



**The Ottawa Heart Research Conference:** 

# **Emerging Pathways in Cardiovascular Disease**



www.ottawaheart.ca/Research-Conference2013

## **Scientific Committee**



Ruth McPherson, MD, PhD, FRCPC Director, Lipid Clinic & Atherogenomics Laboratory, University of Ottawa Heart Institute; Professor of Medicine and Biochemistry, University of Ottawa.

Katey Rayner, PhD
Director, Cardiometabolic microRNA
and Epigenetics Laboratory,
University of Ottawa Heart Institute;
Assistant Professor, University of Ottawa.





Rob S. B. Beanlands, MD, FRCPC Chief of the Division of Cardiology, University of Ottawa Heart Institute; Professor of Medicine (Cardiology) and Radiology, University of Ottawa.

Patrick Burgon, PhD
Principal Investigator, Cardiovascular Endocrinology Group,
University of Ottawa Heart Institute;
Assistant Professor of Medicine (Cardiology),
Department of Cellular and Molecular Medicine;
Member, Faculty of Graduate and Post-doctoral Studies,
University of Ottawa.





Peter Liu, MD, FRCPC
Scientific Director &
Director, Cardiac Function Laboratory,
University of Ottawa Heart Institute;
Professor of Medicine,
University of Ottawa.

Thierry Mesana, MD, PhD, FRCSC Cardiac Surgeon, Division of Cardiac Surgery, University of Ottawa Heart Institute; Professor, Cardiac Surgery, University of Ottawa.



# Welcome Message

It is our pleasure to welcome you to the **Ottawa Heart Research Conference**: **Emerging Pathways in Cardiovascular Disease**. The agenda covers a broad range of topics related to atherosclerosis. We are delighted to welcome distinguished Keynote speakers from around the world, representing the very best in cardiovascular science. Sessions will include presentations in the areas of microRNAs in lipoprotein metabolism and atherosclerosis, genetic contributors to cardiovascular disease, macrophage biology and the role of inflammation in the vasculature and many more.

This event will also honor the retirement of Canadian icons in cardiovascular research, Drs. Yves Marcel and Ross Milne, who have carried out pioneering research in lipoprotein metabolism and the molecular and metabolic determinants of atherosclerosis at the University of Ottawa Heart Institute.

We are grateful to the conference sponsors for their important contribution to the organization of the Ottawa Heart Research Conference.

We welcome you to Ottawa during the International Tulip Festival and look forward to your active participation throughout the Conference.

Ruth McPherson, MD, PhD Chair

Scientific Committee

Katey Rayner, PhD Vice-Chair Scientific Committee

blener

#### **Disclosure Statement**

Speakers will be requested to disclose to the audience any real or apparent conflict(s) of interest that may have a direct bearing on the subject matter of this program.

07:30-08:30	Registration and Continental Breakfast
08:30-08:45	Welcome and Introduction Drs. Ruth McPherson and Katey Rayner
08:45-12:00	SESSION I MODERATOR: Murray W. Huff, PhD University of Western Ontario
08:45-09:15	MicroRNA Regulation of Vascular Inflammation Mark Feinberg, MD Harvard Medical School
09:15-09:25	Discussion
09:25-09:55	Genetic Basis of Coronary Artery Disease: Rare & Common Variants Ron Do, PhD Broad Institute and Harvard Medical School
09:55-10:05	Discussion
10:05-10:20	REFRESHMENT BREAK
10:20-10:50	The Evolution of VLDL and Apolipoprotein B Metabolism: A Degrading Experience Edward Fisher, MD, PhD New York University School of Medicine
10:50-11:00	Discussion
11:00-11:10	Apolipoprotein E in Atherosclerosis Robert Raffai, PhD Veterans Affairs Medical Centre; University of California San Francisco Dr. Raffai graduated from Dr. Ross Milne's laboratory
11:10-11:15	Discussion
11:15-11:45	HONORARY LECTURE Dicarbonyl Stress and Diabetic Vascular Complications Ross Milne, PhD University of Ottawa Heart Institute.
11:45-12:00	Discussion Followed by Presentation of distinguished scientist award by Robert Roberts, MD President and CEO University of Ottawa Heart Institute

