## Program at-a-Glance

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<th>Time</th>
<th>Tuesday May 5</th>
<th>Wednesday May 6</th>
<th>Thursday May 7</th>
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<tr>
<td>9:00</td>
<td>9:00-10:05 Conference Opening and Plenary Session I: From Discovery to Therapeutics – How Basic Science Can Help to Address Unmet Clinical Needs in Cardiovascular Medicine</td>
<td>9:00-9:45 Plenary Session III: Multiomics in Cardiovascular Science</td>
<td>10:30-11:35 Plenary Session V Invited Lecture Series</td>
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<td>10:00</td>
<td>10:05-11:05 Moderated Poster Sessions 1, 2, 3</td>
<td>10:05-11:05 Moderated Poster Sessions 6, 7</td>
<td>10:30-11:35 Plenary Session V Invited Lecture Series</td>
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<td>10:30</td>
<td>11:00-12:00 Online Interactive Early Career Training Session</td>
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<td>11:30</td>
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<td>12:00-1:05 The Mentor of Women Award Event</td>
<td>12:20-1:45 Plenary Session IV: Young Investigator Award Competition Brinkhous Prize and Page Award</td>
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<td>2:00</td>
<td>2:00-3:05 Moderated Poster Sessions 4, 5</td>
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<td>3:00</td>
<td>3:00-4:20 Concurrent Session II</td>
<td>3:00-4:20 Concurrent Session II</td>
<td>12:20-1:45 Plenary Session IV: Young Investigator Award Competition Brinkhous Prize and Page Award</td>
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Final Program Agenda

TUESDAY, MAY 5

The abstracts are embargoed until 9:00 AM, Tuesday May 5. For a list of ePosters, please go to https://atvb.apprisor.org.

9:00– 9:20 AM
Conference Opening Welcome

9:20 – 10:05 AM
Plenary Session I: From Discovery to Therapeutics – How Basic Science Can Help to Address Unmet Clinical Needs in Cardiovascular Medicine

9:20  Antisense Oligonucleotides for the Treatment of Cardio-Metabolic Diseases
Rosanne M. Crooke, PhD, Boston, Massachusetts

9:40  Altered Genes Triggering Acute Aortic Dissections Implicate Mechanotransduction as a Primary Driver of the Disease
Dianna M. Milewicz, MD, PhD, Houston, Texas

10:05 – 11:05 AM
Concurrent Moderated Poster Session 1 – Junior Investigator for Women Award Finalists

MP100
Inhibition of MicroRNA-33 Reprograms the Transcriptional Landscape and Kinetic Processes of Immune Cells to Promote Atherosclerotic Plaque Regression

MP101
Vascular Aging Alters Mitophagy to Lead to Galectin 3 Secretion
Muriel Blin, Daniel Tyrrell, Univ of Michigan, Ann Arbor, MI; Daniel R Goldstein, Univ of Michigan Med, Ann Arbor, MI

MP102
Loss of Notch Signaling in Pericytes Induces Arteriovenous Malformations
Taliha Nadeem, Henar Cuervo, Univ of Illinois at Chicago, Chicago, IL

MP103
A Naive CD8 T Cell Expressing CD95 Intensifies Cardiovascular Disease and Atherosclerosis
Lindsey Padgett, Huy Dinh, La Jolla Inst, La Jolla, CA; Holger Winkels, LJI, La Jolla, CA; Coleen A McNamara, Univ of Virginia, Charlottesville, VA; Catherine C Hedrick, La Jolla Inst for Allergy and, La Jolla, CA

MP104
Wnt Signaling Enhances Macrophage Response to IL4/13 and Promotes Resolution of Atherosclerosis
Ada Weinstock, NYU Sch of Med, New York, NY; Karishma Rahman, Or Yaacov, NYU Sch of Med, New York, NY; Michela Garabedian, New York Univ Medical Ctr, New York, NY; Cyrus Nikain, Stephanie Pena, NYU Sch of Med, New York, NY; Sean Heffron, Brian Sansbury, Brigham and Women's Hosp, Boston, MA; Matthew R Spite, Harvard Medical Sch, Boston, MA; P'ng Loke, NYU Sch of Med, New York, NY; Edward A Fisher, NYU Langone Medical Ctr, New York, NY
10:05 – 11:05 AM
Concurrent Moderated Poster Session 2

**MP105**
**Single-cell Analysis of Human Atherosclerosis Identifies Clusters of Macrophages Found in Plaque Progression in Mice**

**MP107**
**Pluripotency Factor OCT4 Regulates Atheroprotective Responses in Endothelial Cells**
*Svyatoslav Tkachenko, Cleveland Clinic, Cleveland, OH; Malay Chaklader, Cleveland Clinic Fndn, Cleveland, OH; Olga A Cherepanova, Cleveland Clinic, Cleveland, OH*

**MP109**
**SVEP1, a Novel Human Coronary Artery Disease Locus, Induces Vascular Smooth Muscle Cell Proliferation and Phenotypic Modulation Through Notch and Integrin Signaling**
*Jared Elenbaas, Washington Univ in St. Louis, Saint Louis, MO; In-Hyuk Jung, Washington Univ Sch of Med, Saint Louis, MO; Katherine Santana, Arturo Alisio, Washington Univ in St. Louis, Saint Louis, MO; Nathan Stitziel, Washington Univ, Saint Louis, MO*

**MP111**
**Loss of Lmo7 in Smooth Muscle Cell Promotes Atherosclerotic Plaque Stability**
*Yi Xie, Kathleen A Martin, Yale Sch of Med, New Haven, CT*

10:05 – 11:05 AM
Concurrent Moderated Poster Session 3

**MP112**
**Single Cell RNA Sequencing Reveals Heterogeneous Smooth Muscle Cell Phenotype Modulation in Marfan Syndrome Aortic Aneurysm**
*Albert J Pedroza, Stanford Univ, Palo Alto, CA; Samantha Churovich, Stanford Univ, Stanford, CA; Rohan Shad, Stanford Univ, Palo Alto, CA; Tiffany Kimiko Koyano, Stanford Univ, Stanford, CA; Yasushi Tashima, Stanford Univ, Cupertino, CA; Cristiana Iosef Husted, Michael P Fischbein, Stanford Univ, Stanford, CA*

**MP113**
**MicroRNA-181b Regulates Critical Limb Ischemia in Diabetic Mice**
*Henry S Cheng, Brigham and Women's Hosp, Boston, MA; Daniel Perez-Cremades, BWH, Boston, MA; Marc P Bonaca, CPC Clinical Res, Aurora, CO; Mark Feinberg, Brigham and Women's Hosp, Boston, MA*

**MP114**
**Osteoprotegerin Deficiency in Mice Increases Calcification to Accelerate Vascular Dysfunction**
*Jocelyne Mulangala, Emma Akers, SAHMRI, Adelaide, SA, Australia; Laura Wlsdon, Fullarton, SA, Australia; Panashe Michelle Bamhare, Fullarton, SA, Australia; Mount Barker, SA, Australia; Stephen James Nicholls, Monash Univ, Clayton, Australia; Belinda Di Bartolo, The Kolling Inst, St Leonards, Australia*

**MP116**
**A Novel Mouse Model Capable of Recapitulating Sexual Dimorphism in the Development of Ascending Aortic Aneurysms and Dissections (aads)**
*Xiaoyan Qi, Fen Wang, changzoon Chun, Univ of Florida, Gainesville, FL; Gilbert R Upchurch Jr., Univ of FL Dept of Surgery, Gainesville, FL; Zhihua Jiang, Univ of Florida COM, Gainesville, FL*
MP117
Ischemic-trained Monocytes Improve Hindlimb Ischemia Outcomes
Gustavo Falero-Diaz, Catarina Barboza, Felipe Pires, Roberto I Vazquez-Padron, Univ of Miami, Miami, FL; Omaida Caridad Velazquez, Univ of Miami Miller Sch of Med, Miami, FL; Roberta M Lassance-soares, Univ of Miami, Miami, FL

11:00 AM – 5:00 PM
Online Interactive Early Career Training Session
Organized in cooperation with the ATVB Early Career Committee

Round Table Discussion and Networking
- Getting Your First Grant: Insights from Study Section
- Building a Successful International Research Program
- Making Moves: transitioning institutions, setting up your lab, hiring
- (Early) Career Transition Grants

11:05 AM – 12:20 PM
Concurrent Session I A: Molecular and Cellular Mechanisms of Atherosclerosis

