VASCULAR RESEARCH INITIATIVES CONFERENCE
OUTSIDE-IN: PARADIGM SHIFTS IN VASCULAR DISEASE

WEDNESDAY, MAY 4, 2016

8:00AM - 5:25PM

*Draft Program Schedule, subject to change

7:00 AM  REGISTRATION AND CONTINENTAL BREAKFAST

8:00 AM  INTRODUCTORY REMARKS

John A. Curci MD, FACS – Chair, Research and Education Committee
Bruce A. Perler, MD – President, Society for Vascular Surgery
Alan Dardik, MD, FACS – Chair, SVS Research Council
ATVB Chair, Program Committee

ABSTRACT SESSION I:  STEM CELLS AND TISSUE ENGINEERING

Moderator: Edith Tzeng, MD
Moderator: David A. Vorp, MD

8:15 am  **Angiogenesis Is Triggered By Nutrient Deprivation Via GCN2/ATF4-dependent Regulation Of VEGF And H2S Production**
Alban Longchamp¹, Teodelinda Mirabella², Christopher Hine¹, Lear E. Brace¹, Nelson Knudsen¹, J. Humberto Treviño-Vilarreal¹, Pedro Mejía¹, Ming Tao³, Gaurav Sharma³, Rui Wang⁴, Jean-Marc Corpataux⁵, Jacques-Antoine Haefliger⁵, Kyo Han Ahn⁶, Chih-Hao Lee¹, Christopher Chen³, Charles Keith Ozaki³, James R. Mitchell¹
¹Harvard Sch of Public Health, Boston, MA; ²Boston Univ, Boston, MA; ³Brigham and Women’s Hospital, Boston, MA; ⁴Laurentian Univ, Sudbury, ON, Canada; ⁵Ctr Hospier Univire Vaudois, Lausanne, Switzerland; ⁶Ctr for Electro-Photo Behaviors in Advanced Molecular Systems, Nam-Gu, Korea

8:27 am  **Nitric Oxide Favors Sca-1+ Vascular Progenitor Cell Differentiation Toward Endothelial Cells**
Adam J. Schuldt, Rommel C. Morales, Zheng Wang, Vera P. Shivley, Melina R. Kibbe
Northwestern Univ, Chicago, IL
8:39 am  Development of a Hybrid Cryogel-coated Prosthetic Vascular Graft for Delivery of Targeted Gene Therapies
Cindy Huynh¹, Ting-Yu Shih², Amruta Samant³, Saif G. Pathan, David W. Nelson³, David J. Mooney², Leena Pradhan-Nabzdyk³, Frank W. LoGerfo¹
¹Beth Israel Deaconess Medical Ctr, Harvard Medical Sch, Boston, MA; ²Harvard Univ, Cambridge, MA; ³BioSurfaces, Inc., Ashland, MA

8:51 am  Epigenetically Altered TLR4 Expression May Contribute to Increased Inflammation and Impaired Wound Healing in a Murine Model of Diabetes
Andrew Kimball, Amrita Joshi, Matthew Schaller, Beau Carson, Kanakadurga Singer, Jennifer Bemick, Shreyas Ramani, Peter Henke, Steven Kunkel, Katherine Gallagher
Univ of Michigan, Ann Arbor, MI

9:03 am  N-Acetylcysteine Enhances Amputation Stump Healing and Perfusion in Diabetes
Mohamed A. Zayed¹, Xiaochao Wei², Larisa Belaygorod³, Uzma Naim³, Kyoung-mi Park³, Clay F. Semenkovich³
¹Washington Univ Sch of Med & St. Louis Veterans Affairs Health Care System, St. Louis, MO; ²Washington Univ Sch of Med, Div of Endocrinology, Metabolism, and Lipid Res, St. Louis, MO; ³Washington Univ Sch of Med, St. Louis, MO

9:15 am  Wound Application of Nitrite Enhances Healing in Diabetic Mice
Ankur Aggarwal¹, Michael C. Madigan¹, Ellen Cody², Edith Tzeng¹
¹VA Pittsburgh Healthcare System and Univ of Pittsburgh, Pittsburgh, PA; ²Univ of Pittsburgh, Pittsburgh, PA

SPECIAL SESSION

9:30 am  SVS FOUNDATION MENTORED CLINICAL SCIENTIST RESEARCH CAREER DEVELOPMENT AWARD (K08) - 2014 RECIPIENT
Luke P. Brewster, MD, PhD
Emory University School of Medicine
Project Title: Molecular Mechanism of Disturbed Flow in Arterial Stiffening

SVS FOUNDATION MENTORED PATIENT-ORIENTED RESEARCH CAREER DEVELOPMENT AWARD (K23) - 2014 RECIPIENT
Marlene Grenon, MD
University of California, San Francisco
Project Title: Effects of Fish Oil on Inflammation and Vascular Function in Claudicants

