VASCULAR RESEARCH INITIATIVES CONFERENCE:
ROAD TO INNOVATION, INVENTION AND ENTERPRISE

WEDNESDAY, MAY 9, 2018

8:00AM - 5:15PM

*Draft Program Schedule, subject to change

7:00 AM  REGISTRATION AND CONTINENTAL BREAKFAST

8:00 AM  INTRODUCTORY REMARKS

- Edith Tzeng, MD – Chair, Research and Education Committee
- Michel S. Makaroun, MD – President-Elect, Society for Vascular Surgery
- Alan Dardik, MD Chair, SVS Research Council

ABSTRACT SESSION I: STEM CELLS AND REGENERATION

Moderator: Katherine Gallagher, MD
Moderator: Philip S. Tsao, PhD FAHA

8:15 am  Palmitate Regulates Diabetic Macrophage Inflammation via the Epigenetic Enzyme JMJ3
*Frank M Davis, Andrew Kimball, Amrita Joshi, Anna Boniakowski, Matthew Schaller, Aaron DenDekker, Steven Kunkell, Bethany Moore, Katherine Gallagher
Univ of Michigan, Ann Arbor, MI

8:27 am  Oral Nitrite Supplementation Improves Rates of Wound Healing in Diabetic Mice
*Karim M Salem, Nandan Nath, Ankur Aggarwal, Edith Tzeng
VA Medical Ctr and Univ of Pittsburgh, Pittsburgh, PA

8:39 am  Fatty Acid Binding Protein 4, FABP4, Causes Impaired Wound Healing in Diabetes
Anna Boniakowski, Andrew Kimball, Frank Davis, Amrita Joshi, Matt Schaller, Aaron denDekker, Steve Kunkel, Katherine Gallagher
Univ of Michigan, Ann Arbor, MI

8:51 am  Defining the Mechanisms of Autologous Bone Marrow Cell Therapy in Critical Limb Ischemia
Bianca Kenyon, Ashley Gutwein, S. Keisin Wang, Linden Green, Michael Murphy
Indiana Univ Sch of Med, Indianapolis, IN

9:03 am  Muscle Ischemia Induces Nlrp3 Inflammasome Activation in Platelets via Tlr4, Promoting Platelet Aggregation and Interfering With Perfusion Recovery
Sebastian Vogel, Pranav Murthy, Xiangdong Cui, Bowen Xie, Ulka Sachdev
UPMC, Pittsburgh, PA
Hyperglycemia Enhances Pro-inflammatory Properties Of Macrophage-derived Exosomes to Drive Hematopoiesis in Apolipoprotein E-deficient Mouse.
Laura Bouchareychas, Allen Chung, David K Wong, Phat Duong, Robert L Raffai
Div of Vascular and Endovascular Surgery, Dept of Surgery, Univ of California San Francisco & VA Medical Ctr, San Francisco, CA

SPECIAL SESSION I: ALEXANDER W. CLOWES DISTINGUISHED LECTURE

9:30 am Introduction: Ronald M. Fairman, MD, Chair, SVS Foundation
Moderator: John Curci, MD
Speaker: Alan Daugherty, PhD, DSc, FAHA
“Angiotensin II and cellular complexity of the aorta: A recipe for a neovascular location”

10:10 AM COFFEE BREAK

ABSTRACT SESSION II: PERIPHERAL ARTERIAL DISEASE

Moderator: Sherene Shalhub, MD
Moderator: Peter K. Henke, MD, ATVB

10:30 am Hydrogen Sulfide Limits the Development of Intimal Hyperplasia in a Mouse Model of Femoral Wire Injury and In Human Veins
Alban Longchamp, Natsumi Yamagushi, Martine Lambelet, Celine Dubuis, Francois Saucy, Jean-Marc Corpataux, Florent Allagnat, Sebastien Dégilde
CHUV, Lausanne, Switzerland

10:42 am Short-term Oral Supplementation with a Novel Marine Oil Fraction Alters Resolution Phenotype in Healthy Subjects and Patients with Peripheral Arterial Disease
Melinda S Schaller1, Mian Chen1, Romain A Colas2, Thomas A Somentino1, S Marlene Grenon3, Jesmond Dalli3, Michael S Conte1
1UCSF, San Francisco, CA; 2William Harvey Res Inst, Queen Mary Univ, London, United Kingdom