11:05 Dissecting the Cellular and Molecular Immune Interactions In Human Atherosclerosis
Chiara Giannarelli, MD, PhD, New York, New York

Oral Abstract Presentations

11:25 HIV Protein Tat Induces Macrophage Dysfunction and Atherosclerosis Development in LDLR-deficient Mice
Zhaojie Meng, Univ of California, Riverside, CA; Weiwei Lu, Taesik Gwag, Univ of Kentucky, Lexington, KY; Changcheng Zhou, Univ of California, Riverside, CA

11:35 Resolvin D1 Promotes Fatty Acid Oxidation in Macrophages to Facilitate Swift Necroptotic Cell Clearance
Zeinab Hosseini, Michael Marinello, Gabrielle Fredman, Albany Medical Coll, Albany, NY

11:45 Quantitative Trait Loci Mapped For Tcf21 Binding, Chromatin Accessibility And Chromosomal Looping In Coronary Artery Smooth Muscle Cells Reveal Molecular Mechanisms Of Coronary Disease Loci
Quanyi Zhao, Michael Dacre, Trieu Nguyen, Milos Pjanic, Boxiang Liu, Dharini Iyer, Stanford Univ, Stanford, CA; Paul Cheng, STANFORD UNIVERSITY, Stanford, CA; Robert Wirka, Stanford Univ, Stanford, CA; Juyong B Kim, STANFORD UNIVERSITY, Stanford, CA; Hunter B Fraser, Thomas Quertermous, Stanford Univ, Stanford, CA
Discovering and Characterizing Conserved Regulatory Elements That Orchestrate Vascular Inflammatory Responses and are Linked to Human Disease
Azad Alizada, Univ of Toronto, Toronto, ON, Canada; Nadiya Khyzha, Liangxi Wang, Univ Health Network, Toronto, ON, Canada; Lina Antounians, Minggao Liang, SickKids Res Inst, Toronto, ON, Canada; Melvin Khor, Univ Health Network, Toronto, ON, Canada; Michael D Wilson, SickKids Res Inst, Toronto, ON, Canada; Jason E Fish, Univ Health Network, Toronto, ON, Canada

Vascular Aging Alters Mitophagy to Lead to Galectin 3 Secretion
Muriel Blin, Daniel Tyrrell, Univ of Michigan, Ann Arbor, MI; Daniel R Goldstein, Univ of Michigan Med, Ann Arbor, MI

Q&A/Wrap-up

11:05 AM – 12:20 PM
Concurrent Session I B: Molecular, Developmental and Cellular Biology of the Vessel Wall

Clonal Vascular Smooth Muscle Cell Expansion in Disease
Helle F. Jørgensen, PhD, Cambridge, United Kingdom

Oral Abstract Presentations

Klf4 Dependent Plasticity of Perivascular Cells Regulates Obesity Induced Inflammation and Endothelial Cell Polarization in Adipose Tissue
Gamze B Bulut, Univ of Virginia, Glen Allen, VA; Gary K Owens, Univ of Virginia, Charlottesville, VA; Gabriel Alencar, Univ of Virginia, Charlottesville, VA

Endothelial Deficiency of Nogo-B Receptor Induces Cerebral Hemorrhage via Histone Acetylation Regulated Ccm1/2 Expression
Zhi Fang, Wenquan Hu, Xiang Wang, Qing Robert Miao, NYU Winthrop Hosp, Mineola, NY

High Throughput Screening Identifies the DNMT1 Inhibitor, 5-azacytidine, as a Potent Inducer of Smooth Muscle Phosphatase and Tensin Homolog (PTEN): A Central Role Mediating 5-azacytidine Protection Against Pathological Vascular Remodeling
Keith Strand, Univ of Colorado-Anschutz, Aurora, CO; Sizhao Lu, Univ of Colorado Denver, Aurora, CO; Qiong Zhou, Univ of Colorado-Anschutz, Aurora, CO; Marie Mutryn, Univ of Colorado Anschutz, Aurora, CO; Rebecca Tucker, UC Denver, Aurora, CO; Austin Jolly, Univ of Colorado Anschutz, Aurora, CO; Allison Dubner, Univ of Colorado Anschutz, Aurora, CO, Aurora, CO; Raphael A Nemenoff, Univ of Colorado Denver, Aurora, CO; Karen Moulton, Univ of Colorado Anschutz, Aurora, CO; Keith Koch, Univ of Colorado-Anschutz, Aurora, CO; Daniel Vincent LaBarbera, Univ of Colorado, Aurora, CO; Mary Cm Weiser-Evans, Univ of Colorado Health Scien, Denver, CO

Positional Transcriptomics to Clarify Site-specific Pathologies of the Vessel Wall
Milagros C Romay, Feiyang Ma, Univ of California - Los Angeles, Los Angeles, CA; Todd Haswell Kimball, UCLA, Los Angeles, CA; Gloria Hernandez, Margaret Ramirez, Andrew Reyes, Matteo Pellegrini, Univ of
California - Los Angeles, Los Angeles, CA; M Luisa Iruela-arispe, Northwestern Univ, Chicago, IL

12:15  Q&A/Wrap-up

11:05 AM – 12:20 PM
Concurrent Session I C: Translational Science of Vascular Medicine: Emerging Research in Thrombosis and Hemostasis
Organized in cooperation with the Council on Peripheral Vascular Disease

11:05  TBD
Andrea T. Obi, MD, Ann Arbor, Michigan

Oral Abstract Presentations

11:25  Targeted Mir-146a; an Innovative Treatment Modality for Shear Stress-induced Vascular Inflammation
Islam Mohamed, California Northstate Univ, Elk Grove, CA; Kimberly Rooney, Emory Univ, Atlanta, GA; Katherine Ferrara, Stanford Univ, Stanford, CA; Charles D Searles Jr., Emory Univ, Atlanta, GA

11:35  Novel Oxylipin Inhibits Platelet Activation and Thrombosis Through Activation of Ppar Alpha
Michael Holinstat, Univ of Michigan Medical, Ann Arbor, MI

11:45  Stress and Myocardial Infarction Alter the Blood Transcriptional Signature in Women
Tessa Barrett, Nathaniel Smilowitz, Angela Lee, Tanya M Spruill, Harmony Reynolds, Judith S Hochman, Jeffrey S Berger, NYU Sch of Med, New York, NY

11:55  Severity of Pulmonary Thrombosis Alters Lung Endothelial Viability and Regulates Sepsis-induced Lung Injury via Hypoxia-inducible Factor 1 Alpha
Colin E Evans, Xianming Zhang, Northwestern Univ, Chicago, IL; Narsa Machireddy, Northwestern Feinberg Sch of Med, Aurora, IL; You-Yang Zhao, Northwestern U-Lurie Children's H, Chicago, IL

12:00  Lysophosphatidic Acid Induces Tissue Factor Expression via PKD2-p38a-JNK2 Pathway
Mei-zhen Cui, Feng Hao, Qiwei Liu, Jiaxin Du, Olawale Bankole, Amanda Dumire, Bethanie Quintela, Xuemin Xu, Univ of Texas Permian Basin, Odessa, TX

12:15  Q&A/Wrap-up
12:20 PM – 1:05 PM
The Mentor of Women Award Event

12:20  **Presentation of the Mentor of Women Award**  
Isabella Grumbach, MD, PhD, University of Iowa, Iowa City, IA

12:25  **Mentor of Women Awardee**  
Murray W. Huff, PhD, FAHA, Robarts Research Institute, University of Western Ontario, London, Ontario, Canada

12:40  **Introduction of Featured Presentation**  
Isabella Grumbach, MD, PhD, University of Iowa, Iowa City, IA

12:45  **Featured Presentation: Women, Hope, and Leadership in the Time of a Pandemic**  
Jane E. Freedman, MD, Boston, Massachusetts

1:05 PM – 1:55 PM
Plenary Session II:  Highlights from the ATVB Journal

1:05  **ATVB Journal Report**  
Alan Daugherty, PhD, DSc, FAHA, University of Kentucky, Lexington, KY

Presentations by the 2020 ATVB Journal Early Career Investigator Award Recipients

1:10  **Daniel Steinberg Early Career Investigator Award in Atherosclerosis/Lipoproteins**  
Critical Role of SREBP-1c Large-VLDL Pathway in Environment-induced Hypertriglyceridemia of apoA-V Deficiency  
Hiroaki Okazaki, Tokyo, Japan

