascular Cells, Inflammation and Thrombosis

Moderators:

Craig Morrell, DVM, PhD, University of Rochester, Rochester, New York

Dennis Wolf, MD, University Heart Center Freiburg, Freiburg, Germany

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

Oral Abstract Presentations

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

118

Karen Ridge, Northwestern Univ, Chicago, IL; Denisa Wagner, Boston Childrens Hosp, Boston, MA

5:00 **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

119

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

120

5:30 **Neuropilin1 and PIGF/VEGF-B: a Novel Neuroimmune Pathway Involved in Angiotensin II-Induced Hypertension and Target Organ Damage**
Daniela Carnevale, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy; Daniele Iodice, IRCCS Neuromed, Pozzilli, Italy; Sara Perrotta, Sapienza Univ, Pozzilli, Italy; Fabio Pallante, Roberta Iacobucci, Giuseppe Cifelli, IRCCS Neuromed, Pozzilli, Italy; Giuseppe Lembo, Sapienza Univ and IRCCS Neuromed, Pozzilli, Italy

121

5:45 **Macrophage-dependent Lymphangiogenesis and Antigen Trafficking After Experimental Myocardial Infarction**
Kristofor E. Ginton, Wanshu Ma, Xin Yi Yeap, Lubov S. Grigoryeva, Xiaolei Liu, Guillermo Oliver, Edward B. Thorp, Northwestern Univ, Chicago, IL

122

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)

- | | | | |
|---|----------------------------------|---|--|
| <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 Alfrie, 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> |
|---|----------------------------------|---|--|

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

WEDNESDAY

Program Agenda (continued)

WEDNESDAY

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. Lusis, Univ California Los Angeles, Los Angeles, CA; Federico E. Rey, Univ Wisconsin Madison, Madison, WI

11:20 **Trans-thrombus Leukocyte Migration: A Novel Mode of Neutrophil Extravasation Following Vascular Injury** 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 Tgfb β 1 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

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

Program Agenda (continued)

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; Sunghye 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, Georgia 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; Rikio 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** 161
 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** 162
 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

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

WEDNESDAY/THURSDAY



American
Heart
Association.

Membership provides you...

- Savings on registraion for AHA Scientific Meetings
- The opportunity to apply for AHA research grants (only members can apply)
- Savings on OnDemand Sessions and Stroke programs
- Access to all 11 AHA scientific journals online
- 50+ opportunities annually for networking
- Complimentary/discounted online education offerings for CME/CE credit
- The path to becoming a Fellow of the American Heart Association (FAHA)
- Volunteer opportunities such as becoming peer reviewers, journal reviewers and more!

Learn more and join us at
professional.heart.org/membership

Abstract Topic List

Aortic Aneurysm Disease

Oral Abstracts: 127, 140, 141, 149

Poster Abstracts: 254, 255, 256, 258, 259, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 446, 448, 449, 450, 452, 453, 454, 455, 456, 457, 458, 459, 460, 463, 496 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 654, 655, 656

Apolipoproteins, Lipoproteins and Lipid Metabolism

Oral Abstracts: 113, 114, 115, 116, 117, 147, 155

Poster Abstracts: 327, 328, 329, 330, 331, 332, 333, 335, 336, 338, 339, 340, 341, 342, 343, 484, 497, 498, 499, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 676, 677, 678, 679, 680, 681, 682, 684, 685, 686, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 700, 701, 702, 703, 704, 705

Blood Coagulation and Antithrombotic Therapy

Oral Abstracts: 119, 130, 131, 132, 143, 144, 146, 158

Poster Abstracts: 279, 280, 281, 476, 477, 478, 660, 661, 662, 663

Cardiovascular Precision Medicine

Oral Abstracts: 154, 161

Poster Abstracts: 189, 190, 191, 192, 363, 364, 365, 366, 367, 565, 566, 567, 568, 569, 570

Genomics, Epigenomics, and Stem Cells in Vascular Disease

Oral Abstracts: 105, 162

Poster Abstracts: 198, 199, 200, 201, 202, 203, 374, 375, 376, 377, 378, 379, 576, 577, 580, 582, 583

Immune Mechanisms of Atherosclerosis

Oral Abstracts: 101, 102, 148, 151

Poster Abstracts: 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 706, 707, 708, 709, 710, 711, 712, 713

Immunity and Inflammation in Vascular Biology

Oral Abstracts: 120, 121, 122, 124, 128, 142, 159

Poster Abstracts: 221, 222, 223, 224, 225, 226, 227, 228, 230, 231, 232, 233, 276, 337, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 419, 421, 422, 423, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613

Inflammation and Hemostasis

Oral Abstracts: 118, 129, 137, 145

Poster Abstracts: 285, 286, 287, 288, 479, 481, 482, 483, 670, 671, 672, 673, 675

Metabolic Disorders and Atherosclerosis

Oral Abstracts: 152

Poster Abstracts: 290, 291, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 490, 491, 492, 493, 494, 495, 526, 527, 528, 529, 530, 531, 532, 533, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724

Molecular and Cellular Mechanisms of Atherosclerosis

Oral Abstracts: 100, 103, 104, 109, 150, 153

Poster Abstracts: 303, 304, 306, 307, 308, 309, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 534, 535, 536, 537, 539, 540, 541, 542, 543, 544, 546, 547, 548, 549, 551, 553, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742

Molecular, Developmental, and Cellular Biology of Vessel Wall

Oral Abstracts: 106, 107, 108

Poster Abstracts: 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 277, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 598

Peripheral Artery Disease, Carotid Artery Disease and Stroke

Oral Abstracts: 133, 135, 138, 139

Poster Abstracts: 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 249, 250, 251, 252, 253, 425, 426, 427, 428, 429, 430, 431, 432, 433, 435, 436, 437, 439, 440, 442, 443, 444, 445, 461, 462, 620, 621, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639

Platelet Production, Signaling and Function

Oral Abstracts: 156, 157, 160

Poster Abstracts: 283, 284, 554, 555

Population Science, Genetics, and Genomics in Vascular Discovery

Poster Abstracts: 193, 194, 195, 196, 197, 368, 369, 370, 371, 372, 373, 571, 572, 573, 574, 575

Therapeutic Targets in Atherosclerosis

Oral Abstracts: 123, 125, 126, 136

Poster Abstracts: 356, 357, 358, 359, 360, 361, 556, 557, 558, 559, 560, 561, 743, 744, 745, 746, 747, 748, 749

Venous Thromboembolism and Lymphatic Disease

Oral Abstracts: 110, 111, 112, 134

Poster Abstracts: 271, 272, 273, 274, 275, 278, 471, 472, 474, 475, 657, 658

Oral Abstracts

100

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

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, Seunghye 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- β 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 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 Univrio 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.

114

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, Roberts 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.

115

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
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
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
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
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 Ginton, Wanshu Ma, Xin Yi Yeap, Lubov S Grigoryeva, Xiaolei Liu, Guillermo Oliver, Edward B Thorp, Northwestern Univ, Chicago, IL
K.E. Ginton: 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
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
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
Li-Hsien Lin, **William H Thiel**, Univ of Iowa, Div of Cardiovascular Med, Iowa City, IA
L. Lin: None. **W.H. Thiel:** None.

126

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

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

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

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

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 Autonomus Mechanism

Jinglian Yan, Guodong Tie, Amanda Tutto, Kate Hayes, Lyne Khair, Louis Messina, UMass Medical school, Worcester, MA

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

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

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. Mausekapp, 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. Mausekapp:** 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

Kazuyuki Kasahara, Qijun Zhang, Eugenio I Vivas, Univ Wisconsin Madison, Madison, WI; Aldons J Lusis, Univ California Los Angeles, Los Angeles, CA; Federico E Rey, Univ Wisconsin Madison, Madison, WI

K. Kasahara: None. **Q. Zhang:** None. **E.I. Vivas:** None. **A.J. Lusis:** None. **F.E. Rey:** None.

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

Akm Wara, Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA

A. Wara: None.

139

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

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

Xiaoyan Qi, Guannan Zhou, Fen Wang, Gilbert R Upchurch Jr, Zhihua Jiang, Univ of Florida, Gainesville, FL

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*

Lacramioara Ivanciu, Valder Arruda, Rodney M Camire, Children's Hosp of Philadelphia / Univ of Pennsylvania, Philadelphia, PA

L. Ivanciu: None. **V. Arruda:** None. **R.M. Camire:** None.

145

Extended Stability of Activated TAFI Normalizes Vascular Dysfunction in Hemophilic Joint Disease in Mice

Tine Wyseure, Ruchi Agashe, The Scripps Res Inst, La Jolla, CA; Annette von Drygalski, Univ of California, San Diego, La Jolla, CA; Scott Henderson, Laurent O Mosnier, The Scripps Res Inst, La Jolla, CA

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

Ze Zheng, Ira Tabas, Columbia Univ Medical Ctr, New York City, NY

Z. Zheng: None. **I. Tabas:** None.

147

ApoC-III Stimulates Intestinal Regulatory T Cells and Intestinal Tolerance: Is Lipoprotein Triglyceride a Critical Regulator of Tregs?

Alison B Kohan, Univ of Connecticut, Storrs, CT

A.B. Kohan: None.

148

Key Role of Cytokines in Regulation of Intestinal Microbial Homeostasis, Inflammation and Atherosclerosis
Aliia Fatkhullina, Iulia 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 Ramkhalawon**, NYU Medical Ctr, New York, NY
L. Boytard: None. **T. Hadi:** None. **G. Miller:** None. **L. Zangi:** None. **B. Ramkhalawon:** 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 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
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. Collier:** 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.

153

Macrophage-derived 27-hydroxycholesterol Promotes Atherosclerosis by Activating Endothelial Inflammation via ERα, Septin 11, and Jnk Kinase
Linzhang Huang, Lin Xu, Mohamed Ahmed, Bonne Thompson, Jeffrey McDonald, Univ of Texas Southwestern ME, Dallas, TX; Erik Nelson, Univ of Illinois at Urbana-Champaign, Urbana, IL; Sunghee Park, Donald P McDonnell, Duke Univ Sch of Med, Durham, NC; Chieko Mineo, Philip W Shaul, Univ of Texas Southwestern ME, Dallas, TX
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
Myungsuk Kim, Erik Gertz, Alexa Rindy, Excel Que, Nazmul Huda, Brian Bennett, USDA-ARS, Davis, CA
M. Kim: None. **E. Gertz:** None. **A. Rindy:** None. **E. Que:** None. **N. Huda:** None. **B. Bennett:** None.

155

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

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.

157

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; Yiping 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

Qing Li, Tao You, Li Zhu, Soochow Univ, Suzhou, China

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

159

The Role of Platelets in Response to Human Influenza Infection

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

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.

160

Mitogen Activation Protein Kinase-interacting Kinase 1 Regulates Platelet Production and Activation

Bhanu Kanth Manne, Robert Campbell, Elizabeth Middleton, Seema Bhatlaker, Univ of Utah, Salt Lake City, UT; Rikio 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.

161

Blood Progenitor Endothelial Cells-on-a-chip: A Disease and Patient-specific Cell Source for Vascular Medical Devices

Tanmay Mathur, Texas A&M Univ, College Station, TX;

Travis W Hein, Texas A&M Health Science Ctr, Temple, TX;

Jonathan D Flanagan, Baylor Coll of Med, Houston, TX;

Abhishek Jain, Texas A&M Univ, College Station, TX

T. Mathur: None. **T.W. Hein:** None. **J.D. Flanagan:** None. **A. Jain:** None.

162

Human Genetics in Vascular Mechanotransduction and Metabolism

Matthew Krause, Univ of Chicago, Chicago, IL; Mete Civelek,

Univ of Virginia, Charlottesville, IL; Casey Romanoski, Univ of

Arizona, Tucson, AZ; **Yun Fang**, Univ of Chicago, Chicago, IL

M. Krause: None. **M. Civelek:** None. **C. Romanoski:** None.

Y. Fang: None. 170

Extracellular Vesicles Secreted by Atherogenic Macrophages Transfer microRNA to Inhibit Cell Migration

Katey Rayner, PhD, University of Ottawa Heart Institute, Ottawa, Ontario, Canada, for her paper:

Daniel Steinberg Early Career Investigator Award in

Arteriosclerosis/Lipoproteins

Poster Abstracts

Poster Session 1 Abstracts

ATVB Journal Awardees

170

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

171

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

172

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

2019 Junior Investigator Award for Women Finalists

173

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

174

Na⁺-H⁺ Exchanger 1 Determines Atherosclerotic Lesion Acidification and Promotes Atherogenesis
Cong-Lin Liu, Xian Zhang, Brigham and Women's Hosp, Boston, MA; Matthias Nahrendorf, Ctr for Systems Biology, Massachusetts General Hosp, Boston, MA; Samuel Achilefu, Mallinckrodt Inst of Radiology, Washington Univ Sch of Med, St. Louis, MO; Peter Libby, Guo-Ping Shi, Brigham and Women's Hosp, Boston, MA
C. Liu: None. **X. Zhang:** None. **M. Nahrendorf:** None. **S. Achilefu:** None. **P. Libby:** None. **G. Shi:** None.

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

178

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

179

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

180

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

181

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

182

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

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

Mahdi Abdollahi-karizno, Naeem Ravanbakhsh, Neda Partovi, Toba Kazemi, Birjand Univ of Medical Sciences, Birjand, Iran, Islamic Republic of

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

P. Nogales: None. **C. Velasco**: None. **L. González-Cintado**: None. **A. Mota-Cobián**: None. **J. Mateo**: None. **S. España**: None. **J.F. Bentzon**: None.

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

K.A. Omalley: None. **J. Rozowsky**: None. **G. Shan**: None. **S. Barbey**: None. **Q. Hu**: None. **T. Huber**: None. **S. Berceli**: None. **S. Scali**: None.

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

Sabahat Usmani, Sami Alam, Amer Suleman, The Heartbeat Clinic, McKinney, TX

S. Usmani: Other Research Support; Modest; Other Research Support; Modest; Invitae Genetic Tests were Sponsored by Alnylam Pharmaceuticals, Inc.. **S.B. Alam**: None. **A. Suleman**: Other Research Support; Modest; Invitae Genetic Tests were Sponsored by Alnylam Pharmaceuticals, Inc..

198

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

L.W. Koblan: None. **S.P. Doherty**: None. **J.M. Levy**: None. **M.R. Erdos**: None. **F.S. Collins**: None. **C.Y. Lin**: None. **D.R. Liu**: None. **J.D. Brown**: None.

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

Poster Abstracts (continued)

H.A. Burr: None. **L. Pilote:** None. **A. Cheema:** None. **L. Dufresne:** None. **H. Chen:** None. **G. Thanassoulis:** None. **J.C. Engert:** None.

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

J. Lee: None. **K. Henderson:** None. **M. Armenta-Ochoa:** None. **A. Veith:** None. **P. Maceda:** None. **E. Yoon:** None. **L. Samarneh:** None. **M. Wong:** None. **A. Dunn:** None. **A. Baker:** None.

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

L.B. Grimsley: None. **R.A. Dieter:** None. **J.D. Arnold:** None. **M.R. Buckley:** None. **M.M. McNally:** None. **M.B. Freeman:** None. **O.H. Grandas:** None. **D.J.H. Mountain:** None.

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

A. Behrmann: Research Grant; Significant; National Institutes of Health. **D. Zhong:** Research Grant; Significant; National Institutes of Health. **S. Cheng:** None. **L. Li:** Research Grant; Significant; National Institutes of Health. Other Research Support; Significant; American Diabetes Association. **M. Mead:** None. **B. Ramachandaran:** None. **M. Goodarzi:** None. **A. Lemoff:** None. **D.A. Towler:** Employment; Significant; UT Southwestern. Research Grant; Significant; National Institutes of Health. Other Research Support; Significant; American Diabetes Association.

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

Poster Abstracts (continued)

L. Matic: None. **S. Röhl:** None. **U. Rykaczewska:** None. **T. Seime:** None. **B. Suur:** None. **M. Gonzalez Diez:** None. **J.R. Gâdin:** None. **A.A. Sergushichev:** None. **R. Wirka:** None. **M. Lengquist:** None. **M. Kronqvist:** None. **O. Bergman:** None. **J. Odeberg:** None. **J.H.N. Lindeman:** None. **T. Quertermous:** None. **A. Hamsten:** None. **P. Eriksson:** None. **U. Hedin:** None. **A. Razuvaev:** None.

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

C. Canugovi: None. **M.D. Stevenson:** None. **A. Lozhkin:** None. **A.E. Vendrov:** None. **T. Hayami:** None. **L.G. Koch:** None. **S.L. Britton:** None. **N.R. Madamanchi:** None. **M.S. Runge:** None.

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

A. Carrizzo: None. **A. Damato:** None. **M. Ambrosio:** None. **M. De Lucia:** None. **F. Villa:** None. **C. Spinelli:** None. **A.A. Puca:** None. **C. Vecchione:** None.

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

S. Saeedi Saravi: None. **E. Eroglu:** None. **B. Steinhorn:** None. **T. Michel:** None.

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

V. Wong: None. **D. Hui:** None. **J. Matsuura:** None. **L. Wrenshall:** None.

222

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

Khalid Changel, 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

K. Changel: None. **R. Bashir:** None. **M. Sheikh:** None.

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, Jinzhou Medical Univ, Jinzhou, China; **Ming-Sheng Zhou,** Shenyang Medical Univ, Shenyang, China

X. Yang: None. **J. Huang:** None. **C. Tan:** None. **R. Cai:** None. **L. Huang:** None. **Z. Yang:** None. **Y. Liu:** None. **A. Wang:** None. **M. Zhou:** Research Grant; Modest; National Natural Science Foundation of China 81470532. Research Grant; Significant; National Natural Science Foundation of China 81670384.

Poster Abstracts (continued)

224

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

A. Glémain: None. **M. Néel:** None. **G. Andre-Gregoire:** None. **B. Martinet:** None. **R. Le Bloas:** None. **A. Néel:** None. **M. Hamidou:** None. **J. Gavard:** None. **F. Fakhouri:** None. **S. Bruneau:** None.

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

M.M. Xu: None. **A. Ménoret:** None. **S.E. Nicholas:** None. **S. Günther:** None. **E.J. Sundberg:** None. **B. Zhou:** None. **A. Rodriguez:** Ownership Interest; Significant; Lipid Genomics. Other; Significant; Licensed patents. **P.A. Murphy:** None. **A.T. Vella:** None.

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

M.C. Flynn: None. **M. Kraakman:** None. **M. Lee:** None. **C. Tikellis:** None. **H. Kammoun:** None. **N. Hanssen:** None. **R. Pickering:** None. **D. Dragoljevic:** None. **A. Al-Sharea:** None. **P. Nagareddy:** None. **M. Cooper:** None. **M. Thomas:** None. **A. Murphy:** None.

233

Methotrexate Attenuates Vascular Inflammation Through an Adenosine-microrna-181b Dependent Pathwayin 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

N. Arinze: None. **S. Richards:** None. **J. Walker:** None. **S. Yoo:** None. **C. Lyle:** None. **M. Napoleon:** None. **N. Rahimi:** None. **A. Farber:** None. **V. Chitalia:** None.

235

Inhibition of the Akt1-mTORC1 Axis Alters Venous Remodeling to Improve Arteriovenous Fistula Patency
Arash Fereydooni, Yale Sch of Med, New Haven, CT; Xiangjiang Guo, Dept of Vascular Surgery, Renji Hosp, Shanghai Jiaotong Univ, Shanghai, China; Toshihiko Isaji, Jolanta Gorecka, Shun Ono, Haidi Hu, Shirley Liu, Vascular Biology and Therapeutics Program, Yale Sch of Med, New Haven, CT; Naiem Nassiri, Section of Vascular and Endovascular Surgery, Dept of Surgery, Yale Univ Sch of Med, New Haven, CT; Lan Zhang, Dept of Vascular Surgery, Renji Hosp, Shanghai Jiaotong Univ, Shanghai, China; Alan Dardik, Section of Vascular and Endovascular Surgery, Dept of Surgery, Yale Univ Sch of Med, New Haven, CT
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.

236

The BD2 Domain of BRD4 is a Determinant in EndoMT and Vein Graft Neointima Formation
Mengxue Zhang, Cellular and Molecular Pathology graduate program, Sch of Med and Public Health, Univ of Wisconsin, Madison, WI; Bowen Wang, Go Urabe, Yitao Huang, Dept of Surgery, Coll of Med; Davis Heart and Lung Res Inst, Wexner Medical Ctr. The Ohio State Univ, Columbus, OH; Jorge Plutzky, Cardiovascular Div, Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA; K Craig Kent, Dept of Surgery, Coll of Med; Davis Heart and Lung Res Inst, Wexner Medical Ctr. The Ohio State Univ, Columbus, OH; Lian-wang Guo, Dept of Surgery and Dept of Physiology & Cell Biology, Coll of Med; Davis Heart and Lung Res Inst, Wexner Medical Ctr. The Ohio State Univ, Columbus, OH
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
Furqan Muqri, Mohammed Kassem, Alex Helkin, David Bruch, Kristopher G Maier, Vivian Gahtan, SUNY Upstate Medical Univ, Syracuse, NY
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
Patric Liang, Marisa Sewall, Navneet Momi, Beth Israel Deaconess Medical Ctr, Boston, MA; David Mooney, Harvard Univ, Boston, MA; Leena Pradhan-Nabzdyk, Frank LoGerfo, Beth Israel Deaconess Medical Ctr, Boston, MA
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
Joe Luis Pantoja, Esteban Aguayo, Peter A Pellionisz, Erik Dutson, Peter F Lawrence, David A Rigberg, Univ of California Los Angeles, Los Angeles, CA
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
Gale L Tang, VAPSHCS/Univ of Washington, Seattle, WA; Lei Wang, Michael Sobel, Univ of Washington, Seattle, WA; Thomas N Wight, Ingrid Harten, Benaroya Res Inst, Seattle, WA; Richard D Kenagy, Univ of Washington, Seattle, WA
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
Jacqueline Chevalier, John-Michael Arpino, Hao Yin, Caroline O'Neil, Zengxuan Nong, Robarts Res Inst, London, ON, Canada; Kevin Gilmore, Schulich Sch of Med & Dentistry, London, ON, Canada; Jason Lee, Emma Prescott, Robarts Res Inst, London, ON, Canada; Matthew Hewak, Charles L Rice, Schulich Sch of Med & Dentistry, London, ON, Canada; Luc Dubois, Adam H Power, London Health Sciences Ctr, London, ON, Canada; Douglas W Hamilton, Schulich Sch of Med & Dentistry, London, ON, Canada; J. Geoffrey Pickering, London Health Sciences Ctr, London, ON, Canada
J. Chevalier: None. **J. Arpino**: None. **H. Yin**: None. **C. O'Neil**: None. **Z. Nong**: None. **K. Gilmore**: None. **J. Lee**: None. **E. Prescott**: None. **M. Hewak**: None. **C.L. Rice**: None. **L. Dubois**: None. **A.H. Power**: None. **D.W. Hamilton**: None. **J. Pickering**: None.

243

Caspase-1 Mediates Muscle Fiber Typing and Functionality in Response to Ischemia
Ricardo J Ferrari, Xiangdong Cui, Abish Pius, Amrita Sahu, Sunita N Shinde, Fabrisia Ambrosio, Hong Liao, UPMC, Pittsburgh, PA; Melanie J Scott, Ulka Sachdev, UPMC, Pittsburgh, NY
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

Peter Kip, Ming Tao, Kaspar M Trocha, Brigham and Women's Hosp, Boston, MA; Michael R MacArthur, Sarah J Mitchell, Harvard T.H. Chan Sch of Public Health, Boston, MA; Suzannah Patterson, Brigham and Women's Hosp, Boston, MA; Jonathan Jung, Harvard T.H. Chan Sch of Public Health, Boston, MA; Paul H. Quax, Margreet R de Vries, Leiden Univ Medical Ctr, Leiden, Netherlands; James R Mitchell, Harvard T.H. Chan Sch of Public Health, Boston, MA; C. Keith Ozaki, Brigham and Women's Hosp, Boston, MA

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.

245

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

Peter Kip, Ming Tao, Kaspar M Trocha, Brigham and Women's Hosp, Boston, MA; Michael R MacArthur, Sarah J Mitchell, Jonathan Jung, Harvard T.H. Chan Sch of Public Health, Boston, MA; Paul H. Quax, Margreet R de Vries, Leiden Univ Medical Ctr, Leiden, Netherlands; Jay R Mitchell, Harvard T.H. Chan Sch of Public Health, Boston, MA; C Keith Ozaki, Brigham and Women's Hosp, Boston, MA

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

246

Mitochondrial Dysfunction in a Novel, *in vitro*, Cell-based Model of Intermittent Claudication

Panagiotis Koutakis, Ahmed Ismaeel, Evlampia Papoutsis, Florida State Univ, Tallahassee, FL; William T Bohannon, Robert S Smith, Baylor Scott and White Hosp, Temple, TX; Iraklis I Pipinos, George P Casale, Univ of Nebraska at Medical Ctr, Omaha, NE

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

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

Nikolai Harroun, Mohamed Zayed, Chao Yang, Clay Semenkovich, Luis Sanchez, Washington Univ in St. Louis, St. Louis, MO

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

Margreet R de Vries, Fabiana Baganha, Erna A Peters, Paul H Quax, LUMC, Leiden, Netherlands

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

Toshiki Kuno, Mount Sinai Beth Israel, NY, NY; Shohei Imaeda, Japanese Red Cross Ashikaga Hosp, Ashikaga, Japan; Keita Hirano, Kenji Hashimoto, Toshinobu Ryuzaki, Souichi Yokokura, Japanese Red Cross Ashikaga Hosp, Ashikaga, Japan; Tetsuya Saito, Mount Sinai Beth Israel, Japanese Red Cross Ashikaga Hospital, Japan; Hiroyuki Yamazaki, Japanese Red Cross Ashikaga Hosp, Ashikaga, Japan; Ryota Tabei, Japanese Red Cross Ashikaga Hosp., Ashikaga, Japan; Masaki Kodaira, Japanese Red Cross Ashikaga Hosp., NY, Japan; Hitoshi Anzai, Subaru Health Insurance Ota Memorial Hosp, Ota, Japan; Yohei Numasawa, Japanese Red Cross Ashikaga Hosp, Ashikaga, Japan

T. Kuno: None. **S. Imaeda:** None. **K. Hirano:** None. **K. Hashimoto:** None. **T. Ryuzaki:** None. **S. Yokokura:** None. **T. Saito:** None. **H. Yamazaki:** None. **R. Tabei:** None. **M. Kodaira:** None. **H. Anzai:** None. **Y. Numasawa:** None.

253

Seasonal Variation for Acute Limb Ischemia Related Hospitalizations

Ronak Gajendrakumar Soni, Univ of Toledo Medical Ctr, Toledo, OH; Smit Patel, Univ of Connecticut Medical Ctr, Hartford, CT; Mohit Pahuja, Detroit Medical Ctr/Wayne State Univ, Detroit, MI; Khalid Changel, Mercy St.Vincent Medical Ctr, Toledo, OH; Mujeeb Sheikh, Univ of Toledo Medical Ctr, Toledo, OH

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

254

Autophagy is Impaired in Thoracic Aortic Aneurysms

Elizabeth L Chou, MGH Vascular Surgery, CVRC, Boston, MA; Francois Cherbonneau, MGH CVRC, Boston, MA; Mark F Conrad, MGH Vascular Surgery, Boston, MA; Christian L Lino Cardenas, Mark E Lindsay, MGH CVRC, Boston, MA

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

255

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

Susanne Metschl, Benedikt Reutersberg, Lars Maegdefessel, Hans-Henning Eckstein, Jaroslav Pelisek, Dept of Vascular and Endovascular Surgery, Klinikum rechts der Isar - TUM, Munich, Germany
S. Metschl: None. **B. Reutersberg:** None. **L. Maegdefessel:** None. **H. Eckstein:** None. **J. Pelisek:** None.

256

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

Brittany O. Aicher, Selen C. Muratoglu, Areck A. Ucuzian, Dudley K. Strickland, Univ of Maryland, Baltimore, Baltimore, MD
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

Jean Marie Ruddy, Randall T. Grespin, Nicholas Ward, Christine Couch, Rupak Mukherjee, Jeffrey A. Jones, Medical Univ South Carolina, Charleston, SC
J. Ruddy: None. **R.T. Grespin:** None. **N. Ward:** None. **C. Couch:** None. **R. Mukherjee:** None. **J.A. Jones:** None.

