



# 42<sup>nd</sup> Canadian Lipoprotein Conference 2017

Scientific Program  
October 19-22, 2017



Chateau Laurier, Ottawa, Ontario

## Thursday, October 19<sup>th</sup>

- 4:00- 6:00 PM      **Arrival and Registration** (Drawing Room foyer)
- 6:00- 7:30 PM      **Dinner** (Drawing Room)
- 7:30- 7:40 PM      Opening and welcoming remarks from Conference Chairs

### Session I: 7:40- 9:50 PM

#### Translational and Clinical Symposium (Drawing Room)

**Chair: Dr. Morgan Fullerton**

- 7:40-8:05 PM      **Dr. Jonathan Schertzer:** “Immunometabolism of statin intolerance and side-effects: beyond cholesterol”
- 8:05-8:30 PM      **Dr. Benoît Arseneault:** “Does lifestyle predict disease severity in patients with inherited lipid disorders?”
- 8:30- 9:10 PM      **Dr. Jacques Genest:** “A Tale of two Pathologists, Virchow and Anitschkov (They were both right)”
- 9:10- 9:50 PM      **Dr. Robert Blaustein:** “CETP inhibition and cardiovascular outcomes”

## Friday, October 20<sup>th</sup>

- 7:00- 8:30 AM      **Breakfast** (Canadian Room)

### Session II: 8:30- 10:00 AM Oral Presentations (Drawing Room)

**Chair: Dr. Scot Stone**

- 8:30-8:45 AM      **Stephen Lee** | Christina Priest | Cynthia Hong | Jason Kim | Peter Tontonoz  
(UCLA)  
*The role of IDOL in systemic energy homeostasis*
- 8:45- 9:00 AM      Sereana Wan | Folkert Kuipers | Rick Havinga | Dennis E. Vance | René L. Jacobs | **Jelske N. van der Veen**  
(University of Alberta)

*Mice lacking phosphatidylethanolamine n-methyltransferase develop intrahepatic cholestasis when fed a high-fat diet*

9:00-9:15 AM **Jean-Philippe Drouin-Chartier** | André J. Tremblay | Jean-Charles Hogue | Valéry Lemelin | Benoît Lamarche | Patrick Couture (Université Laval)  
*Plasma PCSK9 concentrations are positively associated with the apolipoprotein B-48-containing triglyceride-rich lipoprotein production rate*

9:15-9:30 AM **Jihong Lian** | Russell Watts | Richard Lehner (University of Alberta)  
*Inhibition of Ces1d activity attenuates nonalcoholic fatty liver disease*

9:30-9:45 AM **Simon Bissonnette** | Valérie Lamantia | Yannick Cyr | Viviane Provost | Marie Devaux | May Faraj (Université de Montréal)  
*ApoB-lipoproteins are priming signals for the NLRP3 inflammasome in human white adipose tissue*

9:45-10:00 AM **Denuja Karunakaran** | Adam Turner | My Anh Nguyen | Joshua Kandiah | Michele Geoffrion | Zachary Lister | Ana Mompeon | Hailey Wyatt | Majid Nikpay | Ella deKemp | Calvin Pan | Richard Lee | Mary-Ellen Harper | Aldons Lulis | Ruth McPherson | Katey Rayner (University of Ottawa Heart Institute)  
*Therapeutic inhibition of RIP1 improves metabolic dysfunction and inhibits atherosclerosis in mouse models of cardiometabolic diseases.*

10:00- 10:20 AM **Refreshment Break** (Drawing Room foyer)

**Session III: 10:20-11:35 AM Oral Presentations (Drawing Room)**

**Chair: Dr. Mireille Ouimet**

10:20-10:35 AM **Nicholas D. LeBlond** | Julia Nunes | Suresh Gadde | Morgan D. Fullerton (University of Ottawa)  
*Macrophage AMPK links cholesterol and lysosomal homeostasis.*

10:35- 10:50 AM **Samaneh Samami** | Maya Mamarbachi | Eric Rhéaume | Jean-Claude Tardif | Steve Poirier | Gaétan Mayer (Université de Montréal)  
*Identification of a Golgi-associated protein that regulates the secretion of PCSK9 and ApoB-lipoproteins*