1:20  **Werner Risau Early Career Investigator Award in Vascular Biology**  
Ponatinib Combined with Rapamycin Causes Regression of Murine Venous Malformation  
Elisa Boscolo, PhD, Cincinnati, Ohio

Featured Presentation:

1:30  **Mechanisms of Venous Thrombosis in Cancer**  
Nigel Mackman, PhD, FAHA, Chapel Hill, North Carolina

1:55  **Q&A/Wrap-up**

2:05 – 3:05 PM
Concurrent Moderated Poster Session 4

**MP119**  
**BCL11B is a Newly Identified Regulator of Arterial Stiffness and Related Target Organ Damage**  
Francesca Seta, Jeff Arni Valisno, Boston Univ Sch of Med, Boston, MA; Joel May, Kuldeep Singh, Boston Univ, Boston, MA; Lisa Venegas, Enkhjargal Budbazar, Boston Univ Sch of Med, Boston, MA; Eric Y Helm, Univ of Florida, Coll of Med, Gainesville, MA; Christopher Nicholson, Massachusetts General Hosp, Charlestown, MA; Dorina Avram, University of Florida, Coll of Med, Gainesville, FL; Richard A Cohen, Boston Univ Sch of Med, Boston, MA; Gary F Mitchell, Cardiovascular Engineering Inc, Norwood, MA; Kathleen G Morgan, Boston Univ, Boston, MA

**MP120**  
**Discovery of an Evolutionarily Conserved Smooth Muscle Cell-specific LncRNA CARMN**  
Kunzhe Dong, Augusta Univ, Augusta, GA; Jian Shen, Zhejiang Univ, Zhejiang, China; Xiangqin He, Augusta Univ, Augusta, GA; Liang Wang, Nanchang Univ, Nanchang, China; Guoqing Hu, Kristopher Bunting, Rachael Dixon-Melvin, Augusta Univ, Augusta, GA; zeqi zheng, Nanchang; Meixiang Xiang, Nanchang, Hangzhou; Almira Vazdarjanova, Augusta Univ, Augusta, GA; Jiliang Zhou, Medical Coll Georgia, Augusta, GA
MP121
A Central Role for Klf4-dependent Smooth Muscle-derived Adventitial Sca1+ Vascular Stem/Progenitor Cells in Myofibroblast Formation, Adventitial Fibrosis, and Pathogenic Artery Wall Stiffening
Sizhao Lu, Austin Jolly, Keith Strand, Marie Mutryn, Rebecca Tucker, Allison Dubner, Karen Moulton, Raphael A Nemenoff, Univ of Colorado Anschutz, Aurora, CO; Mark W Majesky, Seattle Children's Res Inst, Seattle, WA; Mary Cm Weiser-Evans, Univ of Colorado Anschutz, Aurora, CO

MP122
Diabetes-induced Dynamic Changes in RNA-chromatin Interactome Promotes Endothelial Dysfunction
Kiran Sriram, Yingjun Luo, City of Hope, Duarte, CA; Riccardo Calandrelli, Univ of California San Diego, La Jolla, CA; Zhen Chen, City of Hope, Duarte, CA

MP125
Enhancing Base Excision Repair of Oxidative DNA Damage Delays Vascular Aging in Mice
Kirsty Foote, Univ of Cambridge, Cambridge, United Kingdom; Marieke Rienks, Konstantinos Theofilatos, Kings Coll London, London, United Kingdom; Aarti V Shah, Nichola L Figg, Alison Finigan, Univ of Cambridge, Cambridge, United Kingdom; Manuel Mayr, Kings Coll London, London, United Kingdom; Martin Bennett, Univ of Cambridge, Cambridge, United Kingdom

2:05 – 3:05 PM
Concurrent Moderated Poster Session 5

MP127
Platelet-specific Ablation of Mtor Regulates Platelet Aggregation and in vivo Thrombosis Through Rap1b-Mediated Integrin Alphaiibbeta3 Activation
Bhanu Kanth Manne, Robert Campbell, Matthew T Rondina, Univ of Utah, Salt Lake City, UT

MP128
High Throughput Screening Assay for Identifying Small Molecules That Block ga12/αSnap Binding for Inhibition of Vwf Secretion
Misuk Bae, Univ of Illinois at Chicago, Chicago, IL; Hyun Lee, Univ of Illinois at Chicago Res Resources Ctr, Chicago, IL; Laura J Bloem, Univ of Illinois at Chicago UICtr for Drug Discovery, Chicago, IL; Kiira Ratia, Univ of Illinois at Chicago Res Resources Ctr, Chicago, IL; Xiaoping Du, Univ of Illinois at Chicago, Chicago, IL; Gregory R Thatcher, Univ of Illinois at Chicago UICtr for Drug Discovery, Chicago, IL; Richard D Minshall, Univ of Illinois at Chicago, Chicago, IL

MP130
Identification of a Specific Thrombomodulin Residue That Defines Its Conformational Selectivity for TAFI or Protein C
John Ackersviller, Michael Boffa, The Univ of Western Ontario, London, ON, Canada

3:05 – 4:20 PM
Concurrent Session II A: Lipoproteins and Lipid Metabolism: LDL and Beyond

3:05
Endothelial Cell Lipoprotein Transport and Atherosclerosis
Chieko Mineo, PhD, Dallas, Texas
### Oral Abstract Presentations

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<tr>
<td>3:25</td>
<td>Direct Evidence for the Intracellular Non-covalent Interaction of Apolipoprotein(a) and ApolipoproteinB100 During Lipoprotein(a) Biosynthesis</td>
<td>Amer Youssef, Robarts Res Inst, London, ON, Canada; Michael Boffa, The Univ of Western Ontario, London, ON, Canada; Santica M Marcovina, Univ of Washington, Seattle, WA; Marlys L Koschinsky, Robarts Res Inst, London, ON, Canada</td>
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<td>3:35</td>
<td>Utilizing Nanodiscs to Model Membrane Interactions With SR-BI</td>
<td>Hayley R Powers, Medical Coll of Wisconsin, Wauwatosa, WI; Sarah Proudfoot, Jimmy Feix, Daisy Sahoo, Medical Coll of Wisconsin, Milwaukee, WI</td>
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<td>3:45</td>
<td>Characterizing the Effects Of Fish Oil On High-density Lipoprotein Proteome And Cholesterol Efflux Capacity</td>
<td>Paul A Mueller, Sara Rosario, Elisabeth Yerkes, Melissa Heard, Oregon Health and Science Universit, Portland, OR; Nathalie Pamir, OHSU, Portland, OR</td>
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<td>3:55</td>
<td>Mir-1908 is a Cholesterol Responsive MicroRNA Implicated in LDLR Cleavage</td>
<td>Kaitlyn Beehler, Majid Nikpay, Paulina Lau, Sebastien Soubeyrand, Ruth McPherson, Univ of Ottawa Heart Inst, Ottawa, ON, Canada</td>
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<td>4:05</td>
<td>Non-Targeting Locked-Nucleic-Acids Antagonize Inflammatory Activation of Foam Cells and Impede Atherosclerosis</td>
<td>Ryan M Allen, Vanderbilt Univ, Nashville, TN; Danielle L Michell, Ashley Cavnar, Vanderbilt Univ Medical Ctr, Nashville, TN; Marisol Ramirez, VUMC, Nashville, TN; Shilin Zhao, Vanderbilt Univ Medical Ctr, Nashville, TN; MacRae F Linton, Vanderbilt Univ Sch of Med, Nashville, TN; Kasey C Vickers, Vanderbilt Univ Medical Ctr, Nashville, TN</td>
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<tr>
<td>4:15</td>
<td>Q&amp;A/Wrap-up</td>
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### Concurrent Session II B: Vascular Immunity, Inflammation and Thrombosis