259

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
Z. Wanken: None. **S.W. Trooboff:** None. **B. Gladders:** None. **K.O. Moore:** None. **J.A. Columbo:** None. **N. Ramkumar:** None. **A. Sedrakyan:** Research Grant; Significant; FDA grant 1U01FD005478-01. **P.P. Goodney:** Research Grant; Significant; FDA grant 1U01FD005478-01.

261

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

Jeff Chen, Jessica Moorleghen, Mary Sheppard, Alan Daugherty, Univ of Kentucky, Lexington, KY
J. Chen: None. **J. Moorleghen:** None. **M. Sheppard:** None. **A. Daugherty:** None.

262

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

Alexander H Shannon, Mahendra D Chordia, Michael Spinosa, Dongfeng Pan, Univ of Virginia, Charlottesville, VA; Gilbert R Upchurch Jr., **Ashish K Sharma**, Univ of Florida, Gainesville, FL
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

Catherine Go, Univ of Pittsburgh Med Ctr, Pittsburgh, PA; Jenna Kuhn, Moataz Elsisy, Youngjae Chun, Univ of Pittsburgh, Pittsburgh, PA; **Bryan Tillman**, Univ of Pittsburgh Med Ctr, Pittsburgh, PA
C. Go: None. **J. Kuhn:** None. **M. Elsisy:** None. **Y. Chun:** None. **B. Tillman:** None.

264

Epigenetic Modifications Influence Macrophage-mediated Inflammation in Abdominal Aortic Aneurysms

Frank M. Davis, Aaron Dendekker, Amrita Joshi, Christopher Audu, Andrea Obi, Steven Kunkel, Jonathan Eliason, Univ of Michigan, Ann Arbor, MI; Hong Lu, Alan Daugherty, Univ of Kentucky, Lexington, KY; Katherin Gallagher, Univ of Michigan, Ann Arbor, MI
F.M. Davis: None. **A. Dendekker:** None. **A. Joshi:** None. **C. Audu:** None. **A. Obi:** None. **S. Kunkel:** None. **J. Eliason:** None. **H. Lu:** None. **A. Daugherty:** None. **K. Gallagher:** None.

265

Endothelial Krüppel Like Factor 11 Inhibits Abdominal Aortic Aneurysm

Guizhen Zhao, Ziyi Chang, Yang Zhao, Haocheng Lu, Wenying 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.

266

Nicotine and Epigenetic Transgenerational Risk of Abdominal Aortic Aneurysm

Joscha Mulorz, **Pireyatharsheny Mulorz**, Stanford Cardiovascular Inst, Stanford Univ, Stanford, CA; Markus U Wagenhaeuser, Dept of Vascular and Endovascular Surgery, Univ Hosp Duesseldorf, Duesseldorf, Germany; Philip S Tsao, Joshua M Spin, Stanford Cardiovascular Inst, Stanford Univ, Stanford, CA
J. Mulorz: None. **P. Mulorz:** None. **M.U. Wagenhaeuser:** None. **P.S. Tsao:** None. **J.M. Spin:** None.

267

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

Satoko Ohno-Urabe, Div of Cardiovascular Med, Dept of Internal Med, Kurume Univ Sch of Med, Kurume, Japan; Masaya Kase, Kurume Univ Sch of Med, Kurume, Japan; Hiroki Aoki, Cardiovascular Res Inst, Kurume Univ, Kurume, Japan; Michihide Nishihara, Aya Furusho, Saki Hirakata, Norifumi Nishida, Sohei Ito, Makiko Hayashi, Yohei Hashimoto, Ryohei Majima, Yoshihiro Fukumoto, Div of Cardiovascular Med, Dept of Internal Med, Kurume Univ Sch of Med, Kurume, Japan
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

Nozomu Otaka, Haruhito Adam Uchida, Dept of Nephrology, Rheumatology, Endocrinology and Metabolism, Okayama Univ Graduate Sch of Med, Dentistry, and Pharmaceutical Science, Okayama, Japan; Michihiro Okuyama, Dept of Cardiovascular Surgery, Okayama Univ Hosp, Okayama, Japan; Yuki Kakio, Ehime Prefectural Central Hosp, Ehime, Japan; Yoshiko Hada, Dept of Nephrology, Rheumatology, Endocrinology and Metabolism, Okayama Univ Graduate Sch of Med, Dentistry, and Pharmaceutical Science, Okayama, Japan; Hidemi Takeuchi, Kokura Memorial Hosp, Fukuoka, Japan; Ryoko Umebayashi, Katsuyuki Tanabe, Dept of Nephrology, Rheumatology, Endocrinology and Metabolism, Okayama Univ Graduate Sch of Med, Dentistry, and Pharmaceutical Science, Okayama, Japan; Yasufumi Sato, Dept of Vascular Biology, Inst of Development, Aging and Cancer, Tohoku Univ, Miyagi, Japan; Jun Wada, Dept of Nephrology, Rheumatology, Endocrinology and Metabolism, Okayama Univ Graduate Sch of Med, Dentistry, and Pharmaceutical Science, Okayama, Japan

N. Otaka: None. **H.A. Uchida:** None. **M. Okuyama:** None. **Y. Kakio:** None. **Y. Hada:** None. **H. Takeuchi:** None. **R. Umebayashi:** None. **K. Tanabe:** None. **Y. Sato:** None. **J. Wada:** None.

269

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

Baohui Xu, Yankui Li, Xiaoya Zheng, Stanford Univ Sch of Med, Stanford, CA; Xiaofeng Chen, Taizhou Hosp Wenzhou Medical Univ, Linhai, China; Sihai Zhao, Jia Guo, Takahiro Shoji, Stanford Univ Sch of Med, Stanford, CA; 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. **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.

270

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.

271

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

Andrew Kimball, Andrea Obi, Cathy Luke, Qing Cai, Abigail Dowling, Farouc Jaffer, Katherine Gallagher, **Peter Henke**, Univ of Michigan, Ann Arbor, MI

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

Dillon Williams, Mohamed Zayed, Washington Univ Sch of Med, Saint Louis, MO; Guy Genin, Washington Univ in Saint Louis, Saint Louis, MO; Eric Leuthardt, Washington Univ Sch of Med, Saint Louis, MO

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

273

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

Cesar Cuen-Ojeda, Javier E. Anaya-Ayala, Hugo Laparra-Escareno, Ramón García-Alva, Carlos A. Hinojosa, Insto Nacional de Nutrición, Mexico, Mexico

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

Amirali Selahi, Texas AnM Univ, College Station, TX; Mariappan Muthuchamy, Texas AnM Health Science Ctr, College Station, TX; **Abhishek Jain**, Texas AnM Univ, College Station, TX

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

275

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

Roberto I Vazquez Padron, Laisel Martinez, Marwan Tabbara, Juan C Duque, Guillermo Selman, Loay Salman, Omaida Velazquez, Univ Miami, Miami, FL

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

276

Hypoxia and Trained Innate Immunity

Boris L Rodriguez, **Miguel G Rojas**, Jingjing Ling, Roberto I Vazquez-Padron, Omaida C Velazquez, Roberta M Lassance-Soares, Univ of Miami, Miami, FL

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.

277

Loss of C-kit Impairs Nitric Oxide Mediated Vasodilation
Diana R Hernandez, Boris L Rodriguez, Miguel G Rojas, Omaida 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.

278

High Hospitalization Rates but Steady Improvement in Outcomes of US Older Adults with Pulmonary Embolism
Behnood Bikdeli, Columbia Univ Medical Ctr, New York, NY; Yun Wang, Ctr for Outcomes Res and Evaluation, New Haven, CT; David Jimenez, Respiratory Dept, Hosp Ramón y Cajal and Med Dept, Univ de Alcalá, Madrid, Spain; Joseph S. Ross, Yale Sch of Med, New Haven, CT; Mayur M. Desai, Ctr for Outcomes Res and Evaluation, Yale Sch of Med, New Haven, CT; Sahil A. Parikh, Columbia Univ Medical Ctr, New York, NY; Manuel Monreal, Hosp Univri Germans Trias i Pujol, Badalona, Barcelona, Spain; Samuel Z. Goldhaber, Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA; Harlan M. Krumholz, Ctr for Outcomes Res and Evaluation, Yale Sch of Med, New Haven, CT

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.. **Y. Wang:** None. **D. Jimenez:** None. **J.S. Ross:** Other; Significant; Dr Ross reported receiving research support through Yale University from Johnson & Johnson to develop methods of clinical trial data sharing, from Medtronic, and from the FDA to develop methods for po. **M.M. Desai:** None. **S.A. Parikh:** None. **M. Monreal:** None. **S.Z. Goldhaber:** None. **H.M. Krumholz:** Research Grant; Significant; Dr. Krumholz was a recipient of a research grant, through Yale, from Medtronic and the U.S. Food and Drug Administration to develop methods for post-market surveillance of medical devices; is a recipi. Other; Significant; Dr. Krumholz reports that he has been an expert (on behalf of the plaintiff) for litigation related to a specific type of IVC filters.

279

Development of an Individual Patient Database of Participants from Randomized Trials of Periprocedural Anticoagulation with Bivalirudin versus Heparin in Percutaneous Coronary Intervention: Rationale and Methodological Considerations

Behnood Bikdeli, Columbia Univ Medical Ctr, New York, NY; Thomas McAndrew, Aaron Crowley, Shmuel Chen, Ghazaleh Mehdiipoor, Yangbo Liu, Zixuan Zhang, Mengdan Liu, Yiran Zhang, Björn Redfors, Cardiovascular Res Fndn, New York, NY; David Erlinge, Lund Univ, Lund, Sweden; Yaling Han, General Hosp of Northern Theater Command, Shenyang, China; Adnan Kastrati, Deutsches Herzzentrum, Berlin, Germany; Rod Stables, Liverpool Heart and Chest Hosp, Liverpool, United Kingdom; Philippe Gabriel Steg, Assistance Publique-Hôpitaux de Paris, Hôpital Bichat, INSERM U1148, Paris, France; and Univ Paris-Diderot, Paris, France; Marco Valgimigli, Bern Univ Hosp, Bern, Switzerland; Gregg W Stone, Columbia Univ Medical Ctr, New York, NY

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.

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

Kathryn Link, Univ of Utah, Salt Lake City, UT; Michael Stobb, Univ of California, Merced, Mercedf, CA; Matthew Sorrells, Colorado Sch of Mines, Golden, CO; Maria Bortot, Univ of Colorado, Denver, Aurora, CO; Katherine Ruegg, Marilyn Manco-Johnson, Jorge Di Paola, Univ of Colorado, Anschutz Medical Campus, Aurora, CO; Suzanne Sindi, Univ of California, Merced, Merced, CA; Aaron Fogelson, Univ of Utah, Salt Lake City, UT; Karin Leiderman, Colorado Schol of Mines, Golden, CO; **Keith B. Neeves**, Univ of Colorado, Denver, Aurora, CO

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.

Poster Abstracts (continued)

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

Shakil Shaikh, Narendra Bansal, Dept of Cardiology, Grant Medical Coll; JJ Group of Hosp, Mumbai, India

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

283

Expression of the Pan-Neurotrophic Receptor p75^{NTR} in Human Platelets

Samuel Fleury, Imane Boukhatem, Mélanie Welman, Montreal Heart Inst, Montreal, QC, Canada; Jessica Le Blanc, Univ of Montreal, Montreal, QC, Canada; Louis Villeneuve, Marie Lordkipanidzé, Montreal Heart Inst, Montreal, QC, Canada

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

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

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 Sick Cell Disease

Jing Li, Si-Yeon Jeong, Bei Xiong, Alan Tseng, UIC, Chicago, IL; Andrew Mahon, Steven Isaacman, PHD Biosciences, New York City, NY; Jaehyung Cho, UIC, Chicago, IL

J. Li: None. **S. Jeong:** None. **B. Xiong:** None. **A. Tseng:** None. **A. Mahon:** None. **S. Isaacman:** None. **J. Cho:** None.

286

ARTD8/PAIP14 Suppresses Pro-inflammatory Macrophage Activation Through ADP-ribosylation Signaling

Hideyuki Higashi, Takashi Maejima, Lang Ho Lee, Mary C Whelan, Yukiyoishi Yamazaki, Ctr for Interdisciplinary Cardiovascular Sciences, Brigham Women's Hosp, Harvard Medical Sch, Boston, MA; Michael O Hottiger, Dept of Molecular Mechanisms of Disease, Univ of Zurich, Zurich, Switzerland; Sasha A Singh, Masanori Aikawa, Ctr for Interdisciplinary Cardiovascular Sciences, Brigham Women's Hosp, Harvard Medical Sch, Boston, MA

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

Hyun Kuk Kim, Sung Soo Kim, Chosun Univ, Gwangju, Korea, Republic of; Kyung Seob Lim, Korea Res Inst of Bioscience and Biotechnology, Cheongju, Korea, Republic of

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

Chongzhe Yang, Guangzhou First People's Hosp, Guangzhou, China; **Jie Li**, Brigham and Women's Hosp, Boston, MA; Zhiyong Deng, Feng Liu, Guangzhou First People's Hosp, Guangzhou, China; Peter Libby, Guoping Shi, Brigham and Women's Hosp, Boston, MA

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

Kathy Gonzalez, Karim M Salem, Guiying Hong, Edith Tzeng, VA Pittsburgh Healthcare System, Dept of Surgery, Univ of Pittsburgh, Pittsburgh, PA

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

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

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

Ahmed S Ibrahim, Mansoura Univ, Mansoura, Egypt; Augusta Univ, Augusta, GA; Shaimaa El-Tanani, Mansoura Univ, Mansoura, Egypt; Heba Saleh, Augusta Univ, Augusta, GA; Ibrahim Eldeeb, Inst for Glycomics, Griffith Univ, Australia, Southport, Australia; Farid Badria, Mansoura Univ, Mansoura, Egypt; Mohamed Al-Shabrawey, Augusta Univ, Augusta, GA

A.S. Ibrahim: None. **S. El-Tanani:** None. **H. Saleh:** None. **I. Eldeeb:** None. **F. Badria:** None. **M. Al-Shabrawey:** None.

294

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

Hiroaki Ikezaki, HNRCA at Tufts Univ, Boston, MA; Norihiro Furusyo, Kyushu Univ Hosp, Fukuoka, Japan; Yuya Yokota, HNRCA at Tufts Univ, Boston, MA; Masumi Ai, Tokyo Medical and Dental Univ Hosp, Tokyo, Japan; Bela F Asztalos, HNRCA at Tufts Univ, Boston, MA; Masayuki Murata, Kyushu Univ Hosp, Fukuoka, Japan; Jun Hayashi, Haradai Hosp, Fukuoka, Japan; Ernst J Schaefer, HNRCA at Tufts Univ, Boston, MA

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

Masato Furuhashi, Ryosuke Numaguchi, Megumi Matsumoto, Nobuyoshi Kawaharada, Tetsuji Miura, Sapporo Medical Univ Schl Med, Sapporo, Japan

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 -Kolomoitseva, Evgenij Shchetinin, Stavropol State Medical Univ, Stavropol, Russian Federation

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

297

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

Victoria Osinski, Dustin K Bauknight, Siva S Dasa, Univ of Virginia, Charlottesville, VA; Matthew Harms, AstraZeneca, Gothenburg, Sweden; Melissa A Marshall, James C Garmey, Anh T Nguyen, Julia Hartman, Aditi Upadhye, Prasad Srikakulapu, Andrea Zhou, Univ of Virginia, Charlottesville, VA; Gavin O'Mahony, AstraZeneca, Gothenburg, Sweden; Alexander L Klibanov, Kimberly A Kelly, Univ of Virginia, Charlottesville, VA; Jeremie Boucher, AstraZeneca, Gothenburg, Sweden; Coleen A McNamara, Univ of Virginia, Charlottesville, VA

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

Charles E Drummer IV, Temple Univ, Philadelphia, PA
C.E. Drummer IV: None.

299

A Potential MicroRNA Signature of Early Atherosclerosis in Obese Adolescents

Genesio Karere, Andrew Bishop, Laura Cox, Wake Forest Sch of Med, Winston Salem, NC; Maria-Gisela Mercado-Deane, Suzanne Cuda, The Children's Hosp of San Antonio, San Antonio, TX

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

Xiaoya Guo, Southeast Univ, Nanjing, China; **Dalin Tang**, Worcester Polytechnic Inst, Worcester, MA; Akiko Maehara, Mitsuaki Matsumura, The Cardiovascular Res Fndn, Columbia Univ, New York, NY; David Molony, Habib Samady, Emory Univ Sch of Med, Atlanta, GA; Jie Zheng, Washington Univ, St. Louis, MO; Liang Wang, Southeast Univ, Nanjing, China; Chun Yang, Worcester Polytechnic Inst, Worcester, MA; Gary S. Mintz, The Cardiovascular Res Fndn, Columbia Univ, New York, NY; Don P. Giddens, Georgia Inst of Technology, Atlanta, GA

X. Guo: Research Grant; Modest; Jiangsu STA BE2016785.

D. Tang: Research Grant; Modest; NIH R01 EB004759,

Jiangsu STA BE2016785. **A. Maehara:** None. **M.**

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

Francesca Schinzari, Policlinico A. Gemelli IRCCS, Roma, Italy; Manfredi Tesaro, Univ Tor Vergata, Roma, Italy; Carmine Cardillo, Univ Cattolica del Sacro Cuore, Roma, Italy; Umberto Campia, Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA

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

Xian Zhang, Jie Li, Qin Huang, Zhiyong Deng, Guo-Ping Shi, Brigham and women's hospital, Boston, MA

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

Maedeh Zamani, Frank Charbonier, **Ngan F Huang**, Stanford Univ, Stanford, CA

M. Zamani: Research Grant; Modest; AHA Postdoctoral Fellowship. **F. Charbonier:** None. **N.F. Huang:** Research Grant; Modest; NIH: R01 HL127113, and R01 HL142718.

304

Proteoglycan 4 is Implicated in Osteo-chondrogenic Smooth Muscle Cell Differentiation During Vascular Remodelling and Intimal Calcification

Till Seime, Eva Karlöf, Karolinska Instt, Stockholm, Sweden; Asim C Akbulut, Rick H van Gorp, Maastricht Univ, Maastricht, Netherlands; Mariette Lengquist, Malin Kronqvist, Karolinska Instt, Stockholm, Sweden; Nuno Dias, Skåne Univ Hosp, Malmö, Sweden; Anton Razuvaev, Karolinska Instt, Stockholm, Sweden; Jacob Odeberg, Royal Inst of Technology, Stockholm, Sweden; Jan H Lindeman, Leiden Univ Medical Ctr, Leiden, Netherlands; Lars Maegdefessel, Karolinska Instt, Stockholm, Sweden; Leon J Schurgers, Maastricht Univ, Maastricht, Netherlands; Ulf Hedin, Ljubica Matic, Karolinska Instt, Stockholm, Sweden

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

Joshua Muia, Washington Univ Sch of Med, St Louis, MO; J. Evan Sadler, Jian Zhu, Washington Univ Sch of Med, St. Louis, MO; Mehamed Abdi, Saint Louis Univ, St. Louis, MO; Lisa Westfield, Washington Univ Sch of Med, St. Louis, MO

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 Tsivitis, 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. Tsivitis**: 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

Urszula Rykaczewska, Karolinska Inst, Stockholm, Sweden; Catarina Rippe, Lund Univ, Lund, Sweden; Mariette Lengquist, Malin Kronqvist, Anton Razuvaev, Gabrielle Paulsson-Berne, Per Eriksson, Karolinska Inst, Stockholm, Sweden; Thomas Quertermous, Stanford Univ, Stanford, CA; Karl Swärd, Lund Univ, Lund, Sweden; Ulf Hedin, Ljubica Matic, Karolinska Inst, Stockholm, Sweden

U. Rykaczewska: None. **C. Rippe**: None. **M. Lengquist**: None. **M. Kronqvist**: None. **A. Razuvaev**: None. **G. Paulsson-Berne**: None. **P. Eriksson**: None. **T. Quertermous**: None. **K. Swärd**: None. **U. Hedin**: None. **L. Matic**: None.

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

Zaki Al-Yafeai, Jonette Peretik, Lsu Health Sciences Ctr, Shreveport, LA; Brian Petrich, Emory Univ, Atlanta, GA; William DeGrado, UCSF, San Francisco, CA; Shenuarin Bhuiyan, A. Wayne Orr, Lsu Health Sciences Ctr, Shreveport, LA

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

Shruti Chatterjee, PARCC-HEGP, INSERM U970, Paris, France

S. Chatterjee: None.

313

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

Nerea Mendez-Barbero, Carmen Gutierrez-Muñoz, IIS-Fundacion Jimenez Diaz, Madrid, Spain; Julio Madrigal-Matute, Dept of Developmental and Molecular Biology, Albert Einstein Coll of Med, New York, USA, Nueva York, NY; Pablo Minguez, Jesus Egido, Jose Luis Martin-Ventura, Vanesa Esteban, Luis Miguel Blanco-Colio, IIS-Fundacion Jimenez Diaz, Madrid, Spain

N. Mendez-Barbero: None. **C. Gutierrez-Muñoz**: None. **J. Madrigal-Matute**: None. **P. Minguez**: None. **J. Egido**: None. **J. Martin-Ventura**: None. **V. Esteban**: None. **L. Blanco-Colio**: None.

314

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

Viorel Simion, Haoyang Zhou, Stefan Haemmig, Yevgenia Tesmenitsky, Mark W. Feinberg, Brigham and Women's Hosp /Harvard Medical Sch, Boston, MA

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

315

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

Weimin Liu, Amanda M Wahl, Univ Rochester Med Ctr, Rochester, NY; Paul A Cahill, Dublin City Univ, Dublin, Ireland; **Eileen M Redmond**, Univ Rochester Med Ctr, Rochester, NY
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

Simone M. Sartoretto, Brandon M. Schickling, Laurynn Garcia, Jennifer L. Lucitti, Francis J Miller Jr., Duke University, Durham, NC
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
Pavlos Tsantilas, Div of Vascular Surgery/Stanford Cardiovascular Inst, Stanford Univ Sch of Med, and Dept of Vascular and Endovascular Surgery, Klinikum rechts der Isar, Technical Univ of Munich, Stanford, CA; Shen Lao, Dept of Vascular and Endovascular Surgery, Klinikum rechts der Isar, Technical Univ of Munich, Munich, Germany; Monika Vaerst, Div of Vascular Surgery/Stanford Cardiovascular Inst, Stanford Univ Sch of Med, Stanford, CA; Yuhuang Li, Dept of Vascular and Endovascular Surgery, Klinikum rechts der Isar, Technical Univ of Munich, Munich, Germany; Vivek Nanda, Ying Wang, Yoko Kojima, Jianqin Ye, Alyssa Flores, Kai-Uwe Jarr, Div of Vascular Surgery/Stanford Cardiovascular Inst, Stanford Univ Sch of Med, Stanford, CA; Jaroslav Pelisek, Hans-Henning Eckstein, Lars Maegdefessel, Dept of Vascular and Endovascular Surgery, Klinikum rechts der Isar, Technical Univ of Munich, Munich, Germany; Nicholas Leeper, Div of Vascular Surgery/Stanford Cardiovascular Inst, Stanford Univ Sch of Med, Stanford, CA

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

Sivareddy Kotla, The Univ of Texas MD Anderson Cancer Ctr, Houston, TX
S. Kotla: None.

319

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

Emma J Akers, Jocelyne Mulangala, Laura A Wilsdon, Peter J Psaltis, Christina A Bursill, Stephen J Nicholls, Belinda A Di Bartolo, SAHMRI, Adelaide, Australia
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

Hang Thi Vu, Kyung-Sun Heo, Masaki Imanishi, Kyung Ae Ko, Tamlyn N Thomas, Young Jin Gi, Hira Mazhar, Keigi Fujiwara, MD Anderson Cancer Ctr, Houston, TX; Nhat-Tu Le, Houston Methodist, Houston, TX; Jun-ichi Abe, Sivareddy Kotla, MD Anderson Cancer Ctr, Houston, TX
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

Jisu Jeong, Soyoung Cho, Miran Seo, Sungha Park, Chanjoo Lee, Yonsei Univ, Seoul, Korea, Republic of
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

Peggy Robinet, Brian Ritchey, Shuhui Lorkowski, Alexander M Alzayed, Sophia DeGeorgia, Eve Schodowski, **Jonathan D Smith**, Cleveland Clinic, Cleveland, OH
P. Robinet: None. **B. Ritchey:** None. **S. Lorkowski:** None. **A.M. Alzayed:** None. **S. DeGeorgia:** None. **E. Schodowski:** None. **J.D. Smith:** None.

324

A Single Cell Survey of Smooth Muscle Cell Fate in Atherosclerosis

Huize Pan, Chenyi Xue, Jian Cui, Erin C. Bush, Hanrui Zhang, Robert C. Bauer, Wen Liu, Peter A. Sims, Muredach P. Reilly, Columbia Univ Medical Ctr, New York, NY
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*

Luciana A Pescatore, Hosp Israelita Albert Einstein and Insto do Coração (InCor), Hosp das Clinicas, Faculdade de Medicina, Univ de São Paulo, Sao Paulo, Brazil; Patricia Nolasco, Insto do Coração (InCor), Hosp das Clinicas, Faculdade de Medicina, Univ de São Paulo, Sao Paulo, Brazil; Elisangela Farias-Silva, Melissa Fessel, Youri E Almeida, Hosp Israelita Albert Einstein, Sao Paulo, Brazil; Victor Debbas, João Jr Wosniak, Insto do Coração (InCor), Hosp das Clinicas, Faculdade de Medicina, Univ de São Paulo, Sao Paulo, Brazil; Luciana S Carmo, Hosp Israelita Albert Einstein, Sao Paulo, Brazil; Leonardo Jensen, Francisco R Laurindo, Insto do Coração (InCor), Hosp das Clinicas, Faculdade de Medicina, Univ de São Paulo, Sao Paulo, Brazil; Marcel Liberman, Hosp Israelita Albert Einstein, Sao Paulo, Brazil

L.A. Pescatore: Other Research Support; Modest; 2015/25923-0 (FAPESP). **P. Nolasco**: None. **E. Farias-Silva**: None. **M. Fessel**: None. **Y.E. Almeida**: None. **V. Debbas**: None. **J.J. Wosniak**: None. **L.S. Carmo**: None. **L. Jensen**: None. **F.R. Laurindo**: None. **M. Liberman**: Research Grant; Modest; 16/17961-1.

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

Masaki Imanishi, Kyung Ae Ko, Yin Wang, UT MD Anderson Cancer Ctr, Houston, TX; Kyung-Sun Heo, Chungnam Natl Univ, Daejeon, Korea, Republic of; Yuka Fujii, Houtston Methodist, Houston, TX; Tamlyn N Thomas, Young Jin Gi, Hira Mazhar, Keigi Fujiwara, UT MD Anderson Cancer Ctr, Houston, TX; Nhat-Tu Le, Houtston Methodist, Houston, TX; Sivareddy Kotla, Jun-ichi Abe, UT MD Anderson Cancer Ctr, Houston, TX **M. Imanishi**: None. **K. Ko**: None. **Y. Wang**: None. **K. Heo**: None. **Y. Fujii**: None. **T.N. Thomas**: None. **Y. Gi**: None. **H. Mazhar**: None. **K. Fujiwara**: None. **N. Le**: None. **S. Kotla**: None. **J. Abe**: None.

327

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

Jingsong Ou, Hua-Ming Li, Wei-Ping Dai, Yan Li, Zhi-Wei Mo, Yue-Ming Peng, Zhi-Jun Ou, Sun Yet-Sen Univ, Guangzhou, China

J. Ou: None. **H. Li**: None. **W. Dai**: None. **Y. Li**: None. **Z. Mo**: None. **Y. Peng**: None. **Z. Ou**: None.

328

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

Ayea El-Ghazali, Anand Rohatgi, Sneha Deodhar, Suzanne Saldanha, Aseruchi Chindah, UT Southwestern, Dallas, TX **A. El-Ghazali**: None. **A. Rohatgi**: Research Grant; Significant; Merck research grant. Other Research Support; Significant; AHA 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

Adele Richart, Medini Reddy, Baker Heart and Diabetes Inst, Melbourne, Australia; Alaina Natoli, Univ of Melbourne, Melbourne, Australia; Sarah Heywood, Mina Khalaji, Graeme Lancaster, Baker Heart and Diabetes Inst, Melbourne, Australia; Svetlana Diditchenko, Alexei Navdaev, CSL Behring, Bern, Switzerland; Bronwyn Kingwell, Baker Heart and Diabetes Inst, Melbourne, Australia

A. Richart: Research Grant; Significant; Research Grant funded by CSL and paid to the Baker Institute. **M. Reddy**: None. **A. Natoli**: None. **S. Heywood**: None. **M. Khalaji**: None. **G. Lancaster**: None. **S. Diditchenko**: None. **A. Navdaev**: None. **B. Kingwell**: Research Grant; Significant; Research Grant funded by CSL and paid to the Baker Institute. Consultant/Advisory Board; Modest; Funded by CSL and Paid to the Baker Institute.

