



American Heart Association®

# Vascular Discovery: From Genes to Medicine

## Program at-a-Glance

	Tuesday May 5	Wednesday May 6	Thursday May 7
9:00	<b>9:00-10:05</b> Conference Opening and <b>Plenary Session I: From Discovery to Therapeutics – How Basic Science Can Help to Address Unmet Clinical Needs in Cardiovascular Medicine</b>	<b>9:00-9:45</b> <b>Plenary Session III: Multiomics in Cardiovascular Science</b>	
10:00	<b>10:05-11:05</b> <b>Moderated Poster Sessions 1, 2, 3</b>	<b>10:05-11:05</b> <b>Moderated Poster Sessions 6, 7</b>	
10:30			<b>10:30-11:35</b> <b>Plenary Session V Invited Lecture Series</b>
11:00	<b>11:00-12:00</b> <b>Online Interactive Early Career Training Session</b> <i>Organized by the ATVB Early Career Committee</i>	<b>10:05-12:20</b> <b>Concurrent Session III</b> A: Therapeutic Targets in Atherosclerosis B: Blood Coagulation and Antithrombotic Therapy C: Translational Science in Vascular Medicine: Vascular Dysfunction	<ul style="list-style-type: none"> <li>• <b>Hoeg Award Lecture</b></li> <li>• <b>Keynote Lecture</b></li> <li>• <b>Distinguished Lecture</b></li> </ul>
11:30			
12:00	<b>11:05-12:20</b> <b>Concurrent Session I</b> A: Molecular and Cellular Mechanisms of Atherosclerosis B: Molecular, Developmental and Cellular Biology of the Vessel Wall C: Translational Science in Vascular Medicine: Emerging Research in Thrombosis and Hemostasis		<b>11:35</b> <b>Adjourn</b>
12:30	<b>12:20–1:05</b> <b>The Mentor of Women Award Event</b>	<b>12:20-1:45</b> <b>Plenary Session IV: Young Investigator Award Competition Brinkhous Prize and Page Award</b>	
1:00	– Presentation of the Mentor of Women Award – Featured Presentation		
1:30	<b>1:05-1:55</b> <b>Plenary Session II:</b> Highlights from the ATVB Journal	<b>1:45-2:45</b> <b>Moderated Poster Sessions 8, 9</b>	
2:00	<b>2:05-3:05</b> <b>Moderated Poster Sessions 4, 5</b>		
3:00	<b>3:05-4:20</b> <b>Concurrent Session II</b> A: Lipoproteins and Lipid Metabolism: LDL and Beyond B: Vascular Immunity, Inflammation and Thrombosis C: Translational Science in Vascular Medicine: Bioengineered Stents and Conduits	<b>2:45-4:00</b> <b>Concurrent Session IV</b> A: Metabolic Disorders and Atherosclerosis B: Platelet Production, Signaling and Function C: Translational Aspects of Aortic Aneurysm Disease	
4:00	<b>4:00-5:20</b>	<b>4:00-5:00</b>	
4:30	<b>Online Interactive Early Career Training Session</b>	<b>Online Interactive Early Career Training Session</b>	
5:00	<i>Organized by the ATVB Early Career Committee</i>	<i>Organized by the ATVB Early Career Committee</i>	

# Final Program Agenda

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## 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**

**Milessa Silva Afonso**, Monika Sharma, Paul Martin Schlegel, Alireza Khodadadi-Jamayran, Coen van Solingen, Lianne Shanley, Graeme J Koelwyn, Lauren Beckett, Daniel Peled, Karishma Rahman, New York Univ, New York, NY; Mireille Ouimet, Univ of Ottawa Heart Inst, Ottawa, ON, Canada; Edward A Fisher, Kathryn J Moore, New York Univ, New York, NY

**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**

**Dawn Fernandez**, Icahn Sch of Med at Mount Sinai, New York, NY; Ada Weinstock, NYU Sch of Med, New York, NY; Nicolas Fernandez, Icahn Sch of Med at Mount S, New York, NY; Edward A Fisher, NYU Langone Medical Ctr, New York, NY; Chiara Giannarelli, Mount Sinai Sch of Med, New York, NY

**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 Stitzel, 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 Wilsdon, 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; Omaidia 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**