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<td>Immune Cell Communication in Atherosclerosis</td>
<td>Esther Lutgens, MD, PhD, Amsterdam, Netherlands</td>
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<td>3:25</td>
<td>Macrophage ATP Citrate Lyase Deficiency Stabilizes Atherosclerotic Plaques</td>
<td>Jeroen Baardman, Sanne G Verberk, Saskia van der Velden, Marion J Gijsels, Cindy P van Roomen, Guillermo R Griffith, Koen H Prange, Amsterdam Univ Medical Ctr, Amsterdam, Netherlands; Soufyan Lakhbir, Vrije Univ Amsterdam, Amsterdam, Netherlands; Elisa Meinsner, Amsterdam Univ Medical Ctr, Amsterdam, Netherlands; Annette Elise Neele, Academic Medical Ctr, Amsterdam; Esther Lutgens, Amsterdam Univ Medical Ctr, Amsterdam, Netherlands; Kathryn E Wellen, Univ of Pennsylvania, Philadelphia, PA; Menno De Winther, Academic Medical Ctr, Amsterdam, Netherlands; Jan Van den Bossche, Amsterdam Univ Medical Ctr, Amsterdam, Netherlands</td>
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<td>3:35</td>
<td>Gut-derived Metabolite Trimethylamine Regulates Nfkb Signaling and Lipoprotein Metabolism: A Potential Therapeutic Target for Atherosclerosis</td>
<td>Szczepan Kaluzny, Qiaozhu Su, Queen's Univ Belfast, Belfast, United Kingdom</td>
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<td>3:45</td>
<td>The Immune Cell Repertoire in Human Atherosclerotic Plaques Characterized by Single Cell Rna-sequencing and Multi-color Flow Cytometry</td>
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3:55 Smooth Muscle Cell Derived Hyaluronan Synthase 3 Impairs the Smooth Muscle Cell Transition to an Galectin3+ Extracellular Matrix Producing State
Felicia Hartmann, Susanne Homann, Inst for Pharmacology and Clinical Pharmacology, Univ Hosp, Heinrich-Heine-Univ, Dusseldorf, Germany; Alexandra Newman, Univ of Virginia, Charlottesville, VA; Katherine Owsiany, Univ of Virginia, Charlottesville, VA, Charlottesville, VA; Yu-Qing Zhou, Ted Rogers Ctr for Heart Res TBEP, Univ of Toronto, Toronto, ON, Canada; Michelle Bendeck, Univ of Toronto, Toronto, ON, Canada; Maria Grandoch, Inst for Pharmacology and Clinical Pharmacology, Univ Hosp, Heinrich-Heine-Univ, Dusseldorf, Germany; Gary K Owens, Univ of Virginia, Charlottesville, VA; Jens W. Fischer, Inst for Pharmacology and Clinical Pharmacology, Univ Hosp, Heinrich-Heine-Univ, Duesseldorf, Germany

4:05 Endothelial Kynurenine Metabolite Alters Cardiac Function Following Myocardial Infarction
Nada Joe Melhem, Mouna Chajadine, Inserm U970, Paris, France; Jean Sebastien Hulot, APHP, Paris, France; Ziad Mallat, APHP, Paris, France, Cambridge; Jean-Sébastien Silvestre, Inserm U970, Paris, France; Soraya Taleb, U970, Paris, France

4:15 Q&A/Wrap-up

3:05 – 4:20 PM Concurrent Session II C: Translational Science in Vascular Medicine: Bioengineered Stents and Conduits
Organized in cooperation with the Council on Peripheral Vascular Disease

3:05 Molecular Engineering of Angiogenic Growth Factors
Jeffrey A. Hubbell, PhD, Chicago, Illinois

Oral Abstract Presentations

3:25 Transcriptomic Analysis of Notch Signaling Identifies Unc5b as a Genetic Modulators of Endothelial Cell Migration During Vascular Development
Qanber Raza, Bhairavi Swaminathan, Seock-Won Youn, Univ of Illinois at Chicago, Chicago, IL; Kevin Boyé, Yale Univ, New Haven, NY; Anne Eichmann, Yale Univ, New Haven, CT; Jan Kitajewski, Univ of Illinois Chicago, Chicago, IL

3:35 Development of Tissue Engineered Vascular Grafts Resistant to Diabetes
Agneta Simionescu, Clemson Univ, Clemson, SC

3:45 Biomaterials-based Delivery of Angiogenic Messenger RNA Enhances Arteriogenesis in a Porcine Model of Limb Ischemia
Ngan F Huang, Stanford Univ, Stanford, CA; Tatiana Zaitseva, Fibralign Corp, Union City, CA; Guang Yang, Stanford Univ, Stanford, CA; Dimitris Dionyssiou, Fibralign Corp, Union City, CA; Maedeh Zamani, Stanford Univ, Palo Alto, CA; Steve Sawamura, Fibralign Corp, Union City, CA; Eduard Jakubov, PhaRNA, Houston, TX; Richard Hallett, Dominik Fleischmann, Stanford Univ, Stanford, CA; Michael Paukshto, Fibralign Corp, Union City, CA

3:55 Elastic Fibers of the Internal Elastic Lamina are Unraveled But Not Created With Expanding Arterial Diameter in Arteriogenesis
Derek Afflu, Univ of Pittsburgh Medical Ctr, PITTSBURGH, PA; Dylan D McCreary, Nolan Skiritich, VA PHS, Pittsburgh, PA; Kathy Gonzalez, UPMC, Pittsburgh, PA; Edith Tzeng, Univ of Pittsburgh, Pittsburgh, PA; Ryan M McEnaney, VA PHS, Pittsburgh, PA
4:05  **Use of 4d Ultrasound for Fluid-structure Interaction Simulations of Murine Thoracic Aortas**  
Hannah L. Cebull, Conner C. Earl, Vitaliy L. Rayz, **Craig J Goergen**, Purdue Univ, West Lafayette, IN

4:15  **Q&A/Wrap-up**

**4:00 – 5:00 PM**
**Online Interactive Early Career Training Session**  
*Organized in cooperation with the ATVB Early Career Committee*

**Round Table Discussion and Networking**
- Getting Your First Grant: Insights from Study Section
- Building a Successful International Research Program
- Making Moves: transitioning institutions, setting up your lab, hiring
- (Early) Career Transition Grants

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**WEDNESDAY, MAY 6**

**9:00 – 9:45 AM**
**Plenary Session III: Multiomics in Cardiovascular Science**

9:00  **Multi-tissue Multi-omics Approaches to Cardiovascular Diseases**  
Xia Yang, PhD, University of California-Los Angeles, Los Angeles, California

9:20  **Combined Germline and Somatic Genetic Analysis for Atherosclerotic Cardiovascular Disease**  
Pradeep Natarajan, MD, MMSc, Boston, Massachusetts

9:40  **Q&A/Wrap-up**

**10:05 – 11:05 AM**
**Concurrent Moderated Poster Session 6**
MP132
Regression of Advanced Atherosclerotic Lesions in Response to Long Term Chow Diet Feeding is Associated with Increased Il1b-dependent Endo-Mt
Santosh Karnewar, Richard Baylis, Xenia Bradley, Vaishnavi Karnewar, Gabriel Alencar, Gary K Owens, Univ of Virginia, Charlottesville, VA

MP133
Vascular Modulation of Adipose Function: Role of Endothelial Argonaute 1
Xiaofang Tang, Beckman Inst City of Hope, Duarte, CA; Yingjun Luo, Kiran Sriram, City of Hope, Duarte, CA; Zhijie Qi, Univ of California, San Diego, San Diego, CA; Rama Natarajan, Beckman Res Inst of City of Hope, Duarte, CA; Gene Yeo, Beckman Res Inst of City of Hope, Duarte, CA, La Jolla, CA; Kendall Van Keuren-Jensen, -, Phoenix, AZ; Sheng Zhong, Univ of California San Diego, La Jolla, CA; Zhen Chen, City of Hope, Duarte, CA

MP134
T Cell Specific Ezh2 Deficiency Polarizes Cd4+ T Cells Towards an Anti-inflammatory Phenotype and Attenuates Atherosclerosis
Michael Lacy, Katrin Nitz, LMU Univ Munich - DZH, Munich, Germany; Aleksandar Janjic, Yuting Wu, Anuroop Venkatasubramani, Axel Imhof, LMU Univ Munich, Munich, Germany; Christian Weber, LMU Univ Munich - DZH, Munich, Germany; Menno P. de Winther, Academic Medical Ctr, Amsterdam, Netherlands; Dorothee Atzler, LMU Univ Munich - DZH, Munich, Germany; Esther Lutgens, Academic Medical Ctr, Amsterdam, Netherlands