330

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

Xiaoyue Pan, NYU Winthrop Hosp, Mineola, NY; Joyce Queiroz, SUNY Downstate Medical Ctr, Brooklyn, NY; M. Mahmood Hussain, NYU Winthrop Hosp, Mineola, NY **X. Pan**: None. **J. Queiroz**: None. **M. Hussain**: None.

331

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

David Henson, Univ of Kentucky, Lexington, KY; Ayman Samman Tahhan, Arshed Ali Quyyumi, Emory Univ, Atlanta, GA; Vincent Venditto, Univ of Kentucky, Lexington, KY **D. Henson**: None. **A. Samman Tahhan**: None. **A. Quyyumi**: None. **V. Venditto**: None.

332

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

Alexander V. Sorokin, Zhi-Hong Yang, Clarence Ling, Kwame Donkor, Emma Staller, Marcelo J. Amar, Alan T. Remaley, NIH, NHLBI, Bethesda, MD **A.V. Sorokin**: None. **Z. Yang**: None. **C. Ling**: None. **K. Donkor**: None. **E. Staller**: None. **M.J. Amar**: None. **A.T. Remaley**: None.

333

Stable Isotopic Metabolic Labeling with Heavy Water (²H₂O) to Assess the Kinetics of LDL apoB100 in NASH Patients

Mohamad Dandan, Marc Hellerstein, UC Berkeley, Berkeley, CA **M. Dandan**: None. **M. Hellerstein**: None.

335

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

Darcy A Knaack, Rebecca L Schill, Medical Coll of Wisconsin, Milwaukee, WI; Yiliang Chen, Roy L Silverstein, Blood Res Inst, Milwaukee, WI; Daisy Sahoo, Medical Coll of Wisconsin, Milwaukee, WI **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

Thomas A Sorrentino, Kate Townsend Creasy, Melinda S Schaller, UCSF, San Francisco, CA; Brian E Sansbury, Pete Mitchell, Matthew Spite, Brigham and Women's Hosp, Boston, MA; John P Kane, Michael S Conte, UCSF, San Francisco, CA

T.A. Sorrentino: None. **K. Creasy:** None. **M.S. Schaller:** None. **B.E. Sansbury:** None. **P. Mitchell:** None. **M. Spite:** None. **J.P. Kane:** None. **M.S. Conte:** Other Research Support; Modest; Metagenics, Inc.

337

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

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

T.A. Sorrentino: None. **P. Duong:** None. **L. Bouchareychas:** None. **M. Chen:** None. **A. Chung:** None. **M.S. Schaller:** None. **A.Z. Oskowitz:** None. **R.L. Raffai:** None. **M.S. Conte:** None.

338

High-Density Lipoprotein Subclasses Mapping by Targeted Quantitative Proteomics

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

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

339

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

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

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

Loren E Smith, Derek K Smith, Patricia G Yancey, Vanderbilt Univ Medical Ctr, Nashville, TN; Alan T Remaley, NIH, Bethesda, MD; Frederic T Billings IV, Macrae F Linton, Vanderbilt Univ Medical Ctr, Nashville, TN

L.E. Smith: Research Grant; Significant; FAER MRTG research grant support. **D.K. Smith:** None. **P.G. Yancey:** None. **A.T. Remaley:** None. **F.T. Billings:** None. **M.F. Linton:** None.

341

Assembly and Secretion of Fluorescent Tagged Apolipoprotein B Peptides

Meghan T Walsh, SUNY Downstate Medical Ctr, Brooklyn, NY; Oni M Celestin, Carnegie Inst for Sciences, Baltimore, MD; James H Thierer, Carnegie Inst for Sciences, Baltimore, MD; Steven A Farber, Carnegie Inst for Sciences, Baltimore, MD; **M Mahmood Hussain**, NYU Winthrop, Minoela, NY

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

Tomas Vaisar, Univ of Washington, Seattle, WA; Jennifer L Gordon, Univ of Regina, Regina, SK, Canada; Jake Wimberger, Univ of Washington, Seattle, WA; David R Rubinow, Susan S Girdler, Univ of North Carolina, Chapel Hill, NC; **Katya B Rubinow**, Univ of Washington, Seattle, WA

T. Vaisar: None. **J.L. Gordon:** None. **J. Wimberger:** None. **D.R. Rubinow:** None. **S.S. Girdler:** None. **K.B. Rubinow:** None.

343

Novel Regulation of Cholesterol Metabolism Using a Systems Biology Approach

Benjamin L Parker, Univ of Sydney, Sydney, Australia; Thomas Q de Aguiar Vallim, Marcus M Seldin, UCLA, Los Angeles, CA; Michael F Keating, Baker Heart and Diabetes Inst, Melbourne, Australia; Elizabeth J Tarling, UCLA, Los Angeles, CA; Eser J Zerenturk, Sarah C Moody, Yingying Liu, Baker Heart and Diabetes Inst, Melbourne, Australia; Calvin Pan, UCLA, Los Angeles, CA; Peter J Meikle, Baker Heart and Diabetes Inst, Melbourne, Australia; Aldons J Lusis, UCLA, Los Angeles, CA; David E James, University of Sydney, Sydney, Australia; Brian G Drew, **Anna C Calkin**, Baker Heart and Diabetes Inst, Melbourne, Australia

B.L. Parker: None. **T.Q. de Aguiar Vallim:** None. **M.M. Seldin:** None. **M.F. Keating:** None. **E.J. Tarling:** None. **E.J. Zerenturk:** None. **S.C. Moody:** None. **Y. Liu:** None. **C. Pan:** None. **P.J. Meikle:** None. **A.J. Lusis:** None. **D.E. James:** None. **B.G. Drew:** None. **A.C. Calkin:** None.

345

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

Dennis Wolf, Teresa Gerhard, Maximilian Schell, Univ Heart Ctr Freiburg, Freiburg, Germany; Holger Winkels, Koji Kobiyama, Klaus Ley, La Jolla Inst for Immunology, La Jolla, CA

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

Xueying Peng, Inst of Materia Medica, Chinese Acad of Medical Sciences & Peking Union Medical Coll, Beijing, China; Zeqin Lian, Xiaoyuan Dai Perrard, Baylor Coll of Med, Houston, TX; Henry Dong, Univ of Pittsburgh Sch of medicine, Pittsburgh, PA; Haibo Zhu, Inst of Materia Medica, Chinese Acad of Medical Sciences & Peking Union Medical Coll, Beijing, China; Henry Pownall, Houston Methodist Res Inst, Houston, TX; Christie M. Ballantyne, **Huaizhu Wu**, Baylor Coll of Med, Houston, TX

X. Peng: None. **Z. Lian:** None. **X.D. Perrard:** None. **H. Dong:** None. **H. Zhu:** None. **H. Pownall:** None. **C.M. Ballantyne:** None. **H. Wu:** None.

Poster Abstracts (continued)

347

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

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

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

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

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

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

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.

350

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

Hema Kothari, Chantel McSkimming, Corey Williams, Mythili Vigneshwar, Eli Zunder, Coleen McNamara, Univ of Virginia, Charlottesville, VA

H. Kothari: None. **C. McSkimming:** None. **C. Williams:** None. **M. Vigneshwar:** None. **E. Zunder:** None. **C. McNamara:** None.

351

The Cumulative Deleterious Effects of Aircraft Noise Exposure on Developing High Blood Pressure

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

K. Frenis: None. **S. Kröller-Schön:** None. **S. Kalinovic:** None.

J. Helmstädter: None. **M. Kvandova:** None. **M. Oelze:** None.

A. Daiber: None. **T. Münzel:** None. **S. Steven:** None.

352

Resolvin D1 Enhances the Clearance of Necroptotic Cells

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

G. Fredman: None. **B.D. Gerlach:** None. **M. Marinello:**

None. **J. Heinz:** None. **N. Rymut:** None. **B. Sansbury:**

None. **C. Riley:** None. **S. Sadhu:** None. **M. Spite:** None. **M.**

Barroso: None. **K.J. Rayner:** None.

353

Induction of TLR2 Tolerance Suppresses Foam Cell Formation

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

L. Qu: None. **C. Li:** None. **D. Peters:** None. **N. Wasko:**

None. **A.T. Vella:** None. **A. Rodriguez:** None. **P.A. Murphy:**

None. **R.B. Clark:** None. **B. Zhou:** None.

354

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

Masako Tsukamoto, Pamela E Fraungruber, Univ of North Carolina at Chapel Hill, Chapel Hill, NC; Branimir Popovic, Murugesan Velayutham, Univ of Pittsburgh Sch of Med, Pittsburgh, PA; Saira Z Sheikh, Shanmugam Nagarajan, Univ of North Carolina at Chapel Hill, Chapel Hill, NC

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

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

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

Keith A Strand, Sizhao Lu, Marie F Mutryn, Rebecca M Tucker, Karen S Moulton, Daniel V LaBarbera, Mary C Weiser-Evans, Univ of Colorado-Anschutz, Aurora, CO

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

Ifitikhar 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 α - Mice

Priyanka Prathipati, UTHSC-Houston, Houston, TX; Cristian Rodriguez-Aguayo, UT MD Anderson Cancer Ctr, Houston, TX; Jamieson Greaver, Brian Walton, UTHSC-Houston, Houston, TX; Anil Sood, Gabriel Lopez-Berestein, UT MD Anderson Cancer Ctr, Houston, TX

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

Carolyn M Roos, Arman Arghami, Michael A Hagler, Elise A Oehler, Grace C Verzosa, Bin Zhang, Jordan Miller, Mayo Clinic, Rochester, MN

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)

Nabanita Kundu, Laurence Asico, Cleyton Domingues, Pedro Jose, **Sabyasachi Sen**, The George Washington Univ, Washington, DC

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

Evan N. Nicolai, Mayo Clinic Graduate Sch, Rochester, MN; Michael A. Hagler, Carolyn M. Roos, Bin Zhang, Jordan D. Miller, Mayo Clinic, Rochester, MN

E.N. Nicolai: None. **M.A. Hagler**: None. **C.M. Roos**: None. **B. Zhang**: None. **J.D. Miller**: None.

Poster Session 2 Abstracts

363

The Relationship Between Wall Shear Strain and Morphology Plaque in Coronary Artery Disease: A Systematic Review and Meta-analysis

Ibadete Bytyci, Clinic of Cardiology, 10000, Albania; **Sefer Bytyqi**, KorrektKonto, 10000, Albania; Artan Bajraktari, Shpend Elezi, American Hosp, 10000, Albania

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
Huidan Whitney YU, **Monsurul Khan**, Indiana Univ-Purdue Univ, Indianapolis, Indianapolis, IN; Alan Sawchuk, Sch of Med, Indiana Univ, Indianapolis, IN; Qiwen Wang, Dept of Cardiology, The first Affiliated Hosp, Sch of Med, Zhejiang Univ, Hangzhou, China; Haiyan Lou, Dept of Radiology, The First Affiliated Hosp, Sch of Med, Zhejiang Univ, Hangzhou,

China; Xin Fang, Dept of Vascular Surgery, Hangzhou First People's Hosp, Hangzhou, China; Li Zhang, Dept of Cardiology, The first Affiliated Hosp, Sch of Med, Zhejiang Univ, Hangzhou, China; Hui Liang, Dept of Neurology, The First Affiliated Hosp, Medical Sch, Zhejiang Univ, Hangzhou, China; Michal C Dalsing, Dept of Surgery, Indiana Univ Sch of medicine, Indianapolis, IN; Raghu L Motaganahalli, Dept of Surgery, Indiana Univ Sch of Med, Indianapolis, IN

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

Han Naung Tun, European Society of Cardiology, Sophia Antipolis, France; Syed Haseeb Raza, Masood Ahmed Khan, Tariq Abbas, Nisar Ahmed, Muhammad Zubair Zaffar, CPE Inst of Cardiology, Multan, Pakistan

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

Peter Sugita, PT Sahabat Lingkungan Hidup, Surabaya, Indonesia; Djangan Sargowo, Saiful Anwar General Hosp, Malang - East Java, Indonesia

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

367

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

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

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

368

The Effectiveness of Treatment for Patients With Chronic Lower Limb Ischemia Using a Plasmid Vegf65-gene Therapy Drug in the Long-term Period

Hoai Nam Ha, Peoples' Friendship Univ of Russia (RUDN Univ), Moscow, Russian Federation; Yuri Valentinovich Chervyakov, Yaroslavl State Medical Univ of the Public Health Ministry of the Russian Federation, Yaroslavl, Russian Federation

H. Ha: Other Research Support; Modest; The publication has been prepared with the support of the «RUDN University Program 5-100». **Y. Chervyakov**: None.

369

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

Yoshimi Kishimoto, Ochanomizu Univ, Tokyo, Japan; Hanako Niki, Tokyo Medical Ctr, Tokyo, Japan; Emi Saita, Ochanomizu Univ, Tokyo, Japan; Susumu Ibe, Tomohiko Umei, Yukinori Ikegami, Tokyo Medical Ctr, Tokyo, Japan; Kazuo Kondo, Ochanomizu Univ, Tokyo, Japan; **Yukihiko Momiyama**, Tokyo Medical Ctr, Tokyo, Japan
Y. Kishimoto: None. **H. Niki:** None. **E. Saita:** None. **S. Ibe:** None. **T. Umei:** None. **Y. Ikegami:** None. **K. Kondo:** None. **Y. Momiyama:** None.

370

Genomic Analysis of Neurofibromatosis-Related Vasculopathy

Dawn Marie Coleman, Yu Wang, Hannah Hill, Min-Lee Yang, Blackburn Susan, Hunker Kristina, James C Stanley, Santhi K Ganesh, Univ of Michigan, Ann Arbor, MI
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

Hung-Hsin Chen, Vanderbilt Univ, Nashville, TN; Lauren E Petty, Jennifer E Below, Vanderbilt Univ Medical Ctr, Nashville, TN
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

Francisco E Ramirez, Nedley Clinic, Colfax, CA; Gyeongjip Kang, Weimar Inst, Colfax, CA; Neil Nedley, Nedley Clinic, Weimar, CA; Joletta Redd, Weimar Inst, Colfax, CA
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

Sheila K Patel, Jay Ramchand, Univ of Melbourne, Melbourne, Australia; Leighton G Kearney, Austin Health, Melbourne, Australia; Piyush M Srivastava, Louise M Burrell, Univ of Melbourne, Melbourne, Australia
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
J. Gorecka: None. **A. Fereydooni:** None. **J. Luo:** None. **B. Dash:** None. **T. Isaji:** None. **S. Ono:** None. **L. Gonzalez:** None. **S. Lee:** None. **Y. Qyang:** None. **H. Hsia:** None. **A. Dardik:** None.

375

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

Aravin N Sukumar, H. S. J. Man, Michelle K Dubinsky, Paul J Turgeon, Kyung Ha Ku, Daniel Teitelbaum, Mike K Lee, Philip A Marsden, Univ of Toronto, Toronto, ON, Canada
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

Hallie J. Quiroz, Hongwei Shao, Punam P Parikh, Manuela M. Regueiro, Yan Li, Roberta M. Soares, Zhao-Jun Liu, Omaida C. Velazquez, Univ of Miami, Miami, FL
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, Beiyang 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

Juying Han, Heather L Andro, Jonathan D Smith, Cleveland Clinic, Cleveland, OH
J. Han: None. **H.L. Andro:** None. **J.D. Smith:** None.

379

A Mouse ENU Mutagenesis Screen Identifies Spontaneous Mutations as Thrombosuppressors

Marisa A Brake, McKenzie Allen, Oakland Univ, Rochester, MI; Amy E Siebert, Blood Ctr of Wisconsin, Milwaukee, WI; Randal J Westrick, Oakland Univ, Rochester, MI
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

Jiaqi Huang, Zhejiang Univ, Hangzhou, China; Changhong Cai, The Fifth Affiliated Hosp of Wenzhou Medical Univ, Lishui Central Hosp., Lishui, China; Xinyan Wu, Tianyu Zheng, Jie Zhang, Hui Gong, Xue Zhang, Yuehai Ke, Hongqiang Cheng, Zhejiang Univ, Hangzhou, China
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.

391

Impact of Perivascular Adipose Tissue Stem Cells in Vascular Remodelling

Yanhua Hu, King's Coll London, London, United Kingdom
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

Jatin PATEL, Samuel L Lukowski, The Univ of Queensland, Brisbane, Australia; Ingrid Winkler, Joshua Tay, Mater Res Inst, Brisbane, Australia; Kiarash Khosrotehrani, The Univ of Queensland, Brisbane, Australia

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

Seiki Yasumura, Yoshiro Naito, Keisuke Okuno, Hisashi Sawada, Masanori Asakura, Masaharu Ishihara, Cardiovascular Div, Dept of Internal Med, Hyogo Coll of Med, Nishinomiya Hyogo, Japan

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

Hekmat B. Khoukaz, Dept of Med, Univ of Missouri, Columbia, MO; Xu Han, CryoCrate LLC, Columbia, MO; Yan Ji, Dept of Med, Univ of Missouri, Columbia, MO; Michael A. Hill, Dalton Cardiovascular Res Ctr, Univ of Missouri, Columbia, MO; William P. Fay, Dept of Med, Univ of Missouri, Columbia, MO

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

Ibra Fancher, Shane Phillips, Irena Levitan, Univ of Illinois at Chic, Chicago, IL

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

398

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

Isabel Schellinger, Angelika Dannert, Giriprakash Chodiseti, Karin Mattern, Joanna Jakubiczka-Smorag, Andreas Schuster, Gerd Hasenfuß, **Uwe Raaz**, Univ Heart Ctr Goettingen, Goettingen, Germany

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

Michael Boyer, Temple Univ, Philadelphia, PA; Yayoi Kimura, Yokohama City Univ, Yokohama City, Japan; Tomoko Akiyama, Yokohama City Univ, Yokohama, Japan; Satoru Eguchi, Victor Rizzo, Temple Univ, Philadelphia, PA

M. Boyer: None. **Y. Kimura:** None. **T. Akiyama:** None. **S. Eguchi:** None. **V. Rizzo:** None.

400

Smooth Muscle Cell Mitochondrial Complex I and Metabolism in Vascular Remodeling

Dario Fernando Riascos Bernal, Connor deMayo, Bonnie Mendelson, Smitha Jayakumar, Longyue Lily Cao, Nicholas E Sibinga, Albert Einstein Coll of Med, New York, NY

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

N.A. Rashdan: None. **B. Shrestha:** None. **C.J. Boyer:** None. **J.S. Alexander:** None. **A.W. Orr:** None. **C.B. Pattillo:** None.

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

Nobuyuki Masaki, Intensive Care Med, Natl Defense Medical Coll, Tokorozawa, Japan; Yasuo Ido, Dept of Cardiology, Natl Defense Medical Coll, Tokorozawa, Japan; Bonpei Takase, Intensive Care Med, Natl Defense Medical Coll, Tokorozawa, Japan; Takeshi Adachi, Dept of Cardiology, Natl Defense Medical Coll, Tokorozawa, Japan

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

L.M. Tsujikawa: Employment; Significant; Resverlogix Corp. **B. Rakai:** Employment; Significant; Resverlogix Corp. **S. Das:** None. **C. Halliday:** Employment; Significant; Resverlogix Corp. **S.C. Stotz:** Employment; Significant; Resverlogix Corp. **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.

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

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

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

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

Johanna Helmstädter, Konstantina Filippou, Franziska Pawelke, 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. **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

Yoshiko Hada, Haruhito A. Uchida, Okayama Univ Graduate Sch of Med, Dentistry and Pharmaceutical Sciences,, Okayama, Japan; Tomoyuki Mukai, Dept of Rheumatology, Kawasaki Medical Sch, Kurashiki, Japan; Fumiaki Kojima, Dept of Pharmacology, Kitasato Univ Sch of Allied Health Sciences, Sagami-hara, Japan; Nozomu Otaka, Yasuhiro Onishi, Okayama Univ Graduate Sch of Med, Dentistry and Pharmaceutical Sciences,, Okayama, Japan; Yoshitaka Morita, Dept of Rheumatology, Kawasaki Medical Sch, Kurashiki, Japan; Yoichiro Iwakura, Res Inst for Biomedical Sciences, Tokyo Univ of Science, Noda, Japan; Jun Wada, Okayama Univ Graduate Sch of Med, Dentistry and Pharmaceutical Sciences,, Okayama, Japan

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-ElIIA and ElIIIB by Direct Measurement of Exon Usage in a Flow-Cytometry Based CRISPR Screen

Jessica Hensel, Brent Heineman, Amy Kimble, Evan Jellison, UCONN Health, Farmington, CT; Bo Reese, Univ of Connecticut, Storrs, CT; Patrick Murphy, UCONN Health, Farmington, CT

J. Hensel: None. **B. Heineman:** None. **A. Kimble:** None. **E. Jellison:** None. **B. Reese:** None. **P. Murphy:** None.

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.

425

Spatially Patterned Scaffolds Enhance Vascular Perfusion and Integration in Injured Muscle

Karina H Nakayama, Stanford Univ, Stanford, CA; Marco Quarta 94304, Patrick Paine, Cynthia Alcazar, Veterans Affairs Palo Alto Health Care System, Palo Alto, CA; Ioannis Karakikes, Stanford Univ, Stanford, CA; Victor Garcia 94304, Veterans Affairs Palo Alto Health Care System, Palo Alto, CA; Oscar Abilez, Stanford Univ, Stanford, CA; Nicholas Calvo, Chelsey Simmons, Univ of Florida, Gainesville, FL; Thomas Rando, Veterans Affairs Palo Alto Health Care System, Palo Alto, CA; Ngan Huang 94304, Stanford Univ, Palo Alto, CA
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

Qing Guo, Jun Xie, The Univ of Oklahoma HSC, Oklahoma City, OK
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
J. Hedhli: None. **K. Minwoo:** None. **J. Cole:** None. **H. Knox:** None. **I. Dobrucki:** None. **J. Chan:** None. **A. Sinusas:** None. **M. Insana:** None. **L. Dobrucki:** None.

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

Deepaneeta Sarmah, Harpreet Kaur, Kanchan Vats, Kiran Kalia, NIPER-Ahmedabad, Gandhinagar, India; Dileep R. Yavagal, Univ of Miami Miller Sch of Med, Miami, FL; Pallab Bhattacharya, NIPER-Ahmedabad, Gandhinagar, India
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

Yalan Wu, Sch of Biomedical Sciences, The Chinese Univ of Hong Kong,, Hong Kong, Hong Kong; Kathy O Lui, Dept of Chemical Pathology, The Chinese Univ of Hong Kong,, Hong Kong, Hong Kong; Yu Hung, Xiaoyu Tian, Sch of Biomedical Sciences, The Chinese Univ of Hong Kong,, Hong Kong, Hong Kong
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

Rika Takemoto, Okayama Univ Hosp, Okayama, Japan; Haruhito A. Uchida, Okayama Univ, Okayama, Japan; Nozomu Otaka, Okayama Univ Hosp, Okayama, Japan; Yoshiko Hada, Yasuhiro Onishi, Okayama Univ, Okayama, Japan; Natsumi Matsuoka, Shugo Okamoto, Mariko Nishiwaki, Hironobu Toda, Fumio Otsuka, Okayama Univ Hosp, Okayama, Japan; Hiroshi Ito, Jun Wada, Okayama Univ, Okayama, Japan
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 Olivier Espitia, INSERM UMR1238, Univ de Nantes, CHU Nantes, Nantes, France; Marja Steenman, L'institut du thorax, INSERM, CNRS, UNIV Nantes,, Nantes, France; Blandine Maurel, INSERM UMR1238, Univ de Nantes, CHU Nantes, Nantes, France; Beatrice Guyomarch, L'institut du thorax, INSERM, CNRS, UNIV Nantes, Nantes, France; Benjamin Ory, Francois Lamoureux, INSERM UMR1238, Univ de Nantes, Nantes, France; Dominique Heymann, Inst de Cancérologie de l'Ouest, INSERM, U1232, Univ de Nantes, Nantes, France; Yann Gouëffic, INSERM UMR1238, Univ de Nantes, CHU Nantes, Nantes, France; **Thibaut Quillard**, INSERM UMR1238, Univ de Nantes, Nantes, France
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 Prathivadhi-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. Prathivadhi-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
Mazen Albaghdadi, Zhonglie Piao, Adam Mauskapf, Massachusetts General Hosp, Boston, MA; Mohammed Chowdhury, Addenbrooke's Hosp, Univ of Cambridge, UK, Cambridge, United Kingdom; Rami Tzafirri, CBSET, Lexington, MA; Elazer Edelman, Health Sciences, Massachusetts Inst of Technology, United States, Cambridge, MA; Guillermo Tearney, Farouc Jaffer, Massachusetts General Hosp, Boston, MA
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
Vaishali Inamdar, Emmett Fitzpatrick, Ivan Alferiev, Chandrasekaran Nagaswami, Robert Levy, Ilia Fishbein, Stanley Stachelek, Children's Hosp of Philadelphia, Philadelphia, PA
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
Juline N Deppen, Emory Univ & Georgia Inst of Technology, Atlanta, GA; Sydney C Ginn, Lanfang Wang, Mark M Goodman, Ronald J Voll, Rebecca D Levit, Emory Univ Sch of Med, Atlanta, GA
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
Paul M. Ndunda, Mohinder Vindhya, Tabitha Muutu, Sinan Khayyat, Univ of Kansas Sch of Med-Wichita, Wichita, KS; Zaher Fanari, Univ of Kansas Sch of Med-Wichita/Heartland Cardiology, Wichita, KS
P.M. Ndunda: None. **M. Vindhya:** 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
Peter Kip, Kaspar M Trocha, Ming Tao, James J O'Leary, Jack Ruske, Jennifer M Giulietti, Brigham and Women's Hosp, Boston, MA; Jose H Trevino-Villarreal, Michael R MacArthur, Harvard T.H. Chan Sch of Public Health, Boston, MA; Andrew Bolze, M. Furkan Burak, Suzannah Patterson, Brigham and Women's Hosp, Boston, MA; Karen J Ho, Northwestern Med Feinberg Sch of Med, Chicago, IL; Rachel N Carmody, Harvard Univ, Cambridge, MA; Raul J Guzman, Beth Isreal Deaconess Medical Ctr, Boston, MA; James R Mitchell, Harvard T.H. Chan Sch of Public Health, Boston, MA; C Keith Ozaki, Brigham and Women's Hosp, Boston, MA
P. Kip: None. **K.M. Trocha:** None. **M. Tao:** None. **J.J. O'Leary:** None. **J. Ruske:** None. **J.M. Giulietti:** None. **J.H. Trevino-Villarreal:** None. **M.R. MacArthur:** None. **A. Bolze:** None. **M.F. Burak:** None. **S. Patterson:** None. **K.J. Ho:** None. **R.N. Carmody:** None. **R.J. Guzman:** None. **J.R. Mitchell:** None. **C.K. Ozaki:** None.

446

E-cigarette Vapor Accelerates Abdominal Aortic Aneurysm in Mice
Joscha Mulorz, Pireyatharsheny Mulorz, Stanford Cardiovascular Inst, Stanford Univ, Stanford, CA; Markus U Wagenhaeuser, Dept of Vascular and Endovascular Surgery, Univ Hosp Duesseldorf, Duesseldorf, Germany; Joshua M Spin, Philip S Tsao, Stanford Cardiovascular Inst, Stanford Univ, Stanford, CA
J. Mulorz: None. **P. Mulorz:** None. **M.U. Wagenhaeuser:** None. **J.M. Spin:** None. **P.S. Tsao:** None.