12:00-13:00	<b>LUNCH</b> Please visit our sponsors
13:00-16:30	SESSION II  MODERATOR: Marlys Koschinsky, PhD  University of Windsor
13:00-13:30	Macrophage Retention Mechanisms in the Vessel Wall Kathryn Moore, PhD New York University
13:30-13:40	Discussion
13:40-14:10	Emerging Mechanisms of Chemokine Receptor Control of Atherosclerosis Christian Weber, MD Ludwig-Maximilians University, Munich
14:10-14:20	Discussion
14:20-14:50	The Role of Dendritic Cells in Atherosclerosis Ira Tabas, MD, PhD Columbia University
14:50-15:00	Discussion
15:00-15:30	REFRESHMENT BREAK
15:30-15:40	Regulation of Macrophage Cholesterol by Autophagy and microRNA Mireille Ouimet, PhD New York University Dr. Ouimet graduated from Dr. Yves Marcel's laboratory
15:40-15:45	Discussion
15:45-16:15	HONORARY LECTURE From Essential Fatty Acids to Autophagy. What was in Between? Yves Marcel, PhD University of Ottawa Heart Institute
16:15-16:30	Discussion Followed by Presentation of distinguished scientist award by Peter Liu, MD Scientific Director University of Ottawa Heart Institute
16:30-16:45	Closing Drs. Ruth McPherson and Katey Rayner

# **Invited Speakers**



Mark Feinberg, MD Associate Physician Brigham and Women's Hospital, Department of Medicine; Assistant Professor of Medicine, Harvard Medical School.

Dr. Feinberg's research interests involve the identification of microRNAs and transcription factors governing cellular differentiation and activation focusing on cell types that participate in the

development of vascular disease states (monocytes/macrophages,T cells, smooth muscle cells, endothelial cells, and endothelial progenitor cells). His research interests broadly aim to identify and target: I) anti-inflammatory signaling mediators in the development of atherosclerosis; and 2) angiogenic mediators involved in ischemic heart disease.

His laboratory's studies involve a number of cell types implicated in promoting vascular inflammation and impairing blood vessel growth, a process that may lead to heart attack, stroke, or peripheral artery disease. To date, they have identified: I) specific transcription factors called Kruppel-like transcription factors (KLFs) (and 'lead' small molecule compounds targeting these factors); and 2) specific microRNAs and have examined their effects on mouse models of vascular inflammation, atherosclerosis, and heart attack, in an effort to provide promising therapeutic strategies to ameliorate cardiovascular disease. These studies may allow for novel therapeutic strategies for treatment of inflammatory states such as atherosclerosis.



Ron Do, PhD
Postdoctoral Research Fellow,
Center for Human Genetics Research,
Massachusetts General Hospital;
Broad Institute and Harvard Medical School.

Dr. Do currently holds a Banting Postdoctoral Fellowship from the Canadian Institutes of Health Research. Past education includes a BSc in Genetics and MSc in Epidemiology, both from the University

of British Columbia, and a PhD in Human Genetics from McGill University.

Dr. Do has investigated the effects of genetic variants on lipids and coronary disease using a variety of approaches including fine-mapping, gene-environment interaction and meta-analysis methods in gene association studies. Currently, Dr. Do is investigating the role of low-frequency and very rare mutations in case-control samples for early-onset myocardial infarction using exome sequencing technology. He is also currently integrating genetic findings from genome-wide association studies for lipid traits with findings for coronary disease.



Edward Fisher, PhD, MPH, MD
Leon H. Charney Professor of Cardiovascular Medicine;
Director of the Center for the Prevention
of Cardiovascular Disease;
Director of the Marc and Ruti Bell Program in Vascular Biology;
New York University School of Medicine.