MP135
Glucocorticoid Induced Tumour Necrosis Factor Receptor Family-related Protein Drives Atherosclerosis in Mice and is Associated with an Unstable Plaque Phenotype and Cerebrovascular Events in Humans
Laura A Bosmans, Amsterdam UMC, location AMC, Amsterdam, Netherlands; Annelie Shami, Academic Medical Ctr, Amsterdam, Netherlands; Dorothee Atzler, LMU Univ Munich - DZH, Munich, Germany; Holger Winkels, LJI, La Jolla, CA; Michael Lacy, Inst for Cardiovascular Prevention (IPEK), Munich, Germany; Claudia van Tiel, Amsterdam UMC, location AMC, Amsterdam, Netherlands; Katrin Nitz, Inst for Cardiovascular Prevention (IPEK), Munich, Germany; Jeroen Baardman, Amsterdam UMC, location AMC, Amsterdam, Netherlands; Carlo Riccardi, Dept of Med, Univ degli studi di Perugia, Perugia, Italy; Andreas Edsfeldt, Dept of Cardiology, Skåne Univ Hosp, Lund, Sweden; Claudia Monaco, Kennedy Inst Rheumatology, Oxford, United Kingdom; Menno De Winther, Academic Medical Ctr, Amsterdam, Netherlands; Jan Nilsson, Dept of Clinical Sciences, Malmo, Sweden; Christian Weber, Kreislaufenstitut, Munich, Germany; Norbert Gerdes, Univ Hosp Duesseldorf, Duesseldorf; Isabel Gonçalves, Dept of Cardiology, Skåne Univ Hosp, Lund, Sweden; Esther Lutgens, Amsterdam Univ Medical Ctr, Amsterdam, Netherlands

MP136
Implication of Proprotein Convertase Subtilisin/Kexin Type 9 in Human Aortic Valve Interstitial Cell Calcification
Vincenza Valerio, Donato Moschetta, Ctr Cardiologico Monzino IRCCS, Milan, Italy; Anna Maiocchi, Universitly of Milan, Milan, Italy; Iliaria Massaiu, Ctr Cardiologico Monzino IRCCS, Milan, Italy; Paola Songia, Ctr Cardiologico Monzino IRCCS, Milano, Italy; Valentina Alfieri, Veronika Myasoedova, Ctr Cardiologico Monzino IRCCS, Milan, Italy; Romain Capoulade, DR Inserm Grand Ouest, Nantes, France; Benoit Arsenault, Quebec Heart and Lung Inst, Quebec, QC, Canada; Nicola Ferri, Univ degli Studi di Padova, Padova, Italy; Marina Camara, Ctr Cardiologico Monzino, Milano, Italy; Paolo Poggio, Ctr Cardiologico Monzino IRCCS, Milan, Italy

MP137
Notch Signaling in Smooth Muscle Cells Promotes Cap Formation During Atherosclerosis
Carlos J Martos Rodriguez, Ainoa Caballero, Donal MacGrogan, Jose Luis de la Pompa, Laura Carramolino, Ctr Nacional de Investigaciones Cardiovasculares Carlos III, Madrid, Spain; Jacob F Bentzon, Aarhus Univ, Aarhus N, Denmark
MP138
Androgen Mediates the High Susceptibility of Male Mice to Aldosterone and High Salt-induced Abdominal Aortic Aneurysm
Xufang Mu, Shu Liu, Ming C Gong, Zhenheng Guo, Univ of Kentucky, Lexington, KY

MP139
Role of a Novel Cardiovascular Lipid-based Biomarker Score in Identifying Candidates for Beta Blocker Intervention
Peter McGranaghan, Anshul Saxena, Muni Rubens, Baptist Health South Florida, Coral Gables, FL; Mahdi O Garelnabi, Univ Of Massachusetts, Lowell, MA; Emir Veledar, Baptist Health South Florida, Coral Gables, FL; Tobias Trippel, Charite, Berlin, Germany

MP140
Genome-wide Transcriptomics Reveals New Sex-specific Gene Expression and Pathways in Patients With an Acute Myocardial Infarction
Aaron Shulkin, Dept of Molecular, Cell and Developmental Biology, Univ of California Santa Cruz, Santa Cruz, CA; Perman Pandal, San Ramon, CA; Eliseo Tonatiuh Vazquez, Univ California Davis, Sacramento, CA; Elizabeth Cortez-Toledo, Cardiovascular Div, Dept of Internal Med, UC Davis Sch of Med, Univ of California, Davis, Davis, CA; Alejandra Galina Bernal, Cardiovascular Div, Dept of Internal Med, UC Davis Sch of Med, Univ of California, Davis, Davis, CA; Javier E Lopez, UC DAVIS, Davis, CA

MP142
Association Between Genetic Variation in Blood Pressure and Lifetime Risk of Peripheral Artery Disease: A Mendelian Randomization Study
Michael G Levin, Univ of Pennsylvania, Philadelphia, PA; Derek Klarin, Massachusetts General Hosp, Boston, MA; Venexia Walker, Julie Lynch, Univ of Bristol, Bristol, United Kingdom; Kyung Min Lee, Bedford VA Medical Ctr, Beford, MA; Themistocles L Assimes, Stanford Univ, Palo Alto, CA; Pradeep Natarajan, Massachusetts General Hosp, Boston, MA; Adriana Maria Hung Sr., Todd L Edwards, Vanderbilt Univ, Nashville, TN; Daniel J Rader, Univ of Pennsylvania, Philadelphia, PA; John Michael Gaziano, Univ of Pennsylvania, Philadelphia, PA, Boston, MA; Neil M Davies, Univ of Bristol, Bristol, United Kingdom; Philip S Tsao, Stanford Univ, Stanford, CA; Kyong-Mi Chang, Crescenz VA Medical Ctr, Philadelphia, PA; Benjamin F Voight, Univ of Pennsylvania, Philadelphia, PA; Scott M Damrauer, Universtiy of Pennsylvania, Philadelphia, PA; VA Million Veteran Program

MP143
Gender Differences in Lipoprotein Parameters in Cardiovascular Disease Risk; The Framingham Offspring Study
Hiroaki Ikezaki, Kyushu Univ, Fukuoka, Japan; Elise Lim, Ching-Ti Liu, Boston Univ Sch of Public Health, Boston, MA; L. Adrienne Cupples, Boston Univ, Boston, MA; Ernst J Schaefer, Tufts Univ, Boston, MA

11:05 AM – 12:00 PM
Concurrent Session III A: Therapeutic Targets in Atherosclerosis

Oral Abstract Presentations

11:05 Design and Delivery of Microrna Switches to Treat Cardiovascular Diseases
Hana Totary-jain, John Lockhart, Samuel Wickline, Hua Pan, Univ of South Florida, Tampa, FL
Network-driven Drug Repositioning Unveils a New Anti-atherosclerotic Effect of an Old Compound

Inhibition of MicroRNA-33 Reprograms the Transcriptional Landscape and Kinetic Processes of Immune Cells to Promote Atherosclerotic Plaque Regression

Selective Bromodomain Inhibition With the Bromodomain and Extraterminal Domain Inhibitor Apabetalone: Discovery to Phase 3 CVOT Study
Norman C. w Wong, Ewelina Kulikowski, Brooke D Rakai, Michael Sweeney, Resverlogix Corp, Calgary, AB, Canada; Jan O Johansson, Resverlogix Corp, San Francisco, CA; Stephen J Nicholls, Monash Heart, Melbourne, Australia; Kevin A Buhr, Univ of Wisconsin-Madison, Madison, WI; Henry N Ginsberg, Columbia Univ, New York, NY; Peter P Toth, CGH Medical Ctr, Peoria, IL; Gregory G Schwartz, Univ of Colorado, Denver, CO; Kausik K Ray, Imperial Coll London, London, United Kingdom

Immune Checkpoint Inhibitors Aggravate T Cell-mediated Plaque Inflammation in Experimental Atherosclerosis
Kikkie Poels, Amsterdam UMC - Location AMC, Amsterdam, Netherlands; Mandy van Leent, Mount Sinai, New York, NY; Myrthe Reiche, Tsveta Malinova, Stephan Huveneers, Amsterdam UMC - Location AMC, Amsterdam, Netherlands; Menno De Winther, Academic Medical Ctr, Amsterdam, Netherlands; Willem Mulder, Mount Sinai Sch of Med, New York, NY; Esther Lutgens, Amsterdam Univ Medical Ctr, Amsterdam, Netherlands; Tom Seijkens, Amsterdam UMC - Location AMC, Amsterdam, Netherlands

Q&A/Wrap-up

11:05 AM – 12:20 PM
Concurrent Session III B: Blood Coagulation and Antithrombotic Therapy

11:05 Tissue-specific Hemostasis
Maureane Hoffman, MD, PhD, Durham, North Carolina

Oral Abstract Presentations

11:25 Extracellular Vesicles Enhance Venous Thrombus Formation via Receptor Interacting Protein Kinase 3
Mitri K Khoury, Kartik Gupta, Vijaya S Pilli, Univ of Wisconsin-Madison, Madison, WI; Peter Henke, Univ of Michigan, Ann Arbor, MI; Ying H Shen, Baylor Coll Med, Houston, TX; Bo Liu, UW Dept Surgery, Madison, WI