448

Peptide-siRNA Nanocomplexes Targeting NF- κ B Subunit p50 Mitigate Experimental Abdominal Aortic Aneurysm
Huimin Yan, Ying Hu, The John Cochran VA Medical Ctr, Saint Louis, Missouri USA and the Dept of Med, Div of Rheumatology, Washington Univ Sch of Med, Saint Louis, MO; Antonina Akk, The Dept of Med, Div of Rheumatology, Washington Univ Sch of Med, Saint Louis, MO; Hua Pan, Samuel Wickline, Univ of South Florida Health Heart Inst, Morsani Coll of Med, Tampa, FL; Christine Pham, The John Cochran VA Medical Ctr, Saint Louis, Missouri USA and the Dept of Med, Div of Rheumatology, Washington Univ Sch of Med, Saint Louis, MO

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
Marion A Hofmann Bowman, Carmel Ashur, Univ of Michigan, Ann Arbor, MI; Elizabeth L Norton, Creighton Univ Sch of Med, Omaha, NE; Linda Farhat, Cristen Willer, James B Froehlich, David J Pinsky, Karen M Kim, Sinichi Fukuhara, Micheal G Deeb, Himanshu Patel, Kim A Eagle, Bo Yang, Univ of Michigan, Ann Arbor, MI
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 Moorlegghen, Lihua Yang, **Venkateswaran Subramanian**, Univ of Kentucky, Lexington, KY
W. Jiang: None. **A. Javidan:** None. **M. Okuyama:** None. **J.J. Moorlegghen:** 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 Moorlegghen, Alan Daugherty, Hong S Lu, Saha Cardiovascular Res Ctr, Lexington, KY
Y. Wang: None. **X.F. Chen:** None. **D.A. Howatt:** None. **J.J. Moorlegghen:** None. **A. Daugherty:** None. **H.S. Lu:** None.

Poster Abstracts (continued)

460

Vascular Smooth Muscle Sirtuin-1 Regulates Tgf-b1 Signaling Pathway in Angiotensin II-induced Aortic Aneurysm and Dissection

Enkhjargal Budbazar, Francesca Seta, Boston Univ Sch of Med, Boston, MA

E. Budbazar: None. **F. Seta:** None.

461

Cd4+ T Cell Deficiency of KLF10 Impairs Blood Flow and Neovascularization in Response to Tissue Hypoxia

Akm Wara, Brigham and Women's Hosp, Harvard Medical Sch, Boston, MA

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

Navaneeth Krishna Rajeeva Pandian, Rishi Suresh, Pranav Venkata Gadangi, Abhishek Jain, TAMU, College Station, TX

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 Bahooora, McLaren Oakland/MSU, Pontiac, MI

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

Poster Abstracts (continued)

F.M. Davis: None. **A. Dendekker:** None. **A. Joshi:** None. **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 *Adams13*^{-/-} 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

L. Zheng: None. **M. Abdelgawwad:** None. **D. Zhang:** None. **L. Xu:** None. **W. Cao:** None. **X. Zheng:** Speakers Bureau; Significant; Alexion. Consultant/Advisory Board; Significant; Ablynx/Sanofi, Charles River Associates, Baxalta/Shire.

482

Old Substances Used as Novel Approach for Urgent Management of Post Cath Lab Patients Bleeding
Dragana S Šarenac, Branko Calija, ICVD Dedinje, Belgrade, Serbia

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 Berceli, 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. Berceli:** 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 Bahnson, Univ of North Carolina, Chapel Hill, NC

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

Andreas M Beyer, Lukas Brandt, Sushma Kaul, Shelby N Hader, Hao Xu, Katherine Fredrich, Mary Sorci Thomas, Medical Coll Wisconsin, Milwaukee, WI

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

Poster Abstracts (continued)

H. Ikezaki: None. **V.A. Fisher:** None. **C. Liu:** None. **L. Cupples:** None. **K. Nakajima:** None. **M. Murata:** None. **N. Furusyo:** None. **B.F. Asztalos:** None. **E.J. Schaefer:** None.

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
Amer Youssef, Robarts Res Inst, London, ON, Canada; Michael Boffa, Univ of Western Ontario, London, ON, Canada; Marlys L Koschinsky, Robarts Res Inst, London, ON, Canada
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, Cardiovas. 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
Brian Harsch, Kamil Borkowski, The Pennsylvania State Univ, University Park, PA; Theresa L Pedersen, Advanced Analytics, Davis, CA; John W Newman, USDObesity and Metabolism Res Unit, USDA-ARS-WHNR, Davis, CA; Gregory C Shearer, The Pennsylvania State Univ, University Park, PA
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

Patrick Wolfkiel, Anja Jaeschke, David Y Hui, Univ of Cincinnati Coll of Med, Cincinnati, OH

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

Seulgee Lee, Jung-Sun Kim, Oh-Hyun Lee, Jung-Jae Lee, Yonsei Univ, Seoul, Korea, Republic of

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

Dunia Mercedes Garcia-Cruz, Raghavendra Giri, Annabelle Rodriguez, UCONN Health, Farmington, CT

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

Sihai Zhao, Yankui Li, Jia Guo, Stanford Univ Sch of Med, Stanford, CA; Hong S Lu, SAHA Cardiovascular Res Ctr Univ of Kentucky, Lexington, KY; Xiaoya Zheng, Stanford Univ Sch of Med, Stanford, CA; Xiaofeng Chen, Taizhou Hosp Wenzhou Medical Univ, Linhai, China; Alan Daugherty, SAHA Cardiovascular Res Ctr Univ of Kentucky, Lexington, KY; Enqi Liu, Xi'an Jiaotong Univ Health Science Ctr, Xi'an, China; **Baohui Xu**, Ronald L Dalman, Stanford Univ Sch of Med, Stanford, CA

S. Zhao: None. **Y. Li**: None. **J. Guo**: None. **H.S. Lu**: None. **X. Zheng**: None. **X. Chen**: None. **A. Daugherty**: None. **E. Liu**: None. **B. Xu**: None. **R.L. Dalman**: None.

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.

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

Paul A Mueller, Oregon Health and Science Univ, Portland, OR; Yoko Kojima, Stanford Univ Sch of Med, Stanford, CA; Katherine Huynh, Hagai Tavori, Oregon Health and Science Univ, Portland, OR; Nicholas Leeper, Stanford Univ Sch of Med, Stanford, CA; Sergio Fazio, Oregon Health and Science Univ, Portland, OR

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

Liang Wang, Southeast Univ, Nanjing, China; **Dalin Tang**, Worcester Polytechnic Inst, Worcester, MA; Akiko Maehara, The Cardiovascular Res Fndn, New York, NY; Zheyang Wu, Chun Yang, Worcester Polytechnic Inst, Worcester, MA; Mitsuaki Matsumura, The Cardiovascular Res Fndn, New York, NY; Jie Zheng, Richard Bach, Washington Univ, St. Louis, MO; Kristen L Billiar, Worcester Polytechnic Inst, Worcester, MA; Gregg W Stone, Gary S Mintz, The Cardiovascular Res Fndn, New York, NY

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

A. Maehara: None. **Z. Wu:** None. **C. Yang:** None. **M. Matsumura:** None. **J. Zheng:** None. **R. Bach:** None. **K.L. Billiar:** None. **G.W. Stone:** None. **G.S. Mintz:** None.

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

A. Behrmann: Research Grant; Significant; NIH. **L. Li:** Research Grant; Significant; NIH. **B. Ramachandran:** None. **M. Goodarzi:** None. **A. Lemoff:** None. **D.A. Towler:** Employment; Significant; The UT Southwestern Medical Center. Research Grant; Significant; NIH, ADA. Other Research Support; Significant; Endowed Chair.

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 Guillemer, 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. Steinhauer, Brigham and Women's Hosp; Harvard Medical Sch, Boston, MA; **Jonathan D. Brown,** Vanderbilt Univ Medical Ctr, Nashville, TN

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

537

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

Hanna Winter, Klinikum rechts der Isar der TUM, Munich, Germany; Joana R. Viola, Oliver Soehnlein, Inst for Cardiovascular Prevention (IPEK), Ludwig-Maximilians-Univ München, Munich, Germany; Lars Maegdefessel, Klinikum rechts der Isar der TUM, Munich, Germany

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

Ljubica Matic, Eva Karlöf, Till Seime, Karolinska Inst, Stockholm, Sweden; Nuno Dias, Skåne Univ Hosp, Malmö, Sweden; Mariette Lengquist, Anna Witas, Håkan Almqvist, Malin Kronqvist, Karolinska Inst, Stockholm, Sweden; Jacob Odeberg, Royal Inst of Technology, Stockholm, Sweden; Lars Maegdefessel, Peter Stenvinkel, Ulf Hedin, Karolinska Inst, Stockholm, Sweden

L. Matic: None. **E. Karlöf:** None. **T. Seime:** None. **N. Dias:** None. **M. Lengquist:** None. **A. Witas:** None. **H. Almqvist:** None. **M. Kronqvist:** None. **J. Odeberg:** None. **L. Maegdefessel:** None. **P. Stenvinkel:** None. **U. Hedin:** None.

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.

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 Jaikhani, 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

P.A. Murphy: None. **N. Jaikhani:** None. **S. Nicholas:** None. **A. Del Rosario:** None. **J. Balsbaugh:** None. **S. Levine:** None. **S. Begum:** None. **A. Kimble:** None. **R.O. Hynes:** None.

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

Isabelle Baatsch, Inst for Cardiovascular Prevention, Univ Hosp, LMU Munich, Munich, Germany; Maliheh Nazari-Jahantigh, Inst of Pathology, Faculty of Med, LMU Munich, Munich, Germany; Jörg Kumbrink, Pathologisches Inst, Ludwig-Maximilians-Univ Munich, Germany, München, Germany; Christian Weber, Andreas Schober, Inst for Cardiovascular Prevention, Ludwig-Maximilians-Univ Munich, Germany, München, Germany

I. Baatsch: None. **M. Nazari-Jahantigh:** None. **J. Kumbrink:** None. **C. Weber:** None. **A. Schober:** None.

554

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

Biswajit Saha, Texas AnM Univ, College Station, TX; Justin Bui, Piyashi Biswas, Texas A&M Univ, College Station, TX; Anil K Sood, Vahid Afshar-Khargan, MD Anderson Cancer Ctr, Houston, TX; **Abhishek Jain**, Texas AnM Univ, College Station, TX

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

Akshay Goel, Univ of Arkansas for Medical Sciences, Little Rock, AR; Mayank Singhal, Cape Fear Valley Hosp, Fayetteville, NC; Abhishek Goel, Univ Coll of Medical Sciences, New Delhi, India; L H Ghotekar, Lady Hardinge Medical Coll, New Delhi, India; Hakan Paydak, Jawahar L Mehta, Univ of Arkansas for Medical Sciences, Little Rock, AR

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

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

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

557

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

Alexandra E. Panaitiu, Dept of Chemistry, Dartmouth Coll, Hanover, NH; **Christopher O. Audu**, Section of Vascular Surgery, Univ of Michigan, Ann Arbor, MI

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

558

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

Heidi L Collins, VascularStrategies, LLC, Plymouth Meeting, PA; Steven J Nicholls, Monash Cardiovascular Res Ctr, Monash Univ, Melbourne, Australia; Daniel J Rader, Univ of Pennsylvania, Philadelphia, PA; Jeffrey S Riesmeyer, Debra L Miller, Giacomo Ruotolo, Eli Lilly and Company, Indianapolis, IN; Steven J Adelman, VascularStrategies, LLC, Plymouth Meeting, PA

Poster Abstracts (continued)

H.L. Collins: Employment; Significant; VascularStrategies, LLC. Ownership Interest; Significant; VascularStrategies, LLC. **S.J. Nicholls:** Other Research Support; Significant; AstraZeneca, Amgen, Anthera, Eli Lilly, Esperion, Novartis, Cerenis, The Medicines Company, Resverlogix, InfraRedx, Roche, Sanofi-Regeneron, LipoScience. Consultant/Advisory Board; Significant; Akcea, AstraZeneca, Eli Lilly, Anthera, Omthera, Merck, Takeda, Resverlogix, Sanofi-Regeneron, CSL Behring, Esperion, Boehringer Ingelheim. **D.J. Rader:** Ownership Interest; Significant; VascularStrategies, LLC. Other; Significant; Founder-VascularStrategies, LLC. **J.S. Riesmeyer:** Employment; Significant; Eli Lilly. Ownership Interest; Significant; Eli Lilly. **D.L. Miller:** Employment; Significant; Eli Lilly. Ownership Interest; Significant; Eli Lilly. **G. Ruotolo:** Employment; Significant; Eli Lilly. **S.J. Adelman:** Ownership Interest; Significant; VascularStrategies, LLC. Other; Significant; Founder-VascularStrategies, LLC.

559

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

560

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

561

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

Poster Session 3 Abstracts

565

Diabetes Induces Inducible Nitric Oxide Synthase Expression to Impair Ischemia Postconditioning Cardioprotection
Zhi-Jun Ou, Tian-Tian Wang, Yan Li, Da-Sheng Ning, Fan Yang, Sun Yet-Sen Univ, Guangzhou, China; Zheng-Yuan Xia, The Univ of Hong Kong, Hong Kong, China; 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
Tanima De, Cristina Alarcon, Northwestern Univ, Chicago, IL; Erin Smithberger, Univ of Chicago, Chicago, IL; Minoli Perera, Mohammed Shaazuddin, Mohammed Nooruddin, Paul Friedman, Northwestern Univ, Chicago, IL; Diana Moreno, Edith Nutescu, Univ of Illinois, Chicago, IL; April Barbour, George Washington Univ, Washington DC, VA; Matthew Tuck, Washington DC VA Medical Ctr, Washington DC, VA; Arthur Harralson, Shenandoah Univ, Winchester, VA; Tharani Jeyaram, Mary Harris, Sarah Bradbury, Univ of Chicago, Chicago, IL; Ramesh Subrahmanyam, U.S. Dept of Veterans Affairs, Washington DC, VA; Jeff Banagan, Georgetown Univ, Washington DC, VA; Olivia Gordon, George Washington Univ, Washington DC, VA; Juan Avitia, Bianca Lec, Bianca Lec, Northwestern Univ, Chicago, IL
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
Ke Huang, NCSU, Apex, NC; Zhenhua Li, Teng Su, Shiqi Hu, Deliang Shen, Ke Cheng, NCSU, Raleigh, NC
K. Huang: None. **Z. Li:** None. **T. Su:** None. **S. Hu:** None. **D. Shen:** None. **K. Cheng:** None.

568

Nocturnal Dipping as a Function of RS5370 Carrier Status X Everyday Discrimination in the Jackson Heart Study
Mathew J Gregoski, Campbell Univ, 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
Daniel O'Hair, Boulder Community Health, Boulder, CO; Joe Kohli, Cara Brigman, Jessica Rupnow, [m]pirik, Milwaukee, WI
D. O'Hair: Ownership Interest; Significant; [m]pirik. **J. Kohli:** Ownership Interest; Significant; [m]pirik. **C. Brigman:** Employment; Significant; [m]pirik. **J. Rupnow:** Employment; Significant; [m]pirik.

570

Combining Morphological and Biomechanical Factors Led to Better Carotid Plaque Progression Prediction: Using 3D Thin Layer Models for Faster Model Construction
Qingyu Wang, Southeast Univ, Nanjing, China; **Dalin Tang**, Worcester Polytechnic Inst, Worcester, MA; Gador Canton, Thomas S Hatsukami, Univ of Washington, Seattle, WA; Kristen L Billiar, Zheyang Wu, Worcester Polytechnic Inst, Worcester, MA; Chun Yuan, Univ of Washington, Seattle, WA
Q. Wang: Research Grant; Modest; Postgraduate Research & Practice Innovation Program of Jiangsu Province KYCX18_0156. **D. Tang**: Research Grant; Modest; NSF grant DMS-0540684, NIH grant R01 EB004759, Jiangsu Province Science and Technology Agency grant BE2016785. **G. Canton**: None. **T.S. Hatsukami**: Research Grant; Modest; NIH R01 HL61851, NIH P01 HL072262. **K.L. Billiar**: None. **Z. Wu**: None. **C. Yuan**: None.

571

Genome-Wide Interaction Study with Sex Identifies Novel Loci for Intracerebral Hemorrhage Risk
Jaeyoon Chung, Bailey Montgomery, Sandro Marini, Jonathan Rosand, Christopher D Anderson, Massachusetts General Hosp, Boston, MA
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
Francis J Alenghat, Univ of Chicago, Chicago, IL
F.J. Alenghat: None.

573

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

574

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
M.V. Malovichko: None. **D.W. Riggs**: None. **A. Agrawal**: None. **T.E. O'Toole**: None. **R.J. Keith**: None. **A. DeFilippis**: None. **S.N. Rai**: None. **K. Valle**: None. **W.K. Yimer**: None. **A. Bhatnagar**: None. **D.J. Conklin**: None. **M.E. Hall**: None. **S. Srivastava**: None.

575

Rare Variants in ABCG5/8 Genes Contribute to Mimic and Worsen the Phenotype of Familial Hypercholesterolemia
Hayato Tada, Masa-aki Kawashiri, AKIhiro Nomura, Atsushi Nohara, Masayuki Takamura, Kanazawa Univ, Kanazawa, Japan
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
Seen-Ling Sim, Josue Alexis, Abbas Shafiee, Kiarash Khosrotehrani, **Jatin Patel**, The Univ of Queensland, Brisbane, Australia
S. Sim: None. **J. Alexis**: None. **A. Shafiee**: None. **K. Khosrotehrani**: None. **J. Patel**: None.

577

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

580

Coronary Artery Disease-associated Genetic Variants Increased *Lipa* Expression and Overexpression of *Lipa* Induced Atherogenic Phenotypes in Macrophages
Fang Li, Jianting Shi, Chenyi Xue, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY; Elise Flynn, New York Genome Ctr, Dept of Systems Biology at Columbia Univ, New York, NY; Huize Pan, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY; Zihui Gu, Data Science Inst, Columbia Univ, New York, NY; Trent Evans, Washington Univ at St Louis, St Louis, MO; Muredach P Reilly, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY; Danish Saleheen, Dept of Biostatistics and Epidemiology, Univ of Pennsylvania, Philadelphia, PA; Babak Razani, Washington Univ at St Louis, St Louis, MO; Tuuli E Lappalainen, New York Genome Ctr, Dept of Systems Biology at Columbia Univ, New York, NY; Hanrui Zhang, Dept of Med, Columbia Univ Irving Medical Ctr, New York, NY
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
J. Lee: None. **M. Armenta-Ochoa**: None. **P. Maceda**: None. **E. Yoon**: None. **L. Samarneh**: None. **M. Wong**: None. **A. Baker**: None.

583

Adenosine Monophosphate-activated Protein Kinase Mutations Cause Glycogen Storage Disease Mimicking Hypertrophic Cardiomyopathy
Sahmin Lee, Asan Medical Ctr, Seoul, Korea, Republic of; Han-Mo Yang, Seoul Natl Univ Coll of Med, Seoul, Korea, Republic of; Naaleum Song, Kyoung-Hee Choi, Asan Medical Ctr, Seoul, Korea, Republic of; Ju-Young Kim, Seoul Natl Univ Coll of Med, Seoul, Korea, Republic of; Eun-Ju Kang, Asan Medical Ctr, Seoul, Korea, Republic of; Dae-Won Sohn, Seoul Natl Univ Coll of Med, Seoul, Korea, Republic of
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. **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
Islam Mohamed, California Northstate Univ, Elk Grove, CA; Sheena Thomas, Kimberly Rooney, Div of Cardiology, Emory Univ Sch of Med and Atlanta VA Medical Ctr, Atlanta, GA; Nick Willett, Dept of Orthopedics, Emory Univ Sch of Med and Atlanta VA Medical Ctr, Atlanta, GA; W. Robert Taylor, Charles Searles, Div of Cardiology, Emory Univ Sch of Med and Atlanta VA Medical Ctr, Atlanta, GA
I. Mohamed: None. **S. Thomas:** None. **K. Rooney:** None. **N. Willett:** None. **W. Taylor:** None. **C. Searles:** None.

591

Calcium Signaling of Endoplasmic Reticulum Could Predict Spasm of Coronary Artery
Han Mo Yang, Joeeun 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.

595

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

596

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

598

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

599

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

600

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

601

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

602

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

M. Spinoso: None. **V. Serbulea:** None. **W. Montgomery:** None. **C.M. Upchurch:** None. **S. Sahu:** None. **P. Srikakulapu:** None. **C.A. McNamara:** None. **G.R. Upchurch Jr.:** None. **G. Ailawadi:** None. **N. Leitinger:** None. **A.K. Meher:** None.

603

Acute Myocardial Infarction Accelerates Breast Cancer Progression Through Innate Immunity
Graeme J Koelwyn, Coen van Solingen, Emma Corr, Martin Schlegel, Milessa Afonso, Monika Sharma, Jonathan Newman, Emily Brown, Edward Fisher, New York Univ Langone Health, New York, NY; Lee Jones, Memorial Sloan Kettering Cancer Ctr, New York, NY; Kathryn Moore, New York Univ Langone Health, New York, NY
G.J. Koelwyn: None. **C. van Solingen:** None. **E. Corr:** None. **M. Schlegel:** None. **M. Afonso:** None. **M. Sharma:** None. **J. Newman:** None. **E. Brown:** None. **E. Fisher:** None. **L. Jones:** None. **K. Moore:** None.

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
H. Xu: None. **K. Fredrich:** None. **S. Kaul:** None. **R. Llewellyn:** None. **C.C. Hedrick:** None. **R. Kallinger:** None. **K. Fatema:** None. **M. Thomas:** None. **M.G. Sorci Thomas:** None.

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
Suellen Darc Oliveira, Jiwang Chen, Maricela Castellon, Usha Raj, Univ of Illinois at Chicago, Chicago, IL; Suzy Comhair, Serpil Erzurum, Lerner Res Inst, Cleveland Clinic Fndn, Cleveland, OH; Claudia Lucia Martins Silva, Federal Univ of Rio de Janeiro, Rio de Janeiro, Brazil; Roberto F Machado, Indiana Univ, Indiana, IN; Marcelo G Bonini, Medical Coll of Wisconsin, Milwaukee, WI; Richard Minshall, Univ of Illinois at Chicago, Chicago, IL
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.

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

Jsun 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

Ben B Pressly, David T Guerrero, Ivan S Alferiev, Bahman Hooshdaran, Michael Kuoch, Michael Chorny, Ilia Fishbein, The Children's Hosp of Philadelphia, Philadelphia, PA

B.B. Pressly: None. **D.T. Guerrero:** None. **I.S. Alferiev:** None. **B. Hooshdaran:** None. **M. Kuoch:** None. **M. Chorny:** None. **I. Fishbein:** None.

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

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

612

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

Eric A Osborn, Beth Israel Deaconess Medical Ctr, Boston, MA; Zhonglie Piao, Kanwarpal Singh, Adam Mauskapf, Guillermo J Tearney, Farouc A Jaffer, Massachusetts General Hosp, Boston, MA

E.A. Osborn: Consultant/Advisory Board; Modest; Dynamed. Consultant/Advisory Board; Significant; Abbott Vascular. **Z. Piao:** None. **K. Singh:** None. **A. 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

Tae Kyeong Kim, Sejin Jeon, **Goo Taeg Oh**, EWA Womans Univ, Seoul, Korea, Republic of

T. Kim: None. **S. Jeon:** None. **G. Oh:** None.

620

Circulating Sex-specific Markers of Plaque Instability in Women and Men with Severe Carotid Atherosclerosis

Karina Gasbarrino, Huaien Zheng, Edward Daly, Stella S. Daskalopoulou, The Res Inst of the McGill Univ Health Ctr, McGill Univ, Montreal, QC, Canada

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

Urvish K Patel, Creighton Univ Sch of Med, Omaha, NE; Nishanth Kodumuri, Univ of South Carolina Sch of Med, Columbia, SC; Preeti Malik, Saleha Saiyed, Icahn Sch of Med at Mount Sinai, New York, NY; Nirav Patel, Bhavin H Gajjar, Vishal Pandya, Herman Ostrow Sch of Dentistry of USC, Los Angeles, CA; Pruthi Soni, Shashvat Soni, Rutgers Sch of Dental Med, Newark, NJ; Liseth Lavado, Rutgers Sch of Nursing, Newark, NJ; Karan Patel, Johns Hopkins Univ, Baltimore, MD; Abhishek Lunagariya, Vishal B Jani, Creighton Univ Sch of Med, Omaha, NE

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 Saviglin, 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. Saviglin:** 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

Matthew Fuglestad, Hernan Hernandez, Yue Gao, Katyarina E Brunette, Univ of NE Medical Ctr, Omaha, NE; Holly DeSpiegelaere, VA Medical Ctr, Omaha, NE; George Casale, Iraklis Pipinos, Univ of NE Medical Ctr, Omaha, NE

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

Sunil Kumar Saini, Univ of Florida, Inst on Aging, Dept of Aging and Geriatric Res, Gainesville, FL; Tamar S Polonsky, The Univ of Chicago Med, Chicago, IL; Tian Lu, Stanford Univ, Dept of Health Res and Policy Biomedical Data Science, Stanford, CA; Clara B Peek, Northwestern Univ Feinberg Sch of Med, Chicago, IL; Michael H Criqui, Univ of California San Diego Dept of Family Med and Public Health, San Diego, CA; Luigi Ferrucci, Natl Inst on Aging, Div of Intramural Res, Baltimore, MD; Jack Guralnik, Univ of Maryland Sch of Med, Dept of Epidemiology and Public Health, Baltimore, MD; Melina Kibbe, Univ of North Carolina, Dept of Surgery, Chapel Hill, NC; Charlotte A Peterson, Coll of Health Sciences, Univ of Kentucky Dept of Epidemiology, Lexington, KY; Robert L Sufit, Northwestern Univ Feinberg Sch of Med, Dept of Med, Chicago, IL; Christiaan Leeuwenburgh, Univ of Florida, Inst on Aging, Dept of Aging and Geriatric Res, Gainesville, FL; Mary M McDermott, Northwestern Univ Feinberg Sch of Med, Dept of Preventive Med, Chicago, IL

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

Caitlin Lewis, Derick Okwan-Duodo, Laura Hansen, Giji Joseph, David R Archer, W. Robert Taylor, Emory Univ, Atlanta, GA

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

Marcos T Kuroki, Dept of Surgery, Penn State Univ Coll of Med, Penn State Health Milton S. Hershey Medical Ctr, Hershey, PA; Juan A Estrada, Gail D Thomas, Lawrence I Sinoway, Marc P Kaufman, Penn State Hershey Heart and Vascular Inst, Penn State Univ Coll of Med, Penn State Health Milton S. Hershey Medical Ctr, Hershey, PA

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, Zaher 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

Shailesh Samal, Maria Volkova, Max Vikström, Johan Frostegård, Karolinska Instt, Stockholm, Sweden
S.K. Samal: None. **M. Volkova:** None. **M. Vikström:** None. **J. Frostegård:** None.

639

Altered Metabolomic Profile in Peripheral Artery Disease Patients

Ahmed Ismaeel, Florida State Univ, Tallahassee, FL; Marco E Franco, Baylor Univ, Waco, TX; Evlampia Papoutsis, Florida State Univ, Tallahassee, FL; Ramon Lavado, Baylor Univ, Waco, TX; George P Casale, Matthew Fuglestad, Univ of Nebraska at Medical Ctr, Omaha, NE; Robert S Smith, William T Bohannon, Baylor Scott and White Hosp, Temple, TX; Robert S Brumberg, Vascular Surgery Associates, Tallahassee, FL; Iraklis I Pipinos, Univ of Nebraska at Medical Ctr, Omaha, NE; Panagiotis Koutakis, Florida State Univ, Tallahassee, FL

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.

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

Javier Rodriguez-Carrio, Area of Immunology, Dept of Functional Biology, Univ of Oviedo and Insto de Investigación Sanitaria del Principado de Asturias (ISPA), Oviedo, Spain; Jes Lindholt, CIMA, Odense, Denmark; MARINA Canyelles, IIB-Sant Pau and CIBERDEM, Barcelona, Spain; Diego Martinez-Lopez, FIIS-Fundacion Jimenez Diaz, Madrid, Spain; Mireia Tondo, IIB-Sant Pau and CIBERDEM, Barcelona, Spain; Luis M Blanco-Colio, FIIS-Fundacion Jimenez Diaz, Madrid, Spain; Joan-Carles Escola-Gil, IIB-Sant Pau and CIBERDEM, Barcelona, Spain; Ana Suarez, Area of Immunology, Dept of Functional Biology, Univ of Oviedo and Insto de Investigación Sanitaria del Principado de Asturias (ISPA), Oviedo, Spain; **Jose Luis Martin-Ventura**, FIIS-Fundacion Jimenez Diaz, Madrid, Spain

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.

