WORLD LEADERS PRESENT ON EMERGING RESEARCH AND TRENDS IN HARDENING OF THE ARTERIES AND HEART DISEASE

More than 1000 delegates comprising basic scientists from around the world will converge on Sydney for the triennial International Atherosclerosis Society congress. World-renowned experts will discuss the latest research into atherosclerosis (hardening of the arteries) and heart disease. The meeting will see an unprecedented number of workshops, symposia and posters to discuss findings from cutting edge research into the causes and treatment of these diseases.


Themes and highlights include:

**New and emerging approaches for identifying and treating cardiovascular disease (CVD)**

**Professor Sek Kathiresan (USA)**

*Genetic Approaches for Understanding Cardiovascular Disease*

Myocardial Infarction (MI) is a heritable disease that commonly causes death and disability. Prior genetic association studies have discovered more than 30 common DNA sequence risks. DNA was examined from 1,100 people who had an MI at an early age and a further 1,335 who had not had a MI. Findings of the study will be presented at the Congress.

**Professor Christian Weber (Germany)**

*Chemokines and their Receptors as Therapeutic Targets*

An imbalance in fat metabolism and the immune response contributes to chronic inflammation of arterial walls. New pro- and anti-inflammatory pathways linking fat and inflammation biology have been discovered. The current standing of this dynamic research will be presented at the Congress.

**Professor Ruth McPherson (Canada)**

*Coronary Artery Disease, Genetics and Genomics*

Age specific cardiovascular disease onset is increased two-fold in people with a family history of early disease. This is not easily predicted by assessing current risk factors and Ruth is looking at genetic variants that may provide insight into risk.

**Familial Hypercholesterolemia (FH)**

**Dr Sam Gidding (USA)**

*FH in Childhood*

Familial hypercholesterolemia (FH) is caused by a genetic defect and is associated with premature death from atherosclerosis. These people if left untreated have their first heart attack when they are 15-25 years old. People with a less severe form of the disease might see their 50th birthday if not treated, but generally do not live much beyond that. While the worst form of FH is not common, many more have the less severe form of the disease and lot of people attending the meeting are very interested in it—especially how to treat affected children.
Professor Gerald Watts (Australia)
FH in the Copenhagen General Population Study: More than meets the eye

Research suggests that FH may be as common as 1 in 200 and can be simply detected with an LDL-cholesterol > 4.5 followed by a DNA test. Most people with FH in Australia and New Zealand are unrecognised and inadequately treated. To bridge this gap in coronary prevention, the FHAustralasia Network has developed a model of care for patients with FH, focusing on detecting, diagnosing, assessing and managing index cases, as well as on risk notification and cascade screening of family members. This work has just been published in the March 2012 issue of Cardiology Today.

Professor Tsuyoshi Yamamoto (Japan)

A third causative gene has just been identified as contributing to FH. This protein this gene produces promotes degradation of LDL receptors, which are associated with elevated LDL in the blood. Preclinical investigation is underway and its progress and findings will be presented at the Congress.

Infection, immunity and atherosclerosis

Professor Goran Hansson (Sweden)
T-Cells and Atherosclerosis

Atherosclerotic lesions contain immune cells as well as LDL cholesterol. Targeted deletion of certain immunity-related genes may result in reducing disease. Findings have shown that some protein components of LDL can promote vascular inflammation and the development of Atherosclerosis.

Professor Naoto Sasaki (Japan)
Atherosclerosis and the Immune System

Ultraviolet exposure may contribute to the suppression of local and systemic immune reactions and may also inhibit the development of atherosclerosis via the suppression of pathogenic immune responses. Findings suggest that immune modulation at the skin may represent an attractive therapeutic approach to atherosclerosis.

Professor Xian-Cheng Jiang (USA)
Atherosclerosis and the Immune System

Two different enzymes have been found to have potentially different metabolic consequences that impact on the decrease of plasma, liver and macrophage sphingomyelin. Sphingomyelin is a component of cell membranes and two enzymes promote its formation - SM1 and SM2, which are located in different regions of cells. These researchers have found that when this gene is deleted it suppresses the progress of atherosclerosis.

Visceral/ectopic fat: the next target for CVD prevention

Professor Jean-Pierre Despres (Canada)
Visceral Obesity/Ectopic Fat: INSPIRE-ME IAA Study

297 physicians recruited 4504 patients from 29 countries for a study to assess cardiometabolic risk variables with a 3 year follow up. In addition to traditional tools they measured visceral, abdominal and liver fat tissue and insulin resistance markers. Interim results of this international study are now available and will be presented at the congress.
Professor Frank Hu (USA)
Healthy Drinking an Important Component of Healthy Eating

Research has shown that with the increase of consumption of sugar sweetened drinks (soft drinks, carbonated soft drinks, fruitades, fruit drinks, sports drinks, energy and vitamin water drinks, sweetened iced tea, cordial, squashes, and lemonade) there has been a significant impact on long-term weight-gain, type 2 diabetes and cardiovascular risk.

Some speakers will be available for interview prior to and others during the congress.

For further information, to register or to arrange an interview contact Fran Hagon
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