11:35 Loss of Myeloid Specific Protein Phosphatase 2a Accelerates Experimental Venous Thrombus Resolution
Andrea T Obi, Renee Beardslee, Catherine Luke, Univ of Michigan, Ann Arbor, MI; Andrew Kimball, Univ of Alabama Birmingham, Birmingham, AL; Abigail R Dowling, Qing Cai, Sriganesh Sharma, Katherine A Gallagher, Peter Henke, Univ of Michigan, Ann Arbor, MI; Bethany Moore
11:45  Phosphoproteomic Profiling and Causal Pathway Mapping Reveal Signaling Relations in GPVI/ITAM-mediated Platelet Activation Programs
Ozgun Babur, Alexander Melrose, Owen J McCarty, Phillip Wilmarth, Joseph Aslan, OHSU, Portland, OR

11:55  The Mir-125a-5p Regulates Megakaryocyte L-plastin Actin Bundling to Maintain Platelet Number
Seema Bhatlekar, Bhanu K Manne, Indranil Basak, Emilia Tugolukova, Michelle L. Stoller, Mark J. Cody, Univ of Utah, Salt Lake City, UT; Sharon Morley, Washington Univ Sch of Med, St. Louis, MO; Srikanth Nagalla, Univ of Texas Southwestern Medical Ctr, Dallas, TX; Andrew S. Weyrich, Jesse W. Rowley, Ryan M. O’Connell, Matthew Rondina, Robert Campbell, Paul F. Bray, Univ of Utah, Salt Lake City, UT

12:05  Activated Factor XI Promotes Complement Activation by Neutralizing Complement Factor H
Cristina Puy, Oregon Health & Science Univ, Portland, OR; Ravi Shankar Keshari, Oklahoma Medical Res Fndn, Oklahoma City, OK; Christina U Lorentz, ARONORA INC, Portland, OR; Erik I Tucker, ARONORA, Portland, OR; Stephanie Smith, University of Michigan, Ann Arbor, MI; James H Morrissey, Univ of Michigan, Ann Arbor, MI; David Gallani, Vanderbilt Univ Medical Ctr, Nashville, TN; Andras Gruber, Oregon Health & Science Univ, Portland, OR; Florea Lupu, Oklahoma Medical Res Fndn, Oklahoma City, OK; Owen J McCarty, Oregon Health Science Univ, Portland, OR

12:15  Q&A/Wrap-up

11:05 AM – 12:20 PM
Concurrent Session III C: Translational Science in Vascular Medicine: Vascular Dysfunction
Organized in cooperation with the Council on Peripheral Vascular Disease

11:05  Stem Cells for Preventing Vascular Injury
Sanjay Misra, MD, Mayo Clinic, Rochester, Minnesota

Rapid Fire Oral Abstracts

11:25  Epigenetic Regulation of the Notch Signaling Pathway Modulates Macrophage/T Cell Phenotype and Impairs Diabetic Wound Healing
Frank Michael Davis, Aaron Dendekker, Amrita Joshi, Sonya Wolf, Bethany Moore, Katherine A Gallagher, Univ of Michigan, Ann Arbor, MI

11:30  Glycolysis Dictates the Reciprocal Activation Between Macrophages and Vascular Endothelial Cells in the Angiogenic Niche
Zhiping Liu, Jiean Xu, Qian Ma, Qiuhua Yang, Xiaoyu Zhang, Yuqing Huo, Augusta Univ, Augusta, GA
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<thead>
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<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>11:35</td>
<td>Differential Expression of Canonical Mitosis and DNA-Damage Repair Pathways Characterize Muscle Satellite Cells Affected by Pad</td>
<td>Ricardo Ferrari, Guangshi Cong, Bryan Thompson, Debbie Hollingshead, Janette Lamb, Xiangdong Cui, Ulka Sachdev, UPMC, Pittsburgh, PA</td>
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<td>11:45</td>
<td>The High Molecular Weight Isoforms of Fibroblast Growth Factor-2 Are Necessary for Postischemic Hindlimb Functional Recovery and Revascularization</td>
<td>Adeola Adeyemo, Blake Stephens, Yu Zhang, Univ of Cincinnati, Cincinnati, OH; Jacob R Dale, Univ of Louisville, Louisville, KY; James B Hoying, Advanced Solutions Life Sciences, Louisville, KY; Jo El Schultz, Univ of Cincinnati, Cincinnati, OH</td>
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<td>11:50</td>
<td>Dicer Modulation as a Mechanism of Age-Related Dysfunction in Arteriogenesis</td>
<td>Chris Sorel Mantsounga, Jade Neverson, VA Providence Medical Ctr, Providence, RI; Joshua Michael Berus, Brown Univ, Providence, RI; Cadence Lee, VA, Providence, RI; Abigail L Healy, VA, Providence, RI, Norwich, CT; Frank W Sellke, Brown Medical Sch, Providence, RI; Gaurav Choudhary, Providence VAMC, Brown Univ, Providence, RI; Alan R MORRISON, Alpert Medical Sch at Brown Univ, Providence, RI</td>
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<td>11:55</td>
<td>In vivo Identification of Sex-Specific Differences in Vascular Smooth Muscle Cell Gene Expression Programs</td>
<td>Audrey Cleuren, Martijn van der Ent, Isabelle Birt, Kristina Hunker, Santhi Ganesh, Univ of Michigan, Ann Arbor, MI</td>
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<td>12:00</td>
<td>Single-Cell Transcriptomic Profiling Identifies Dynamic Inflammatory and Regenerative Endothelial Cell Subpopulations Following Vascular Injury</td>
<td>Lianghui Zhang, Shang Gao, Zachary White, Yang Dai, Asrar B Malik, Jalees Rehman, Univ of Illinois at Chicago, Chicago, IL</td>
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<td>12:05</td>
<td>Brain Emotional Activity is Associated With Acute Plaque Instability via Enhanced Macrophage Activity: A Prospective 3D Rendered 18F FDG-PET/CT Assessment</td>
<td>Dong Oh Kang, Multimodal Imaging and Theranostic Lab, Cardiovascular Ctr, Korea Univ Guro Hosp, Seoul, Korea, Republic of; Jae Seon Eo, Dept of Nuclear Med, Korea Univ Guro Hosp, Seoul, Korea, Republic of; Eun Jin Park, Multimodal Imaging and Theranostic Lab, Cardiovascular Ctr, Korea Univ Guro Hosp, Seoul, Korea, Republic of; Hyeong Soo Nam, Dept of Mechanical Engineering, KAIST, Daejeon, Korea, Republic of; Joon Woo Song, Multimodal Imaging and Theranostic Lab, Cardiovascular Ctr, Korea Univ Guro Hosp, Seoul, Korea, Republic of; Cheol Ung Choi, Eung Ju Kim, Seung-Woon Rha, Hong Seog Seo, Cardiovascular Ctr, Korea Univ Guro Hosp, Seoul, Korea, Republic of; Hongki Yoo, Dept of Mechanical Engineering, KAIST, Daejeon, Korea, Republic of; Jin Won Kim, Multimodal Imaging and Theranostic Lab, Cardiovascular Ctr, Korea Univ Guro Hosp, Seoul, Korea, Republic of</td>
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<td>12:10</td>
<td>Programmed Death Ligand-1 Regulates T-cells and M2 Macrophages to Control Wall Thickening During Arteriovenous Fistula Maturation</td>
<td>Yutaka Matsubara, Luis Gonzalez, Jia Liu, Arash Fereydoni, John Langford, Shin-rong Lee, Jolanta Gorecka, Mingjie Gao, Xixiang Gao, Ryojuke Taniguchi, Bogdan Yatsula, Alan Dardik, Dept of Surgery, Yale Univ Sch of Med, New Haven, CT</td>
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<td>12:15</td>
<td>Q&amp;A/Wrap-up</td>
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12:20 – 1:45 PM
Plenary Session IV: Award Competition

Finalists for the Kenneth M. Brinkhous Early Career Investigator Prize in Thrombosis

Abstract
Presentation
Number

12:20
**Targeting Myeloid-cell Specific Integrin Alpha9Beta1 Inhibits Arterial Thrombosis and Improves Stroke Outcome by Limiting Thrombo-inflammation**