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 NFyB 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.

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

Nandan Nath, UPMC Vascular Surgery, Pittsburgh, PA; Luka Pocivavsek, Univ of Chicago, Chicago, IL; Sachin Velankar, Univ of Pittsburgh Sch of Engineering, Pittsburgh, PA; Tzeng Edith, UPMC Vascular Surgery, Pittsburgh, PA

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

Brynne E Whitacre, John T Melchior, Univ of Cincinnati, Cincinnati, OH; Vivian Wolfe, Basilia Zingarelli, Cincinnati Children's Hosp Medical Ctr, Cincinnati, OH; W. Sean Davidson, Univ of Cincinnati, Cincinnati, OH

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

Nairuti Patel, Paul M Weers, California State Univ of Long Beach, Long Beach, CA

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

678

Vascular Smooth Muscle Cell Dynamics in Atherosclerosis

Hanna Sanyour, Na Li, Alex Rickel, Univ of South Dakota, 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

Maki Tsujita, Hiroshi Takase, Nobukatsu Akita, Nobuyuki Ohte, Nagoya City Univ Graduate Sch of Medical Sciences, Nagoya, Japan; Takeshi Yamazaki, Hiroshima Univ Graduate Sch of Integrated Arts and Sciences, Higashi-Hiroshima, Japan; Shinji Yokoyama, Inst of Biological Functions, Chubu Univ, Kasugai, Japan

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

Ruel S Michelin, Cariam Health Consulting, Gaithersburg, MD; Sylvia Santosa, Concordia Univ, Montreal, QC, Canada; 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

Anna Wolska, Natl Insts of Health, Bethesda, MD; Larry Lo, Corvidia Therapeutics, Inc., Waltham, MA; Denis O. Sviridov, Mohsen Pourmoussa, Milton Pryor, Natl Insts of Health, Bethesda, MD; Soumitra S. Ghosh, Rahul Kakkar, Michael Davidson, Corvidia Therapeutics, Inc., Waltham, MA; Sierra Wilson, Richard W. Pastor, Jingrong Tang, Marcelo Amar, Natl Insts of Health, Bethesda, MD; Matt Devalaraja, Corvidia Therapeutics, Inc., Waltham, MA; Alan T. Remaley, Natl Insts of Health, Bethesda, MD

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.

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 Ochinn, Mahdi Garelnabi, Univ of Massachusetts Lowell, Lowell, MA

E. Punch: None. **H. Mahini:** None. **C. Ochinn:** 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 Kuklenyik, 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. Kuklenyik: 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 IL-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

Laura M Senatus, Raquel Lopez-Diez, NYU Langone Health, New York, NY; Richard Friedman, Columbia Univ, New York, NY; Ravichandran Ramasamy, Ann Marie Schmidt, NYU Langone Health, New York, NY
L.M. Senatus: None. **R. Lopez-Diez:** None. **R. Friedman:** None. **R. Ramasamy:** None. **A. Schmidt:** None.

712

CXCR4 Maintains B1 Cell Production of Atheroprotective IgM Antibody in the Bone Marrow

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.

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 Bellosa**, Univ of Milan and IRCCS Multimedica, Milan, Italy

S. Castiglioni: None. **I. Damiani:** None. **L. Canclini:** None. **A. Rizzi:** None. **A. Corsini:** None. **S. Bellosa:** 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
Hai Dan Jin, Colle of Med, Ewha Womans Uiv, Seoul, Korea, Republic of; Subin Park, Dept of Chemistry and Nano Science, Ewha Womans Uiv, Seoul, Korea, Republic of; Youngmi Lee, Dept of Chemistry and Nano Science, Ewha Womans Uiv, Seoul, Korea, Republic of; **Ick-Mo Chung**, Colle of Med, Ewha Womans Uiv, Seoul, Korea, Republic of
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
Roman N Rodionov, Technische Univ Dresden, Dresden, Germany; Hoshimjon Begmatov, New York Inst of Technology, New York, NY; Natalia Jarzebska, Technische Univ Dresden, Dresden, Germany; Ketul Patel, Matthew T Mills, Zulaikha Ghani, Doreen Khakshour, Pankti Tamboli, Mitul N Patel, Mirette Abdalla, Maryann Assaf, New York Inst of Technology, New York, NY; Jose Luis Millan, Sanford Burnham Prebys Medical Discovery Inst, La Jolla, CA; Stefanie M Bode-Böger, Jens Martens Lobenhoffer, Inst of Clinical Pharmacology, Magdeburg, Germany; Norbert Weiss, Technische Univ Dresden, Dresden, Germany; Olga V Savinova, New York Inst of Technology, New York, NY
R.N. Rodionov: None. **H. Begmatov:** None. **N. Jarzebska:** None. **K. Patel:** None. **M.T. Mills:** None. **Z. Ghani:** None. **D. Khakshour:** None. **P. Tamboli:** None. **M.N. Patel:** None. **M. Abdalla:** None. **M. Assaf:** None. **J. Millan:** None. **S.M. Bode-Böger:** None. **J. Martens Lobenhoffer:** None. **N. Weiss:** None. **O.V. Savinova:** None.

732

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

733

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

734

Altered Loading of Protein Cargoes in Tissue-Entrapped Human Vascular and Valvular Extracellular Vesicles
Mark C Blaser, Fabrizio Buffolo, Hideyuki Higashi, Maximillian A Rogers, Lang H Lee, Tan Pham, Eugenia Shvartz, Galina K Sukhova, Brigham and Women's Hosp, Boston, MA; Silvia Monticone, Giovanni Camussi, Univ of Turin, Turin, Italy; Jochen D Muehlschlegel, Brigham and Women's Hosp, Boston, MA; Simon C Body, Beth Israel Deaconess Medical Ctr, Boston, MA; Peter Libby, Sasha A Singh, Masanori Aikawa, Elena Aikawa, Brigham and Women's Hosp, Boston, MA
M.C. Blaser: None. **F. Buffolo:** None. **H. Higashi:** None. **M.A. Rogers:** None. **L.H. Lee:** None. **T. Pham:** None. **E. Shvartz:** None. **G.K. Sukhova:** None. **S. Monticone:** None. **G. Camussi:** None. **J.D. Muehlschlegel:** None. **S.C. Body:** None. **P. Libby:** None. **S.A. Singh:** None. **M. Aikawa:** None. **E. Aikawa:** None.

735

Oxidized Phospholipid Induced Redox Imbalance Promoted Inflammation in Atherosclerosis
Mizanur Rahman, Sabbir Ahmed, Johnny Steuer, Peter Gillgren, Anquan Liu, Johan Frostegård, Karolinska Instt, Stockholm, Sweden
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
Tomas Vaisar, Jie H Hu, Nathan Airhart, Kate Fox, Jay W Heinecke, Univ Washington, Seattle, WA; Roberto Nicosia, VA Puget Sound Health Care System, Seattle, WA; Ted Kohler, Sina A Gharib, David A Dichek, Univ Washington, Seattle, WA
T. Vaisar: None. **J.H. Hu:** None. **N. Airhart:** None. **K. Fox:** None. **J.W. Heinecke:** None. **R. Nicosia:** None. **T. Kohler:** None. **S.A. Gharib:** None. **D.A. Dichek:** None.

737

The Low-Density Lipoprotein Receptor-Related Protein 4 (Lrp4) Inhibits Immortalized Vascular Smooth Muscle Cell Calcium Deposition
Eric Johnson, Alabama Coll of Osteopathic Medi, Dothan, AL
E. Johnson: None.

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

Chia-Hua Wu, Deborah Howatt, Jessica Moorleghen, Craig Vander Kooi, Alan Daugherty, Hong Lu, Univ of Kentucky, Lexington, KY

C. Wu: None. **D. Howatt:** None. **J. Moorleghen:** None. **C.**

Vander Kooi: None. **A. Daugherty:** None. **H. Lu:** None.

739

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

Jiangyun Luo, Chak Kwong Cheng, Yu Huang, **Xiao Yu Tian**, Chinese Univ Hong Kong, Sha Tin N T, Hong Kong

J. Luo: None. **C. Cheng:** None. **Y. Huang:** None. **X. Tian:**

None.

740

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

Christopher Henderson, Julia Hartman, Anh Nguyen, Aneesh Patel, Melissa Marshall, James Garmey, Coleen McNamara, Univ of Virginia, Charlottesville, VA

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

Annabel L Taylor, Univ of Cambridge, Cambridge, United Kingdom; Lina Dobnikar, Babraham Inst, Cambridge, United Kingdom; Joel Chappell, KU Leuven, Leuven, Belgium; Jennifer L Harman, Univ of Cambridge, Cambridge, United Kingdom; Elaine Dzierzak, Univ of Edinburgh, Edinburgh, United Kingdom; Martin R Bennett, Univ of Cambridge, Cambridge, United Kingdom; Mikhail Spivakov, MRC London Inst of Medical Sciences, London, United Kingdom; Helle F Jørgensen, Univ of Cambridge, Cambridge, United Kingdom

A.L. Taylor: None. **L. Dobnikar:** None. **J. Chappell:** None.

J.L. Harman: None. **E. Dzierzak:** None. **M.R. Bennett:**

None. **M. Spivakov:** None. **H.F. Jørgensen:** None.

742

Butyrate Protects Against Endothelial Dysfunction Through Ppar-delta

Qin Qin Tian, Fung Ping Leung, Francis M Chen, Xiao Yu Tian, Gary Tse, Wing Tak Wong, The Chinese Univ of Hong Kong, Hong Kong, China

Q. Tian: None. **F. Leung:** None. **F.M. Chen:** None. **X. Tian:**

None. **G. Tse:** None. **W. Wong:** None.

743

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

Josephine L Anderson, Stephan J Bakker, **Uwe J Tietge**, Univ Medical Ctr Groningen, Groningen, Netherlands

J.L.C. Anderson: None. **S.J.L. Bakker:** None. **U.J.F. Tietge:**

None.

744

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

Alexander N Kharlamov, DE HAAR Res Fndn, Amsterdam, Netherlands

A.N. Kharlamov: None.

745

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

Zhongyang Lu, Yanchun Li, Maria F Lopes-Virella, **Yan Huang**, Medical Univ of South Carolin, Charleston, SC

Z. Lu: None. **Y. Li:** None. **M.F. Lopes-Virella:** None. **Y.**

Huang: None.

746

Effects of Catalase Overexpression on Advanced Atherosclerotic Plaque Composition

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

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

Hoai Nam Ha, Peoples' Friendship Univ of Russia (RUDN Univ), Moscow, Russian Federation; Yury Valentinovich Chervyakov, Yaroslavl State Medical Univ of the Public Health Ministry of the Russian Federation, Yaroslavl, Russian Federation

H. Ha: Other Research Support; Modest; The publication has been prepared with the support of the «RUDN University Program 5-100». **Y. Chervyakov:** None.

748

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

Yingzi Chang, At Still Univ, Kirksville, MO; Emma L. Worley, Truman State Univ, Kirksville, MO

Y. Chang: None. **E.L. Worley:** None.

749

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

Divya Thiagarajan, Johan Frostegård, Anna Frostegård, Karolinska Instt, Stockholm, Sweden

D. Thiagarajan: None. **J. Frostegård:** None. **A. Frostegård:**

None.

Author Index

- Abbas, Tariq 365
 Abdalla, Mirette 731
 Abdelgawwad, Mohammad 481
 Abdel-Latif, Ahmed 423
 Abdelrahman, Ammar A. ... **586**
 Abdi, Mehamed 306
 Abdollahi-karizno, Mahdi .. **190**
 Abdul Jalil, Rufaihah 561
 Abe, Jun-ichi 320, 326
 Abhari, Devan 676
 Abilez, Oscar 425
 Abraham, Benjamin 511
 Abusnina, Waiel 529
 Achilefu, Samuel 174
 Acosta, Giancarlo **529**
 Adachi, Takeshi 406
 Adelman, Steven J. 558
 Afonso, Milessa S. ... **102**, 544.
 603, 605, 610, 708
 Afshar-Khargan, Vahid 554
 Agashe, Ruchi 145
 Aghayev, Turan 148
 Agrawal, Abhinav 574
 Agrawal, Devendra K. 409
 Aguayo, Esteban 240
 Aguilar, Rodrigo 529
 Ahmad, Abraheem 307
 Ahmed, Abu 109
 Ahmed, Mohamed 153
 Ahmed, Nisar 365
 Ahmed, Sabbir 735
 Ahn, Yong Joo **414**
 Ai, Masumi 294
 Aicher, Brittany O. **256**
 Aikawa, Elena 734
 Aikawa, Masanori 286, 497,
 651, 734
 Ailawadi, Gorav 602
 Airhart, Nathan 736
 Akbulut, Asim C. 304
 Akers, Emma J. **319**
 Akita, Nobukatsu 679
 Akiyama, Tomoko 399
 Akk, Antonina 448
 Alam, Sami B. 197
 Alamprese, Melissa 150
 Alarcon, Cristina 566
 Albaghdadi, Mazen **439**
 Alcazar, Cynthia 425
 Alenghat, Francis J. **572**
 Alexander, J. S. 402
 Alexis, Josue 576
 Alfaidi, Mabruka **535**
 Alfieriev, Ivan S. 440, 609
 Alfriev, Ivan 126
 Ali, Fadil 239
 Ali, Ramadan 120
 Allan, John M. 541
 Allen, McKenzie 379
 Allen, Ryan M. **355**
 Almeida, Yuri E. 325
 Almqvist, Håkan 542
 Almuwaqqat, Zakaria 195
 Al-Shabraway, Mohamed .. 293
 Al-Sharea, Annas 232
 Althagafi, Marwan G. 534
 Al-Yafeai, Zaki **311**
 Alzayed, Alexander M. 323
 Amadori, Letizia 101, 176
 Amar, Marcelo J. 332, 690
 Amarnath, Venkataraman 510,
 530
 Ambrosio, Fabrisia 243
 Ambrosio, Mariateresa 214
 Amengual, Jaume **511**
 Amir, El-ad David 101, 176
 Ammi, Azzdine 546
 Amro, Ahmed 529
 Anand, Sudarshan 200
 Ananya, Bukhtaram 357
 Anaya-Ayala, Javier E. 273
 Anderson, Christopher D. . 571
 Anderson, Daniel R. 348,
 349, 707, 728
 Anderson, Josephine L.C.
 743
 Anderson, Peter B. 428
 Andraski, Allison B. 497
 Andre-Gregoire, Gwennan 228
 Andro, Heather L. 378
 Antoniak, Silvio **670**
 Anzai, Hitoshi 252
 Aoki, Hiroki 267
 Aono, Jun 715
 Apte, Suneel 641
 Aragam, Krishna 110
 Aranmolate, Rasaki A. 568
 Archer, David R. 629
 Šarenac, Dragana S. B. ... **482**
 Arghami, Arman 359
 Arinze, Nkiruka **234**
 Armenta-Ochoa, Miguel
 202, 582
 Arni Valisno, Jeff 216
 Arnold, Joshua D. 206
 Arpino, John-Michael 242, 634
 Arruda, Valder 144
 Asada, Yujiro 660
 Asakura, Masanori 394, 624
 Ashur, Carmel 452
 Asico, Laurence 360
 Aslan, Joseph E. **156**
 Asmis, Reto 414
 Assaf, Maryann 731
 Assali, Maen 192, 367, 524
 Assimes, Themistocles L. 110
 Asztalos, Bela F. 294,
 494, 702
 Audu, Christopher O. 264,
 **557**
 Autieri, Michael **540**
 Avitia, Juan 566
 Awad, Issam A. 131
 Ayers, Colby 688, 703
 Aylward, Paul **436**
 Baatsch, Isabelle **553**
 Babaev, Vladimir R. 536
 Babur, Özgün 156
 Bach, Richard 531
 Badria, Farid 293
 Baganha, Fabiana 251
 Bahoora, Justin 474
 Bailey, Shannon 541
 Bajaj, Archana 705
 Bajraktari, Artan 363
 Baker, Aaron B. 202, 401, 582
 Bakker, Stephan J.L. 743
 Ballantyne, Christie M. 346
 Ballout, Rami A. **502**
 Balm, Ron 656
 Balsbaugh, Jeremy 549
 Bamshad, Michael J. .. 140, 463
 Banagan, Jeff 566
 Banerjee, Avik 599
 Banerjee, Subhashis 124
 Bansal, Narendra 281
 Bansal, Trisha 657
 Barber, Jacob 499, **504**
 Barbey, Sarah 193
 Barbour, April 566
 Baril, Donald 239
 Bark, David J. 130
 Bark, Katrina 130
 Barker, Phil 476
 Barman, Scott A. 577
 Barnes, Anthony 503
 Barnhart, Shelley 522
 Barr, John R. 702
 Barrera, Jose 392
 Barrett, Tessa J. 511
 Barroso, Margarida 352
 Barter, Philip J. 701
 Bartoli, Manuela 586
 Barton, David E. 348
 Barupal, Dinesh K. 499
 Bashir, Rehana 222
 Bauer, Robert C. 115, 155,
 324, 507
 Bauknight, Dustin K. 297
 Baumgartner, Roland 709
 Beckett, Lauren 102, 708
 Begmatov, Hoshimjon 307, 731
 Begum, Shahinoor 549
 Behrmann, Abraham .. 207, 533
 Bellosta, Stefano **726**
 Below, Jennifer E. 371
 Bender, Timothy 712
 Bennett, Brian 154
 Bennett, Martin R. 741
 Benoit, Joshua A. 449
 Bensed, Tracy A. ... 140, 463
 Bentzon, Jacob F. 191, 681
 Berceli, Scott 193
 Berceli, Scott A. 490
 Berger, Jeffrey 527
 Bergman, Otto .. 210, 309, 450
 Bergstrom, Paige 503
 Berk, Bradford C. 211,
 408, 589
 Berliner, Judith A. 423
 Berrido, Andrea M. 115
 Berru, Fabian 490
 Bertin, Stephanie 492
 Berus, Joshua M. **524**
 Bessen, Sarah Y. 428
 Beyer, Andreas M. **493**
 Bhardwaj, Niharika 529
 Bhatlaker, Seema 160
 Bhatnagar, Aruni 483, 574
 Bhattacharya, Pallab 429
 Bhuiyan, Shenuarin 311
 Bijkerk, Roel 544
 Bikdeli, Behnood **112**,
 **278, 279**
 Billheimer, Jeffrey 513
 Billiar, Kristen L. 531, 570
 Billings, Frederic T. 340
 Birge, Raymond 152
 Bishop, Andrew 299
 Biswas, Piyashi 554
 Björck, Hanna M. 450
 Blackburn, Spiros L. ... 584, 633
 Blalock, J. Edwin 413
 Blanco-Colio, Luis M. 313, 645
 Blaser, Mark C. **734**
 Bockenstedt, Paula L. 120
 Bode-Böger, Stefanie M. .. 731
 Boden, William 110
 Body, Simon C. 734
 Boffa, Michael B. 114, 509
 Bohannon, William T. 246, 639
 Bolze, Andrew 445
 Bonini, Marcelo G. 606
 Boon, Reiner 127
 Borchers, Christoph H. 116
 Bordan, Zsuzsanna 577
 Borja, Mark S. 510
 Borkowski, Kamil 512
 Bornfeldt, Karin E. 522
 Bornstein, Stefan R. 396
 Bortot, Maria **130**, 280
 Bosevski, Marijan 112
 Bouchard, Claude 499, 504
 Bouchareychas, Laura 337
 Boucher, Jeremie 297
 Boufford, Camille K. 135
 Boukhatem, Imane 283
 Boyce, Guialine K. 697
 Boyer, Christen J. 402
 Boyer, Michael **399**
 Boyle, John 636
 Boytard, Ludovic 149
 Bradbury, Sarah 566
 Bragdon, Beth C. 722
 Brake, Marisa A. **379**
 Brandt, Lukas 493
 Brass, Lawrence F. 137
 Bremner, J Douglas 195
 Brewer, H. Bryan 515
 Briggs, Jeremy 492
 Brigman, Cara 569
 Britton, Steven L. 212
 Brown, Ashley **143**
 Brown, Emily 603, 605, 708
 Brown, Jeremiah R. 437
 Brown, Jonathan D. **198**,
 226, **536**
 Bruch, David 237
 Brumberg, Robert S. 639
 Bruneau, Sarah **228**
 Brunette, Katyarina E. 249,
 627, 631
 Brunssen, Coy 396
 Brunton-O'Sullivan, Morgane
 **727**
 Buckley, Michael R. 206
 Budbazar, Enkhjargal **460**
 Buddington, Steve 680
 Buffolo, Fabrizio 734
 Bui, Justin 554, 662
 Burak, M. F. 445
 Burkhart, Keith 626
 Burr, Hannah A. **199**
 Burrell, Louise M. 373
 Burrridge, Paul 657
 Bursill, Christina A. 319
 Burton, Jason C. 116
 Busch, Albert 127, 709
 Busch, David 401
 Busenkell, Emma 110
 Bush, Erin C. 324
 Butler, Emily 670
 Button, Emily B. **697**

Author Index (continued)

- Buxbaum, Sarah G. 568
 Bytyci, Ibadete 363
 Bytyci, Sefer **363**
 Cahill, Paul A. 315
 Cai, Bishuang **152**
 Cai, Changhong 390
 Cai, Qing 271
 Cai, Ruiping 223
 Calija, Branko 482
 Calkin, Anna C. **343**
 Callahan, John 135
 Calvo, Nicholas 425
 Cameron, Scott J. 129, 449
 Camire, Rodney M. 144
 Campbell, Robert 160
 Campia, Umberto 301
 Camussi, Giovanni 734
 Canclini, Laura 726
 Cangut, Busra **746**
 Canton, Gador 570
 Canugovi, Chandrika **212**
 Canyelles, MARINA 645
 Cao, Longyue L. 400
 Cao, Wenjing 481
 Cardillo, Carmine 301
 Carmo, Luciana S. 325
 Carmody, Rachel N. 445
 Carnevale, Daniela **121, 611**
 Carnevale, Lorenzo 611
 Carrizzo, Albino **214**
 Casale, George 249,
 627, 631
 Casale, George P. 246, 639
 Cashin, John **658**
 Castellon, Maricela 606
 Castiglioni, Silvia 726
 Castleberry, Mark **686**
 Castro, Inar 696
 Cecchi, Alana C. 140, 463
 Cecere, Renzo 201
 Celestin, Oni M. 341
 Ceneri, Nicolle 524
 Centa, Monica 523, 709
 Ch, Ifikhar A. **357, 556**
 Chadwick, Alexandra C. ... 532
 Chaffin, Mark 110
 Chakraborty, Raja **623**
 Chambliss, Ken L. 113,
 124, **392**
 Chan, Jefferson 427
 Chan, Kei Hang K. 194
 Chang, Eugene B. 133, 462
 Chang, Kyong-Mi 110
 Chang, Rui 150
 Chang, Wei-Tien **595**
 Chang, Yingzi **748**
 Chang, Ziyi 265, 585
 Chantal, Khalid **222, 253**
 Chantler, Paul 718
 Chappell, Joel 741
 Charbonier, Frank 303
 Chatterjee, Namita 200
 Chatterjee, Shruti **312**
 Chatzizisis, Yiannis S. **409**
 Cheema, Asim 199
 Chen, Edmund B. **133,**
 **462, 632**
 Chen, Feng 577
 Chen, Francis M. 742
 Chen, Hao Yu 199
 Chen, Hong **560**
 Chen, Hung-Hsin **371**
 Chen, Jeff **261**
 Chen, Jiwang 606
 Chen, Jiyan 107
 Chen, Kai 433
 Chen, Lei 233
 Chen, Mian 337
 Chen, P. Roc 230
 Chen, Shi-You 720
 Chen, Shiyu 650
 Chen, Shmuel 279
 Chen, Sisi 720
 Chen, Sunny 551
 Chen, Xiao F. 459
 Chen, Xiaofeng 269, 270,
 495, 496, 521
 Chen, Y. Eugene 265, 585
 Chen, Yiliang 335, **716**
 Chen, Yunfeng **157**
 Chen, Zhiheng 173
 Cheng, Chak Kwong 739
 Cheng, Hongqiang 390
 Cheng, Ke 567
 Cheng, Su Li 207
 Cherbonneau, Francois ... 254
 Chernogubova, Ekaterina -. **127**
 Chervyakov, Yuri Valentinovich
 368, 747
 Chevalier, Jacqueline **242,**
 634
 Chika-nwosuh, Ogechukwu 643
 Chindah, Aseruchi 328
 Chitalia, Vipul 234
 Cho, Jaehyung 285
 Cho, Kelly 110
 Cho, Soyoung 321
 Chodisetti, Giriprakash 398
 Choi, Kyoung-Hee 583
 Chordia, Mahendra D. 262
 Chorny, Michael 609
 Chou, Elizabeth L. **254**
 Choudhary, Gaurav 192,
 367, 524
 Chowdhury, Iffat 626
 Chowdhury, Mohammed .. 439
 Christensen, Cason D. **348**
 Christensen, Gary 492
 Christensen, Jared L. 192, 367,
 524
 Chu, Alice J. 192, **367**
 Chu, Claire 135
 Chu, Haiyan 124, **132, 177**
 Chudnovskiy, Aleksey 101,
 176
 Chun, Youngjae 263
 Chung, Allen 337
 Chung, Ick-Mo **730**
 Chung, Jaeyoon **571**
 Chung, Raymond 152
 Cifelli, Giuseppe 121
 Cikach, Frank 641
 Cisneros, Will 733
 Civelek, Mete 162
 Clancy, Lauren 159
 Clark, Justin **114**
 Clark, Robert B. 353
 Clarkson, William 504
 Clemens, Dahn L. 349,
 707, **728**
 Clendenen, Nathan 130
 Clish, Clary B. 499
 Coady, Sean 626
 Cole, John 427
 Coleman, Dawn M. **370**
 Collier, John 150
 Collins, Francis S. 198
 Collins, Heidi L. **558**
 Columbo, Jesse A. ... 259, 428
 Combs, Christian 117
 Comhair, Suzy 606
 Concato, John 110
 Conklin, Daniel J. 574
 Conrad, Kelsey A. 449
 Conrad, Mark F. 254
 Conte, Michael S. 336, 337
 Cooley, Brian 663
 Cooper, Hannah **642**
 Cooper, Mark 232
 Corey, Kathleen 152
 Corkrey, Heather A. .. 159, 284
 Corr, Emma M. 603, 605,
 **610, 708**
 Correa, Adolfo 194
 Corsini, Alberto 726
 Couch, Christine 258, 649
 Covic, Lidija 449
 Cox, Laura 299
 Craige, Siobhan 433
 Creasy, Kate T. 336,
 **508, 704**
 Criqui, Michael H. 628
 Crowley, Aaron 279
 Csako, Gyorgy 626
 Csanyi, Gabor 175
 Cuchel, Marina 705
 Cuda, Suzanne 299
 Cuen-Ojeda, Cesar **273**
 Cui, Jian 155, 324
 Cui, Jie 134, **415**
 Cui, Xiangdong 243
 Cui, Xiao-Bing **720**
 Cui, Ya Ru 526
 Cunliffe, Jennifer 156
 Cupples, L. Adrienne 494
 Curty da Costa, Ernesto ... 208
 Cybulsky, Myron I. 534
 Cynn, Esther **100**
 Dacken, Brian 127
 Dai, Wei-Ping 327
 Dai, Xiaohua 594
 Daiber, Andreas 351, 412, 608
 Dalman, Ronald L. ... 269, 270,
 453, 495, 496, 521, 647
 Dalsing, Michal C. 364
 Daly, Edward 620
 Damato, Antonio 214
 Damiani, Isabella 726
 Damrauer, Scott M. 110
 Dandan, Mohamad **333**
 Dandi, Gauri 626
 Dannert, Angelika 398
 Dardik, Alan 235, 374
 Das, Shovon 407
 Dasa, Siva S. K. 297
 Dash, Biraja 374
 Daskalopoulou, Stella S. ... 620
 Daugherty, Alan 261, 264,
 269, 270, 459, 521,
 646, 651, 715, 738
 David, Larry 156
 Davidson, Michael 690
 Davidson, W. Sean 510,
 675, 686
 Davies, Sean S. 510, 530
 Davis, Frank M. **264, 479**
 Davis, Roger 433
 Davis, Xenia **506**
 Davis-Knowlton, Jessica H.
 **543**
 Davy, John 151
 Dayal, Sanjana 111, 119
 Daze, Emily 671
 De, Tanimia **566**
 de Aguiar Vallim, Thomas Q.
 343
 Debbas, Victor 325
 de Beer, Frederick C. 693, 700
 de Beer, Maria C. 693, 700
 Deeb, Micheal G. 452
 DeFilippis, Andrew 574
 DeGeorgia, Sophia 323
 De Giorgi, Marco **116, 689**
 DeGrado, William 311
 de Jesus, Daniel 404
 Del Rosario, Amanda 549
 De Lucia, Massimiliano 214
 deMayo, Connor 400
 Dendekker, Aaron 264, 479
 Deng, Hongping 270
 Deng, Jiacheng 725
 Deng, Yak D. 514
 Deng, Zhiyong 288, 302
 Deodhar, Sneha 328
 Deppen, Juline N. **442**
 Desai, Mayur M. 278
 de Souza, Vinicius 588
 Despiegelaere, Holly 249,
 627, 631
 Dev, Rishabh 655
 Devalaraja, Matt 690
 DeVallance, Evan **404**
 de Vries, Carlie J. M. 656
 de Vries, Margreet R. 244,
 245, **251**
 de Waard, Vivian **656**
 Dey, Amit 626
 Dias, Nuno 304, 542
 Di Bartolo, Belinda A. 319
 Dichek, David A. 736
 Diditchenko, Svetlana 329
 Dieter, Raymond A. 206
 Di Lorenzo, Annarita **528**
 Dimmeler, Stefanie 127
 Ding, Lei 530
 Di Paola, Jorge 130, 280
 Dobnikar, Lina 741
 Dobrucki, Iwona 427
 Dobrucki, Lawrence 427
 Doerfler, Alexandria M. 116, **689**
 Doherty, Sean P. 198, 536
 Domingues, Cleyton 360
 Dong, Henry 346
 Dongiovanni, Paola 152
 Donkor, Kwame 332
 dos Santos, Claudia C. 203
 Dowling, Abigail 271
 Dragoljevic, Dragana 232
 Drake, Rachel 291
 Drew, Brian G. 343
 Dr. Kailash N. Pandey's group,
 322