Dr. Fisher is a graduate of the NYU School of Medicine and received his clinical training at Duke and Harvard. He also holds

a PhD from MIT in biochemistry and nutrition and was a post-doctoral fellow at the NIH in molecular genetics.

Dr. Fisher's research program includes investigations of the cell biology of the very low density lipoproteins (the precursors of LDL), the regression of atherosclerosis (including its imaging), and the development of nanoparticles to target therapies directly to atherosclerotic plaques and other sites of inflammation. He is also an active practitioner in preventive cardiology with a particular interest in lipid risk factors. He has published over 150 peer-reviewed articles on both clinical and research topics. His expertise is further reflected by his serving on the editorial boards of the Journal of Clinical Investigation, the Journal of Lipid Research, the Journal of Biological Chemistry, and his service as Editor in Chief of the American Heart Association journal, Arteriosclerosis, Thrombosis, and Vascular Biology. He has a number of honors, including membership in Alpha Omega Alpha (the national honor society of American medical schools) and the American Association of Physicians, the Ruth Gray Memorial Lectureship (Evanston/Northwestern Health Care), the Solomon A. Berson Award in Basic Science Research Achievement (NYU), and the Special Achievement Award (American Heart Association) for his contributions to arteriosclerosis research. In 2007, he was a Pfizer/American College of Cardiology Visiting Professor of Preventive Cardiovascular Medicine at the University of Virginia. From 2010-2011 he was the George Eastman Professor at Oxford University and a fellow of Balliol College.



Robert Raffai, PhD Veterans Affairs Medical Centre; Assistant Professor of Surgery, University of California San Francisco.

Dr. Raffai graduated with a Bachelors degree in biochemistry from McGill University in 1990. He joined Dr. Ross Milne's laboratory at the University of Ottawa for graduate studies and his doctoral thesis work focused on investigating the structural basis for apolipoprotein E

(apoE) isoform-specific recognition by the low density lipoprotein receptor through antibody engineering and molecular modeling. In 1997 he joined Dr. Karl Weisgraber's laboratory at the Gladstone Institutes of Cardiovascular Disease in San Francisco. During this postdoctoral training period, Robert developed the "Arg-61" mouse model of human

apoE4 Domain Interaction and the "HypoE" mouse model of conditional apoE expression to study the isoform-specific roles of apoE in atherosclerosis progression and regression. In 2004 Robert joined the Faculty at the University of California San Francisco in the Dept of Surgery and established a laboratory at the Veterans Affairs Medical Center. Recent findings from his laboratory have uncovered that apoE suppresses atherosclerosis by reducing the expansion and activation of monocytes in the circulation, and identified that apoE4 domain interaction accelerates atherosclerosis by causing macrophage activation. A major focus of the laboratory is to investigate mechanisms through which apoE regulates adaptive immunity to suppress systemic and vascular inflammation and thereby reduce the progression and improve the regression of atherosclerosis in an isoform-specific manner.



Kathryn Moore, PhD Associate Professor, Departments of Medicine and Cell Biology, New York University.

Dr. Moore received her PhD from McGill University for her research on host-pathogen interactions. She completed her postdoctoral studies at Harvard Medical School, focusing on the mechanisms of inflammation in lupus and atherosclerosis, and a clinical fellowship at

Harvard Medical School-Brigham and Women's Hospital. Her research focuses on understanding the pathways that promote chronic inflammation in atherosclerosis and Alzheimer's disease, in particular the role of innate immunity and cholesterol metabolism in these age-related diseases.

Dr. Moore has been the recipient of several prestigious awards, including the Ellison Foundation New Scholar in Aging Award, the American Heart Association's Special Recognition Award in Vascular Biology and the Jeffrey M. Hoeg Arteriosclerosis Award for Basic Science and Clinical Research. Dr. Moore has made seminal contributions to understanding of the pathways that promote atherosclerosis, in such varied areas as innate immunity, immune cell trafficking, and microRNA regulation of cholesterol metabolism.