**Nirav Dhanesha**, Manasa Nayak, Manish Jain, Prakash Doddapattar, Univ of Iowa, Iowa City, IA; Girish Bathla, Univ of Iowa Hosp and Cl, Iowa City, IA; Madankumar Ghatge, Univ of Iowa, Iowa city, IA; Steven R Lentz, Anil K Chauhan, Univ of Iowa, Iowa City, IA

12:30
**Vein-on-chip: Microengineered Modeling of Venous Valves, Thrombosis and Therapeutics**

**Abhishek Jain**, Texas AnM Univ, College Station, TX

12:40
**Evaluating the Impact of Thrombocytopenia and Platelet Transfusion on Bleeding and Thrombosis in the Setting of Anti-Platelet Therapy**

**Robert H Lee**, David S Paul, Wolfgang Bergmeier, Univ of North Carolina, Chapel Hill, NC

12:50
**A Genome-Wide Screen for Modifiers of Tissue Factor Activity Identifies the Palmitoyltransferase ZDHHC2 as a Negative Regulator of Coagulation Initiation**

**Sol Schulman**, Emale El-Darzi, Calvin Schuster, Natasha Panwar, Beth Israel Deaconess Medical Ctr, Boston, MA; Ariel Feiglin, Harvard Medical Sch, Dept of Biomedical Informatics, Boston, MA; Bruce Furie, Robert C Flamenhaft, Beth Israel Deaconess Medical Ctr, Boston, MA

Finalists for the Irvine H. Page Junior Faculty Research Award

Abstract
Presentation
Number

1:00
**Adipocyte Tribbles1 Regulates Plasma Lipids and Circulating Adiponectin**

Elizabeth E Ha, Noel Walsh, Gabriella I Quartuccia, **Robert C Bauer**, Columbia Univ, New York, NY

1:10
**H3K4 Di-methylation Controls Vascular Smooth Muscle Cell Lineage Identity, Contractility, and Participation in Vascular Remodeling**

Mingjun Liu, Sidney Mahan, Cristina Espinosa, Univ of Pittsburgh, Pittsburgh, PA; Anh Nguyen, Charlottesville, VA; Scott Hahn, Adam C Straub, Univ of Pittsburgh, Pittsburgh, PA; Kathleen A Martin, Yale Sch of Med, New Haven, CT; Gary K Owens, Univ of Virginia, Charlottesville, VA; **Delphine A Gomez**, Univ of Pittsburgh, Pittsburgh, PA

1:20
**Endothelial Rna-binding Protein Elavl1 (HuR) Regulates Alternative Splicing of Genes Involved in Adaptive Immunity and Increases T Cells in the Atherosclerotic Intima**

Sarah-Anne E Nicholas, Jessica A Hensel, Maria M Xu, Amy L Kimble, Antoine Menoret, Brent Heineman, Evan R Jellison, UCONN Health, Farmington, CT; Bo Reese, UCONN, Storrs, CT; Beiyan Zhou, UConn Health Ctr, Farmington, CT; Annabelle Rodriguez-Oquendo, Anthony Vella, **Patrick A Murphy**, UCONN Health, Farmington, CT

1:30
**A Genome-Wide CRISPR Screen in Primary Macrophages Reveals WDFY3 as a Novel Regulator of Macrophage Efferocytosis in vitro and in vivo**

Jianting Shi, Columbia Univ, New York, NY; Xun Wu, Fang Li, Columbia Univ Medical Ctr, New York, NY; Jiayi Shen, Columbia Univ Irving Medical Ctr, New York, NY; Chenyi Xue, Columbia Univ, New York, NY; Raneem Hamad, Katherine R Croce, Columbia Univ Irving Medical Ctr, New York, NY; Arif Yurdagul, Columbia Univ, New York, NY; Glykeria Karadimou, Gabrielle Paulsson-Berne, Karolinska Instt, Stockholm, Sweden; John G Doench, Broad Inst of MIT and
1:40 Q&A/Wrap-up

1:45 – 2:45 PM
Concurrent Moderated Poster Session 8

MP147
Neuropilin-1 Enhances Tgf-β1-induced Alk1/Eng-pSMAD1/5/8 Signaling in Vascular Smooth Muscle Cells: Implications for Vascular Malformations
Sreenivasulu Kilari, Avishek Singh, Chuanqi Cai, Chenglei Zhao, Mayo Clinic, Rochester, MN; Ying Wang, Mayo Clinic, Jacksonville, FL; Michael Simeon, Rondell P Graham, Vivek Iyer, Mayo Clinic, Rochester, MN; Debrabata Mukhopadhyay, Mayo Clinic, Jacksonville, FL; Sanjay Misra, Mayo Clinic, Rochester, MN

MP148
Quantitative Trait Loci Mapped for TCF21 Binding, Chromatin Accessibility and Chromosomal Looping in Coronary Artery Smooth Muscle Cells Reveal Molecular Mechanisms of Coronary Disease Loci
Quanyi Zhao, Michael Dacre, Trieu Nguyen, Milos Pjanic, Boxiang Liu, Dharini Iyer, Paul Cheng, Stanford Univ, Stanford, CA; Robert Wirka, Palo Alto, CA; Juyong B Kim, Hunter B Fraser, Thomas Quertermous, Stanford Univ, Stanford, CA

MP149
Inhibitor of Differentiation 3 Promotes Angiogenesis in Response to Hind Limb Ischemia by Attenuating Skeletal Muscle B-1b Cell and IgM Accumulation
Victoria Osinski, Univ of Virginia, Charlottesville, VA; Vijay C Ganta, Augusta Univ, Augusta, GA; Melissa A Marshall, Antony Haider, Univ of Virginia, Charlottesville, VA; Brian H Annex, Augusta Univ, Augusta, GA; Coleen A McNamara, Univ of Virginia, Charlottesville, VA

MP151
Post-prandial Lipemia Acutely Changes Epigenetic Regulation of Inflammatory Genes Over 4 Hr
Megan Lynch, Braxton D Mitchell, Huichun Xu, Univ of Maryland Sch of Med, Baltimore, MD
MP152
**Satellite Cell Expression of Rage is Important for Collateral Vessel Formation**
Giji Joseph, William Robert Taylor, **Laura M Hansen**, Emory Univ, Atlanta, GA

MP153
**Critical Role of the Cytosolic Dna Sensor Cgas in Aortic Degeneration, Dissection, and Rupture**
Wei Luo, Yang Li, Yidan Wang, Lin Zhang, Chen Zhang, Yanming Li, Pingping Ren, Ashley Dawson, Waleed Ageedi, Joseph S Coselli, Scott A Lemaire, Ying H Shen, Baylor Coll of Med, Houston, TX

MP156
**A Novel Mouse Arteriovenous Fistula Model Recapitulates Central Venous Stenosis**
Ryosuke Taniguchi, Dept of Surgery, Yale Univ Sch of Med, New Haven, CT; Shun Ono, Dept of Diagnostic Radiology, Tokai Univ Sch of Med, Isehara, Japan; Toshihiko Isaji, Dept of Vascular Surgery, The Univ of Tokyo, Tokyo, Japan; Bogdan Yatsula, Dept of Surgery, Yale Univ Sch of Med, New Haven, CT; Jun Koizumi, Dept of Diagnostic Radiology, Tokai Univ Sch of Med, Isehara, Japan; Toshiya Nishibe, Dept of Cardiovascular Surgery, Tokyo Medical Univ, Tokyo, Japan; Katsuyuki Hoshina, Dept of Vascular Surgery, The Univ of Tokyo, Tokyo, Japan; Alan Dardik, Dept of Surgery, Yale Univ Sch of Med, New Haven, CT

MP157
**Neuropilin-1 Expressing Monocytes/macrophages: Key Regulators of Revascularisation in the Ischaemic Limb**

MP158
**Inducible Depletion of Calpain-2 in Fibrogenic Mesenchymal Cells Attenuates Angiotensin II-induced Abdominal Aortic Aneurysm Formation in Hypercholesterolemic Mice**
Michihiro Okuyama, Weihua Jiang, Aida Javidan, Lihua Yang, Venkateswaran Subramanian, Univ of Kentucky, Lexington, KY

2:45 – 4:00 PM
**Concurrent Session IV A: Metabolic Disorders and Atherosclerosis**

2:45 **High Dimensional Analysis of Monocyte Heterogeneity in Atherosclerosis**
Catherine (Lynn) Hedrick, PhD, La Jolla, California