Author Index (continued)

- Drummer IV, Charles E. **298**,
..... 723
Duan, Xueyan 107
Duang, Xue-Yan 140, 463
Dubinsky, Michelle K. 375
Dubois, Luc 242
Dufresne, Line 199
Dunn, Andrew 202
Dunn, Jennifer 636
Duong, Phat 337
Duque, Juan C 275
Durham, Kristina K. 514
Duryee, Logan M. 349, 707
Duryee, Michael J. 348, 349,
..... 707, 728
Dutson, Erik 239, 240
DuVall, Scott 110
Dzierzak, Elaine 741
Eagle, Kim A. 452
Ebong, Eno 733
Eckstein, Hans-Henning .. 127,
..... 255, 317
Edelman, Elazer 439
Edith, Tzeng 672
Edwards, Gaylen 720
Edwards, Jane Y. 684
Egido, Jesus 313
Eguchi, Satoru .. 399, 411, 642
Ektesabi, Amin M. **203**
Eldeeb, Ibrahim 293
Elezi, Shpend 363
El-Ghazali, Ayea **328**, 703
Eliaison, Jonathan 264
Eliza Ronsein, Grazilla 338
Elliott, Kathy 642
Elsisy, Moataz 263
El-Tanani, Shaimaa 293
Emerson, Jonathan 196
Engert, James C. 199
Erdos, Michael R. 198
Eriksson, Per 210, 308,
..... 309, 450
Erlinge, David 279
Eroglu, Emrah 219
Erzurum, Serpil 606
Escola-Gil, Joan-Carles 645
Eskandari, Owen M. 133,
..... 462, 632
España, Samuel 191
Espinosa-Diez, Cristina **200**
Espitia, Olivier 432
Esteban, Vanesa 313
Estrada, Juan A. 630
Evanoff, Holly 479
Evans, Trent 551, 580
Evseyeva, Maria **296**
Faffe, Debora S. **208**
Fakhouri, Fadi 228
Fan, Jianjia 697
Fan, Shih-Kang 595
Fan, Yanbo 585
Fanari, Zaher 443, 637
Fancher, Ibra S. **397**, 732
Fang, Jingye 594
Fang, Xin 364
Fang, Yun **162**
Farber, Alik 234
Farber, Steven A. 341
Farhat, Linda 452
Farhat, Maya **517**
Farias-Silva, Elisangela 325
Faries, Christopher ... 101, 176
Faries, Peter 101, 176
Farmer, Stephen R. 722
Farooque, Nashwan 626
Farragher, Cullen 377
Fatema, Kaniz 604
Fatkhullina, Aliia 148
Fay, William P. 395
Fazio, Sergio 503, 525,
..... 692, 721
Fei, Jia 720
Feinberg, Mark W. 213, 314
Feng, James 508, **704**
Fenton, Alexandra M. 291, 503
Fereydooni, Arash **235**, 374
Fernandez, Dawn **101**, **176**
Fernandez, Nicolas ... 101, 176
Ferrari, Ricardo J. **243**
Ferrucci, Luigi 628
Fessel, Melissa 325
Fiehn, Oliver 499
Filippou, Konstantina 412, 608
Finberg, Robert W. 159
Finn, John P. 239
Fishbein, Ilia 126, 440, 609
Fisher, Edward A. 102, 511,
..... 603, 696, 708
Fisher, Virginia A. 494
Fitzpatrick, Emmett 440
Flaker, Gregory 173
Flanagan, Jonathan D. 161
Fleg, Jerome 626
Fleury, Samuel **283**
Flores, Alyssa M. **142**, 317
Flynn, Elise 580
Flynn, Michelle C. **232**
Fogelson, Aaron 280
Foldyna, Borek 515
Fong, Robyn 150
Fortin, Carl 517
Fourman, Sarah 506
Fox, Kate 736
Franco, Marco E. 639
Franco, Sarah 225
Franco-Cereceda, Anders 450
Franklin, Michael **458**
Fraser, David A. 698
Fraungruber, Pamela E. 354
Fredman, Gabrielle **352**
Friedrich, Katherine ... 493, 604
Freedman, Jane E. ... 159, 284
Freeman, Lita A. 117, 694
Freeman, Michael B. 206
Frenis, Katie **351**, 412, 608
Friedman, Paul 566
Friedman, Richard 711
Froehlich, James B. 452
Frostegård, Anna 749
Frostegård, Johan 638,
..... 735, 749
Fuglestad, Matthew A. 249,
..... **627**, 639
Fujii, Yuka 326
Fujimura, Naoki 270
Fujiwara, Keigi 320, 326
Fukanaga, Rikiro 160
Fukuhara, Sinichi 452
Fukumoto, Yoshihiro 267
Fulton, David J. 175, 577
Furgurson, Mia 116, 689
Furtado, Jeremy D. **701**
Furuhashi, Masato **295**
Furusho, Aya 267
Furusyo, Norihiro 294, 494
Gadangi, Pranav 471, 662
Gâdin, Jesper R. 210, 450
Gaggar, Amit 413
Gahtan, Vivian 237
Gaisik, Rayna 503
Gajjar, Bhavin H. 621
Gallagher, Katherine 264,
..... 271, 479
Ganesh, Santhi K. 370
Gani, Nuha 626
Gao, Xiaotang 534
Gao, Yue 249, 627
Gaponenko, Vadim 599
Garcia, Laurynn 316
Garcia, Victor 425
García-Alva, Ramón 273
García-Cruz, Dunia M. **520**
Gardner, Michael S. 702
Garelnabi, Mahdi 695
Garmey, James C. 297,
..... 712, 740
Gasbarrino, Karina **620**
Gaudet, Daniel 515
Gavard, Julie 228
Gavin, Olga 112
Gaziano, J. Michael 110
Geng, Shuo **516**
Genin, Guy 272
Gerhard, Teresa 345
Gerlach, Brennan D. 352
Germano, Emidio 641
Gerszten, Robert E. 499
Gertz, Erik 154
Ghani, Zulaikha 731
Gharib, Sina A. 736
Ghevondyan, Tigran H. **596**
Ghosh, Soumitra S. 690
Ghoshal, Pushpankur 175
Ghoshhajra, Brian **515**
Ghotekar, L. H. 555
Gi, Toshihiro 660
Gi, Young Jin 320, 326
Giannakis, Nikolas 416
Giannarelli, Chiara 101, 176
Giddens, Don P. 300
Gilham, Dean 671
Gillard, Baiba K. **685**
Gillgren, Peter 735
Gilmore, Kevin 242
Ginn, Sydney C. 442
Ginsberg, Henry 484, 498
Ginsberg, Henry N. 682
Ginsberg, Mark H. 131
Girard, Romuald 131
Girdler, Susan S. 342
Giri, Raghavendra 520
Gisterå, Anton 523
Giulietti, Jennifer M. 445
Given, Bruce 492
Gladders, Barbara 259
Glass, Christopher 347
Glémmain, Alexandre 228
Glinton, Kristofor E. **122**
Go, Catherine 263
Goel, Abhishek 555
Goel, Akshay **555**
Goldhaber, Samuel Z. 278
Goldman, Robert 118
Gomez, Delphine 592
Gonen, Ayelet 712
Gong, Hui 390
Gong, Limin 140, 463
Gong, Ming 648
Gonzalez, Kathy **290**
Gonzalez, Luis 374
González-Cintado, Leticia Rocío
..... 191, 681
Gonzalez Diez, Maria 210
Goodarzi, Mohammad 207, 533
Goodman, Mark M. 442
Goodney, Philip P. 259,
..... 428, 437
Gordon, Jennifer L. 342
Gordon, Olivia 566
Gordon, Scott M. **694**
Gordts, Philip L.S M 692
Gorecka, Jolanta 235, **374**
Gorman, Robert C. 126
Gotto, Antonio M. 685
Gouëffic, Yann 432
Graham, James 492
Graham, Mark J. 423
Grandas, Oscar H. 206
Grande-Allen, Jane 403
Grau, Madeleine 415
Gray, Sarah E. **490**
Greaver, Jamieson 358
Gregoski, Mathew J. **568**
Grespin, Randall T. 258
Grespin, Tyler 649
Griendling, Kathy K. 593
Grigoryeva, Lubov S. 122
Grimsley, Lauren B. **206**
Grover, Steven P. **663**
Gruber, András 661
Gu, Yuan 626
Gu, Zihui 580
Gubeladze, Tamar 508
Guddanti, Tejesh 584
Guerau-de-Arellano, Mireia
..... 655
Guerrero, David T. 609
Guillermier, Christelle 536
Gundry, Steven R. **706**
Günther, Sebastian 231
Guo, Dongchuan 140, 463
Guo, Jia 269, 270, 453,
..... 495, 496, 521, **647**
Guo, Lian-wang 236
Guo, Qing **426**
Guo, Xia 650
Guo, Xiangjiang 235
Guo, Xiaoya 300
Guo, Zhenheng **648**
Gupta, Kartik **215**, 225, 478
Gupta, Shuchi 137
Guralnik, Jack 628
Gutiérrez-Muñoz, Carmen 313
Guyomarch, Beatrice 432
Guzman, Raul J. 445
Guzzetta, Nina 143
Ha, Elizabeth **155**
Ha, Hoai Nam **368**, **747**
Ha, Khanh **475**
Haas, Mary 110
Hada, Yoshiko .. 268, **421**, 431
Hader, Shelby N. 493
Hadi, Tarik 149
Haemmig, Stefan 233, 314

Author Index (continued)

Hagler, Michael	123	Heinz, Justin	352	Huang, Jie	110	Jakubiczka-Smorag, Joanna	398
Hagler, Michael A.	359, 361, 457, 746	Helkin, Alex	237	Huang, Juan	719	James, David E.	343
Haigh, Steven	577	Hellberg, Sanna	709	Huang, Ke	567	Jani, Vishal B.	621
Haka, Abigail S.	505	Hellerstein, Marc	333	Huang, Lei	223	Jarr, Kai Uwe	142, 317
Hall, Johnathan H.	728	Hellmann, Jason	483	Huang, Linzhang	153	Jarrett, Kelsey E.	116, 689
Hall, Michael E.	574	Helmstädter, Johanna	351, 412, 608	Huang, Ngan F.	303 , 425	Jarzebska, Natalia	731
Halliday, Christopher ..	407, 671	Henderson, Christopher ..	740	Huang, Qin	302	Javidan, Aida	455 , 456, 652
Hally, Kathryn	601 , 727	Henderson, Kayla	202	Huang, Runqing	457, 729	Jayakumar, Smitha	400
Hambly, Brett D.	644	Henderson, Scott	145	Huang, Wenxin	716	Jellison, Evan	422
Hamidou, Mohamed	228	Hendrikx, Sabrina	712	Huang, Yitao	236	Jensen, Leonardo	325
Hamilton, Douglas W.	242	Henke, Peter K.	134, 271 , 479	Huang, Yu	719, 739	Jensen, Melissa	111
Hamilton, Holly	492	Hensel, Jessica	422	Huang, Yunfeng	110	Jeon, Sejin	613
Hamilton, James	492	Henson, David	331	Huber, Thomas	193	Jeong, Jisu	321
Hamadah, Muhammad ..	195	Heo, Kyung-Sun	320, 326	Huda, Nazmul	154	Jeong, Si-Yeon	285
Hamsten, Anders	210	Herman, Allison	540	Huff, Eric N.	189	Jeremy, Richmond W.	644
Han, Jun	116	Hernandez, Diana R.	277	Huff, Keith D.	189	Jeyaram, Tharani	566
Han, Juying	378	Hernandez, Hernan ..	249, 627	Huff, Murray W.	684	Ji, Ailing	693 , 700
Han, Xu	395	Hewak, Matthew	242	Huffman, Jennifer E.	110	Ji, Yan	395
Han, Yaling	279	Heymann, Dominique	432	Hui, David Y.	221, 518	Jiang, Qun	133, 462, 632
Hand, Nicholas J.	513	Heywood, Sarah	329	Hui, Shiu-Ki	662	Jiang, Weihua	455, 456, 652, 654
Hans, Chetan	655	Higashi, Hideyuki	286 , 497, 651, 734	Hung, Yu	430	Jiang, Xiaohua	710
Hansen, Laura M.	629, 635	Hill, Bradford G.	483	Hurley, Ayrea	116, 689	Jiang, Zhihua	141
Hanssen, Nordin	232	Hill, Hannah	370	Hussain, M. Mahmood ..	341	Jimenez, David	278
Hansson, Göran K.	309, 523, 709	Hill, Michael A.	395	Huynh, Katherine	525	Jin, Chunhua	541
Hao, Hong	173	Hilt, Zachary	129 , 405	Hwa, John	108, 623	Jin, Dayong	157
Hara, Tetsuya	472	Hinkes, Meredith	492	Hyduk, Sharon	534	Jin, Hai Dan	730
Harding, Ian	733	Hinojosa, Carlos A.	273	Hynes, Richard O.	549	Jin, Hong	709
Harding, Scott	727	Hirakata, Saki	267	Iacobucci, Roberta ...	121, 611	Jin, Zheng Gen	217
Hare, Preston	131	Hirano, Keita	252	Ibe, Susumu	369, 573	Jing, Qing	106
Harirforoosh, Sarah	593	Hirata, Ken-ichi	472	Ibrahim, Ahmed S.	293	Johansson, Jan O. ...	407, 671
Harland, Kenneth C.	490	Hitchinson, Ben	599	Ido, Yasuo	406	Johnson, Candice	723
Harman, Jennifer L.	741	Ho, Karen J.	133, 445, 462, 632	Ihezie, Stephanie A.	584	Johnson, Eric	737
Harms, Matthew	297	Ho, Kuan-Lun	595	Ikeda, Jiro	534	Jolly, Austin J.	105, 410
Harralson, Arthur	566	Hoeksema, Marten	347	Ikegami, Yukinori	369, 573	Jones, Alyssa	587
Harrington, Anne	543	Hoffmann, Luisa	208	Ikezaki, Hiroaki	294 , 494	Jones, Jeffrey A.	258, 649
Harris, Katharine	133, 462	Hofmann, Anja	396	Imaeda, Shohei	252	Jones, Lee	603
Harris, Mary	566	Hofmann Bowman, Marion A.		Imanishi, Masaki	320, 326	Jones, Malita A.	586
Harrison, David	226	Hogan, Nicholas	452	Imamdar, Vaishali	440	Jones, Steven R.	515
Harroun, Nikolai	250	Holdt, Lesca M.	544	Inman, Christina	457	Jongstra-Bilen, Jenny	534
Harsch, Brian	512	Holdt, Stephen	484, 498	Inostroza, Yaritza	218	Jørgensen, Helle F.	741
Harten, Ingrid	241	Holleran, Stephen	727	Insana, Michael	427	Jose, Pedro	360
Harting, Matthew	403	Holley, Ana	673	Iodice, Daniele	121, 611	Joseph, Giji	103, 629, 635
Hartman, Julia	297, 740	Hong, Geu-Ru	290	Ip, James	528	Joshi, Amrita	264, 479
Hasan, Ahmed	626	Hong, Guiying	548, 678	Irfan, Affan	529	Jovin, Ion S.	636
Hasan, Wohaib	291	Hong, Zhongkui	609	Irino, Yasuhiro	472	Ju, Lining	157
Hasenfuß, Gerd	398	Hooshdaran, Bahman 126 , 609		Isaacman, Steven	285	Judy, Renae	110
Hashi, Abdul Aziz	634	Hoque, Laboni	626	Isaji, Toshihiko	235, 374	Jung, Jonathan	244, 245
Hashimoto, Kenji	252	Hosseini-Nassab, Niloufar	142	Isida, Tatsuro	472	Kahn, Nayaab	101, 176
Hashimoto, Yohei	267	Hostetler, Ellen M.	140, 463	Ishihara, Masaharu ...	394, 624	Kakio, Yuki	268
Hatakeyama, Kinta	660	Hottiger, Michael O.	286	Ishrat, Tauheed	444	Kakkar, Rahul	690
Hatsukami, Thomas S.	570	Houtkooper, Riekelt H.	656	Islam, Promotto	117	Kalia, Kiran	429
Havel, Peter J.	492	Howard, Courtney	661	Ismaeel, Ahmed	246, 639	Kalinovic, Sanela 351, 412, 608	
Hay, Joshua	692	Howatt, Deborah A.	459, 646, 651, 738	Ismael, Saifudeen	444	Kallinger, Rachel	604
Hayami, Takayuki	212	Hsia, Henry	374	Itani, Hana A.	226	Kamenskiy, Alexey	135, 436
Hayashi, Jun	294	Hsu, Chia George	408	Ito, Hiroshi	431	Kammoun, Helene	232
Hayashi, Makiko	267	Hsu, Rachel H.	116	Ito, Sohei	267	Kane, John P. ...	336, 508, 704
Hayat, Arooj	697	Hu, Die	585	Ivanciu, Lacramioara	144	Kang, Eun-Ju	583
Hayes, Joshua	414	Hu, Guoqing	109	Iwakura, Yoichiro	421	Kang, Gyeongjip	196, 372
Hayes, Kate	128	Hu, Haidi	235	Jack, Godly	476	Kang, Justin J.	113
Hazen, Stanley	126	Hu, Jie H.	736	Jackson, Shaun	157	Kang, Xiuhua	109
Healy, Abigail	524	Hu, Peng	239	Jadeja, Ravirajsinh N.	586	Kant, Shashi	433
Hedhli, Jamila	427	Hu, Qiongyao	193, 490	Jadhav, Kavita	507	Kanter, Jenny E.	522
Hedin, Ulf	139, 210, 304, 308, 309, 542, 709	Hu, Shiqi	567	Jaeschke, Anja	518	Kanthi, Yogendra	120
Hedrick, Catherine C.	604	Hu, Yanhua	391 , 725	Jaffer, Farouc	271, 439, 475	Kanwal, Arjun	474
Hegge, Julia	492	Hu, Ying	448	Jaffer, Farouc A.	134, 612	Kaplan, Jason	474
Hein, Travis W.	161	Huang, Jianghua	223	Jaffer, Farouc M.	415	Karadimou, Glykeria	523
Heinecke, Jay W.	736	Huang, Jiansheng	530	Jahagirdar, Ravi	671	Karakashian, Alexander A.	694
Heineman, Brent	422	Huang, Jiaqi	390	Jailkhani, Noor	549	Karakikes, Ioannis	425
				Jain, Abhishek	161 , 274 , 471, 554 , 662	Karere, Genesio	299
						Karlöf, Eva	304, 542

Author Index (continued)

- Karvelis, Peter249
 Kasahara, Kazuyuki**136**
 Kase, Masaya267
 Kassem, Mohammed237
 Kastrati, Adnan279
 Kath, Philipp127
 Kathiresan, Sekar110
 Katz, Jason476
 Kaufman, Marc P.630
 Kaul, Sushma493, 604
 Kaur, Harpreet429, **625**
 Kawaharada, Nobuyoshi ...295
 Kawai, Tatsuo411, 642
 Kawashiri, Masa-aki575
 Kazemi, Toba190
 Ke, Yuehai390
 Keaney, John433
 Kearney, Leighton G.373
 Keating, Michael F.343
 Keith, Rachel J.574
 Kekic, Murat644
 Kelemen, Sheri540
 Kellnberger, Stephan M. ...134
 Kelly, Kimberly A.297
 Kenagy, Richard D.241
 Kent, K C.236
 Kessinger, Chase W. ...134, 475
 Ketelhuth, Daniel F.J. ...309, 709
 Kettermann, Anna626
 Khair, Lyne128
 Khakshour, Doreen731
 Khalaji, Mina329
 Khan, Kashif**201**
 Khan, Masood Ahmed365
 Khan, Monsurul**364**
 Khan, Muhammad S.**477**
 Khan, Sohaib392
 Kharlamov, Alexander N. ...**744**
 Khayyat, Sinan443, 637
 Khosrotehrani, Kiarash ...393,
576
 Khoukaz, Hekmat B.**395**
 Khoury, Etienne515
 Khoury, Mitri**478**
 Kibbe, Melina628
 Kim, Darae673
 Kim, Eunhee230
 Kim, Hyo-Soo417
 Kim, Hyun Kuk**287**
 Kim, Jeong Hwan195
 Kim, Joonoh417
 Kim, Ju-Young583, 591
 Kim, Julian631
 Kim, Jung-Sun519, 673
 Kim, Juyong150
 Kim, Karen M.452
 Kim, Myungsuk**154**
 Kim, Nari**559**
 Kim, Seonwook423
 Kim, Sung Soo287
 Kim, Tae Kyeong613
 Kimball, Andrew271, 479
 Kimble, Amy422, 549
 Kim-Schulze, Seunghee ..101,
176
 Kimura, Yayoi399
 Kingwell, Bronwyn329
 Kinser, Courtney N.548
 Kip, Peter**244, 245, 445**
 Kirkland, James L.457
 Kishimoto, Yoshimi ...369, 573
 Kittisopikul, Mark118
 Klarin, Derek**110**
 Klibanov, Alexander L.297
 Klimek, John156
 Kluck, George G. E.**514**
 Knaack, Darcy A.**335**
 Knight, Jason S.120
 Knox, Hailey427
 Ko, Chih-Wei506
 Ko, Kyung Ae320, 326
 Kobayashi, Seimi472
 Kobiyama, Koji345
 Koblan, Luke W.198
 Koch, Lauren G.212
 Kodaira, Masaki252
 Kodumuri, Nishanth621
 Koelwyn, Graeme J.102,
544, 605, **603**, 610
 Kohan, Alison B.**147**
 Kohler, Ted736
 Kohli, Joe569
 Kojima, Fumiaki421
 Kojima, Yoko317, 525
 Koltsova, Ekaterina**148**
 Komarova, Yulia599
 Kondo, Kazuo369, 573
 Kong, Edward307
 Koromia, George529
 Korshunov, Vyacheslav A. ...589
 Koschinsky, Marlys L. 114, 509
 Kostousov, Vadim V.662
 Kothari, Hema**350**
 Kothari, Vishal522
 Kotla, Sivareddy**318**,
320, 326
 Koupenova, Milka**159**, 284
 Koutakis, Panagiotis ...**246**, 639
 Koyano, Tiffany150
 Kraakman, Michael232
 Kramer, Farah522
 Krause, Matthew162
 Krieger, José E.588
 Kristina, Hunker370
 Kröller-Schön, Swenja ...351,
412, 608
 Kronqvist, Malin210, 304,
308, 542
 Krumholz, Harlan M.278
 Ku, Kyung H.375
 Kuhn, Jenna263
 Kukida, Masayoshi**715**
 Kuklenyik, Zsuzsanna**702**
 Kukumberg, Marek561
 Kulikowski, Ewelina ...407, 671
 Kuliopulos, Athan449
 Kumar, Rahul111, **119**
 Kumar, T., Peeyush633
 Kumbrink, Jörg553
 Kundu, Nabanita360
 Kundu, Ramen150
 Kunkel, Steven264, 479
 Kuno, Toshiaki**252**
 Kuntz, Thomas133, 462
 Kuo, Hui-Hsuan657
 Kuo, Michael609
 Kuroki, Marcos T.**630**
 Kurt-Jones, Evelyn A.159
 Kvandova, Miroslava351
 Kwartler, Callie S.**107**
 LaBarbera, Daniel V.356
 Labrador, Veronica681
 Lackner, Timothy J. ...249, 631
 La Flamme, Anne601
 Lagor, William R.116, 689
 Lai, Donna644
 Lamón-Fava, Stefania 227, 607
 Lamoureux, Francois432
 Lancaster, Graeme329
 Landesberg, Gavin411
 Lång, Karin450
 Langbein, Heike396
 Lao, Shen317
 Laparra-Escareno, Hugo ...273
 Lappalainen, Tuuli E.580
 Larsen, Peter601, 727
 Lassance-Soares, Roberta
276, **277**
 Lassègue, Bernard ...103, 593
 Laurindo, Francisco R.325
 Lavado, Liseth621
 Lavado, Ramon639
 Lawrence, Peter F.239, 240
 Layne, Matthew D.722
 Le, Nhat-Tu320, 326
 Le, Victoria P.**401**
 Le Blanc, Jessica283
 Le Bloas, Rozenn228
 Lec, Bianca566, 566
 Lee, Chanjoo321
 Lee, Christina516
 Lee, Grace S.593
 Lee, Hyun-Chae417
 Lee, Jaewon417
 Lee, James732
 Lee, Jason**202**, 242, **582**
 Lee, Jason J.**634**
 Lee, Joeeun591
 Lee, Jung-Jae519
 Lee, Jyong-Huei595
 Lee, Kyung Min110
 Lee, Lang H.286, 651, 734
 Lee, Lang Ho497
 Lee, Man Kit Sam232
 Lee, Mike K.375
 Lee, Oh-Hyun519
 Lee, Richard G.423
 Lee, Sahmin**417, 583**, 591
 Lee, Sangderk**423**
 Lee, Seulgee**519, 673**
 Lee, Shin Rong374
 Lee, Soobeom417
 Lee, Sooyeon721
 Lee, Youngmi730
 Leeper, Nicholas J.142,
317, 525
 Leeuwenburgh, Christiaan 628
 Lehtikoski, Antony702
 Leiderman, Karin280
 Leitingner, Norbert602
 Le Master, Elizabeth**732**
 Lembo, Giuseppe121, 611
 Lemoff, Andrew207, 533
 Lengquist, Mariette ...139, 210,
304, 308, 309, 542
 Leone, Vanessa133, 462
 Leung, Fung Ping742
 Leuthardt, Eric272
 Levine, Stewart549
 Levit, Rebecca D.442
 Levitan, Irena397, 732
 Levy, Jon M.198
 Levy, Robert J.126, 440
 Lewis, Caitlin**629**
 Lewis, Esmeralda A.**681**
 Ley, Klaus345
 Li, Ang116, 689
 Li, Boyangzi**527**
 Li, Chenxiao**650**
 Li, Chuan353, **377**
 Li, Daniel Y.100
 Li, Fang**580**
 Li, Fang-Fang106
 Li, Gang270
 Li, Hua-Ming327
 Li, Hui594
 Li, Jie**288**, 302
 Li, Jing**285**
 Li, Lexiao**444**
 Li, Li207, 533, 594
 Li, Liwu516
 Li, Na548, 678
 Li, Qing**158**
 Li, Shuai**631**
 Li, Wei**724**
 Li, Wenzhu**134**
 Li, Xiaofeng416
 Li, Xueyi**577**
 Li, Yan205, 327, 376, 565
 Li, Yanchun745
 Li, Yankui269, 270, 453,
495, 496, 521, 647
 Li, Yixi173
 Li, Yuesheng117
 Li, Yuhuang309, 317, 709
 Li, Zhen492
 Li, Zhenhua567
 Lian, Zeqin346
 Liang, Hui364
 Liang, Patric**238**
 Liang, Wenying265, 585
 Liang, Yu-Lai106
 Liao, Hong243
 Liao, Jiexi157
 Liaw, Lucy543
 Libby, Peter134, 174,
288, 734
 Liberman, Marcel325
 Lichtenstein, Alice H. 227, 607
 Liddy, Kiersten A.644
 Lim, Kyung Seob287
 Lima, Bruno B.**195**
 Lin, Charles Y.198
 Lin, Chieh-Yu209
 Lin, Chien-Jung**209**
 Lin, Huiping**175**
 Lin, Jennie691
 Lin, Li-Hsien125
 Lin, Thomas508
 Lindeman, Jan H.N.210,
304, 656
 Lindholt, Jes645
 Lindner, Jonathan546
 Lindquist, Jessica535
 Lindquist Liljeqvist, Moritz .309
 Lindsay, Mark E.254
 Ling, Clarence332
 Ling, Jingjing276
 Ling, Ruifeng155
 Link, Kathryn280
 Lino Cardenas, Christian L. 254
 Linton, Macrae F.340, 355,
510, 530, 536
 Liu, Anquan735