- 10:50-11:05 AM **My-Anh Nguyen** | Denuja Karunakaran | Michele Geoffrion | Henry S Cheng | Kristofferson Tandoc | Ljubica Perisic Matic | Ulf Hedin | Lars Maegdefessel | Jason E Fish | Katey J Rayner  
(University of Ottawa Heart Institute)  
*Extracellular vesicles secreted by atherogenic macrophages transfer microRNA to inhibit cell migration*
- 11:05- 11:20 AM **Amy C. Burke** | Dawn E. Telford | Jane Y. Edwards | Brian G. Sutherland | Marisa R. Morrow | Cynthia G. Sawyez | Murray W. Huff  
(Robarts Research Institute)  
*Naringenin supplementation to a chow diet enhances energy expenditure, increases RER and maintains lower body weight in pair-fed Ldlr<sup>-/-</sup> mice*
- 11:20- 11:35 AM **Adekunle Alabi** | Faqi Wang | Dawei Zhang  
(University of Alberta)  
*Membrane Type 1 Matrix Metalloproteinase-Induced cleavage of the Low Density Lipoprotein Receptor*
- 11:35-12:35 PM **Rubinstein Lecture-** Dr. Kathryn Moore  
*“Regulation of cholesterol homeostasis by non-coding RNAs”*
- 12:35- 12:45 PM **CLC Group Photo** (Terrace-weather permitting or main staircase)
- 12:35- 2:00 PM **Lunch** (Canadian Room)

**Session IV: 2:00- 4:30 PM Oral Presentations (Drawing Room)**

**Chair: Dr. May Faraj**

- 2:00-2:15 PM **Jérôme Robert** | Emily B. Button | Brian Yuen | Megan Gilmour | Kevin Kang | Arvin Bahrabadi | Sophie Stukas | Wenchen Zhao | Iva Kulic | Cheryl L. Wellington  
(University of British Columbia)  
*High-density lipoproteins reduce amyloid-beta-deposition in a novel in vitro model of the human brain vasculature*
- 2:15-2:30 PM **Emily A. Day** | Rebecca J. Ford | Brennan K. Smith | Šarka Lhoták | Bernardo L. Trigatti | Richard C. Austin | Morgan D. Fullerton | Gregory R. Steinberg  
(McMaster University)  
*Salsalate reduces aortic plaque size in an early model of atherosclerosis via an AMPK  $\beta$ 1 dependent pathway*

- 2:30-2:45 PM **Michael A. Iacocca** | Jian Wang | Jacqueline S. Dron | John F. Robinson | Adam D. McIntyre | Henian Cao | Robert A. Hegele  
(Robarts Research Institute)  
*Use of next-generation sequencing to detect copy number variants in the molecular diagnosis of familial hypercholesterolemia*
- 2:45-3:00 PM **Mark Trinder** | Mihai Cirstea | Keith R. Walley | James A. Russell | Kelly R. Genga | John H. Boyd | Liam R. Brunham  
(University of British Columbia)  
*Decreased high-density lipoprotein cholesterol level as an early prognostic marker for severe infections that progress into complicated sepsis*
- 3:00-3:15 PM **Hong Choi** | Isabelle Ruel | Adel Schwertani | Jacques Genest  
(Research Institute of the McGill University Health Centre)  
*Desmocollin 1 is abundantly expressed in atherosclerosis and impairs HDL biogenesis.*
- 3:15- 3:30 PM **Refreshment Break** (Drawing Room foyer)
- 3:30- 4:30 PM **Physician Scientist Lecture-** Dr. Katherine Morrison  
*“Childhood Obesity: It is not all about the number!”*
- 4:30- 6:30 PM **Poster session I** (Canadian Room- Cash Bar)
- #P1 *Activating Liver X Receptors in Endothelial Progenitor Cells Enhances the Release of Vasoreparative Factors that Reduce the Development of Atherosclerotic Lesions***  
Adil Rasheed, Ricky Tsai, Katey J. Rayner, Carolyn L. Cummins  
(University of Toronto)
- #P2 *Pathogenic frameshift mutations in the human choline transporter SLC44A1***  
Adrian Taylor, Christina Fagerberg, Maria Kibaek and Marica Bakovic  
(Guelph University)
- #P3 *Effects of hematopoietic deficiency of pro-apoptotic protein Bim on the development of atherosclerosis***  
Alexander Qian, Pei Yu, Leticia Gonzalez, Bernardo Trigatti  
(McMaster University)
- #P4 *Functional relationship of the CARS2 locus to CAD***  
AnhThu Dang, Adam Turner, Paulina Lau, Amy Martinuk, Sebastien Soubeyrand, Ruth McPherson  
(University of Ottawa Heart Institute)

**#P5 *Role of adipose tissue - skeletal muscle crosstalk in PCB126-induced metabolic defects***

Audrey Caron, Celine Aguer  
(Ottawa University)

**#P6 *The interplay between hepatic choline metabolism and HCV***

Kaelan Gobeil Odai, Morgan D. Fullerton  
(University of Ottawa)

**#P7 *Neuregulin 4 (Nrg4) regulation of hepatic lipid and lipoprotein Metabolism in the Hamster Model***

Danielle Alvares, Christopher Baker, Khosrow Adeli  
(University of Toronto)

**#P8 *Nobiletin corrects intestinal insulin resistance and lipid metabolism in Ldlr<sup>-/-</sup> mice fed a high-fat diet***

Dawn Telford, Nadya Morrow, Brian Sutherland, Jane Edwards, Murray Huff  
(Robarts Research Institute)

**#P9 *High-density lipoproteins suppress amyloid beta induced endothelial cell activation in bioengineered vessels and monoculture***

Emily B Button\*, Jérôme Robert\*, Sophie Stukas, Guilaine K. Boyce, Ebrima Gibbs, Catherine M. Cowan, Megan Gilmour, Wai Hang Cheng, Sonja K. Soo, Brian Yuen, Arvin Bahrabadi, Kevin Kang, Iva Kusic, Gordon Francis, Neil Cashman, Cheryl L. Wellington  
(University of British Columbia)

**#P10 *Reversion of liver steatosis in Pcyt2<sup>+/-</sup> mice by phosphoethanolamine and choline***

Gabriela Mattos, Liala Schenkel, Marica Bakovic (University of Guelph)

**#P11 *The impact of PCYT2 gene deletion on membrane phospholipid formation and autophagy***

Gabriela Mattos, Marica Bakovic, Liala Schenkel, Leanne Pereira  
(University of Guelph)

**#P12 *VEGF-A pathway regulates trans-endothelial lipid uptake***

Hoon-Ki Sung, Yun Hye Kim, Ju Hee Lee, Eashita Das, Hira Raheel, Joe Eun Son, Jae-Ryong Kim, Jin Gyoon Park, Chi-chung Hui, Andras Nag, Warren Lee, So Young Park, Kyung-Oh Doh  
(University of Toronto)

**#P13 *Effect of acute fasting on lysophosphatidic acid receptor and autotaxin expression in five adipose tissue depots***

Iman M'Hiri, Phillip Marvyn, Fernanda Fernandes, Robin E. Duncan  
(University of Waterloo)

**#P14 *Update on the Familial Hypercholesterolemia Canada (FH Canada) Registry***

Isabelle Ruel, Sumayah Aljenedil, James Brophy, Daniel Gaudet, Brian McCrindle, Jiri Frohlich, Robert A. Hegele, Jacques Genest  
(McGill University)

**#P15 *Small molecule inducers of ABCA1 and apoE that act through indirect activation of the LXR pathway***

Jianjia Fan, Rui Qi Zhao, Cameron Parro, Wenchen Zhao, Hsien-Ya Chou, Jerome Robert, Tarek Deeb, John Linley, Samantha Barichievy, Nicholas J. Brandon, Michael W. Wood, Iva Kulic, Cheryl L. Wellington  
(University of British Columbia)

**#P16 *Developing a polygenic risk score for hypertriglyceridemia***

Jacqueline Dron, Jyler Menard, Jian Wang, Rob Hegele  
(Robarts Research Institute)

**#P17 *The efficacy of LDL-apheresis with dextran sulfate adsorption is inversely associated with plasma triglyceride concentrations in patients with homozygous familial hypercholesterolemia***

Jean-Philippe Drouin-Chartier, André J. Tremblay, Jean Bergeron, Benoît Lamarche, Patrick Couture  
(Université Laval)

**#P18 *Phosphatidylcholine synthesis regulates intestinal lipid absorption and secretion***

John P. Kennelly, Jelske van der Veen, Randal Nelson, Kelly-Ann Leonard, Rene L. Jacobs  
(University of Alberta)

**#P19 *The role of CTP:phosphocholine cytidyltransferase (CCT) in chylomicron secretion by Caco-2 cells***

Jonghwa Lee, Neale D. Ridgway  
(Dalhousie University)

**#P20 *Imputation of baseline LDL-C level in patients with familial hypercholesterolemia on statins or ezetimibe***

Sumayah Aljenedil, Isabelle Ruel, Iman Sadri, Émilie de Varennes, Robert A. Hegele, Patrick Couture, Jean Bergeron, Eric Wanneh, Alexis Baass, Robert Dufour, Daniel Gaudet, Diane Brisson, Liam R. Brunham, Gordon A. Francis, Lubomira Cermakova, James M. Brophy, Arnold Ryomoto, G.B. John Mancini, Jacques Genest  
(Research Institute of the McGill University Health Centre)

6:30PM **Dinner** (on own)

## **Saturday, October 21<sup>th</sup>**

7:00- 8:30 AM **Breakfast** (Canadian Room)

8:30- 9:30 AM **Simon-Pierre Noel Lecture-** Dr. Marica Bakovic (Drawing Room)  
*“Redefining lipid and energy metabolism via CDP- ethanolamine Kennedy pathway”*

### **Session V: 9:30- 11:05 AM**

#### **Mini-symposium “Focus on Ottawa Research”**

**Chair: Dr. Katey Rayner**

9:30- 9:55 AM **Dr. Steffany Bennett:** *“Translational lipidomics: Stratifying dementia patients by interrogating their plasma lipidomes - Fact or fiction”*

9:55- 10:20 AM **Dr. Erin Mulvihill:** *“Regulation of Post prandial Glucose and Lipid Metabolism: Role of Dipeptidyl Peptidase 4”*

10:20- 10:45 AM **Dr. Benjamin Rotstein:** *“PET Radiotracers for Molecular Imaging of Vascular Inflammation”*

10:45-11:05 AM **Refreshment Break** (Drawing Room foyer)

### **Session VI: 11:05- 12:30 PM Oral Presentations (Drawing Room)**

**Chair: Dr. Patrick Couture**

11:05-11:20 AM **Joshua A. Dubland** | Sima Allahverdian | Collin S. Pryma | Kamel Boukais | Ying Wang | Teddy Chan | Gordon A. Francis  
(University of British Columbia)  
*Relative lysosomal acid lipase deficiency in arterial smooth muscle cells as a mechanism for foam cell formation*

11:20-11:35 AM **Jenika Marshall** | Emily R. Courage | Madeline N. Fitzpatrick | Ryan F. Elliott | Yanbo Yang | Bronwyn A. Woolfrey | Robert J. Brown  
(Memorial University)  
*Lipoprotein lipase hydrolysis products are associated with Akt signalling in THP-1 macrophages*

11:35- 12:30 PM **CLC Young Investigator Award Lecture-** Dr. Katey Rayner  
*“Live and Let Die: Cell Death by Cholesterol”*

12:30- 1:30 PM **Lunch** (Canadian Room)

1:30- 3:30 PM **Poster Session II (Canadian Room- Cash Bar)**

**#P21 *Potential for an AMPK, SREBP2 and miR-33 pathway in regulating immunometabolism***

Julia Nunes, Morgan D. Fullerton (University of Ottawa)

**#P22 *Cholesterol handling and expression of ABCA1 and SR-BI differ between M1 and M2 macrophages from the THP-1 cell line***

Julien Renaud, Mathieu R Brodeur, Éric Rhéaume, David Rhains, Jean-Claude Tardif  
(Université de Montréal)

**#P23 *Caspase 1/11 and RIP3 signaling maintain metabolic homeostasis***

Conor O'Dwyer, Nicholas D. LeBlond, Subash Sad, Morgan D. Fullerton  
(University of Ottawa)

**#P24 *High density lipoprotein mediated protection of macrophages against apoptosis requires scavenger receptor class B type 1 activity and sphingosine-1-phosphate***

Kevin Chathely, Dr. Leticia Gonzalez, Dr. Bernardo L. Trigatti  
(McMaster University)

**#P25 *Effects of low dose niacin and vitamin D on endothelial cell angiogenic function and vascular regeneration under lipotoxic conditions***

Kia Peters, Rachel Wilson, Cynthia Sawyez, Brian Sutherland, Nica Borradaile  
(Western University)

**#P26 *The Effects of dietary linoleic and a-linolenic acids on depression-like behavior in male rats***

Maria Fernanda Fernandes, Francesco Leri, David M. Mutch  
(University of Waterloo)

**#P27 *Impact of a 1-year lifestyle modification program on cholesterol efflux capacities in abdominally obese men with dyslipidemia***