10:54 am Role of PDE10A in Arterial Calcification
Yujun Cai, Xue-lin Wang, Tonghui Lin, Raul J Guzman
Beth Israel Deaconess Medical Center, Boston, MA

11:06 am Genome Wide Association Study in the Million Veteran Program Identifies a Novel Role for Thrombosis in the Pathogenesis of Peripheral Artery Disease
Derek Klarin1, Julie Lynch2, Krishna Aragam1, Tim Assimes2, Kyung Lee4, Qing Shao4, Mark Chaffin4, Pradeep Natarajan1, Shipra Arya3, Aeron Small8, Yan V Sun7, Jennifer S Lee3, Donald Miller1, Peter Reaven9, Scott DuVall10, William Boden11, J. Michael Gaziano12, John Concato13, Sekar Kathiresan1, J Rader14, Kelly Cho12,
Characterization of Peripheral Artery Disease Severity by Near-Infrared Spectroscopy
Matthew Fuglestad¹, Hernan Hernandez¹, Henamari Ybay², Molly Schieber¹,², Katya Brunette¹, Yue Gao¹, Mahdi Hassan², Sara Myers², George Casale¹, Iraklis Pipinos³
¹Univ of NE Medical Ctr, Department of Surgery, Omaha, NE; ²Univ of NE Omaha, Department of Biomechanics, Omaha NE

Circulating Exosomes from PAD Patients Modulate Vascular Repair and Inflammation
Thomas A Sorrentino¹, Phat Duong¹, Laura Bouchareychas¹, Brian E Sansbury², Pete Mitchell², Mian Chen¹, Allen Chung¹, Melinda S Schaller¹, Matthew Spite², Robert L Raffai¹, Michael S Conte¹
¹Univ of California, San Francisco, San Francisco, CA; ²Brigham and Women’s Hosp, Boston, MA

NOON LUNCH

1:00 PM SVS FOUNDATION UPDATE AND AWARDS CEREMONY
Ronald Fairman, MD, SVS Foundation Chair
SVS Foundation VRIC Trainee Travel Scholarship Awards
Frank M Davis
Catherine Go
Omar Saffaf
Karim M Salem

SPECIAL SESSION II

1:10 PM SVS FOUNDATION MENTORED CLINICAL SCIENTIST RESEARCH CAREER DEVELOPMENT AWARD (K08) – 2016 RECIPIENT
Karen Ho, MD
Northwestern University Feinberg School of Medicine
Project Title: The Role of Gut Microbiota in Neointimal Hyperplasia after Vascular Injury
Abstract Session III: Vascular Endothelium and Thrombosis

Moderator: Joseph Raffetto, MD
Moderator: Naomi Hamburg, MD MS FACC, ATVB

1:20 PM PARP-1 Silencing Upregulates FOSL1 Transcription, Enhances Angiogenesis and Accelerates Ischemic-Diabetic Wound Healing
Jaideep Banerjee, Divya Cheedu, Raul Sebastian, Robyn Mascata, Anton Sidawy, Lopa Mishra, Bao Nguyen,
George Washington Univ, Washington, DC

1:32 PM Clinical and Genetic Determinants of Varicose Veins: A Prospective, Community-Based Study of ~500,000 Individuals
Alyssa M Flores¹, Eri Fukaya¹, Daniel Lindholm³, Stefan Gustafsson², Daniela Zanetti³, Erik Ingelsson³, Nicholas J. Leeper³
¹Stanford Univ Sch of Med, Stanford, CA; ²Uppsala Univ, Uppsala, Sweden

1:44 PM Fenofibrate Induces Endothelial Cell Tubule Formation Independent of Phospholipogenesis
*Omar Saffaf, Larisa Belaygorod, Khalid Saffaf, Clay F. Semenkovich, Mohamed Zayed
Washington Univ Sch of Med, St Louis, MO

1:56 PM Real-time Modulation of Platelet Phenotype and Vein Wall Biology in Patients with Chronic Venous Insufficiency
Doran S Mix, Zane Young, Sandra Toth, Rachel Schmidt, Adam J Doyle, Jennifer L Ellis, Michael C Stoner, Igor Gosev, Sunil Prasad, Peter Knight, Sara Ture, Craig Morrell, Scott J Cameron
Univ of Rochester Medical Ctr, Rochester, NY