		Abstract Presentation Number
11:25	<b>HIV Protein Tat Induces Macrophage Dysfunction and Atherosclerosis Development in LDLR-deficient Mice</b> <b>Zhaojie Meng</b> , Univ of California, Riverside, CA; Weiwei Lu, Taesik Gwag, Univ of Kentucky, Lexington, KY; Changcheng Zhou, Univ of California, Riverside, CA	100
11:35	<b>Resolvin D1 Promotes Fatty Acid Oxidation in Macrophages to Facilitate Swift Necroptotic Cell Clearance</b> <b>Zeinab Hosseini</b> , Michael Marinello, Gabrielle Fredman, Albany Medical Coll, Albany, NY	101
11:45	<b>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</b> <b>Quanyi Zhao</b> , 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	102

- 11:55 **Discovering and Characterizing Conserved Regulatory Elements That Orchestrate Vascular Inflammatory Responses and are Linked to Human Disease** 103  
 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
- 12:05 **Vascular Aging Alters Mitophagy to Lead to Galectin 3 Secretion** 104  
 Muriel Blin, Daniel Tyrrell, Univ of Michigan, Ann Arbor, MI; **Daniel R Goldstein**, Univ of Michigan Med, Ann Arbor, MI

12:15 **Q&A/Wrap-up**

11:05 AM – 12:20 PM

**Concurrent Session I B: Molecular, Developmental and Cellular Biology of the Vessel Wall**

- 11:05 **Clonal Vascular Smooth Muscle Cell Expansion in Disease**  
 Helle F. Jørgensen, PhD, Cambridge, United Kingdom

**Oral Abstract Presentations**

- |   | Abstract<br>Presentation<br>Number |
|---|------------------------------------|
| 11:35 <b>Klf4 Dependent Plasticity of Perivascular Cells Regulates Obesity Induced Inflammation and Endothelial Cell Polarization in Adipose Tissue</b><br><b>Gamze B Bulut</b> , Univ of Virginia, Glen Allen, VA; Gary K Owens, Univ of Virginia, Charlottesville, VA; Gabriel Alencar, Univ of Virginia, Charlottesville, VA   | 106                                |
| 11:45 <b>Endothelial Deficiency of Nogo-B Receptor Induces Cerebral Hemorrhage via Histone Acetylation Regulated Ccm1/2 Expression</b><br>Zhi Fang, Wenquan Hu, Xiang Wang, <b>Qing Robert Miao</b> , NYU Winthrop Hosp, Mineola, NY  | 107                                |
| 11:55 <b>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</b><br><b>Keith Strand</b> , 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 | 108                                |
| 12:05 <b>Positional Transcriptomics to Clarify Site-specific Pathologies of the Vessel Wall</b><br><b>Milagros C Romay</b> , 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   | 109                                |

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**

		Abstract Presentation Number
11:25	<b>Targeted Mir-146a; an Innovative Treatment Modality for Shear Stress-induced Vascular Inflammation</b> <b>Islam Mohamed</b> , 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	110
11:35	<b>Novel Oxylipin Inhibits Platelet Activation and Thrombosis Through Activation of Ppar Alpha</b> <b>Michael Holinstat</b> , Univ of Michigan Medical, Ann Arbor, MI	111
11:45	<b>Stress and Myocardial Infarction Alter the Blood Transcriptional Signature in Women</b> <b>Tessa Barrett</b> , Nathaniel Smilowitz, Angela Lee, Tanya M Spruill, Harmony Reynolds, Judith S Hochman, Jeffrey S Berger, NYU Sch of Med, New York, NY	112
11:55	<b>Severity of Pulmonary Thrombosis Alters Lung Endothelial Viability and Regulates Sepsis-induced Lung Injury via Hypoxia-inducible Factor 1 Alpha</b> <b>Colin E Evans</b> , 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	113
12:00	<b>Lysophosphatidic Acid Induces Tissue Factor Expression via PKD2-p38a-JNK2 Pathway</b> <b>Mei-zhen Cui</b> , Feng Hao, Qiwei Liu, Jiaxin Du, Olawale Bankole, Amanda Dumire, Bethanie Quintela, Xuemin Xu, Univ of Texas Permian Basin, Odessa, TX	114

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; Lisia 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<sup>+</sup> 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 AlphaIIb beta3 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  $\alpha$ 12/ $\alpha$ Snap 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

