



Atherosclerosis: Lessons Learned and Concepts Challenged

February 4–8, 2018 | Sagebrush Inn & Suites | Taos, New Mexico | USA

Scientific Organizers:

Laura F. Michael, Eli Lilly and Company, USA

Gerard Pasterkamp, University Medical Center Utrecht, Netherlands

Sekar Kathiresan, Massachusetts General Hospital, USA

Atherosclerosis is a chronic, systemic disease process whereby fatty deposits, inflammation and fibrosis accumulate in arterial vessel walls. Organ systems, including heart, brain, kidneys, as well as extremities, can be damaged, leading to atherosclerosis-driven clinical outcomes. According to the American Heart Association, 15.5 million Americans have coronary heart disease, of which 7.6 million experienced myocardial infarction. These statistics are reflective of global incidence. Treatment of atherosclerosis often begins with robust cholesterol-lowering treatments, yet many patients continue to experience cardiovascular events. Recent attempts to provide cardiovascular protection to such patients have included anti-inflammatory and HDL-raising therapeutic approaches that have yielded little benefit. Building knowledge of atherosclerosis disease etiology, defining unique attributes of patient differences as simple as sex or genetic inheritance, and using technology to identify patients with early disease is foundational for the scientific community to develop urgently needed therapeutics. The current concept of acute coronary syndrome (“the vulnerable plaque”) and widely applied animal models are debated because clinical presentation, underlying pathology and pathogenetic mechanisms are subject to change due to improved medical treatment. The goals of this meeting are to: 1) Challenge current dogma of atherosclerosis etiology and explore intra-organ cross-talk that may underlie disease evolution; 2) Consider emerging risk factors and their origins as intervention targets; and 3) Explore cutting-edge technologies to discover new therapeutic targets and approaches for drug development. By bringing together scientists from preclinical to clinical settings and from industry to academic institutions, this conference will nurture discussions to translate breakthrough discoveries into therapeutics.

Session Topics:

- The Natural History of Atherosclerotic Disease
 - Lipoprotein Risk Factors
 - Diabetes, Obesity and Atherosclerosis
 - The Inflammation Hypothesis
 - The Milieu Extérieur
 - Crosstalk Among Organs
 - Models and Biomarkers for Atherosclerotic Disease
 - Emerging Fields of Research
- plus three workshops*

Scholarship Application & Discounted Abstract Deadline: October 5, 2017

Abstract Deadline: November 7, 2017

Discounted Registration Deadline: December 7, 2017



Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Submitting an abstract is an excellent opportunity to gain exposure for your work. Abstracts submitted by the abstract deadline will also be considered for short talks on the program.

Meeting Hashtag: #KSathero

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KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

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SUNDAY, FEBRUARY 4

Arrival and Registration

MONDAY, FEBRUARY 5

The Natural History of Atherosclerotic Disease

Peter Libby, Brigham and Women's Hospital, USA
Requiem for the Vulnerable Plaque, Challenging Current Concepts

Sekar Kathiresan, Massachusetts General Hospital, USA
Inherited Basis for Myocardial Infarction

Gerard Pasterkamp, University Medical Center Utrecht, Netherlands
Geno-Phenotyping of the Vulnerable Plaque and Patient

Short Talk(s) Chosen from Abstracts

Workshop 1

Short Talks Chosen from Abstracts

Lipoprotein Risk Factors

Kiran Musunuru, University of Pennsylvania, USA
Therapeutic Genome Editing as a Cure for Atherosclerosis

Anne Tybjærg-Hansen, Rigshospitalet, Copenhagen University Hospital, Denmark
Triglyceride-Rich Lipoproteins and Atherosclerotic Cardiovascular Disease: New Insights from Epidemiology, Genetics, and Biology

Daniel J. Rader, University of Pennsylvania, USA
Functionalizing HDL Cholesterol

Marlys L. Koschinsky, Western University, Canada
Lipoprotein(a): Ready For Prime Time?