9:50 AM  COFFEE BREAK
Abstract Session II: Vascular Endothelium and Thrombosis

Moderator: Joseph D. Raffetto, MD

10:10 am  
P2X7R Antagonism Alleviates Traction Injury Induced Extracellular ATP Release in Vascular Tissues  
Weifeng Luo, Olukemi J McWilliam, Colleen Brophy, Joyce Cheung-Flynn  
Vanderbilt Univ Medical Ctr, Nashville, TN

10:22 am  
Periadventitial or Intraluminal Delivery of Simvastatin Attenuates Intimal Hyperplasia after Arterial Injury  
Alex Helkin1, David Bruch1, David R Wilson2, Rebecca Bader6, Kristopher G Maier4, Vivian Gahtan3  
1SUNY Upstate Medical Ctr and Dept of Veterans Affairs Healthcare Network Upstate New York at Syracuse, Syracuse, NY; 2Syracuse Univ, Syracuse, NY; 3SUNY Upstate Medical Ctr, Dept of Veterans Affairs Healthcare Network Upstate New York at Syracuse, and Syracuse Biomaterials Inst, Syracuse, NY

10:34 am  
A Single Nucleotide Polymorphism of p27Kip1 Associated with Vein Graft Patency Regulates Expression of p27Kip1 in Both Venous Adventitial Cells and Smooth Muscle Cells but Selectively Regulates Proliferation of Adventitial Cells  
Richard D. Kenagy1, Shinsuke Kikuchi2, Lihua Chen1, Erol S. Wijelath3, Alexander W. Clowes1, Michael Sobel3  
1Univ of Washington, Seattle, WA; 2Asahikawa Medical Univ, Asahikawa, Japan; 3VA Puget Sound Health Care System and Univ of Washington, Seattle, WA

10:46 am  
Arteriovenous Fistula Adaptation Requires Caveolin1 Signaling  
Takuya Hashimoto, Trenton R. Foster, Hualong Bai, Haidi Hu, Jeans M. Santana, Jesse Hanisch, Alan Dardik  
Yale Sch of Med, New Haven, CT

10:58 am  
Platelet and Monocyte Activity in Carotid Artery Stenosis Treated With Carotid Endarterectomy  
Arvind Reddy Devanabanda, Caron Rockman, Nicole Allen, Maya Rubin, Binita Shah, Mark Adelman, Jeffrey Berger  
New York Univ, New York, NY

11:10 am  
Induction of miR-21 Increases Fibrous Cap Stability in Vulnerable Atherosclerotic Lesions  
Hong Jin1, Yuhuang Li1, Alexandra Bäcklund1 Albert Busch1, Suzanne M Eken1, Ekaterina Chemogubova1, Peter Gustafsson1, Ljubica Perisic1, Isabel Schellinger2, Uwe Raaz2, Philip Tsao3, Göran K Hansson1, Gabrielle Paulsson- Beme1, Ulf Hedin1, Lars Maegdefessel1  
1Karolinska Inst, Solna, Sweden; 2Georg-August-Univ Göttingen, Göttingen, Germany; 3Stanford Univ, Palo Alto, CA
11:22 am  **IL-6 Mediates Vein Wall Response to Thrombosis in a Model Dependent Manner**  
Andrea T. Obi, Andrew Kimball, Megan Effline, Catherine Luke, Jose Diaz, Thomas W. Wakefield, Peter K. Henke  
Univ of Michigan, Ann Arbor, MI

11:34 am  **Anti-thrombin Perfluorocarbon Nanoparticles Decrease Clot Burden in a Murine Model of Venous Thrombosis**  
Chandu Vemuri, Batool Arif, Susannah A. Grathwohl, John S. Allen, Peter K. Henke, Samuel A. Wickline  
Washington Univ in St. Louis, St. Louis, MO

NOON  LUNCH

1:00 PM  **AWARDEE RECOGNITION AND REPORTS**  
Peter F. Lawrence, MD

**TRANSLATIONAL PANEL:**  
**MANIPULATING LARGE DATA SETS TO ANSWER BIG QUESTIONS**

1:15 pm  
Moderator: Bruce A. Perler, MD  
Moderator: Scott A. Berceli, MD, PhD  
• Speaker: Matthew R. Spite, PhD  
• Speaker: J. Jeffrey Carr, MD, MSc  
• Speaker: Scott A. Berceli, MD, PhD

**ABSTRACT SESSION III: ANEURYSMS**

2:20 pm  **An XY Sex Chromosome Complement in Females Confers Susceptibility and Rupture of Angiotensin II-induced Abdominal Aortic Aneurysms in Hypercholesterolemic Female Mice**  
Yasir Alsiraj, Sean Thatcher, Eric Blalock, Kuey Chen, Richard Chamigo, Alan Daugherty, Lisa Cassis  
Univ of Kentucky, Lexington, KY

2:32 pm  **Depletion of Plasmacytoid Dendritic Cells Inhibits Experimental Abdominal Aortic Aneu**  
Baohui Xu, Haojun Xuan, Naoki Fujimura, Sara A. Michie, Ronald L. Dalman  
Stanford Univ Sch of Med, Stanford, CA
2:44 pm  **Collagen type V Contributes to the Development of Aortic Dissections and Aneurysms**  
Noel M. Phan, Arick Park, Ting Zhou, David Scott, Qiwei Wang, Paul Tang, Daniel S. Greenspan, Bo Liu  
Univ of Wisconsin-Madison, Madison, WI