Oral Abstract Presentations

3:05 **Loss of Alanine-glyoxylate Aminotransferase Exacerbates Hypercholesterolemia and Atherosclerosis**
Yuhao Liu, Ying Zhao, Frankel Cardiovascular Ctr, Dept of Internal Med, Univ of Michigan, Ann arbor, MI; Cai Liu, Coll of Pharmacy, Dept of Pharmaceutical Sciences, Univ of Michigan, Ann arbor, MI; Zhipeng Liu, Dept of Medicinal Chemistry and Molecular Pharmacology, Purdue Univ, West Lafayette, IN; Bo Wen, Lu Wang, Coll of Pharmacy, Dept of Pharmaceutical Sciences, Univ of Michigan, Ann arbor, MI; Minerva Garcia-Barrio, Frankel Cardiovascular Ctr,
3:15 The Phosphatidylserine Receptor Tim4 and Integrin Beta 5 Subunit are Required for Effective Lysosomal Secretion in Macrophage Clearance of Apoptotic Adipocytes
Valeria Barbosa-Lorenzi, Weill Cornell Med, New York, NY; Abigail S Haka, Frederick R Maxfield, Weill Cornell Medical Coll, New York, NY

3:25 Interrogation of Long Intergenic Non-coding RNA Functions in Obesity-induced Adipose Tissue Inflammation
Marcella E O'Reilly, Chenyi Xue, Esther Cynn, Wen Liu, Muredach P Reilly, Columbia Univ Medical Ctr, New York, NY

3:45 Role of Pip2 and Gasdermin D in Reverse Cholesterol Transport and Inflammation
Kailash Gulshan, Emmanuel Opoku, Jonathan D Smith, Cleveland Clinic Fndn, Cleveland, OH

3:55 Q&A/Wrap-up

2:45 – 4:00 PM
Concurrent Session IV B: Platelet Production, Signaling and Function

2:45 Platelets: The Crossroad of Immunity and Thrombosis
Milka Koupenova, PhD, University of Massachusetts Medical School, Worcester, Massachusetts

Oral Abstract Presentations

3:05 The Intrinsic Tenase Regulates Platelet Activation During Hemostasis in vivo

3:15 Single-cell Rna-seq of Megakaryocytes Identifies Novel Pathways Involved in the Mitochondrial Dysfunction of Tnf- Driven Platelet Hyperreactivity
Pavel Davizon-Castillo, Andrew Thorburn, Univ of Colorado, Denver, CO

3:25 A Hypo-reactive Protease Activated Receptor 4 (PAR4) Variant is Associated with a Reduced Risk of Venous Thromboembolism
Xu Han, Elizabeth Knauss, Case Western Reserve Univ, Cleveland, OH; INVENT Consortium; Lalitha Nayak, Cleveland, OH; Marvin T Nieman, Case Western Reserve Univ, Cleveland, OH

3:35 Pirfenidone Attenuates Cardiac Fibrosis in a High Shear Ascending Aortic Constriction Mouse Model: Role of Shear-induced Platelet TGF-β1 Activation
Sandeep Subrahmanian, Sean Woolington, Sandra Gostynska, Jasimuddin Ahamed, Oklahoma Medical Res Foundatio, Oklahoma City, OK

3:45 Benefit-risk Profile of Dual Antiplatelet Therapy Continuation Beyond 1 Year After Pci in Patients with Moderately Increased Risk Features of Ischemic Events as Endorsed by 2019 ESC Chronic Coronary Syndromes Guidelines
Haoyu Wang, Kefei Dou, Runlin Gao, Dept of Cardiology, Coronary Heart Disease Ctr, Fuwai Hosp, Natl Ctr for Cardiovascular Diseases, Chinese Acad of Medical Sciences & Peking Union Medical Coll, Beijing, China; Ajay J Kirtane, NewYork-Presbyterian Hosp/Columbia Univ Medical Ctr, New York, NY
3:55  Q&A/Wrap-up

2:45 – 4:00 PM
Concurrent Session IV C:  Translational Aspects of Aortic Aneurysm Disease

2:45  What Diabetes is Teaching Us About Abdominal Aortic Aneurysm Disease
Ronald L. Dalman, MD, Stanford University, Stanford, California

Oral Abstract Presentations

3:05  Therapeutic Benefit of Inhibiting the Long Non-coding RNA NUDT6 in Preclinical Models of Abdominal Aortic Aneurysm Disease
Hanna Winter, Dept. of Vascular and Endovascular Surgery, Klinikum rechts der Isar der TUM, Munich, Germany; Hong Jin, Ekaterina Chernogubova, Alexandra Bäcklund, Greg Winski, Molecular Vascular Med, Bioclinicum, Karolinska Inst, Solna, Sweden; Jessica Pauli, Valentina Paloschi, Hans-Henning Eckstein, Albert Busch, Lars Maegdefessel, Dept. of Vascular and Endovascular Surgery, Klinikum rechts der Isar der TUM, Munich, Germany

3:15  Chemical Stabilization of the Extracellular Matrix Attenuates Growth of Experimentally Induced Abdominal Aorta Aneurysms in a Large Animal Model
Dan T Simionescu, Megan Casco, Clemson Univ, Clemson, SC; Jake Turner, Nectero Medical Inc, Mesa, AZ; Nicholas Rierson, Clemson Univ, Clemson, SC; Jianing Yue, Fudan Univ Zhongshan Hosp, Shangahi, China; Kelvin Ning, Nectero Medical Inc, Mesa, AZ

3:25  Polygenic Risk Score Identifies Patients at Increased Risk for Abdominal Aortic Aneurysm and May Benefit from Ultrasound Screening
Derek Klarin, Univ of Florida Coll of Med, Gainesville, FL; Ozan Dikilitas, Mayo Clinic, Rochester, MN; Brooke Wolford, Univeristy of Michigan, Ann Arbor, MI; Michael Levin, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Ishan Paranjpe, Mount Sinai Sch of Med, New York, NY; 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; Themistocles L Assimes, Stanford Univ Sch of Med, Palo Alto, CA; Yan Sun, Emory Univ, Atlanta, GA; Daniel Rader, Univ of Pennsylvania Sch of Med, Philadelphia, PA; Peter W Wilson, Emory Univ Sch of Med, Atlanta, GA; Salvatore Scali, Scott Berceli, Univ of Florida Coll of Med, Gainesville, FL; Sekar Kathiresan, Verve Therapeutics, Cambridge, MA; Pradeep Natarajan, Massachusetts General Hosp, Boston, MA; Girish Nadkarni, Mount Sinai Sch of Med, New York, NY; Cristen Willer, Univ of Michigan, Ann Arbor, MI; Ifitikhar Kullo, Mayo Clinic, Rochester, MN; Scott M Damrauer, Universtiy of Pennsylvania Sch of Med, Philadelphia, PA; Philip Tsao, Stanford Univ Sch of Med, Palo Alto, CA
3:35  Landscape of Human Secretome in Abdominal Aortic Aneurysm Profiled by Single-cell RNA Sequencing
Bhama Ramkhelawon, NYU Medical Ctr, New York, NY; Tarik Hadi, NYU Langone Medical Ctr, New York, NY; Michele Silvestro, NYU Sch of Med, New York, NY

3:55  Q&A/Wrap-up

4:00 – 5:00 PM
Online Early Career Session
Organized in cooperation with the ATVB Early Career Committee

Mental Health Awareness Seminar
- Managing Burn-out – especially for early stages of your career
- Imposter Syndrome
- Perspectives on Failure – being flexible, anticipating failure, perspective shifting
- Social Skills – reading others, ending conversations, reading body language
- COVID-related mental health issues – how to deal with isolation, anxiety about the future, managing in a virtual world, how to deal with being alone during the lockdown
- Dealing with Depression – underlying disorder, warning signs, combating depression

THURSDAY, MAY 7

10:30 – 11:35 AM
Plenary Session V  Invited Lecture Series

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

10:30  Cardiovascular Calcification: From Extracellular Vesicles to Systems Biology
Elena Aikawa, MD, PhD, Brigham and Women’s Hospital, Harvard Medical School, Boston, Massachusetts

Keynote Lecture

10:50  Exploring Resilience to Cardiovascular Insults
Louisa Iruela-Arispe, PhD, Northwestern University Feinberg School of Medicine, Chicago, Illinois

Distinguished Lecture

11:10  Network Medicine, Systems Pharmacology, and Cardiovascular Drug Development
Joseph Loscalzo, MD, PhD, FAHA, Brigham and Women’s Hospital, Harvard Medical School, Boston, Massachusetts

11:30  Q&A/Wrap-up/Conference Adjourn