2:08 PM Vascular Injury-Induced ATP release leads to Inflammation and Endothelial Dysfunction
Joyce Cheung-Flynn, Weifeng Luo, Christy M Guth, Padmini Komalavilas, Colleen M Brophy
Vanderbilt, Nashville, TN

2:20 PM Application of a Cryogel-Coated Prosthetic Vascular Graft Material for Delivery of Targeted Gene Therapies in a Rabbit Model
Cindy Huynh¹, Ting Shih², Mauricio Contreras³, David Mooney², Leena Pradhan-Nabzdyk³, Frank LoGerfo¹
¹Beth Israel Deaconess Medical Ctr, Boston, MA; ²Harvard Univ, Cambridge, MA

Translational Panel: Road to Entrepreneurship

2:32 pm Moderator: Michel S. Makaroun, MD
Moderator: Luke Brewster, MD
- Speaker: Colleen M. Brophy, MD “Transmogrifying Scientific Knowledge into Technologic Advancements”
- Speaker: Mary Albertson, “In the Middle, Between Science and Development”
- Speaker: Geoffrey C. Gurtner, MD, FACS, “Other People’s Money: Getting the Resources to Do Stuff”

3:40 PM       COFFEE BREAK

ABSTRACT SESSION IV: VASCULAR INFLAMMATION AND INJURY

Moderator: Mohamed Zayed, MD
Moderator: Lars Maegdefessel, MD PhD, ATVB

4:00 PM    Efficacy and Mechanisms of Metformin Therapy in Established Experimental Abdominal Aortic Aneurysms
Baohui Xu¹, Gang Li¹, Fanju Shen¹, Trevor Weden¹, Anna Cabot¹, Hongping Deng¹, Xiaofeng Chen², Ronald L Dalman¹
¹Stanford University School of Med, Stanford, CA; ²Whenzhou Medical Univ Taizhou Hosp, Linhai, China

4:12 PM    Retrograde Hemorrhage and Malperfusion Injury after REBOA in a Porcine Model of Uncontrolled Aortic Injury
*Catherine Go, Partha Thirumala, Jenna Kuhn, Yanfei Chen, Youngjae Chun, Bryan Tillman
Univ of Pittsburgh Med Ctr, Pittsburgh, PA

4:24 PM    Cell Mimetic Liposomal Nanocarriers Tailored for Vascular Smooth Muscle Cell Molecular Therapeutics
Samuel I Mattern-Schain¹, Richard K Fisher², Lauren B Grimsley², Stacy S Kirkpatrick², Oscar H Grandas², Michael D Best³, Deidra J Mountain²
¹Univ of Tennessee, Knoxville, TN; ²UT Graduate School of Medicine, Knoxville, TN

4:36 PM    Increased Plasma Sulfide in Vascular Surgery Patients Correlates with Reduced Post-Operative Mortality
Kaspar Trocha¹,², Alban Longchamp³, Christopher Hine⁴, Michael MacArthur², Janine Ganahl², Peter Kip¹, Ming Tao¹, Peter Nagy⁵, C. Keith Ozaki³, James R. Mitchell²
¹Brigham & Women’s Hosp, Boston, MA; ²Harvard Sch of Public Health, Boston, MA; ³Dept of Vascular Surgery, Lab of Experimental Med, Ctr Hospier Univire Vaudois, Lausanne, Switzerland; ⁴Cleveland Clinic, Cleveland, OH; ⁵Molecular Immunology and Toxicology, Natl Inst of Oncology, Budapest, Hungary

4:48 PM    Parthenolide Inhibits Inflammatory Dysfunction of Human Aortic Endothelial Cells and Proliferation of Smooth Muscle Cells in vitro and Restenosis in a Rat Model
Bowen Wang¹, Mengxue Zhang¹, Xudong Shi², Lian-Wang Guo¹, Craig Kent³
¹The Ohio State Univ, Columbus, OH; ²Univ of Wisconsin-Madison, Madison, WI

5:00 PM    Targeted Nanotherapy for the Treatment of Atherosclerosis
Neel A Mansukhani, Miranda So, Mazen S Albaghdadi, Erica B Peters, Zheng Wang, Samuel I Stupp, Melina R Kibbe

1Northwestern Univ, Chicago, IL; 2Univ of North Carolina at Chapel Hill, Chapel Hill, NC

5:15 PM  RECEPTION AND POSTERS

7:00 PM  VRIC CLOSE

* SVS Foundation Vascular Research Initiatives Trainee Travel Scholarship Awardee