	Abstract Presentation Number
3:25 <b>Direct Evidence for the Intracellular Non-covalent Interaction of Apolipoprotein(a) and ApolipoproteinB100 During Lipoprotein(a) Biosynthesis</b> Amer Youssef, Roberts 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, Roberts Res Inst, London, ON, Canada	115
3:35 <b>Utilizing Nanodiscs to Model Membrane Interactions With SR-BI</b> Hayley R Powers, Medical Coll of Wisconsin, Wauwatosa, WI; Sarah Proudfoot, Jimmy Feix, Daisy Sahoo, Medical Coll of Wisconsin, Milwaukee, WI	116
3:45 <b>Characterizing the Effects Of Fish Oil On High-density Lipoprotein Proteome And Cholesterol Efflux Capacity</b> Paul A Mueller, Sara Rosario, Elisabeth Yerkes, Melissa Heard, Oregon Health and Science Universit, Portland, OR; Nathalie Pamir, OHSU, Portland, OR	117
3:55 <b>Mir-1908 is a Cholesterol Responsive MicroRNA Implicated in LDLR Cleavage</b> Kaitlyn Beehler, Majid Nikpay, Paulina Lau, Sebastien Soubeyrand, Ruth McPherson, Univ of Ottawa Heart Inst, Ottawa, ON, Canada	118
4:05 <b>Non-Targeting Locked-Nucleic-Acids Antagonize Inflammatory Activation of Foam Cells and Impede Atherosclerosis</b> Ryan M Allen, Vanderbilt Univ, Nashville, TN; Danielle L Mitchell, 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	119
4:15 <b>Q&amp;A/Wrap-up</b>	

3:05 – 4:20 PM

### Concurrent Session II B: Vascular Immunity, Inflammation and Thrombosis

- 3:05 **Immune Cell Communication in Atherosclerosis**  
Esther Lutgens, MD, PhD, Amsterdam, Netherlands

## Oral Abstract Presentations

	Abstract Presentation Number
3:25 <b>Macrophage ATP Citrate Lyase Deficiency Stabilizes Atherosclerotic Plaques</b> Jeroen Baardman, Sanne G Verberk, Saskia van der Velden, Marion J Gijbels, Cindy P van Roomen, Guillermo R Griffith, Koen H Prange, Amsterdam Univ Medical Ctr, Amsterdam, Netherlands; Soufyan Lakbir, Vrije Univ Amsterdam, Amsterdam, Netherlands; Elisa Meinster, 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	120
3:35 <b>Gut-derived Metabolite Trimethylamine Regulates Nfkb Signaling and Lipoprotein Metabolism: A Potential Therapeutic Target for Atherosclerosis</b> Szczepan Kaluzny, Qiaozhu Su, Queen's Univ Belfast, Belfast, United Kingdom	121
3:45 <b>The Immune Cell Repertoire in Human Atherosclerotic Plaques Characterized by Single Cell Rna-sequencing and Multi-color Flow Cytometry</b>	122

3:55	<p>Hauke Horstmann, Freiburg; Peter Stachon, Christoph Bode, Univ Heart Ctr Freiburg, Freiburg, Germany; Andreas Zirlik, Medical Univ Graz, Graz; <b>Dennis Wolf</b>, Univ Heart Ctr Freiburg, Freiburg, Germany</p> <p><b>Smooth Muscle Cell Derived Hyaluronan Synthase 3 Impairs the Smooth Muscle Cell Transition to an Galectin3<sup>+</sup> Extracellular Matrix Producing State</b></p> <p><b>Felicia Hartmann</b>, 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, Dusseldorf, Germany</p>	123
4:05	<p><b>Endothelial Kynurenine Metabolite Alters Cardiac Function Following Myocardial Infarction</b></p> <p><b>Nada Joe Melhem</b>, 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</p>	124

