37th Annual Conference of the North American Section of the International Society for Heart Research
“Cardiovascular Disease in Vulnerable Populations”

May 29 - June 1, 2018
Halifax, Nova Scotia
Lord Nelson Hotel & Suites
Program Chair: Susan E. Howlett
XXXVII North American Section
Halifax, Nova Scotia

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37th Annual Conference of the
North American Section of
the ISHR

Local Organizing Committee

Program Chair: Susan Howlett
Program Co-Chairs: Alex Quinn, Kishore Pasumarthi, Tom Pulinilkunnil, Petra Kienesberger, J.F. Legaré, John Sapp, Scott Grandy & Keith Brunt

ECI Program Executive: Sam Das (Chair), Ron Vagnozzi (Vice-Chair) Erik Blackwood (Secretary)
ECI Program Committee: Randi Parks, Cat Makarewich, Stephan Lange, Natasha Fillmore, Manuel Rosa Garrido & Kim Ho.
Local ECI Contacts: Hirad Feridooni, Brittney Allen
Social Chair: Jeff Molkentin

ISHR Officers and Council Members

President: Gary D. Lopaschuk
President Elect: Peipei Ping
Past President: Elizabeth Murphy
Secretary: Susan Howlett
Treasurer: Litsa Kranias
Recording Secretary: Thomas M. Vondriska
Executive Secretary: Leslie Anderson Lobaugh
Council Members:


2015-2021: Dale Abel, Burns Blaxall, John Elrod, Joseph Hill, Tim O’Connell, Brian O’Rourke and Monte Willis
SPONSORS
Dear Colleagues

It is my pleasure to welcome you to the 37th Annual Conference of the North American Section of the International Society for Heart Research in Halifax, Nova Scotia, Canada. As a Canadian, I am very happy to have you visiting our part of the world, where I am sure that you will enjoy our kind “Canadian” hospitality. The meeting is being hosted by Dr. Susan Howlett and her colleagues, who have put together a wonderful scientific program that addresses a number of cutting edge topics in the cardiovascular research arena. The meeting will also provide both established and young investigators an ideal venue for exchange of scientific ideas. Susan and her colleagues have also put together a wonderful social program that will expose conference registrants to the rich culture that Halifax has to offer. There is a considerable history to Halifax, which is one of Canada’s oldest cities, and its harbor has always been Canada’s portal to the “Old World”. My sincerest thanks go out to Susan and her colleagues for the tremendous time and effort in putting together what I am sure will be an excellent congress.

I welcome you to Halifax, and hope you enjoy the congress.

Sincerely,

Dr. Gary D. Lopaschuk
President,
NAS-ISHR
Tuesday May 29, 2018
Overview

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<td>8:00 AM</td>
<td>Registration</td>
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<td>8:30 AM</td>
<td>Early Career Investigator (ECI) Symposium</td>
<td>Regency Ballroom</td>
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<td>10:30 AM</td>
<td>Coffee Break</td>
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<td>10:45 AM</td>
<td>Career Development Panel – Discussion</td>
<td>Regency Ballroom</td>
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<tr>
<td>12:00 PM</td>
<td>ECI Lunch with senior investigators (Ticket Required)</td>
<td>Admiral Room</td>
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<tr>
<td>2:00 PM</td>
<td>Young Investigator Competition - Junior Sci.</td>
<td>Regency Ballroom</td>
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<td>3:30 PM</td>
<td>Coffee Break</td>
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<tr>
<td>4:00 PM</td>
<td>Young Investigator competition - Senior Sci.</td>
<td>Regency Ballroom</td>
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<tr>
<td>5:30 PM</td>
<td>Welcome Reception &amp; Posters – Session 1</td>
<td>Georgian Lounge &amp; Admiral Room</td>
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8:00 AM – 5:00 PM Registration

8:30 AM – 10:30 AM ECI Symposium

10:30 AM – 10:45 AM Coffee Break

10:45 AM – 11:45 AM ISHR-NAS Career Development Panel – Funding Opportunities
and Strategies for a Successful Grant Submission

Panel discussion on funding mechanisms, strategies, and grant writing advice for early career cardiovascular researchers across the U.S and Canada. Attendees will develop a better understanding of what the major national and international funding opportunities are, and how to best prepare successful grant applications based on the unique aspects of each region’s major funding sources.

Participants:

Ronglih Liao, Ph.D., FAHA
Professor, Stanford University School of Medicine, Stanford Cardiovascular Institute
Chair, Council on Basic Cardiovascular Sciences (BCVS), American Heart Association

Gary Lopaschuk, Ph.D.
Scientific Director, Mazankowski Alberta Heart Institute
Professor, Department of Pediatrics, University of Alberta

Krystle van Hoof, M.A.
Assistant Director, Institute of Gender and Health
Canadian Institutes of Health Research

Timothy McKinsey, Ph.D.
Associate Professor and Associate Division Head for Translational Research
School of Medicine and Division of Cardiology, University of Colorado
12:00 PM – 1:30 PM ECI Lunch with Senior Investigators  
(Admiral Room)  
(Ticket Required; Sponsored by ISHR International)

2:00 PM – 3:30 PM Young Investigator competition – Junior Sci.  
(Regency Ballroom)  
(Sponsored by Cincinnati Children's Hospital & Dr. Jeff Robbins)

CHAIR: Dr. Tom Vondriska, UCLA

Katherina Alsina  
Integrative Molecular and Biomedical Sciences, Baylor College of Medicine  
Houston, TX  
Advisor: Dr Xander Wehrens, MD, PhD

Randi Parks, PhD  
NHLBI/NIH  
Bethesda, MD  
Advisor: Dr Elizabeth Murphy, PhD

Lisa Dorn  
Dept of Physiology and Cell Biology and Dorothy M Davis Heart and Lung Res Inst, OSUMC  
Columbus, OH  
Advisor: Federica Accornero, PhD

3:30 PM – 4:00 PM Coffee Break  
(Admiral Room)

4:00 PM – 5:30 PM Young Investigator competition – Senior Sci.  
(Regency Ballroom)  
(Sponsored by Cincinnati Children's Hospital & Dr. Jeff Robbins)

CHAIR: Dr. Gary Lopaschuk, University of Alberta

Olympia Bikou, MD  
Cardiovascular Res Ctr, Icahn School of Med at Mount Sinai, New York, NY  
Advisor: Roger Hajjar, MD

Prabhakara Nagareddy, PhD  
Dept of Nutrition Sciences, UAB  
Birmingham, LA  
Advisor: W. Timothy Garvey, MD

Erin Reineke, PhD  
Center for Bioenergetics, Houston Methodist Res Inst  
Houston, TX  
Advisor: Dale J Hamilton, MD, FACP

5:30 PM – 8:00 PM Welcome Reception & Posters  
(Georgian Lounge and Admiral Ballroom)  
(Poster session sponsored by Scintica Instrumentation Inc).
7:00 AM | 8:00 AM  | Breakfast                          | Admiral Room
--- | --- | --- | ---
8:00 AM | 5:00 PM | Registration                       | Registration Desk
8:00 AM | 8:45 AM | Sarrazin Award Lecture             | Imperial Ballroom
9:00 AM | 10:30 AM| Symposium 1 Cell death, cancer treatment & cardiovascular disease | Imperial Ballroom
9:00 AM | 10:30 AM| Symposium 2 Proteomics & proteotoxicity in the heart and impact of co-morbid illness | Regency Ballroom
10:30 AM | 11:00 AM | Coffee Break                       | Admiral Room
11:00 AM | 12:30 AM | Symposium 3 Autophagy: fundamentals to cardiovascular disease | Imperial Ballroom
11:00 AM | 12:30 AM | Symposium 4 Rare diseases, cardiomyopathy and heart failure | Regency Ballroom
12:30 PM | 1:30 PM  | ISHR – NAS Council Meeting          | Britannia Room
12:30 PM | 2:00 PM  | Lunch & Posters Session II         | Admiral Room & Georgian Lounge
2:00 PM | 3:30 PM  | Symposium 5 Cardiovascular diseases in females | Imperial Ballroom
2:00 PM | 3:30 PM  | Symposium 6 Evolving trends in cardiac metabolism | Regency Ballroom
3:30 PM | 4:00 PM  | Coffee Break                        | Admiral Room
4:00 PM | 5:30 PM  | Symposium 7: Cardiac hypertrophy and heart failure | Imperial Ballroom
4:00 PM | 5:30 PM  | Symposium 8: New advances in stem cell and gene therapy | Regency Ballroom
5:30 PM | 7:00 PM  | Posters & Reception – Session II    | Georgian Lounge & Admiral Room
7:00 PM | 10:00 PM | ECI Social (Ticket Required)        | TBA

**Overview**

### 9:00 AM – 10:30 AM

**Symposium 1: Cell death, cancer treatment & cardiovascular disease**  
Imperial Ballroom

**CHAIRS:** Ian Dixon (University of Manitoba), Sayantan Jana (University of Alberta)

1. Novel small molecule inhibitors protect against doxorubicin-induced cardiomyopathy (Rick Kitsis, Einstein)
2. Cell death signaling pathways in the heart: doxorubicin (Lorrie Kirshenbaum, University of Manitoba and St Boniface)
3. E2F6 serves to protect myocardium in drug induced injury (Balwant Tuana, University of Ottawa)
4. Vitamin C mitigation of oxidative/nitrosative stress in doxorubicin-induced cardiomyopathy (Pawan Singal, University of Manitoba and St Boniface Hospital)
5. **Oral Abstract:** Validation of a GWAS–identified variant in RARG as a risk predictor of doxorubicin–induced cardiotoxicity using patient-derived hiPSC–CMs (Paul Burridge, Northwestern University)

9:00 AM – 10:30 AM  
**Symposium 2: Proteomics and proteotoxicity in the heart and impact of co-morbid illness**  
**Regency Ballroom**

**CHAIRS:** Monte Willis (Duke University), Erik Blackwood (San Diego State University)

1. Protein aggregates and proteotoxicity in the heart (Jeff Robbins, Cincinnati Children’s Hospital Medical Center)
2. The cardiac mitochondrial proteome (Peipei Ping, UCLA)
3. Cardiac amyloidosis: heart disease links in Alzheimer’s Disease (Federica del Monte, South Carolina)
4. Role of proteomics in studies of heart disease (J Van Eyk, Cedars-Sinai)
5. **Oral abstract:** Loss of the Prolyl Hydroxylase OGFOD1 In Vivo Leads to Metabolic Alterations (Leslie Kennedy, NIH)

10:30 AM – 11:00 AM  
**Coffee Break**  
**Admiral Room**

11:00 AM – 12:30 PM  
**Symposium 3: Autophagy: fundamentals to cardiovascular disease**  
**Imperial Ballroom**

**CHAIRS:** Aldrin Gomes (UC Davis), Charles Steenbergen (Johns Hopkins)

1. Cell death pathways in the heart: roads to cell dysfunction and death (Dale Abel, Iowa)
2. Mitochondrial Autophagy (Asa Gustafsson, University of California, San Diego)
3. Taking Heart: what we can learn from intra-operative biopsies of human heart (Roberta Gottlieb, Barbra Streisand Women’s Heart Center and Cedars-Sinai Heart Institute)
4. Autophagy and Cardiomyopathy (Thomas Pulinilkunnil, Dalhousie University)
5. **Oral abstract:** Cardiac insulin signaling is impaired concomitant with decreased branched-chain amino acid oxidation in human failing hearts (Liyan Zhang, University of Alberta)

11:00 AM – 12:30 PM  
**Symposium 4: Rare diseases, cardiomyopathy and heart failure**  
**Regency Ballroom**  
(Sponsored by Data Sciences of Cardiovascular Medicine at UCLA & Dr. Peipei Ping)

**CHAIRS:** Richard Vander Heide (Louisiana State), Hailey Jansen (University of Calgary)
1. