### **2019 CANADIAN VASCULAR & LIPID SUMMIT**



Joint symposia of Canadian Lipoprotein Conference and the Canadian Society for Atherosclerosis, Thrombosis and Vascular Biology

Banff Conference Centre, Banff, Alberta

Thursday, October 3rd - Sunday, October 6th, 2019

### PROGRAM AT A GLANCE

### **OVERVIEW OF FORMAT AND HIGHLIGHTS**

Cardiometabolic Disease, Diabetes, Genes, Imaging, Clinical Insights, Novel Therapies

2.5 days (Thursday PM to Sunday AM)
Afternoon Trainee Workshop (sponsored by CIHR-ICRH)
30 Trainee presentations (selected from abstracts submitted, at least one from each PI lab)
Simon Pierre Noël Lecture 2019
Clinician Scientist Award 2019
CSATVB Scientific Excellence Award 2019
David Rubenstein (CLC) Lecture 2019
Special Topic Symposia
Adjudicated Poster Sessions

#### **Awards**

Trainee Awards (oral and poster)
Stewart Whitman Award
CLC Senior Investigator Award

### **Invited/Guest Speakers**

Dr. Gordon Francis MD
Dept. Medicine, University of British Columbia, Vancouver.

Dr. Morgan Fullerton

Dept. Biochemistry, Microbiology and Immunology, University of Ottawa.

Professor Zamaneh Kassiri

Dept. Physiology, Faculty of Medicine and Dentistry, University of Alberta.

Dr. Gavin Oudit MD

Dept. Medicine, Division of Cardiology, University of Alberta.

Dr. Paolo Raggi MD

Division of Cardiology, Mazankowski Alberta Heart Institute, University of Alberta.

**Professor Paul Kubes** 

Dept. Physiology/Pharmacology; Director, Calvin, Phoebe and Joan Snyder Institute for Chronic Diseases, University of Calgary.

Professor Karen Reue

Dept. Human Genetics, David Geffen School of Medicine, UCLA.

# Special Thanks to Our Sponsors:





















### **2019 CANADIAN VASCULAR & LIPID SUMMIT**

### Banff Conference Centre, Banff, Alberta

## Thursday, October 3rd - Sunday, October 6th, 2019

**Conference Chairs: Rene Jacobs and Spencer Proctor** 

#### **PROGRAM**

----FINAL----

### **THURSDAY, OCTOBER 3, 2019**

11:00am – 6:00pm Arrival, Check-in (Main Lobby) and Conference Registration (KC100- Galleria)

**12:00 noon** Boxed lunch available for Trainees (KC#103) – please see *Trainee Workshop Program* 

12:30pm – 4:00pm 
Trainee Workshop (KC#103) (CSATVB, CLC & CIHR Institute of Circulatory & Respiratory Health)

2:00pm – 4:00pm Business Meetings (parallel) CSATVB (KC#301-Werstuck) and CLC (KC#105-Jacobs)

**5:30pm - 6:45pm** Dinner, Vistas Dining Room, Banff Centre

**6:45pm – 7:00pm** Conference Opening – (KC#103) Welcome remarks from Conference Chairs

Session I (KC#103):

7:00pm - 9:00pm Invited Speakers and Trainee Talks

Theme: Vascular and Lipid Complications in the Clinic

Chair: Dr. Richard Lehner

**7.00-7.30pm 2019 Simon Pierre Noël Lecture-** *Atherogenesis: Macrophage- or smooth muscle cell-driven?* 

Dr. Gordon Francis MD

Dept. Medicine, University of British Columbia, Vancouver.

7.30-8.00pm 2019 Clinician Scientist Award-

Molecular imaging of Atherosclerosis: Present and Future Applications.

Dr. Paolo Raggi MD

Division of Cardiology, Mazankowski Alberta Heart Institute, University of Alberta.

**8.00-8.30pm** Invited Talk- Apelin Analogs as Novel Therapies for Cardiovascular Disease.

Dr. Gavin Oudit MD

Dept. Medicine, Division of Cardiology, University of Alberta.