2:56 pm  **Number of Reentry Tears Influences Flap Motion and Flow Reversal in an In Vitro Model of Type B Aortic Dissection**  
Joav Birjiniuk¹, Mark Young², Lucas H. Timmins¹, Bradley G. Leshnower¹, John N. Oshinski¹, David N. Ku³, Ravi K. Veeraswamy¹  
¹Emory Univ Sch of Med, Atlanta, GA; ²Medtronic, Inc., Santa Rosa, CA; ³Georgia Inst of Technology, Atlanta, GA

3:10 PM  **COFFEE BREAK**

SPECIAL SESSION:  **DISTINGUISHED INVITED SPEAKER**

3:30 pm  **VASCULAR RESPONSE TO INJURY: A NEW PARADIGM**  
Colleen M. Brophy, MD

ABSTRACT SESSION IV:  **PERIPHERAL ARTERIAL DISEASE**

Moderator: Gale L. Tang, MD  
Moderator: David G. Harrison, MD

4:00 pm  **Revascularization but not Supervised Exercise Therapy Prevents Progression of Fibrosis in the Gastrocnemius of Patients with Peripheral Artery Disease while Improving Limb Function**  
Duy Ha, George Casale, Alicia Luis, Kevin Harkins, Reagan Huber, Tanmayee Chengalasetty, Ruby Hickman, Mina Hanna, Stanley Swanson, Holly DeSpiegelaere, Iraklis Pipinos  
Univ of Nebraska Medical Ctr, Omaha, NE

4:12 pm  **Statins Have a Dose-dependent Effect On Amputation Risk And Survival In Peripheral Arterial Disease Patients**  
Shipra Arya¹, Anjali Khakharia¹, Zachary O. Binney¹, Randall R Demartino², Luke P. Brewster¹, Philip P. Goodney³, Peter W. Wilson¹  
¹Emory Univ, Atlanta, GA; ²Mayo Clinic, Rochester, MN; ³Geisel Sch of Med Dartmouth-Hitchcock, Lebanon, NH
4:24 pm  **Proprotein Convertase Subtilisin/Kexin Type 6 is a Key Protease in the Control of Smooth Muscle Cell Function in Vascular Disease**
Ulf Hedin1, Ljubica Perisic1, Urszula Rykaczewska1, Anton Razuvaev1, Mariette Lengquist1, Maria Sabater-Lleal1, Ida Eriksson1, Samuel Röhl1, Malin Kronqvist1, Chim Nan Tseng1, Patricia Rodriguez2, Lasse Folkersen2, Lei Du1, Maria Gonzalez Diez1, Cecilia Osterholm1, Joy Roy1, Jaakko Patrakka1, Gabrielle Paulsson-Beme1, Göran Hansson1, Jacob Odeberg1, Anders Hamsten1, Per Eriksson1
1Karolinska Inst, Stockholm, Sweden; 2Technical Univ of Denmark, Kongens Lyngby, Denmark

4:36 pm  **Smooth Muscle Specific Knock-Out of the Zinc-Finger Protein 148 (ZFP148) Attenuates Atherosclerotic Lesion Formation via Regulation of Apoptotic Signaling Pathways**
Morgan Salmon1, Anna Z. Fashandi1, Michael D. Spinosa1, Ashish K. Shama1, Gary K. Owens1, Juanita L. Merchant2, Zendra E. Zehner3, Gilbert R. Upchurch Jr. 1, Gorav Ailawadi1
1Univ of Virginia Medical Ctr, Charlottesville, VA; 2Univ of Michigan at Ann Arbor, Ann Arbor, MI; 3Virginia Commonwealth Univ Medical Coll of Virginia Campus, Richmond, VA;

4:48 pm  **Vitamin D3-Induced Arterial Calcification Decreases Functional Recovery and Limb Perfusion in a Murine Model of Hindlimb Ischemia**
Sara L Zettervall, Stephanie Monk, Xue-Lin Wang, Yujun Cai, Tonghui Lin, Raul J. Guzman
Beth Israel Deaconess Medical Ctr, Boston, MA

5:00 pm  **The Myristolated Alanine-Rich C Kinase Substrate (MARCKS) Differentially Regulates Proliferation of Vascular Smooth Muscle Cells and Endothelial Cells through Affecting Protein Stability and Proteolytic Processing of the Kinase Interacting with Stathmin (KIS)**
Thomas S Monahan1, Dan Yu1, Charles Drucker2, Rajabrata Sarkar2, Dudley K. Strickland2
1Baltimore VA Medical Ctr, Baltimore, MD; 2University of Maryland Sch of Med, Baltimore, MD;

5:15 PM  **RECEPTION AND POSTERS**

7:00 PM  **VRIC CLOSE**