Christian Weber, MD
Director, Institute for Cardiovascular Prevention;
Chair, Vascular Medicine;
Ludwig-Maximilians University, Munich.

After graduating and completing his training in internal medicine at LMU and Harvard Medical School, Boston, Dr. Weber was board-certified in clinical cardiology and appointed as a Chair in Molecular Cardiology at RWTH Aachen University. As a Dutch VICI laureate, he

also serves as a Professor at the Cardiovascular Research Institute Maastricht (CARIM) at Maastricht University. His group has a strong interest in the molecular interactions and pathophysiological functions of chemokines and immune cell subsets, as well as the role of microRNAs and their targets in vascular disease, namely atherosclerosis, while his clinical interests are focused on developing novel biomarkers and peptide-based biopharmaceuticals. Among many other awards, he is an ERC Advanced Investigator with 350 publications, Senior Editor of ATVB, Editor-in-Chief of Thrombosis & Haemostasis and co-founder of Carolus Therapeutics.



Ira Tabas, MD, PhD
Richard J. Stock Professor and Vice-Chair of Research,
Department of Medicine;
Professor of Pathology & Cell Biology,
Columbia University.

Dr. Tabas received his medical degree and his doctorate in biochemistry from Washington University in St. Louis, Missouri. He then completed an internship and residency in internal medicine and

a fellowship in endocrinology and metabolism at Columbia University Medical Center in New York City. During that period, Dr. Tabas also conducted a postdoctoral fellowship in the laboratory of Dr. Alan Tall in the Department of Medicine at Columbia University. He joined the Columbia faculty in 1985 and is currently the Richard J. Stock Professor and Vice-Chair of Research in the Department of Medicine and Professor of Pathology & Cell Biology (in Physiology and Cellular Biophysics).

Dr. Tabas' research focuses on the molecular-cellular mechanisms of atherosclerosis, with an emphasis on macrophage and dendritic cell biology. His most recent research related to diabetes has offered new insight into how signaling pathways in both macrophages and hepatocytes promote atherosclerosis in insulin-resistant syndromes. He has lectured worldwide and published approximately 200 original research articles and reviews. These papers have been published in Cell, Nature, Science, Nature Cell Biology, Nature Reviews Immunology, Cell Metabolism, Journal of Clinical Investigation, Proceedings of the National Academy of Sciences, and other top journals. Dr. Tabas' honors include the American Heart Association Established Investigator Award, the Columbia University Doctor Harold and Golden Lamport Research Award, the American Heart Association/ATVB Council Special Recognition Award, and the 2011 Alumni Achievement Award from Washington University School of Medicine. Dr. Tabas also serves on the Board of Reviewing Editors for the journal Science. He was elected to both the Society for Clinical Investigation and the Association of American Physicians.



Mireille Ouimet, PhD
Postdoctoral Fellow,
Langone Medical Center,
New York University School of Medicine.

Dr. Ouimet obtained her PhD under the direction of Dr. Yves Marcel from the University of Ottawa, and is currently a postdoctoral fellow in the laboratory of Dr. Kathryn Moore at the New York University School of Medicine. Her PhD research project, focused on the role

of endogenous LXR ligands in regulating cholesterol efflux from macrophages, and led to the identification of authophagy as a key pathway for macrophage cholesterol efflux. She is currently working on elucidating the molecular mechanisms by which miR-33 regulates cytosolic cholesterol mobilization for efflux and how it exerts potent antiatherogenic properties.

1h\_1h\_1h\_

The following speakers declared financial interests, arrangements and/or affiliations with organizations sponsoring this program.