Author Index (continued)

- Liu, Bo 215, 225, 478
 Liu, Boxiang 150
 Liu, Ching-ti 494
 Liu, Cong-Lin **174**
 Liu, David R. 198
 Liu, Enqi 521
 Liu, Esther **691**
 Liu, Feng 288
 Liu, Huan **217**
 Liu, Jing 678, **682**, 685
 Liu, Martin (Xiang-der) 409
 Liu, Mengdan 279
 Liu, Min 506, 686
 Liu, Mingjun **592**
 Liu, Qing **194**
 Liu, Shirley 235
 Liu, Shu 648
 Liu, Simin 194
 Liu, Sophia 205
 Liu, Weimin 315
 Liu, Wen 324
 Liu, Wenxue 635
 Liu, Xiaolei 122, **657**
 Liu, Yangbo 279
 Liu, Yingying 343
 Liu, Yongfeng **598**
 Liu, Yueyang 223
 Liu, Zhao-Jun **205**, 376
 Liu, Zhenguo 173
 Llewellyn, Ryan 604
 Lo, Larry 690
 LoGerfo, Frank 238
 Lok, Zoe S. Yee. 593
 Loke, P'ng 708
 Long, Xiaochun 587
 Lopes-Virella, Maria F. 745
 Lopez-Berestein, Gabriel ... 358,
 717
 Lopez-Diez, Raquel 711
 Lopez-Ramirez, Miguel A. . **131**
 Lordkipanidzé, Marie 283
 Lorentz, Christina 661
 Lorenzo, Alicia 112
 Lorkowski, Shuhui 323
 Lou, Haiyan 364
 Lozhkin, Andrey 212
 Lu, Hang 157
 Lu, Haocheng 265, 585
 Lu, Hong 264, 715, 738
 Lu, Hong S. 269, 270, 459,
 521, 646
 Lu, Sizhao **105**, 356, **410**
 Lu, Tian 628
 Lu, Yaxin 644
 Lu, Zhongyang 745
 Lucero, Diego **117**
 Lucitti, Jennifer L. 316
 Lui, Kathy O. 430
 Luke, Cathy 271
 Lukowski, Samuel L. 393
 Luna, David 662
 Lunagariya, Abhishek 621
 Lund, Frederik W. 505
 Luo, Jiang-Yun 719
 Luo, Jiangyun 739
 Luo, Jiesi 374
 Luo, Lingfeng **589**
 Luo, Xi 194
 Lusis, Aldons J. 136, 343, 423
 Lutgens, Esther 709
 Lv, Wenjian 532
 Lyle, Alicia N. **593**
 Lyle, Chimera 234
 Lynch, Julie 110
 Lyons, Carter 436
 Ma, Shuangtao 107
 Ma, Wanshu 122, 657
 MacArthur, Michael R. 244,
 245, 445
 Maceda, Pablo 202, 582
 Machado, Roberto F. 606
 Mackenzie, Todd A. 437
 Mackman, Nigel 663, 670
 MacTaggart, Jason N. 135, 436
 Madamanchi, Nageswara R. ...
 212
 Maddipati, Krishna R. 607
 Madrigal-Matute, Julio 313
 Maegdefessel, Lars 127,
 255, 304, 309, 317,
 537, 542, 544, 709
 Maehara, Akiko 300, 531
 Maejima, Takashi 286
 Maekawa, Kazunari . **435**, 660
 Magupalli, Venkat 118
 Mahan, Sidney 592
 Mahini, Halleh 695
 Mahon, Andrew 285
 Maier, Kristopher G. 237
 Majesky, Mark W. 651
 Majima, Ryohei 267
 Mak, Kei C. 514
 Malecki, Cassandra **644**
 Maleki, Shohreh 450
 Malik, Preeti 621
 Malin, Stephen 709
 Mallick, Zyannah 626
 Malloy, Mary 704
 Malloy, Mary J. 508
 Malovichko, Marina V. **574**
 Man, H. S. 375
 Manco-Johnson, Marilyn ... 280
 Manne, Bhanu K. **160**
 Manni, Giorgia 159
 Mantsounga, Chris 524
 Marcovina, Santica 484
 Marinello, Michael 352
 Marini, Sandro 571
 Marino, Alice 528
 Marris, Elijah 475
 Marsden, Philip A. 375
 Marshal, Melissa 151
 Marshall, Melissa A. 297,
 712, 740
 Martel, Catherine 104, 517
 Martens Lobenhoffer, Jens 731
 Marti, Michelle 713
 Martin, Andrew J. 490
 Martin, Daniel R. **641**
 Martin, James F. 689
 Martin, Kathleen A. . 108, 419,
 592, 623
 Martin, Pamela M. 586
 Martinet, Bernard 228
 Martinez, Laisel 275
 Martinez-Lopez, Diego 645
 Martins, Kris M. 697
 Martin-Ventura, Jose Luis
 313, **645**
 Masaki, Nobuyuki **406**
 Mateo, Jesús 191
 Mathur, Tanmay 161, 662
 Matic, Ljubica .. 139, **210**, 304,
 308, 309, **542**, 709
 Matsumoto, Megumi 295
 Matsumura, Kanako .. 584, 633
 Matsumura, Mitsuki 300, 531
 Matsuoka, Natsumi 431
 Matsuura, John 221
 Matsuura, Yunosuke **522**
 Mattern, Karin 398
 Matthan, Nirupa R. 607
 Matveyenko, Anastasiya .. **484**,
 498
 Matzko, Chelsea N. 137
 Maurel, Blandine 432
 Mauskapf, Adam W. 134, 439,
 612
 Maxfield, Frederick R. 505
 May, Joel **216**
 May-Zhang, Linda S. **510**, 530
 Mazhar, Hira 320, 326
 McAndrew, Thomas 279
 McBride, Devin W. 584, **633**
 McCarthy, Jason 475
 McCarty, Owen J. 156, 661
 McCreary, Dylan 204
 McDermott, Mary M. 628
 McDermott-Roe, Chris 532
 McDonald, Jeffrey 153
 McDonnell, Donald P. 153
 McEnaney, Ryan M. **204**
 McGarvey, Stephen T. 194
 McLeod, Rebecca 636
 McNally, Lindsey A. 483
 McNally, Michael M. 206
 McNamara, Coleen .. 151, 297,
 350, 602, 712, 740
 McSkimming, Chantel 350, 712
 Mead, Megan 207
 Mecham, Robert P. 209
 Mehdiipoor, Ghazaleh 279
 Meher, Akshaya K. **602**
 Mehta, Jawahar L. 555
 Mehta, Nehal 626
 Mei, Lei 401
 Meikle, Peter J. 343
 Melchior, John T. 510, 675, 686
 Melrose, Alexander 156
 Mendelson, Bonnie 400
 Mendelson, Michael 117
 Mendez-Barbero, Nerea ... **313**
 Meng, He 120
 Ménoret, Antoine 231, 377
 Merad, Miriam 101, 176
 Mercado-Deane, Maria-Gisela
 299
 Messina, Louis 128
 Metschl, Susanne **255**
 Metzinger, Mark P. **703**
 Michel, Thomas 219
 Michelin, Ruel S. **680**
 Michell, Danielle L. **339**
 Middleton, Elizabeth 160
 Mietus, Constance J. **249**
 Mikuls, Ted R. ... 349, 707, 728
 Milasan, Andreea **104**
 Miles, Joshua ... 503, 692, 721
 Milewicz, Dianna M. 107,
 140, 463
 Millan, Jose Luis 307, 731
 Millar, John 513
 Millar, John S. 115
 Miller, Clint 150
 Miller, Debra L. 558
 Miller, Donald R. 110
 Miller, Francis J. 316
 Miller, George 149
 Miller, Jordan D. 123, 359, 361,
 457, 729, 746
 Mills, Matthew T. 731
 Mineo, Chieko 113, 124,
 132, 153, 177, 392
 Minetti, Erika 216
 Minguez, Pablo 313
 Minnier, Jessica 291
 Minshall, Richard 606
 Mintz, Gary S. 300, 531
 Minwoo, Kim 427
 Mitchell, James R. ... 244, 445
 Mitchell, Jay R. 245
 Mitchell, Pete 336
 Mitchell, Sarah J. 244, 245
 Mittag, Jennifer 396
 Miu, Phuong 347
 Miura, Tetsuji 295
 Mix, Doran S. 449
 Miyake, Ituski 715
 Miyata, Masaaki 269, 270, 496
 Miyoshi, Ken-ichi 715
 Mo, Zhi-Wei 327
 Moazzami, Kasra 195
 Mocco, J 101, 176
 Mohamed, Islam **590**
 Mohammadmoradi, Shayan **646**
 Molony, David 300
 Momi, Navneet 238
 Momiyama, Yukihiko ... **369**, 573
 Mone, Pasquale **714**
 Monreal, Manuel 112, 278
 Monroe, Madeline N. **403**
 Montgomery, Bailey 571
 Montgomery, Stephen 150
 Montgomery, William 602
 Monticone, Silvia 734
 Moody, Sarah C. 343
 Mooney, David 238
 Moore, Bethany 479
 Moore, Kathryn J. 102, 544,
 605, 610, 603, 708
 Moore, Kayla O. 259, 428
 Moorhead, William J. 135
 Moorleghen, Jessica J. 261,
 456, 459, 646, 651, 738
 Morales, Maria Del Valle ... 112
 Morawietz, Henning **396**
 Moreira Bahnson, Edward 491
 Moreno, Diana 566
 Morgan, Samuel E. 491
 Mori, Keisuke 203
 Morita, Yoshitaka 421
 Morrell, Craig 129, 405
 Morris, Jamie 510
 Morrison, Alan R. 192, 194,
 367, 524
 Morrow, Nadya M. **684**
 Mosnier, Laurent O. .. 131, 145
 Mota, Roberto I. **491**
 Mota-Cobián, Adriana 191
 Motaganahalli, Raghu L. ... 364
 Moulton, Karen S. 105, 356
 Mountain, Deidra J. H. 206
 Moustafa, Fares 112
 Mu, Xufang 648

Author Index (continued)

- Muehlschlegel, Jochen D. . 734
 Mueller, Paul 546
 Mueller, Paul A. **525**
 Muia, Joshua **306**
 Mukai, Tomoyuki 421
 Mukherjee, Rupak 258, 649
 Mulangala, Jocelyne 319
 Mulorz, Joscha 266, **446**
 Mulorz, Pireyatharsheny ... **266**,
 446
 Münzel, Thomas 351, 412, 608
 Münzer, Patrick **118**
 Muqri, Furqan **237**
 Murata, Masayuki 294, 494
 Muratoglu, Selen C. 256
 Murphy, Andrew 232
 Murphy, Patrick A. ... **231**, 353,
 422, **549**
 Musunuru, Kiran 532
 Muthuchamy, Mariappan .. 274
 Mutryn, Marie F. 105,
 356, 410
 Muutu, Tabitha 443, 637
 Myers, Sara 631
 Nagao, Manabu 150
 Nagao, Tomoaki 715
 Nagarajan, Shanmugam ... 354
 Nagarajan, Shanthi 503
 Nagareddy, Prabhakara ... 232
 Nagaswami, Chandrasekaran
 440
 Nagy, Laszlo 416
 Nahrendorf, Matthias 174
 Naito, Yoshiro 394, 624
 Nakajima, Katsuyuki 494
 Nakayama, Karina H. **425**
 Nanda, Vivek 317
 Nandakumar, Renu 484
 Napoleon, Marc 234
 Narayanaswami, Vasanthy **676**
 Nassiri, Naiem 235
 Natale, David R. 132, 177
 Natarajan, Pradeep 110
 Nath, Nandan **672**
 Natoli, Alaina 329
 Navarro, Eileen 626
 Navdaev, Alexei 329
 Nazari-Jahantigh, Maliheh 553
 Ndunda, Paul M. **443**, **637**
 Nedley, Neil 196, 372
 Néel, Antoine 228
 Néel, Mélanie 228
 Neeves, Keith B. 130, **280**
 Negro, Roberto 118
 Nellenbach, Kimberly 143
 Nelson, Erik 153
 Nemenoff, Raphael A. 105, 410
 Nesheiwat, Zeid 474
 Neufeld, Edward B. 117
 Neverson, Jade 524
 Newman, John W. 512
 Newman, Jonathan .. 527, 603
 Ng, Wei Kai 561
 Ngai, Colleen 484, 498, 682
 Ngo, Anh T. **661**
 Ngo, Anh T. P. 156
 Nguyen, An B. 132, 177
 Nguyen, Anh 740
 Nguyen, Anh T. 297
 Nguyen, Trieu 150
 Ni, Zhichao **725**
 Nicholas, Sarah-Anne E. .. 231,
 549
 Nicholls, Stephen J. ... 319, 701
 Nicholls, Steven J. 558
 Nickerson, Deborah A. 140, 463
 Nicolai, Evan N. **361**
 Nicosia, Roberto 736
 Nieto, José Antonio 112
 Niisuke, Katrin 702
 Niki, Hanako 369, 573
 Nilson, Rachael 524
 Ning, Da-Sheng 565
 Nishida, Norifumi 267
 Nishihara, Michihide 267
 Nishihira, Kensaku 660
 Nishimori, Makoto 472
 Nishiwaki, Mariko 431
 Nnaoma, Christopher **643**
 Noffsinger, Victoria P. ... 693, 700
 Nogales, Paula **191**
 Nohara, Atsushi 575
 Nolasco, Patricia 325
 Nomura, Akihiro 575
 Nong, Zengxuan 242, 634
 Nooromid, Michael J. 133,
 462, **632**
 Nooruddin, Mohammed 566
 Norton, Elizabeth L. 452
 Notterpack, Lucia 721
 Numaguchi, Ryosuke 295
 Numasawa, Yohei 252
 Nutescu, Edith 566
 Oates, John A. 530
 Obi, Andrea 264, 271
 Ochin, Chinedu 695
 Odeberg, Jacob 210, 304,
 309, 542
 O'Donnell, Christopher J. .. 110
 Oehler, Elise A. 359
 Oelze, Matthias . 351, 412, 608
 Oh, Goo Taeg **613**
 O'Hair, Daniel **569**
 Ohno-Urabe, Satoko **267**
 Ohte, Nobuyuki 679
 Okamoto, Shugo 431
 Okano, Mitsumasa 472
 Okuno, Keisuke 394, **624**
 Okuyama, Michihiro 268,
 456, **652**
 Okwan-Duodo, Derick 629
 Okwan-Duodo, Derick 103
 Oleaga, Carlota **692**
 O'Leary, James J. 445
 Oliveira, Suellen D. Santos. **606**
 Oliver, Guillermo 122, 657
 Olivier, Michael 504
 O'Mahony, Gavin 297
 O'Malley, Kerri A. **193**, 490
 O'Neil, Caroline 242, 634
 Onishi, Yasuhiro 421, 431
 Ono, Shun 235, 374
 Opperman, Patrick J. **707**
 Orie, Makoto 134
 Orr, A. Wayne 311, 402
 Orr, Anthony W. 535
 Ory, Benjamin 432
 Osborn, Eric A. **612**
 Osinski, Victoria **297**
 Oskowitz, Adam Z. 337
 Osman, Islam **109**
 Ostriker, Allison ... 108, **419**, 623
 Otaka, Nozomu **268**,
 421, 431
 O'Toole, Timothy E. 574
 Otsuka, Fumio 431
 Ou, Jingsong **327**, 565
 Ou, Zhi-Jun 327, **565**
 Ouimet, Mireille 102
 Ouyang, Zhengqing 377
 Owens III, A. Phillip **449**
 Oxendine, Michael 657
 Ozaki, C K. 244, 245, 445
 Pagano, Patrick J. 404
 Pahuja, Mohit 253
 Paik, David 150
 Paine, Patrick 425
 Pallante, Fabio 121, 611
 Paloschi, Valentina 450
 Pamir, Nathalie **291**, **503**
 Pan, Calvin 343
 Pan, Dongfeng 262
 Pan, Hua 448
 Pan, Huize **324**, 580
 Pan, Xiaoyue **330**
 Panaitiu, Alexandra E. 557
 Pandey, Arvind 226
 Pandian, Navaneeth K. 662
 Pandya, Vishal 621
 Pang, Jiaqing 661
 Pansini, Antonella 714
 Pantoja, Joe L. **239**, **240**
 Papen, Courtney R. 546
 Papoutsis, Evlampia .. 246, 639
 Paredes, Felipe 103
 Parikh, Punam P. 376
 Parikh, Sahil A. 278
 Pariser, Daphne 129, **405**
 Park, Eunsu **230**
 Park, Subin 730
 Park, Sungha 321
 Park, Sunghye 153
 Parker, Benjamin L. 343
 Partida-Sanchez, Santiago .. 655
 Partovi, Neda 190
 Pastar, Irena 205
 Pastor, Richard W. 690
 Patel, Aneesh 740
 Patel, Himanshu 452
 Patel, Jatin **393**, **576**
 Patel, Karan 621
 Patel, Ketul 731
 Patel, Mitul N. 731
 Patel, Nairuti **677**
 Patel, Nirav 621
 Patel, Sheila K. **373**
 Patel, Smit 253
 Patel, Tejas 626
 Patel, Urvish K. **621**
 Pati, Paramita **541**
 Patsalos, Andreas 416
 Patterson, Suzannah 244, 445
 Pattillo, Christopher B. 402, 600
 Paulsson-Berne, Gabrielle .. 139,
 308, 309, 523
 Pawelke, Franziska ... 412, 608
 Paydak, Hakan 555
 Payne, Gregory A. **413**
 Pedersen, Theresa L. 512
 Peek, Clara B. 628
 Pelisek, Jaroslav 255, 317
 Pellionisz, Peter A. 240
 Pena Calderin, Ernesto 483
 Peng, Jun **124**, 392
 Peng, Xueying 346
 Peng, Yue-Ming 327
 Perera, Minoli 566
 Peretik, Jonette 311
 Perrard, Xiaoyuan D. 346
 Perrotta, Sara 121, 611
 Perry, Heather 712
 Perry, Robert C 682
 Pescatore, Luciana A. **325**
 Peshkova, Iuliia 148
 Peters, Danielle 353
 Peters, Erna A. B. 251
 Peterson, Charlotte A. 628
 Petrich, Brian 311
 Petroski, Greg 173
 Petty, Lauren E. 371
 Pham, Angela 131
 Pham, Christine 448
 Pham, Tan 734
 Phillips, Shane 397
 Piao, Zhonglie 439, 612
 Pickering, J. Geoffrey 242, 634
 Pickering, Raelene 232
 Pierce, Gary L. 119
 Pieterman, Elsbet J. 698
 Pilli, Satish 215
 Pilli, Vijaya S. S. **225**, 478
 Pilote, Louise 199
 Pinard, Amélie **140**, **463**
 Pinos, Ivan 511
 Pinsky, David J. 120, 452
 Pipinos, Iraklis .. 246, 249, 627,
 631, 639
 Pipinos, Margarita 436
 Pirtskhalava, Tamar 457
 Pitts, Michelle 713
 Pius, Abish 243
 Pjanic, Milos 150
 Plubell, Deanna L. 291, 503
 Plutzky, Jorge 236
 Pocivavsek, Luka 672
 Pollock, David M. 541
 Pollock, Jennifer S. 541
 Polonsky, Tamar S. 628
 Popovic, Branimir 354
 Porter, Thomas 249
 Potapenko, Anton 547
 Poujade, Flore-Anne A. **450**
 Poulson, William 436
 Pourmousa, Mohsen 690
 Powell, Folami L. 586
 Power, Adam H. 242
 Pownall, Henry J. 346, 685
 Pradhan-Nabzdyk, Leena . 238
 Prathipati, Priyanka ... **358**, **717**
 Prathivadi-Bhay, Sruti 436
 Prescott, Emma 242
 Pressly, Ben B. 126, **609**
 Preston, Kyle 642
 Princen, Hans M. G. 698
 Prokhorenko -Kolomoitseva,
 Irina 296
 Prokupets, Rochelle 205
 Proud, Christopher 160
 Proudfoot, Sarah **501**
 Pryor, Milton 690
 Psaltis, Peter J. 319
 Puca, Annibale A. 214
 Pucino, Frank 626
 Punch, Emily **695**

Author Index (continued)

Purnell, Jonathan Q.	291	Regalado, Ellen S.	140, 463	Rozowsky, Jared M.	193, 490	Schaefer, Ernst J.	294,
Puvvala, Sahithi	729	Regueiro, Manuela M.	376	Rubinow, David R.	342	.....	494, 515
Puy, Cristina	661	Reilly, Muredach	100	Rubinow, Katya B.	342	Schaff, Hartzell	123
Pyarajan, Saiju	110	Reilly, Muredach P.	324, 580	Ruddy, Jean Marie	258 , 649	Schaller, Melinda S. ..	336, 337
Pyle, Travis	662	Reiner, Alexander P.	194	Ruegg, Katherine	280	Schelgel, Martin	708
Qadar, Abdul	556	Remaley, Alan T.	117, 332,	Ruhl, Rebecca	200	Schell, Maximilian	345
Qadar, Abul	357	.....	340, 502, 690, 694	Ruiz-Giménez, Nuria	112	Schellinger, Isabel	398
Qi, Xiaoyan	141	Ren, Gang	694	Ruiz-Ramie, Jonathan	499, 504	Schellong, Sebastian	112
Qu, Lili	353	Ren, Jun	225	Runge, Marschall S.	212	Schickling, Brandon M.	316
Qu, Xinyan	599	Reutersberg, Benedikt	255	Ruotolo, Giacomo	558, 701	Schienebeck, Casi	492
Quarta, Marco	425	Rey, Federico E.	136	Rupnow, Jessica	569	Schill, Rebecca L.	335
Quartuccia, Gabriella	507	Rey, Jorge	454	Ruske, Jack	445	Schinzari, Francesca	301
Quax, Paul H. A. 244, 245, 251		Reyes-soffer, Gisette 484, 498		Russell, Hannah M.	449	Schlegel, Martin	603, 610
Que, Excel	154	Riascos Bernal, Dario F.	400	R. Viola, Joana	537	Schlegel, Paul M.	102, 605
Queiroz, Joyce	330	Ribeiro Martins da Silva,		Ryan, Evan M.	349, 707	Schmedes, Clare M.	670
Quertermous, Thomas	150,	Amanda	338	Ryan, Terence E.	490	Schmidt, Ann Marie	711
.....	210, 308	Rice, Charles L.	242	Rykaczewska, Urszula 210, 308		Schober, Andreas	553
Quillard, Thibaut	432	Rich, Madison	700	Rymut, Nicholas	352	Schodowski, Eve	323
Quintana, Raymundo A. ...	103	Richards, Sean	234	Ryuzaki, Toshinobu	252	Schurgers, Leon J.	304
Quiroz, Hallie J.	376	Richart, Adele	329	Sacharidou, Anastasia	124,	Schuster, Andreas	398
Quiroz-Figueroa, Katherine 115		Richie, Megan	704	.....	132, 177, 392	Schwertani, Adel	201
Quyyumi, Arshed Ali	195,	Richmond, Bradley W.	355	Sachdev, Ulka	243	Scipione, Corey	534
.....	331	Rickel, Alex	548, 678	Sacks, Frank M.	497, 701	Scolaro, Bianca	696
Qyang, Yibing	374	Ridge, Karen	118	Sadhu, Sudeshna	352	Scott, Melanie J.	243
Raaz, Uwe	398	Riesmeyer, Jeffrey S.	558	Sadler, J. Evan	306	Searcy, Ryan	476
Rabhi, Nabil	722	Rigberg, David A.	240	Saeedi Saravi, Seyed Soheil		Searles, Charles	590
Rader, Daniel J.	110, 115,	Riggs, Daniel W.	574	.....	219	Sedrakyan, Art	259, 437
.....	513, 558, 705	Riley, Colin	352	Saha, Biswajit	554	Seefeld, Mark	492
Radmanesh, Behram S. ...	691	Rindy, Alexa	154	Sahagian, Alex	644	Segura, Ana	403
Radosavljevic, Silvija	547	Rippe, Catarina	308	Saharan, Seema	704	Seid, Heather	498
Raffai, Robert L.	337	Ritchey, Brian	323	Sahoo, Daisy	335, 501	Seidel, Vinicius	196
Rahimi, Nader	234	Rivera, Alicia	218	Sahoo, Sanghamitra	404	Seime, Till	210, 304 , 542
Rahman, Adeeb	101, 176	Rizzi, Alessia	726	Sahu, Amrita	243	Selahi, Amirali	274
Rahman, Karishma	102	Rizzo, Victor	399, 642	Sahu, Srabani	602	Seldin, Marcus M.	343
Rahman, Mizanur	735	Roach, Cameron	539	Saini, Sunil K.	628	Sellak, Hassan	103
Rai, Shesh N.	574	Robbins, Jeremy M.	499	Saita, Emi	369, 573	Selman, Guillermo	275
Raj, Usha	606	Robert, Jerome	697	Saito, Chieko	411	Semenkovich, Clay	250
Rajeeva Pandian, Navaneeth		Roberts, Jackson	530	Saito, Tetsuya	252	Sen, Sabyasachi	360
Krishna	471	Robertson, Elizabeth N.	644	Saiedy, Saleha	621	Senatus, Laura M.	711
Rakai, Brooke	407	Robinet, Peggy	323	Sakurai, Toshihiro	694	Senchanthisai, Sharon	211
Ramachandaran, Bindu	207	Rode, John B.	428	Salazar, Hector F.	593	Seo, Kyo Won	559
Ramachandran, Bindu	533	Rodionov, Roman N.	731	Saldanha, Suzanne ...	328, 703	Seo, Miran	321
Ramakrishnan, Rajasekhara		Rodriguez, Annabelle	231,	Saleh, Heba	293	Sepp, Anna-Liisa	156
.....	484, 498	.....	353, 520	Saleheen, Danish	110, 580	Serbulea, Vlad	602
Ramasamy, Ravichandran	711	Rodriguez, Boris L. ...	276, 277	Salem, Karim M.	290	Sergeeva, Oksana	296
Ramchand, Jay	373	Rodriguez-Aguayo, Cristian		Salman, Loay	275	Sergushichev, Alexey A.	210
Ramirez, Francisco E.	196,	.....	358, 717	Samady, Habib	300	Seta, Francesca	216, 460
.....	372	Rodriguez-Carrio, Javier ...	645	Samal, Shailesh K.	638	Sewall, Marisa	238
Ramirez-Solano, Marisol A.	355	Rodriguez-Vélez, Astrid	551	Samarneh, Lara	202, 582	Shaazuddin, Mohammed ..	566
Ramkhalawon, Bhama	149	Rogers, Maximillian A.	734	Samman Tahhan, Ayman ..	331	Shafiee, Abbas	576
Ramkumar, Niveditta 259, 437		Rohatgi, Anand	328, 504,	Sanchez, Luis	250	Shah, Amit	195
Ramms, Bastian	692	.....	688, 703	Sangal, Kunal	636	Shah, Prediman K.	515
Ramos Duran, Elizabeth ...	454	Röhl, Samuel	210	San Martin, Alejandra	103	Shahid, Amna	396
Ran, Ran	650	Rohrer, Lucia	547	Sansbury, Brian E.	336,	Shaikh, Shakil	281
Rando, Thomas	425	Rojas, Miguel G.	276 , 277	.....	352, 416	Shalhoub, Ruba	626
Rashdan, Nabil A.	402	Romanoski, Casey	162	Santanam, Nalini	718	Shamailova, Roza	101, 176
Rateri, Debra L.	651	Romero, Sebastian J.	218	Santosa, Sylvia	680	Shan, Dan	526
Ravanbakhsh, Naeem	190	Rondina, Matthew	160	Sanyour, Hanna J.	548 , 678	Shan, Grace	193
Ray, Mitali	540	Rooney, Kimberly	590	Sarano, Maurice	123	Shanley, Lianne	610, 708
Rayner, Katey J.	352	Roos, Benjamin B.	746	Sargowo, Djangan	366	Shannley, Lianne	605
Raza, Syed Haseeb	365	Roos, Carolyn M.	123, 359 ,	Sarmah, Deepaneeta	429	Shannon, Alexander H.	262
Razani, Babak	551, 580	.....	361, 457, 729, 746	Sartoretto, Simone M.	316	Shao, Hongwei	205, 376
Razuvaev, Anton	210, 304,	Rosado, Juan de Dios Ruiz		Sarzynski, Mark A.	499 , 504	Shao, Jiaxin	239
.....	308, 309	.....	655	Sato, Yasufumi	268	Shao, Qing	110
Real, Kevin D.	349	Rosales, Corina	685	Savinova, Olga V.	307 , 731	Shao, Ying	710
Reaven, Peter	110	Rosand, Jonathan	571	Sawada, Hisashi	394, 624,	Shapiro, Katherine E.	133,
Redd, Joletha	372	Rosario, Sara	503	.....	646, 651	.....	462, 632
Reddy, Medini	329	Roselli, Eric	641	Sawchuk, Alan	364	Shariati, Aryon	636
Redfors, Björn	279	Rosenberg, Yves	626	Scacalossi, Kaitlyn R.	544	Sharma, Ashish K.	262
Redmond, Eileen M.	315	Ross, Joseph S.	278	Scali, Salvatore T.	193, 490	Sharma, Monika	102, 544,
Reese, Bo	422	Roy, Joy	139, 309	Scalia, Rosario ..	411 , 540, 642	.....	603, 605, 610, 708