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**

		Abstract Presentation Number
3:25	<p><b>Transcriptomic Analysis of Notch Signaling Identifies Unc5b as a Genetic Modulators of Endothelial Cell Migration During Vascular Development</b></p> <p><b>Qanber Raza</b>, 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</p>	125
3:35	<p><b>Development of Tissue Engineered Vascular Grafts Resistant to Diabetes</b></p> <p><b>Agneta Simionescu</b>, Clemson Univ, Clemson, SC</p>	126
3:45	<p><b>Biomaterials-based Delivery of Angiogenic Messenger RNA Enhances Arteriogenesis in a Porcine Model of Limb Ischemia</b></p> <p><b>Ngan F Huang</b>, 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 Jakobov, PhaRNA, Houston, TX; Richard Hallett, Dominik Fleischmann, Stanford Univ, Stanford, CA; Michael Paukshto, Fibralign Corp, Union City, CA</p>	127
3:55	<p><b>Elastic Fibers of the Internal Elastic Lamina are Unraveled But Not Created With Expanding Arterial Diameter in Arteriogenesis</b></p> <p><b>Derek Afflu</b>, Univ of Pittsburgh Medical Ctr, PITTSBURGH, PA; Dylan D McCreary, Nolan Skirtich, VA PHS, Pittsburgh, PA; Kathy Gonzalez, UPMC, Pittsburgh, PA; Edith Tzeng, Univ of Pittsburgh, Pittsburgh, PA; Ryan M McEnaney, VA PHS, Pittsburgh, PA</p>	128

4:05      **Use of 4d Ultrasound for Fluid-structure Interaction Simulations of Murine Thoracic Aortas**      129  
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 I1b-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 Instit of City of Hope, Duarte, CA; Gene Yeo, Beckman Res Instit 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 - DZHK, Munich, Germany; Aleksandar Janjic, Yuting Wu, Anuroop Venkatasubramani, Axel Imhof, LMU Univ Munich, Munich, Germany; Christian Weber, LMU Univ Munich - DZHK, Munich, Germany; Menno P. de Winther, Academic Medical Ctr, Amsterdam, Netherlands; Dorothee Atzler, LMU Univ Munich - DZHK, 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 - DZHK, 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, Kreislaufinstitut, 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, Universtiy of Milan, Milan, Italy; Ilaria 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 Arsenaault, Quebec Heart and Lung Inst, Quebec, QC, Canada; Nicola Ferri, Univ degli Studi di Padova, Padova, Italy; Marina Camera, 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

10:05 – 11:05 AM

**Concurrent Moderated Poster Session 7**

**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, Sacramento, 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, Bedford, 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

Abstract  
Presentation  
Number  
130

- 11:15 **Network-driven Drug Repositioning Unveils a New Anti-atherosclerotic Effect of an Old Compound** 131  
**Letizia Amadori**, Claudia Calcagno, Peik Sean Chong, Roza Shamailova, Christopher Faries, Icahn Sch of Med Mount Sinai, New York, NY; Ben Readhead, ASU-Banner Neurodegenerative Disease Res Ctr Arizona State Univ, Tempe, AZ; Joel Dudley, Icahn Sch of Med Mount Sinai, New York, NY; Zahi Fayad, BioMedical Engineering and Imaging Inst, Icahn Sch of Med Mount Sinai, New York, NY; Johan Bjorkegren, Chiara Giannarelli, Icahn Sch of Med Mount Sinai, New York, NY
- 11:25 **Inhibition of MicroRNA-33 Reprograms the Transcriptional Landscape and Kinetic Processes of Immune Cells to Promote Atherosclerotic Plaque Regression** 132  
**Milessa Silva Afonso**, Monika Sharma, Paul Martin Schlegel, Alireza Khodadadi-Jamayran, Coen van Solingen, Lianne Shanley, Graeme J Koelwyn, Lauren Beckett, Daniel Peled, Karishma Rahman, New York Univ, New York, NY; Mireille Ouimet, Univ of Ottawa Heart Inst, Ottawa, ON, Canada; Edward A Fisher, Kathryn J Moore, New York Univ, New York, NY
- 11:35 **Selective Bromodomain Inhibition With the Bromodomain and Extraterminal Domain Inhibitor Apabetalone: Discovery to Phase 3 CVOT Study** 133  
**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
- 11:45 **Immune Checkpoint Inhibitors Aggravate T Cell-mediated Plaque Inflammation in Experimental Atherosclerosis** 134  
**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

11:55 **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**

- |       |   | Abstract<br>Presentation<br>Number |
|-------|---|------------------------------------|
| 11:25 | <b>Extracellular Vesicles Enhance Venous Thrombus Formation via Receptor Interacting Protein Kinase 3</b><br><b>Mitri K Houry</b> , 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   | 135                                |
| 11:35 | <b>Loss of Myeloid Specific Protein Phosphatase 2a Accelerates Experimental Venous Thrombus Resolution</b><br><b>Andrea T Obi</b> , 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 | 136                                |