Dr. Edward Fisher, New York University School of Medicine Merck – Global Advisory Board on Atherosclerosis, Member of a Speakers bureau, Receives grants

Dr. Murray Huff, University of Western Ontario, Robarts Research Institute Pfizer – Lipitor Advisory Board, completed 2011 Merck – Member of a Speakers bureau, receives honourarium

Dr. Maryls Koschinsky, University of Windsor Celera, Atherotech – Independent Research Coordinator Merck, Astra Zeneca, Pfizer – Receives honourarium, seminar speaker

The following speakers declared that they had no financial interests, arrangements and/or affiliations with organizations sponsoring this program.

Dr. Ron Do Dr. Ross Milne Dr. Robert Raffai Dr. Mark Feinberg Dr. Kathryn Moore Dr. Yves Marcel Dr. Mireille Ouimet

# **Honorary Scientists**



Ross Milne, PhD
Director, Diabetes and Atherosclerosis Laboratory,
University of Ottawa Heart Institute;
Professor, Department of Pathology and Laboratory Medicine,
Department of Biochemistry, Microbiology and Immunology,
University of Ottawa.

#### **Background, Education:**

Dr. Milne received a PhD in Immunology from McMaster University followed by postdoctoral training at the Université Catholique de Louvain. In 1980, he took a position at the Institut de Recherches Cliniques de Montréal and, in 1992, moved to the University of Ottawa Heart Institute to help establish the Lipoprotein and Atherosclerosis Research Group.

#### **Research Interests:**

For many years, Dr. Milne's primary research interest was the metabolism of plasma lipoproteins and their role in atherosclerosis. More recently, the focus of his laboratory has shifted to the role of dicarbonyl stress in the development of diabetic vascular complications.

#### Most significant research achievements during lifetime of scientific career:

Dr. Milne has generated large panels of well-characterized monoclonal antibodies against proteins involved in plasma lipoprotein metabolism that have become important reagents for investigators throughout the world for the study of cardiovascular disease, Alzheimer's disease and human hepatitis C. In his own research, he has used these antibodies to help define the structure/function relationships of apolipoproteins B, D and E and cholesteryl ester transfer protein. Dr. Milne has recently developed a novel human glyoxalase I transgenic mouse model that he has used to demonstrate the importance of the reactive dicarbonyl, methylglyoxal, in the etiology of microvascular diabetic complications.



#### Yves Marcel, PhD

Director, Atherosclerosis, Genetics and Cell Biology Laboratory, University of Ottawa Heart Institute; Professor, Department of Pathology and Laboratory Medicine, Professor, Department of Biochemistry, Microbiology and Immunology, University of Ottawa.

#### **Background, Education:**

After completing his Doctorate in Biochemistry in 1965, Dr. Marcel worked at the University of Minnesota first as a postdoctoral fellow and then as Visiting Assistant Professor. In 1969, he became Senior Scientist and Director of the Laboratory of Lipoprotein Metabolism at the Clinical Research Institute of Montreal. He also held the position of Professor in the Department of Medicine at the University of Montreal and became Associate Member in the Department of Experimental Medicine at McGill University. In 1992, he joined the University of Ottawa Heart Institute as Director of the Atherosclerosis, Genetics and Cell Biology Group. Dr. Marcel also served as Chief Scientific Officer and Vice President of Research for the Heart Institute until 2003.

#### **Research Interests:**

Dr. Marcel's areas of expertise and interests are HDL, apolipoprotein A-I structure, and reverse cholesterol transport; The synthesis of apoA-I and HDL secretion by hepatocytes; the interaction of HDL and apoA-I with macrophages for the control of cholesterol accumulation and its export in the reverse cholesterol transport pathway.

Most significant research achievements during lifetime of scientific career: In collaboration with A. Sniderman, he made several seminal observations on the transfer of cholesterol esters by cholesterol ester transfer protein (CETP Including the demonstration that whereas the neutral lipids are in equilibrium between HDL and LDL (1978), there is a net transfer of cholesterol esters from HDL to triglyceride-rich lipoproteins (1980)).