Author Index (continued)

- Sharma, Neekun **655**
Shaul, Philip W. 113, 124,
..... 132, 153, 177, 392
Shaw, Mary C. 175
Schetinin, Evgenij 296
Shearer, Gregory C. 512
Sheikh, Mujeeb 253
Sheikh, Mujeeb Abdul 222
Sheikh, Saira Z. 354
Shen, Deliang 567
Shen, Fanru 270
Sheng, Quanhu 355
Sheppard, Mary 261
Shi, Guo-Ping 174, 302
Shi, Guoping 288
Shi, Jianting 100, 580
Shibata, Yoshisato 660
Shields, Christina 631
Shimizu-Albergine, Masami
..... 522
Shin, Dasom 417
Shinde, Sunita N. 243
Shinohara, Masakazu 472
Shoji, Takahiro 269, 270,
..... **453**, 495, 496, 647
Showalter, Megan R. 499
Shrestha, Bandana ... 402, **600**
Shridas, Preetha **700**
Shroyer, Noah F. 689
Shvartz, Eugenia 734
Sibinga, Nicholas E. S. 400
Siebert, Amy E. 379
Silva, Claudia L. 606
Silva, Rosane 208
Silverstein, Roy L. 335, 716
Sim, Seen-Ling 576
Simion, Viorel **314**
Simmons, Chelsey 425
Simpson, C. LaShan **539**
Sims, Peter A. 324
Sindi, Suzanne 280
Singer, Harold 598
Singh, Anupama **284**
Singh, Kanwarpal 612
Singh, Kavisha **688**
Singh, Mohnish 307
Singh, Rajesh K. **505**
Singh, Sasha A. 286, **497**,
..... 651, 734
Singhal, Mayank 555
Singla, Bhupesh 175
Sinoway, Lawrence I. 630
Sinusas, Albert 427
Siorek, Marek 477
Skirtich, Nolan 204
Skjæret, Tore 698
Sloan, Steven R. 515
Smaani, Ali 104
Smilowitz, Nathaniel 527
Smith, Bryan R. 142
Smith, Derek K. 340
Smith, Jonathan D. 126,
..... **323**, 378
Smith, Leslie A. 729
Smith, Loren E. **340**
Smith, Mikhaila 115
Smith, Nicholas L. 110
Smith, Robert S. 246, 639
Smithberger, Erin 566
So, Jisun **227**, **607**
Soares, Roberta M. 376
Sobel, Michael 241
Soehnlein, Oliver 537
Sohn, Dae-Won 583
Soler, Silvia 112
Soliman, Shady 131
Solingen, Coen V. 610, 708
Song, Chunyan 413
Song, Naaleum 583
Soni, Prutha 621
Soni, Ronak G. **253**
Soni, Shashvat 621
Sonkar, Vijay **111**
Sonkar, Vijay K. 119
Sood, Anil 358, 554, 717
Sopko, George 626
Sorci Thomas, Mary G. 493,
..... 604
Sorokin, Alexander V. **332**
Sorrrells, Matthew 280
Sorrentino, Thomas A. **336**,
..... **337**
Sousa, Iguaracy P. **588**
Sowden, Mark 211
Spedale, Melanie 133, 462
Spin, Joshua M. 266, 446
Spinelli, Chiara 214
Spinosa, Michael 262, 602
Spite, Matthew 336,
..... 352, 416
Spivakov, Mikhail 741
Srikakulapu, Prasad **151**,
..... 297, 602, 712
Srivastava, Piyush M. 373
Srivastava, Sanjay 574
Stables, Rod 279
Stachelek, Stanley 440
Stachowiak, Jeanne 401
Staiculescu, Marius C. 209
Stalker, Timothy J. **137**
Staller, Emma 332
Stanley, James C. 370
Staton, Kyle M. 490
Steenman, Marja 432
Steg, Philippe Gabriel 279
Steinhauser, Matthew L. ... 536
Steinhorn, Benjamin 219
Stenvinkel, Peter 542
Stepp, David W. 577
Steuer, Johnny 735
Steven, Sebastian 351,
..... 412, 608
Stevenson, Mark D. 212
St Hilaire, Cynthia **135**
Stobb, Michael Stobb. 280
Stock, Eveline O. 508
Stokman, Geurt **698**
Stone, Gregg W. 279, 531
Stotz, Stephanie 671
Stotz, Stephanie C. 407
Strand, Keith A. 105, **356**, 410
Strickland, Dudley K. 256
Studený, Mark 529
Stukas, Sophie 697
Su, Qian 157
Su, Teng 567
Su, Yunchao 577
Suarez, Ana 645
Subrahmanyam, Ramesh 566
Subramanian, Venkateswaran
..... 455, **456**, 652, **654**
Suckow, Bjoern D. 437
Sufit, Robert L. 628
Sugita, Peter **366**
Sukhova, Galina K. 734
Sukumar, Aravin N. **375**
Suleman, Amer 197
Sullivan, Samaah 195
Sun, Jinjian **585**
Sun, Yan V. 110
Sundberg, Eric J. 231
Sundgren, Nathan C. 124
Sur, Swastika 135
Suresh, Rishi 471
Susan, Blackburn 370
Sutherland, Brian G. 684
Suur, Bianca E. 210, **309**
Svart, John 127
Svigin, Helena 626
Sviridov, Denis O. 502,
..... 690, 694
Swain, Telisha M. 541
Swärd, Karl 308
Sweeney, Michael 407, 671
Szarfman, Ana 626
Szpakowski, Alexis 634
Tabas, Ira 146, 152
Tabbara, Marwan 275
Tabei, Ryota 252
Tada, Hayato **575**
Taha, Abdallah 680
Tahirkehi, Naeem 357, 556
Takamura, Masayuki 575
Takase, Bonpei 406
Takase, Hiroshi 679
Takemoto, Rika **431**
Takeuchi, Hidemi 268
Tallman, Keri A. 510
Talquist, Michelle 150
Tamboli, Pankti 731
Tan, Chunxiang 223
Tan, Sydney **192**, 367
Tanabe, Katsuyuki 268
Tang, Chaojun 137
Tang, Dalin **300**, **531**, **570**
Tang, Gale L. **241**
Tang, Jingrong 117, 690
Tang, Li 689
Tanigaki, Keiji 124, 392
Tannock, Lisa R. 693, 700
Tao, Guozhong 495
Tao, Huan 530
Tao, Michael L. 495
Tao, Ming 244, 245, 445
Tarling, Elizabeth J. 343
Tatsumi, Kohei 670
Tavori, Hagai ... 503, 525, **546**,
..... 661, 692, **721**
Tawakol, Ahmed 134
Tay, Joshua 393
Taylor, Angela 712
Taylor, Annabel L. **741**
Taylor, Cara 718
Taylor, W R. 103
Taylor, W. Robert 590, 629, 635
Tchkonja, Tamara 457
Tearney, Guillermo J. 439, 612
Teitelbaum, Daniel 375
Teixeira, Samantha K. 588
Telford, Dawn E. 684
Temel, Ryan E. 423
Teoh, Chun Ming **561**
Teruya, Jun 662
Tesauro, Manfredi 301
Tesmenitsky, Yevgenia 314
Thanassoulis, George 199
Thankamani Pandit, Peeyush
..... **584**
Therault, Betty 133, 462
Thiagarajan, Devi 652, 654
Thiagarajan, Divya **749**
Thiel, William H. **125**
Thiele, Geoffrey M. ... 348, 349,
..... 707, 728
Thierer, James H. 341
Thomas, Gail D. 630
Thomas, Merlin 232
Thomas, Michael 604
Thomas, Sheena 590
Thomas, Tamlyn N. ... 320, 326
Thomas, Tiffany 484, 498
Thome, Trace 490
Thompson, Bonne 153
Thompson, Thomas B. 686
Thorp, Edward B. 122, 657
Thounaojam, Menaka C. ... 586
Tian, Qin Qin **742**
Tian, Rong 522
Tian, Xiao Yu **739**, 742
Tian, Xiaoyu 430
Tian, Xin 626
Tie, Guodong 128
Tietge, Uwe J. F. **743**
Tikellis, Christos 232
Tillman, Bryan **263**
Toda, Hironobu 431
Toh, Ryuji 472
Tomic-Canic, Marjana 205
Tondo, Mireia 645
Torguson, Rebecca 515
Toth, Christopher 702
Towler, Dwight A. **207**, **533**
Travis, Claire 539
Trevino-Villarreal, Jose H. ... 445
Trice, Alayna 475
Trigatti, Bernardo L. 514
Trilling, Lucas 492
Tripathi, Himi 423
Trocha, Kaspar M. 244,
..... 245, 445
Trooboff, Spencer W. 259, 428
Trumbauer, Andrea 700
Tsai, Ding-Yang 595
Tsai, Michelle Z. 593
Tsantilas, Pavlos **317**
Tsao, Philip S. ... 110, 266, 446
Tse, Gary 742
Tseng, Alan 285
Tsimikas, Sotirios 347, 712
Tsivitis, Alexandra H. 307
Tso, Patrick 506
Tsujikawa, Laura M. ... 407, 671
Tsujita, Maki **679**
Tsukamoto, Masako **354**
Tu, Kai-Han 676
Tuck, Matthew 566
Tucker, Erik 661
Tucker, Rebecca M. 105,
..... 356, 410
Tun, Han Naung **365**
Ture, Sara 129, 405
Turgeon, Paul J. 375
Turner, Jacqueline E. 543
Tutto, Amanda 128

Author Index (continued)

- Tzafiriri, Rami 439
Tzeng, Edith 204, 290
Uchida, Haruhito A. 268,
..... 421, 431
Uczuzian, Areck A. 256
Ullah, Raja 357, 556
Umebayashi, Ryoko 268
Umei, Tomohiko 369, **573**
Upadhye, Aditi .. 151, 297, **712**
Upchurch, Clint M. 602
Upchurch, Gilbert R. 262
Upchurch Jr., Gilbert R. ... 141,
..... 602
Uphoff, Irina 195
Urabe, Go 236
Urmenyi, Turan P. 208
Usmani, Ahmad 357, 556
Usmani, Sabahat **197**
Vaccarino, Viola 195
Vaerst, Monika 317
Vahabikashi, Amir 118
Vaisar, Tomas 342, 696,
..... 702, **736**
Valenti, Luca 152
Valgimigli, Marco 279
Valle, Karen 574
van den Hoek, Anita M. 698
van der Hoorn, José W. 698
Vander Kooi, Craig 738
van Gorp, Rick H. 304
Van Solingen, Coen 102,
..... **544**, 603, 605
van Zonneveld, Anton Jan 544
Vargas, Fabian 192, 367
Varlamov, Oleg 291
Vats, Kanchan 429
Vazquez-Padron, Roberto I.
..... **275**, 276, 277
Vecchione, Carmine 214
Veettil, Remya A. 633
Veith, Austin 202
Velankar, Sachin 672
Velasco, Carlos 191
Velayutham, Murugesan ... 354
Velazquez, Omaidha 275
Velazquez, Omaidha C. 205,
..... 276, 277, 376
Vella, Anthony T. 231,
..... 353, 377
Venditto, Vincent J. ... 331, **713**
Vendrov, Aleksandr E. 212
Venkataraman, Vikram 436
Verbout, Norah 661
Verzosa, Grace C. 123,
..... 359, 729
Vickers, Kasey C. 113,
..... 339, 355
Vigneshwar, Mythili 350
Vikström, Max 638
Villa, Francesco 214
Villeneuve, Louis 283
Vindhyal, Mohinder ... 443, 637
Vitali, Cecilia 115, **513**, **705**
Vitseva, Olga 159
Vivas, Eugenio I. 136
Volkova, Maria 638
Voll, Ronald J. 442
von Drygalski, Annette 145
von Eckardstein, Arnold 547
Vongpatanasin, Wanpen ... 124
von Lintig, Johannes 511
Voyvodic, Peter 401
Vrakas, Christine 540
Vreede, Andrew P. 120
Vu, Hang T. **320**
Vujacic-Mirski, Ksenija 412,
..... 608
Vujkovic, Marijana 110
Wada, Jun 268, 421, 431
Wadén, Katarina **139**
Wadsworth, Brennan J. 697
Wagenhaeuser, Markus U.
..... 266, 446
Wagenseil, Jessica E. 209
Wagh, Dhananjay 150
Wagner, Denisa 118
Wahl, Amanda M. 315
Waksman, Ron 515
Walker, Joshua 234
Walker, Kendrick M. 568
Walsh, Christopher 203
Walsh, Meghan T. 341
Walsh, Noel 507
Walton, Brian 358, 717
Wan, Qing **224**
Wang, Aimei 223
Wang, Bowen 236
Wang, Charis 107
Wang, Da-zhi 594
Wang, Fen 141
Wang, Hong 710, 723
Wang, Jennifer P. 159
Wang, Lanfang 442
Wang, Lang 134
Wang, Lei 137, 241
Wang, Liang 300, 531
Wang, Luxi 414
Wang, Miao 224
Wang, Qingyu 570
Wang, Qiwen 364
Wang, Runqiu 626
Wang, Tian-Tian 565
Wang, Xiao **532**
Wang, Xiaobo 152
Wang, Xuebing 693
Wang, Ya **459**
Wang, Yan 495
Wang, Yin 326
Wang, Ying 100, 317
Wang, Yu 370
Wang, Yun 278
Wanga, Shaynah 656
Wanhainen, Anders 449
Wanken, Zachary J. ... **259**, **428**
Wara, Akm **138**, **461**
Ward, Nicholas D. 258, **649**
Wasiak, Sylwia **671**
Wasko, Nicholas 353
Watanabe, Koichi 472
Watts, Jerome P. 524
Waxman, Sergio 643
Webb, Nancy R. 693, 700
Weber, Christian 553
Weers, Paul M. M. 677
Weiser-Evans, Mary C.M.
..... 105, 356, 410
Weiss, Norbert 731
Weitzel, Hunter 357, 556
Wellington, Cheryl L. 697
Welman, Mélanie 283
Westfield, Lisa 306
Westrick, Randal J. 379
Weyrich, Andrew 160
Whelan, Mary C. 286
Whitacre, Brynne E. **675**
Whitehead, Aldon 357
Whitney, Adam G. 536
Wichman, Christopher 436
Wickline, Samuel 448
Wiese, Carrie B. 355
Wight, Thomas N. 241
Wilcox, Tanya 527
Wilensky, Robert L. 126
Wilke, Carol 479
Wilkinson, Anna 697
Willcockson, Gregory T. ... 249,
..... 631
Willer, Cristen 452
Willett, Nick 590
Williams, Corey 350
Williams, Dillon **272**, 658
Williams, Holly C. 103
Williams, Mark 631
Wilmarth, Phillip A. 291
Wilsdon, Laura A. 319
Wilson, James G. 194
Wilson, Peter W.F. 110
Wilson, Sierra 690
Wimberger, Jake 342
Wines-Samuelson, Mary E.
..... **213**
Winkels, Holger 345
Winkler, Ingrid 393
Winski, Greg 127
Winter, Hanna 127, **537**
Wirka, Robert **150**, 210
Wirtz, Alex 658
Witasp, Anna 542
Witzum, Joseph 712
Wolf, Dennis **345**
Wolfe, Vivian 675
Wolfkiel, Patrick **518**
Wolska, Anna **690**
Wong, Blenda 416
Wong, Mitchell 202, 582
Wong, Norman C.W. **407**, 671
Wong, Siu Ling 118
Wong, So C. **492**
Wong, Victoria 221
Wong, Wing Tak 742
Woo, Joseph 150
Worley, Emma L. 748
Wosniak, João J. 325
Wrenshall, Lucile **221**
Wright, Bradley C. 651
Wu, Chia-Hua **738**
Wu, Colin 626
Wu, Dayong 227, 607
Wu, Hao 118
Wu, Huaizhu **346**
Wu, Joseph 150
Wu, Pei-Tzu 357, 556
Wu, Wen-Chih 192,
..... 194, 367, 524
Wu, Xiaoyun 511
Wu, Xinyan 390
Wu, Yalan **430**
Wu, Zheyang 531, 570
Wun, Kelly H. 133, 462, 632
Wust, Rob C. I. 656
Wyseure, Tine 131, **145**
Xia, Xiujuan 173
Xia, Zheng-Yuan 565
Xie, Feng 249
Xie, Jun 426
Xie, Yi **108**
Xin, Victoria **626**
Xing, Dongqi 413
Xiong, Bei 285
Xiong, Liqun 133, 462, 632
Xu, Baohui **269**, **270**,
..... 453, **495**, **496**, **521**, 647
Xu, Canxia 173
Xu, Hao 493, **604**
Xu, Leimeng 481
Xu, Lin 153
Xu, Maria M. 231
Xu, Qingbo 725
Xu, Suowen 217
Xue, Chao **211**
Xue, Chenyi 100, 324, 580
Xue, Lingzhou 157
Yalavarthi, Sriakshmi 120
Yamaguchi, Osamu 715
Yamashita, Atsushi **660**
Yamazaki, Hiroyuki 252
Yamazaki, Takeshi 679
Yamazaki, Yukiyoshi 286
Yan, Chen 408, 589
Yan, Huimin **448**
Yan, Jinglian **128**
Yancey, Patricia G. 340,
..... 510, 530
Yang, Bo 452
Yang, Chao 250
Yang, Chongzhe 288
Yang, Chun 300, 531
Yang, Dafeng **233**
Yang, Fan 565
Yang, Han-Mo .. 417, 583, **591**
Yang, Lihua 423, 455, 456, 652
Yang, Maozhou 594
Yang, Min-Lee 370
Yang, Moua 716
Yang, Qing 506
Yang, Xiao-feng 710
Yang, Xiaofeng 723
Yang, Xuefeng 223
Yang, Zhe 594
Yang, Zhi-Hong 332
Yang, Zhihang 223
Yasumura, Seiki **394**, 624
Yavagal, Dileep R. 429
Ye, Jianqin 142, 317
Yeang, Calvin 347
Yeap, Xin Yi 122, 657
Yelamanchili, Dedipya 685
Yerkes, Elisabeth 503
Yermalitsky, Valery 510
Yimer, Wondwosen K. 574
Yin, Hao 242, 634
Yin, Shuping **594**
Yokokura, Souichi 252
Yokota, Yuya 294
Yokoyama, Shinji 679
Yoo, Sung Bok 234
Yoon, Eun 202, 582
You, Tao 158
Youssef, Amer **509**
Yu, Bin 201
YU, Huidan W. 364
Yu, Jun 108, 526
Yu, Luyi 109
Yu, Wenzheng 192, 367

Author Index (continued)

Yuan, Chun 570	Zhang, Mengxue 236	Zheng, Huaian 620	Zhu, Haibo 346
Yuan, Yuping 157	Zhang, Qijun 136	Zheng, Jie 300, 531	Zhu, Jian 306
Yue, Hong 724	Zhang, Shuya 217	Zheng, Jing-Juan 483	Zhu, Kuixi 150
Yuhanna, Ivan S 124	Zhang, Wei 109, 587	Zheng, Liang 481	Zhu, Li 137, 158
Zaffar, Muhammad Zubair .. 365	Zhang, Xian 174, 302	Zheng, Tianyu 390	Zhu, Li y. 224
Zamani, Maedeh 303	Zhang, Xiangyu 551	Zheng, X. Long 481	Zhu, Rui 492
Zangi, Lior 149	Zhang, Xue 390	Zheng, Xiaoxin 134, 475	Zhu, Tianqing 265
Zayed, Mohamed 250,	Zhang, Yao 516	Zheng, Xiaoya .. 269, 270, 453,	Zhu, Wanying 339, 355
..... 272, 658	Zhang, Yi 528	 495, 496, 521, 647	Zhu, Xingjun 142
Zerenturk, Eser J. 343	Zhang, Yiran 279	Zheng, Ze 146 , 152	Zhu, Zhen 631
Zhang, Bin 123 , 359, 361,	Zhang, Youmin 530	Zhong, Dalian 207	Zimmerman, Matthew C. .. 728
..... 457, 729, 746	Zhang, Zixuan 279	Zhong, Yu 648	Zingarelli, Basilia 675
Zhang, Cheng 526	Zhao, Chi 401	Zhou, Andrea 297	Zulfiker, Abu Hasanat Md .. 724
Zhang, Chongxu 599	Zhao, Guizhen 265	Zhou, Beiyang 231, 353, 377	Zunder, Eli 350
Zhang, Di 481	Zhao, Hanqing 322	Zhou, Bin 725	
Zhang, Dingguo 541	Zhao, Jinjing 217, 587	Zhou, Fangyuan 157	
Zhang, Hanrui ... 100, 324, 580	Zhao, Junyun 746	Zhou, Felix 511	
Zhang, Heyu 123, 746	Zhao, Shilin 355	Zhou, Guannan 141	
Zhang, Jessica J. 347	Zhao, Shuangping 599	Zhou, Haoyang 314	
Zhang, Jie 390	Zhao, Sihai 269, 270, 495,	Zhou, Jiliang 109	
Zhang, Jifeng 265, 585	 496, 521	Zhou, Ming-Sheng 223	
Zhang, Lan 235	Zhao, Yang 265	Zhou, Ting 225	
Zhang, Li 364, 725	Zhao, Yiqiong 716	Zhou, Ye 721	
Zhang, Linfang 173	Zhaorigetu, Siqin 403	Zhu, Cheng 157	



Getting a leg up on PAD begins here.

3-PART WEBINAR SERIES:

Treating Stable, Yet High-Risk PAD Patients

Peripheral Artery Disease affects over 8.5 million people in the United States. Providing effective care for those affected by PAD is more critical now than ever before. The American Heart Association is pleased to present three webinars that address the challenges and opportunities associated with treating PAD patients.

WEBINAR **1** Clinical Assessment of PAD on the Primary Care Spectrum

Presented by **EILEEN WALSH**, PhD, APN, RN-BC, FAHA
College of Nursing / University of Toledo

WEBINAR **2** Treating PAD in Underserved Communities

Presented by **J. ANTONIO GUTIERREZ**, MD, MHS
Interventional Cardiologist / Duke University Hospital

and **AMY WEST POLLAK**, MD MS
Cardiovascular Medicine / Mayo Clinic Florida

WEBINAR **3** Exercise Therapy for PAD Patients

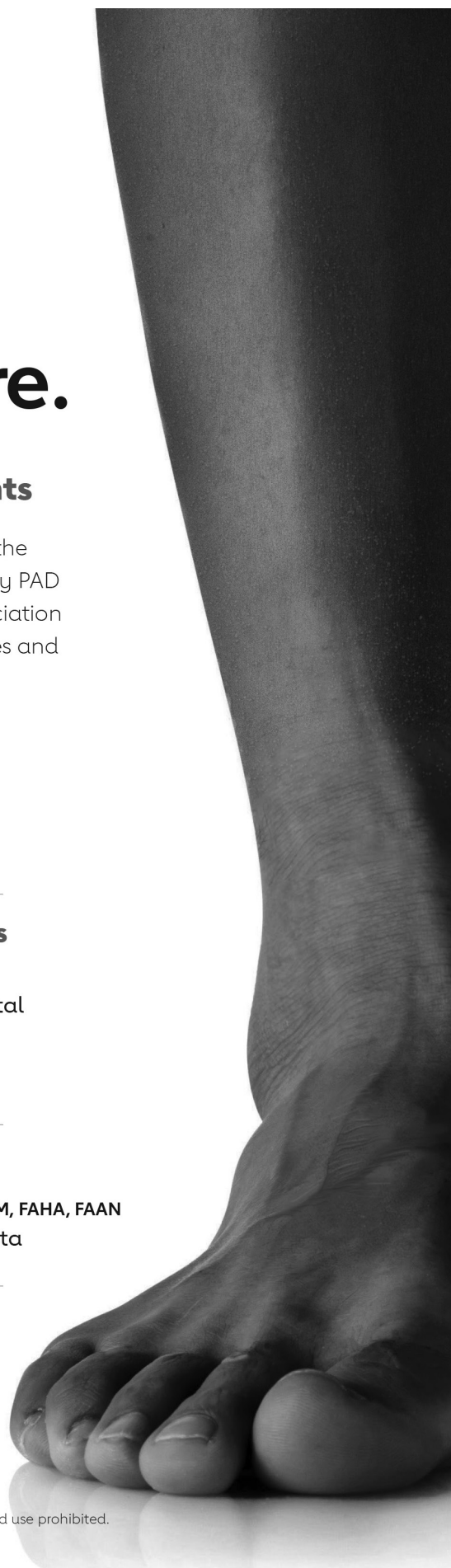
Presented by **DIANE TREAT-JACOBSON**, PhD, RN, FSVN, FAHA, FAAN
Professor, School of Nursing / University of Minnesota

Access the webinars now at:

heart.org/PADresources

Nationally sponsored by **janssen** 

© 2019 American Heart Association, Inc., a 501(c)(3) not-for-profit. All rights reserved. Unauthorized use prohibited.
3/19DS14524



[illegible]

[illegible]

[illegible]



The American Heart Association would like to thank Verve Therapeutics
or its support of the Vascular Discovery 2019 Scientific Sessions.

For information on upcoming
American Heart Association
Scientific Conferences,
visit **professional.heart.org**

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



American Heart Association®

Vascular Discovery:
From Genes to Medicine

National Center
7272 Greenville Avenue
Dallas, Texas 75231-4596