Marjorie Boyer, Paul Poirier, Nathalie Almeras, Angelo Tremblay, Jean Bergeron, Jean-Pierre Despras, Benoît Arsenault  
(Université Laval)



**#P28 *Impact of a 1-year lifestyle modification program on plasma lipoprotein(a) levels in abdominally obese men with dyslipidemia***

Nicolas Perrot, Audrey-Anne Despres, Paul Poirier, Natalie Almeras, Angelo Tremblay, Jean Bergeron, Jean-Pierre Despres, Benoît Arsenault  
(Université Laval)

**#P29 *Hepatic lipid accumulation in PCSK9 knockout mice is not associated with ER stress***

Paul Lebeau, Jae Hyun Byun, Ali Al-Hashimi, Khrystyna Platko, Šarka Lhoták, Nabil G. Seidah, Richard C. Austin  
(McMaster University)

**#P30 *Role of MGAT1 and MGAT2 in adipocyte differentiation and triacylglycerol metabolism***

Puja Biswas, Pamela McFie, Scot Stone  
(University of Saskatchewan)

**#P31 *Acute and chronic impact of bariatric surgery on plasma autotaxin levels in patients with severe obesity***

Raphaelle Bourgeois, Marie-Eve Piche, Audrey Auclair, Thomas Grenier-Larouche, Patrick Mathieu, André Tchernof, Andre Carpentier, Paul Poirier, Benoît Arsenault  
(Université Laval)

**#P32 *Identification of a novel protein involved in cardiolipin synthesis and remodeling***

Ryan M. Bradley, Emily B. Mardian, Juan J. Aristizabal Henao, Adam H. Metherel, Ken D. Stark, Robin E. Duncan  
(University of Waterloo)

**#P33 *Association of PCSK9 with lipoproteins***

Samantha Sarkar, Alex Foo, Natalie Goto, Thomas Lagace  
(University of Ottawa Heart Institute)

**#P34 *Restoration of TDAG51 protein improves insulin response and reduces weight gain in mouse models of type 2 diabetes***

Tamana R. Yousof\*, Celeste Bouchard\*, Mihnea Alb, Edward G. Lynn, Šarka Lhoták, Kenneth N. Maclean, Hui Li, Nathan J. Cherrington, Joan C. Krepinsky, Gregory R. Steinberg, Richard C. Austin  
(McMaster University)

**#P35 *Hepatic cholesterol dysregulation in SR-B1/ApoE dKO mice***

Ting Xiong, Pei Yu, Paul Lebeau, Richard C. Austin, Bernardo L. Trigatti

(McMaster University)

**#P36 *The association of delta-5 fatty acid desaturase activity with insulin resistance and postprandial hypertriglyceridemia is dependent on plasma apoB in obese subjects***

Valérie Lamantia, Simon Bissonnette, Viviane Provost, Yannick Cyr, Christine Des Rosiers, May Faraj  
(Université de Montréal)

**#P37 *Improvement in risk factors for type 2 diabetes with increased fiber intake during a hypocaloric diet***

Viviane Provost, Simon Bissonnette, Valérie Lamantia, Yannick Cyr, May Faraj  
(Institut de Recherches Cliniques de Montréal)

**#P38 *Physiological concentrations of estrogen decrease LDL transcytosis by coronary artery endothelial cells through GPER and SR-BI***

Siavash Ghaffari, Michael Sugiyama, Warren L. Lee  
(University of Toronto)

**#P39 *Plasma apoB-to-PCSK9 ratio associates with postprandial priming of the NLRP3 inflammasome in human white adipose tissue better than apoB or PCSK9 alone***

Yannick Cyr, Simon Bissonnette, Valérie Lamantia, Aurele Besse-Patin, Emmanuelle Meugnier, Martin Wabitsch, Hubert Vidal, Jennifer L. Estall, Michel Chretien, May Faraj  
(Université de Montréal)

**#P40 *Distinct alteration of gene expression programs in the small intestine of male and female mice in response to Fabp gene ablation***

Yiheng Chen, Luis B. Agellon  
(McGill University)

4:30-5:30 PM	CLC Business Meeting (Burgundy Room)
6:00- 6:30 PM	Cocktail reception (Laurier Room Foyer and Terrace)
6:30- 9:30 PM	<b>CLC Banquet and Entertainment (<u>Dueling Pianos</u>)</b> (Laurier Room)

**Sunday, October 22<sup>nd</sup>**

Depart