11:45	<p><b>Phosphoproteomic Profiling and Causal Pathway Mapping Reveal Signaling Relations in GPVI/ITAM-mediated Platelet Activation Programs</b>  Ozgun Babur, Alexander Melrose, Owen J McCarty, Phillip Wilmarth, <b>Joseph Aslan</b>, OHSU, Portland, OR</p>	137
11:55	<p><b>The Mir-125a-5p Regulates Megakaryocyte L-plastin Actin Bundling to Maintain Platelet Number</b>  <b>Seema Bhatlekar</b>, 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</p>	138
12:05	<p><b>Activated Factor XI Promotes Complement Activation by Neutralizing Complement Factor H</b>  Cristina Puy, Oregon Health &amp; 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, Univeristy of Michigan, Ann Arbor, MI; James H Morrissey, Univ of Michigan, Ann Arbor, MI; David Gailani, Vanderbilt Univ Medical Ctr, Nashville, TN; Andras Gruber, Oregon Health &amp; Science Univ, Portland, OR; Florea Lupu, Oklahoma Medical Res Fndn, Oklahoma City, OK; <b>Owen J McCarty</b>, Oregon Health Science Univ, Portland, OR</p>	139
12:15	<b>Q&amp;A/Wrap-up</b>	

**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**

		Abstract Presentation Number
11:25	<p><b>Epigenetic Regulation of the Notch Signaling Pathway Modulates Macrophage/T Cell Phenotype and Impairs Diabetic Wound Healing</b>  <b>Frank Michael Davis</b>, Aaron Dendekker, Amrita Joshi, Sonya Wolf, Bethany Moore, Katherine A Gallagher, Univ of Michigan, Ann Arbor, MI</p>	140
11:30	<p><b>Glycolysis Dictates the Reciprocal Activation Between Macrophages and Vascular Endothelial Cells in the Angiogenic Niche</b>  <b>Zhiping Liu</b>, Jean Xu, Qian Ma, Qiuhua Yang, Xiaoyu Zhang, Yuqing Huo, Augusta Univ, Augusta, GA</p>	141

11:35	<b>Differential Expression of Canonical Mitosis and Dna-damage Repair Pathways Characterize Muscle Satellite Cells Affected by Pad</b> <b>Ricardo Ferrari</b> , Guangzhi Cong, Bryan Thompson, Debbie Hollingshead, Janette Lamb, Xiangdong Cui, Ulka Sachdev, UPMC, Pittsburgh, PA	142
11:40	<b>Single-Cell Transcriptomic Analysis Identifies Differences in Skeletal Muscle Macrophages in a Human Critical Limb Ischemia Patient and a Murine Model of Hindlimb Ischemia</b> <b>Lindsey Olivere</b> , Duke Univ Sch of Med, Durham, NC; Yu Xiang, James Otto, Timothy McCord, Christopher Kontos, Yarui Diao, Kevin Southerland, Duke Univ, Durham, NC	143
11:45	<b>The High Molecular Weight Isoforms of Fibroblast Growth Factor-2 are Necessary for Postischemic Hindlimb Functional Recovery and Revascularization</b> 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; <b>Jo El Schultz</b> , Univ of Cincinnati, Cincinnati, OH	144
11:50	<b>Dicer Modulation as a Mechanism of Age-related Dysfunction in Arteriogenesis</b> <b>Chris Sorel Mantsounga</b> , 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	145
11:55	<b>In vivo Identification of Sex-specific Differences in Vascular Smooth Muscle Cell Gene Expression Programs</b> <b>Audrey Cleuren</b> , Martijn van der Ent, Isabelle Birt, Kristina Hunker, Santhi Ganesh, Univ of Michigan, Ann Arbor, MI	146
12:00	<b>Single-cell Transcriptomic Profiling Identifies Dynamic Inflammatory and Regenerative Endothelial Cell Subpopulations Following Vascular Injury</b> <b>Lianghui Zhang</b> , Shang Gao, Zachary White, Yang Dai, Asrar B Malik, Jalees Rehman, Univ of Illinois at Chicago, Chicago, IL	147
12:05	<b>Brain Emotional Activity is Associated With Acute Plaque Instability via Enhanced Macrophage Activity: A Prospective 3d Rendered 18f Fdg-pet/ct Assessment</b> <b>Dong Oh Kang</b> , 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	148
12:10	<b>Programmed Death Ligand-1 Regulates T-cells and M2 Macrophages to Control Wall Thickening During Arteriovenous Fistula Maturation</b> <b>Yutaka Matsubara</b> , Luis Gonzalez, Jia Liu, Arash Fereydooni, John Langford, Shin-rong Lee, Jolanta Gorecka, Mingjie Gao, Xixiang Gao, Ryosuke Taniguchi, Bogdan Yatsula, Alan Dardik, Dept of Surgery, Yale Univ Sch of Med, New Haven, CT	149
12:15	<b>Q&amp;A/Wrap-up</b>	



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	<b>Targeting Myeloid-cell Specific Integrin Alpha9Beta1 Inhibits Arterial Thrombosis and Improves Stroke Outcome by Limiting Thrombo-inflammation</b> <b>Nirav Dhanesha</b> , 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	150
12:30	<b>Vein-on-chip: Microengineered Modeling of Venous Valves, Thrombosis and Therapeutics</b> <b>Abhishek Jain</b> , Texas AnM Univ, College Station, TX	151
12:40	<b>Evaluating the Impact of Thrombocytopenia and Platelet Transfusion on Bleeding and Thrombosis in the Setting of Anti-Platelet Therapy</b> <b>Robert H Lee</b> , David S Paul, Wolfgang Bergmeier, Univ of North Carolina, Chapel Hill, NC	152
12:50	<b>A Genome-Wide Screen for Modifiers of Tissue Factor Activity Identifies the Palmitoyltransferase ZDHHC2 as a Negative Regulator of Coagulation Initiation</b> <b>Sol Schulman</b> , 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 Flaumenhaft, Beth Israel Deaconess Medical Ctr, Boston, MA	153

Finalists for the Irvine H. Page Junior Faculty Research Award

		Abstract Presentation Number
1:00	<b>Adipocyte Tribbles1 Regulates Plasma Lipids and Circulating Adiponectin</b> Elizabeth E Ha, Noel Walsh, Gabriella I Quartuccia, <b>Robert C Bauer</b> , Columbia Univ, New York, NY	154
1:10	<b>H3K4 Di-methylation Controls Vascular Smooth Muscle Cell Lineage Identity, Contractility, and Participation in Vascular Remodeling</b> 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; <b>Delphine A Gomez</b> , Univ of Pittsburgh, Pittsburgh, PA	155
1:20	<b>Endothelial Rna-binding Protein Elavl1 (HuR) Regulates Alternative Splicing of Genes Involved in Adaptive Immunity and Increases T Cells in the Atherosclerotic Intima</b> 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, <b>Patrick A Murphy</b> , UCONN Health, Farmington, CT	156
1:30	<b>A Genome-Wide CRISPR Screen in Primary Macrophages Reveals WDFY3 as a Novel Regulator of Macrophage Efferocytosis <i>in vitro</i> and <i>in vivo</i></b> 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	157

Harvard, Cambridge, MA; Charles Karan, Columbia Univ Irving Medical Ctr, New York, NY; Danish Saleheen, Columbia Univ Irving Medical Ctr, New York, NY, New York, NY; Ira A Tabas, Columbia Univ, New York, NY; Ai Yamamoto, **Hanrui Zhang**, Columbia Univ Irving Medical Ctr, New York, NY

1:40 **Q&A/Wrap-up**

**1:45 – 2:45 PM**

**Concurrent Moderated Poster Session 8**

**MP147**

**Neuropilin-1 Enhances Tgf- $\beta$ 1-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; Debabrata 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

1:45 – 2:45 PM

**Concurrent Moderated Poster Session 9**

**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**

**Jun Cho**, Ashish S Patel, Academic Dept of Vascular Surgery, Sch of Cardiovascular Med & Sciences, St Thomas' Hosp, King's Coll London, London, United Kingdom; Alessandro Fantin, UCL Inst of Ophthalmology, Univ Coll London, London, United Kingdom; Francesca Ludwinski, Jamie Kelly, Oliver Lyons, Celine Pichette, Prakash Saha, Academic Dept of Vascular Surgery, Sch of Cardiovascular Med & Sciences, St Thomas' Hosp, King's Coll London, London, United Kingdom; Christiana Ruhrberg, UCL Inst of Ophthalmology, Univ Coll London, London, United Kingdom; Alberto Smith, Bijan Modarai, Academic Dept of Vascular Surgery, Sch of Cardiovascular Med & Sciences, St Thomas' Hosp, King's Coll London, London, United Kingdom