8.30-8.45pm \*LipidSeq: clinical and research learnings from a targeted sequencing panel for dyslipidemias

by \*Jacqueline S. Dron | Jian Wang | Adam D. McIntyre | Michael A. Iacocca | John F. Robinson | Matthew R. Ban | Henian Cao | Robert A. Hegele | Robarts Research Institute, Western University

8.45-9.00pm \*Functional Relationship of CARS2 locus to Coronary Artery Disease

by \*AnhThu Dang | Adam Turner | Sebastien Soubeyrand | Paulina Lau | Ruth McPherson | University of Ottawa Heart Institute | University of Virginia | University of Ottawa Heart Institute

<sup>\*</sup>Graduate Student Competition (Thurs/Sat Dr's Angela Devlin & Tom Lagace), KC = Kinnear Centre, Husky Great Hall Rooms

### FRIDAY, OCTOBER 4, 2019

6:15am - 7:00am Guided run/jog/walk- to(wards) Tunnel Mountain (Meet in main lobby/reception @6am)

7:00am – 8:30am Sreakfast, Vistas Dining Room- Banff Centre

### Session II (KC#103)

8:30am – 10:00am Theme: CSATVB Presidents Symposium

Chair: Dr. Geoff Werstuck

**8.30-9.15am CSATVB Scientific Excellence Award** - Presentation of Award & Seminar

Studying sterile injury using microscopy and busting dogmas about the immune response

**Dr. Paul Kubes,** Dept. Physiology/Pharmacology; Director, Calvin, Phoebe and Joan Snyder Institute

for Chronic Diseases, University of Calgary.

9.15-9.30am 
#Knockdown of the Mixed Lineage Kinase Domain-Like Protein (MLKL) Enhances Extramedullary

**Hematopoiesis to Increase Atherosclerosis** 

by <sup>#</sup>Adil Rasheed, My-Anh Nguyen | Michele Geoffrion | Taylor Dennison | Adir Baxi | Richard Lee | Katey J Rayner | University of Ottawa Heart Institute | Department of Biochemistry, Microbiology

and Immunology, University of Ottawa, Ionis Pharmaceuticals.

9.30-9.45am \*The role of sex hormones in modulating beta cell function and diabetes-associated

atherosclerosis.

by \*Monica De Paoli | Dempsey Wood | Mary Kathryn Bohn | Daniel Venegas-Pino | Yuanyuan Shi |

Dana Borowitz | Geoff Werstuck | TaARI

9.45-10.00am \*Cardiovascular and Endothelial Dysfunction Is Exacerbated with Loss Of Angiotensin-Converting

**Enzyme 2 in Diabetic Mice** 

by \*Mahmoud Gheblawi | Ratnadeep Basu | Wang Wang | Jessica Desaulniers | Faqi Wang | Cory Wagg | Gary Lopaschuk | Zamaneh Kassiri | Gavin Oudit | Department of Physiology, | Department

of Medicine - University of Alberta, Edmonton, AB, Canada

10:20am - 12:20pm Trainee Oral Presentations

Theme: Molecular Regulation of lipoprotein metabolism and atherosclerosis

Chair: Dr. Zamaneh Kassiri

10:20- 10:35am \*Knocking out PCSK9 gene expression protects against atherosclerosis in aortic sinus and coronary

arteries in SR-B1 (Scavenger Receptor Class B type 1)/ApoE (Apolipoprotein E) double knockout

(SR-B1/ApoE dKO) mice

by \*Ting Xiong | Linda Ros-Choi | Bernardo L Trigatti | McMaster University

10.35-10.50am \*FH-associated L108R and S127R mutations in PCSK9 inhibit LDL binding and increase cellular LDL

receptor degradative functions

by \*Angela Matyas | University of Ottawa Heart Institute.

10.50-11.05am \*Membrane Type 1 Matrix Metalloproteinase-Induced cleavage of the Low-Density Lipoprotein Receptor

by \*Adekunle Alabi, Faqi Wang and Dawei Zhang | University of Alberta

11.05-11.20am IDOL regulates systemic energy balance by controlling neuronal VLDLR levels

by Stephen Lee | Christina M. Priest | Peter Tontonoz | UCLA

11.20-11.35am \*Eating Up the Plaque: Defining the Mechanisms of Foam Cell Lipid Droplet Catabolism

by \*Sabrina Robichaud, Alexander Pelletier, David Cook, Esther Mak-Washburn, Barbara Vanderhyden, Daniel Figeys, Mathieu Lavallée-Adam, Mireille Ouimet | University of Ottawa Heart Institute | Department of Biochemistry, Microbiology and Immunology, Ottawa Institute of Systems

Biology | Ottawa Hospital Research Institute

11.35-11.50am \*\*Clonally-expanding smooth muscle cells promote atherosclerosis by escaping efferocytosis and

activating the complement cascade

by #Ying Wang | Stanford University

11.50-12.05pm \*Partial ablation of PDGFRa expressing cells is sufficient to increase atherosclerosis

by \*France Dierick | Talin Ebrahimian | Maria Kotsiopriftis | Véronique Michaud | Stefania Simeone | Stephanie Lehoux | McGill University | Lady Davis Institute