Together with R. Milne, they used monoclonal antibodies as structural probes of apolipoproteins (1981-1995), to provide the first correct identification of apoB molecular weight (1982) and the demonstration that lipoproteins containing this protein only had one copy of apoB per particle (1982), to show that the intestinal form of apoB, apoB-48, was in fact the N-terminal half of the longer hepatic form, apoB-100 (1982). The same antibodies have also proven useful for the cloning of the cDNA coding for apoB (1986) and for the identification of the LDL receptor binding domain on apoB (1989).

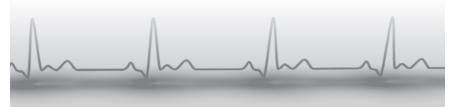
Antibodies were also used to characterize functional domains in apoA-I that are important for binding of phospholipids and cholesterol (1991-2000), the region responsible for LCAT activation, helix 6, (1998). Most recently, the N-terminal domain of apoA-I (residues 44-65 in particular) was found essential for the build up of the hydrophobic core that transforms prebeta- into alpha-migrating HDL (2001), whereas the C-terminal domain is essential for ABCA1-mediated efflux to apoA-I (1999).

In collaboration with J. Cohen and R. McPherson, he showed that multiple non-synonymous mutations in ABCAI, apoA-I and LCAT contribute to the low HDL phenotype (2004). Thus, rare alleles with major phenotypic effects contribute significantly to low plasma HDL-C levels in the general population. Pursuing this work with R. McPherson (2005), he showed that efflux defects are frequent in low HDL syndrome and genetically heterogeneous. Furthermore, the monocyte-derived macrophages of these patients present with a pro-inflammatory phenotype independent of efflux (Kiss, 2007; Sarov-Blat, 2007).

The latest contribution is the demonstration that lysosomal acid lipase and the autophagy pathway contribute to the clearance of cholesterol esters accumulated in macrophage foam cells (Ouimet, 2012).

#### Other highlights:

Dr. Marcel was awarded the Royal Society of Canada's McLaughlin Medal in 1997 and the Ottawa Life Sciences Basic Research Award in 2001. He has 173 peer-reviewed publications, 20 reviews, supervised 20 PhD graduates and postdoctoral fellows, 10 of whom have academic appointment in various universities.



## **Study Credits**

The University of Ottawa's Office of Continuing Medical Education is accredited by the Committee on Accreditation of Continuing Medical Education (CACME) to provide accredited CME activities for family physicians and specialists. This event is an Accredited Group Learning Activity (Section I) as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons for up to 6.25 credits. This program also meets the accreditation criteria for a maximum of 6.25 Category I credits towards the American Medical Association Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

## **Session Moderators**



Murray Huff, PhD
Co-Director and Scientist, Vascular Biology Group,
Robarts Research Institute;
Professor of Medicine and Biochemistry,
University of Western Ontario.

Dr. Huff received a PhD in biochemistry from the University of Western Ontario and completed postdoctoral training as a Medical Research Council fellow in cardiovascular metabolism at the Baker Medical Research Institute in Melbourne, Australia.

Dr. Huff's research is focused on the relationship between lipoprotein metabolism and atherosclerosis. His laboratory discovered that macrophage and smooth muscle cell foam cell formation, critical events in atherosclerosis, can be inhibited through activation of nuclear, hormone receptors. Dr. Huff is an expert in the kinetic analysis of lipoprotein metabolism and has elucidated the mechanism of action of cholesterol-lowering drugs, including statins, inhibitors of cholesterol absorption, cholesterol esterification (acyl-coenzyme A: cholesterol acyltransferase [ACAT]) and the apical sodium bile acid cotransporter. His laboratory discovered that the bioactive flavonoids naringenin and nobiletin inhibit the assembly and secretion of hepatic lipoproteins by activation of insulin signal transduction pathways. These flavonoids prevent metabolic dysregulation, obesity and atherosclerosis in mouse models of the metabolic syndrome, providing insights into potential therapeutic targets for treatment of lipid disorders associated with the metabolic syndrome.

Dr. Huff receives peer-reviewed funding from the Canadian Institutes of Health Research and the Heart and Stroke Foundation of Canada. He has published over 130 peer-reviewed papers, and his research has been recognized by over 50 invited presentations in the past five years. He has received awards recognizing his research, including the 2011 ATVB Distinguished Achievement Award, the Robert Levy Award from ATVB in 2008, the UWO Faculty Scholar Award (2008) and the Senior Research Award from the Canadian Lipoprotein Conference (2010). His trainees have received seven national research awards over the past five years. Dr. Huff is the past co-chair of Arteriosclerosis, Thrombosis and Vascular Biology Council Scientific Sessions for 2010 and 2011.



Marlys Koschinsky, PhD
Dean, Faculty of Science,
Professor, Department of Chemistry and Biochemistry,
University of Windsor.

Dr. Koschinsky obtained her PhD in Biochemistry from the University of British Columbia and subsequently joined the Cardiovascular Research Group at Genentech, Inc. in San Francisco, California, as a Medical Research Council-funded post-doctoral fellow.

It was during her post-doctoral studies that she developed a research interest in structure/function analyses of lipoprotein(a), which had been characterized at Genentech, Inc., and identified in population studies as a risk factor for coronary heart disease. Funded by a salary award from the Natural Sciences and Engineering Research Council of Canada, Dr. Koschinsky accepted a position at Queen's University as an Assistant professor in 1991, and initiated a research program focused on analysis of the mechanism of action of emerging risk factors for the development of atherothrombotic disease including lipoprotein(a) and thrombin-activatable fibrinolysis inhibitor (TAFI). Dr. Koschinsky has received salary support from the Heart & Stroke Foundation in the form of a Research Scholarship Award (1995-2000), and subsequently held a Career Investigator Award from the Heart and Stroke Foundation of Ontario (2001-2011). She was the Director of the Queen's University Cardiac, Circulatory and Respiratory Research Group from 2002-2008.

In 2008, Dr. Koschinsky was appointed as Dean of the Faculty of Science at University of Windsor where she is also a professor in the Department of Chemistry and Biochemistry. She also holds an adjunct appointment in the Department of Biomedical and Molecular Sciences at Queen's University, and in the Department of Physiology and Pharmacology at the Schulich School of Medicine & Dentistry at Western University.

Funding for Dr. Koschinsky's research has come from the Heart and Stroke Foundation of Ontario as well as from the Canadian Institutes for Health Research (CIHR). Dr. Koschinsky has received numerous awards and invited lectureships in recognition of her contributions to lipoprotein(a) (Lp(a)) and TAFI research. Amongst her research accomplishments are characterization of Lp(a) assembly, elucidation of a role for Lp(a) in promoting endothelial dysfunction, defining the mechanisms underlying the antifibrinolytic effect of Lp(a), and discovery and characterization of the gene encoding TAFI. She actively collaborates with pharmaceutical companies as well as basic and clinical research groups throughout the world. In addition to her research program, Dr. Koschinsky has served in many administrative capacities including membership on the Board of Directors of the Heart and Stroke Foundation of Ontario and on the Advisory Board for the CIHR Institute of Circulatory and Respiratory Heath. Most recently she has been appointed to the Advisory Board for the Cardiovascular Research Institute at Wayne State University in Michigan and to the Board of Directors for WE-Tech Alliance, a technology accelerator serving the Southwestern Ontario region.

## The Ottawa Heart Research Conference thanks our Sponsors for supporting this meeting



**PLATINUM** 



**SILVER** 



BRONZE









### **Conference Presentations**

To ensure course participants receive the most up-to-date information and in an effort to lessen the environmental impact of our events, all available course materials will be posted to our website and can be accessed by visiting:

#### www.med.uottawa.ca/cme

and clicking on "course presentations"

Username: CME Pathways Password: Ottawa, I