**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,

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	Dept of Internal Med, Univ of Michigan, Ann arbor, MI; Eugene Chen, Frankel Cardiovascular Ctr, Dept of Internal Med, Univ of Michigan, Ann Arbor, MI; Oren Rom, Univ of Michigan, Ann Arbor, MI; Jifeng Zhang, Frankel Cardiovascular Ctr, Dept of Internal Med, Univ of Michigan, Ann Arbor, MI	
3:15	<b>The Phosphatidylserine Receptor Tim4 and Integrin Beta 5 Subunit are Required for Effective Lysosomal Secretion in Macrophage Clearance of Apoptotic Adipocytes</b> Valeria Barbosa-Lorenzi, Weill Cornell Med, New York, NY; Abigail S Haka, Frederick R Maxfield, Weill Cornell Medical Coll, New York, NY	159
3:25	<b>Interrogation of Long Intergenic Non-coding RNA Functions in Obesity-induced Adipose Tissue Inflammation</b> Marcella E O'Reilly, Chenyi Xue, Esther Cynn, Wen Liu, Muredach P Reilly, Columbia Univ Medical Ctr, New York, NY	160
3:45	<b>Role of Pip2 and Gasdermin D in Reverse Cholesterol Transport and Inflammation</b> Kailash Gulshan, Emmanuel Opoku, Jonathan D Smith, Cleveland Clinic Fndn, Cleveland, OH	162

3:55 **Q&A/Wrap-up**

**2:45 – 4:00 PM**

**Concurrent Session IV B: Platelet Production, Signaling and Function**

2:45	<b>Platelets: The Crossroad of Immunity and Thrombosis</b> Milka Koupenova, PhD, University of Massachusetts Medical School, Worcester, Massachusetts	
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**Oral Abstract Presentations**

		Abstract Presentation Number
3:05	<b>The Intrinsic Tenase Regulates Platelet Activation During Hemostasis <i>in vivo</i></b> Maurizio Tomaiuolo, Tanya T Marar, Univ of Pennsylvania, Philadelphia, PA; Chelsea N. Matzko, Univ of Pennsylvania, Philadelphia, PA; <b>Timothy J Stalker</b> , Univ of Pennsylvania, Philadelphia, PA	163
3:15	<b>Single-cell Rna-seq of Megakaryocytes Identifies Novel Pathways Involved in the Mitochondrial Dysfunction of Tnf- Driven Platelet Hyperreactivity</b> Pavel Davizon-Castillo, Andrew Thorburn, Univ of Colorado, Denver, CO	164
3:25	<b>A Hypo-reactive Protease Activated Receptor 4 (PAR4) Variant is Associated with a Reduced Risk of Venous Thromboembolism</b> 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	165
3:35	<b>Pirfenidone Attenuates Cardiac Fibrosis in a High Shear Ascending Aortic Constriction Mouse Model: Role of Shear-induced Platelet TGF-β1 Activation</b> Sandeep Subrahmanian, Sean Woolington, Sandra Gostynska, Jasimuddin Ahamed, Oklahoma Medical Res Foundatio, Oklahoma City, OK	166
3:45	<b>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</b> 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	167

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**

		Abstract Presentation Number
3:05	<b>Therapeutic Benefit of Inhibiting the Long Non-coding RNA NUDT6 in Preclinical Models of Abdominal Aortic Aneurysm Disease</b> <b>Hanna Winter</b> , 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	168
3:15	<b>Chemical Stabilization of the Extracellular Matrix Attenuates Growth of Experimentally Induced Abdominal Aorta Aneurysms in a Large Animal Model</b> <b>Dan T Simionescu</b> , 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, Shanghai, China; Kelvin Ning, Nectero Medical Inc, Mesa, AZ	169
3:25	<b>Polygenic Risk Score Identifies Patients at Increased Risk for Abdominal Aortic Aneurysm and May Benefit from Ultrasound Screening</b> <b>Derek Klarin</b> , 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 Berceci, 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; Iftikhar 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	170

3:35 **Landscape of Human Secretome in Abdominal Aortic Aneurysm Profiled by Single-cell RNA Sequencing** 171  
**Bhama Ramkhalawon**, 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

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## **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**