Poster Session 1

TUESDAY, FEBRUARY 6

Diabetes, Obesity and Atherosclerosis

Ruth McPherson, University of Ottawa Heart Institute, Canada
Is Obesity a Causal Risk Factor for Atherosclerosis?

Sudha B. Biddinger, Boston Children's Hospital, Harvard Medical School, USA
Beyond Hyperglycemia: Novel Mediators of Diabetes-Associated Cardiovascular Disease

Joerg Heeren, University Medical Center Hamburg-Eppendorf, Germany
Protective Role of Brown Adipose in Atherosclerosis Development

Laura F. Michael, Eli Lilly and Company, USA
Diabetes and Atherosclerosis: Anti-Diabetic Agents that Improve Cardiovascular Outcomes

Short Talk(s) Chosen from Abstracts

The Inflammation Hypothesis

Ziad Mallat, University of Cambridge, UK
Immune Modulation in Atherosclerosis

Jan Nilsson, Lund University, Sweden
Autoimmunity, Injury and Repair as Potential Targets for Intervention in Atherosclerosis

Paul Ridker, Brigham and Women's Hospital, Harvard Medical School, USA
Anti-inflammatory Therapies for Chronic Atherosclerosis

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 7

The Milieu Exterieur

J. Mark Brown, Cleveland Clinic, USA
Diet, Gut Microbiota and Cholesterol Balance Influences Atherosclerosis

Seppo Yla-Herttuala, University of Eastern Finland, Finland
Epigenetics, VEGFs and Non-coding RNAs in Atherosclerosis and Angiogenesis

Robert E. Gerszten, Beth Israel Deaconess Medical Center, USA
Translating Exercise into Reduced Atherosclerosis Burden

Short Talk(s) Chosen from Abstracts

Workshop 2

Short Talks Chosen from Abstracts

Crosstalk Among Organs

Viktoria Gusarova, Regeneron Pharmaceuticals, USA
ANGPTL3 Blockade as a Therapeutic Approach for Treatment of Dyslipidemia and Atherosclerosis

Lilach O. Lerman, Mayo Clinic, USA
New Concepts in Atherosclerotic Renovascular Disease: Current Status

Joachim Herz, University of Texas Southwestern Medical Center, USA
Multitasking Therapeutics: What Brain Development, Alzheimer's disease and Atherosclerosis Have in Common

Johan Lars Markus Björkegren, Icahn School of Medicine at Mount Sinai, USA
Cardiometabolic Risk Loci Share Downstream Cis- and Trans-Gene Regulation Across Tissues and Diseases

Poster Session 3

THURSDAY, FEBRUARY 8

Keynote Address

George D. Yancopoulos, Regeneron Pharmaceuticals, Inc., USA
The Impact of PCSK9 on Treating Atherosclerosis

Models and Biomarkers for Atherosclerotic Disease

Jacob Fog Bentzon, Centro Nacional de Investigaciones Cardiovasculares, Spain
Gene-Modified Minipigs: Applications in Atherosclerosis Imaging

James K. Min, Weill Cornell Medicine, USA
Predicting the Future: Coronary CT Angiography

Katey Rayner, University of Ottawa Heart Institute / University of Ottawa, Canada
New Inflammatory Drivers and Biomarkers of Atherosclerosis

Short Talk(s) Chosen from Abstracts

Workshop 3

Short Talks Chosen from Abstracts

Emerging Fields of Research

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Siddhartha Jaiswal, Stanford University, USA

Clonal Hematopoiesis in Aging and Atherosclerotic Cardiovascular Disease

Hester den Ruijter, UMC Utrecht, Netherlands

Sex Differences in Cardiovascular Disease

Salim Yusuf, McMaster University, Canada

How can we Reduce Premature CVD Globally in a Generation?

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

FRIDAY, FEBRUARY 9

Departure