\*The elongation factor 1A1 inhibitor, didemnin B, decreases fibrotic and inflammatory activity in vitro and improves NAFLD in western diet-induced obese mice

by \*Rachel Wilson, Cynthia Sawyez, Brian Sutherland, Richard Zhang, Taylor Woolnough, Alexandra Hetherington, John P. Kennelly, Kelly-Ann Leonard, René Jacobs, Nica Borradaile | Department of Physiology and Pharmacology, Schulich School of Medicine and Dentistry, Western University, London, ON, Canada | Group on the Molecular and Cell Biology of Lipids, Department of Agricultural,

Food and Nutritional Science, University of Alberta, Edmonton, AB, Canada

**1.30pm-2.00pm** Poster setup (KC#105 – South Room)

Session III (KC#103)

2:00pm - 4:00pm Trainee Oral presentations

Theme: Molecular and physiology regulation of lipid metabolism

Chair: Dr. Erin Mulvihill

2.00-2.15pm Phosphoethanolamine phospholyase (ETNPPL) as a novel modulator of liver health

by Jelske N. van der Veen | Randal C. Nelson | Kelly-Ann Leonard | Qianshan Ding | Robin D. Clugston | Rene L. Jacobs | Group on the Molecular Biology of Lipids, Department of Biochemistry, Department of Agricultural, Food and Nutritional Sciences, University of Alberta, Canada | Dept of

Gastroenterology, Institute for Gastroenterology and Hepatology, Wuhan University, China

2.15-2.30pm The Role of Arylacetamide Deacetylase (AADAC) in Hepatic Lipid Homeostasis

by Jihong Lian | Russell Watts | Randal Nelson | John P. Kennelly | René Jacobs | Richard Lehner | Group on Molecular and Cell Biology of Lipids, Department of Pediatrics, Department of Agricultural, Food and Nutritional Science, Department of Biochemistry, University of Alberta

2.30-2.45pm Haploinsufficiency for CYP8B1 is a monogenic cause of increased insulin sensitivity in humans.

by Roshni Singaraja | National University of Singapore

2.45-3.00pm \*Hepatic Lipid Secretion is Regulated by Glucocorticoid Action in the Hypothalamus

by \*Miguel Cardoso | Mark Wang | Emily J. Ling | Hongju (Jennifer) Lee | Emilie Beaulieu-Bayne |

Jessica T. Y. Yue | Department of Physiology, University of Alberta

	by Hoon-Ki Sung   Ju Hee Lee   Sammy Shun Wai Shi   Lauren Pickel   Navkiran Verma   Irisa Shi   Min-Ah Choi   Jae-Ryong Kim   The Hospital for Sick Children, Canada   The Hospital for Sick Children, Canada   The Hospital for Sick Children, Canada   Yeungnam University, South Korea		
3.15-3.30pm	Abnormal lipoprotein metabolism in chronic muscle diseases: target, biomarker or bystander? by Pascal Bernatchez   Gordon Francis   Zoe White   University of British Columbia, St. Paul's Hospital, Centre for Heart & Lung Innovation, Vancouver, BC		
3.30-3.45pm	*Maternal exercise during pregnancy improves offspring vascular function through effects on one carbon metabolism		

Diverse impact of intermittent fasting on adipose tissue remodelling

by \*Nicha Boonpattrawong | Saeid Golbidi | Ismail Laher | Angela Devlin | University of British Columbia

\*Alcohol consumption alters lipid metabolism in brown adipose tissue of mice

by \*Michael Trites | Robin D. Clugston | Dept of Physiology, University of Alberta, Edmonton,

Alberta

4:00pm – 4:15pm Activity and Nutrition Break -KC#103

3.00-3.15pm

4:15pm – 5:00pm

2019 CLC Rubenstein Lecture- Introduced by Dr. Robin Duncan
Professor Karen Reue

Dept. Human Genetics, David Geffen School of Medicine, UCLA

5:00pm – 5:15pm 2019 Vascular & Lipid Summit Group Photo

5:15pm - 7:15pm

Poster Session I- Adjudication (KC#105)

Wine and Science (Ticket/cash bar & light snacks)

7:15pm - 10:00pm

Dinner on own (Conference Centre or Townsite)

Trainee Social Event: Banff Avenue Brewing Company (1.6 km from the conference centre).

7:30pm – onward. Appetizers will be provided, meals and beverages at your own expense.

<sup>\*</sup>Graduate Student Competition (Fri sessions Drs' Stephanie Lehoux & Jelske van der Veen)
#Post-Doctoral Competition (Drs' Jessica Yue & Dino Trigatti)
KC = Kinnear Centre, Husky Great Hall Rooms

### SATURDAY, OCTOBER 5, 2019

Guided run/jog/walk- to(wards) Banff Springs Hotel (Meet in main lobby/reception @6am) 6.15am - 7:00am Rreakfast, Vistas Dining Room - Banff Centre 7:00am - 8:30am Session IV (KC#103) 8:30 am - 9:45 am Trainee Oral presentations and 2019 CLC Young Investigator Award lecture Theme: Cardiometabolic Disease: Intestinal pathophysiology and molecular regulation of lipoprotein secretion Chair: Dr. Gordon Francis \*Non-Fasting Remnant Cholesterol in Alberta's Tomorrow Project: Implications for CVD Risk 8.30-8.45am **Prediction** by \*Jacqueline Krysa | University of Alberta 8.45-9.00am \*Nobiletin corrects intestinal insulin resistance and lipid metabolism in Ldlr-/-mice fed a high-fat by \*Nadya Morrow | Dawn E. Telford | Brian G Sutherland | Jane Y Edwards | Erin E Mulvihill | Murray W Huff | University of Ottawa Heart Institute | Robarts Research Institute 9.00-9.15am A novel atheroprotective role of gut microbiota: an unconventional bridging by Toll-like Receptor by Connie Woo | Jensen Yiu | Jamie Cheung | Patrick Tso | University of Hong Kong | University of Cincinnati #Glucose and GLP-2 mobilize enteral fat by pre- and post-Golgi mechanisms, respectively 9.15-9.30am by #Priska Stahel | Changting Xiao | Avital Nahmias | Gary Lewis | Department of Medicine and Physiology, Banting & Best Diabetes Centre, University of Toronto, Canada 9.30-9.45am \*Serotonin-mediated regulation of postprandial chylomicron production in hamsters by \*Fitore Raka | Khosrow Adeli | The Hospital for Sick Children 9.45-10.15am **CLC Amgen Stewart Whitman Young Investigator Award Lecture 2019** Introduced by Dr. Murray Huff Choline uptake as a regulator of lipid and immunometabolism Dr. Morgan Fullerton Dept. Biochemistry, Microbiology and Immunology, University of Ottawa. Nutrition Break & Poster Session II -KC#103 10:15am - 10:30am Poster Session II- Adjudication (KC#105-Please remove posters prior or during lunch) 10:30am - 12:15pm Lunch, Vistas Dining Room -Banff Centre 12:15pm - 1:30pm

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1:30pm - 2:30pm Trainee Oral presentations and Invited Speaker

Theme: Atherosclerosis and Immunology

Chair: Dr. Katey Rayner

1.30-1.45pm \*ApoA1 deficiency increases atherosclerosis, necrotic core size and plaque apoptosis in high-fat

diet-fed LDLR KO mice: correction by inactivation of Bim in BM-derived cells

by \*Alexander S Qian | Pei Yu | Leticia Gonzalez | Bernardo Trigatti | McMaster University

1.45-2.00pm Identification of an apoA-I binding site in desmocollin 1 and small molecules docking into the site

by Hong Choi | Isabelle Ruel | Jacques Genest | Research Institute of the McGill University Health

Center

2.00-2.15pm \*NLRP3 inflammasome promotes statin-induced myopathy via protein-prenylation

by #Nicole G. Barra | McMaster University, Department of Biochemistry and Biomedical Sciences

2.15-2.30pm \*AMPK-mediated inhibition of HMG-CoA reductase is protective against atherosclerosis

by \*Tyler K.T. Smith | Nicholas D. LeBlond | Peyman Ghorbani | Shauna Han | Kim Loh | Bruce E.

Kemp | Morgan D Fullerton | University of Ottawa Centre for Infection, Immunity and Inflammation; Ottawa Department of Biochemistry, Microbiology and Immunology, Faculty of

Medicine, University of Ottawa, Ottawa, ON, Canada. | St. Vincent's Institute of Medical Research

and Department of Medicine, University of Melbourne, Fitzroy, Australia

2:30-3:00pm Professor Zamaneh Kassiri

Dept. Physiology, Faculty of Medicine and Dentistry, University of Alberta.

3.00-4.00pm CSATVB Annual General Meeting (KC#103 all welcome)

7:00pm – 10:00 pm Vascular & Lipid Summit Dinner and Award Presentations (KC#203)

Graduate Student Oral Presentation Awards
Post-Doctoral Fellow Oral Presentation Awards

Graduate Student Poster Presentation Awards- Grouped by Theme

Post-Doctoral Fellow Oral Presentation Awards

2019 CLC Amgen Stewart Whitman Young Investigator Award

KC = Kinnear Centre, Husky Great Hall Rooms

### **SUNDAY, OCTOBER 6, 2019**



Departure Travel Day

<sup>\*</sup>Graduate Student Competition (Thurs/Sat Dr's Angela Devlin & Tom Lagace), #Post-Doctoral Competition (Drs' Jessica Yue & Dino Trigatti)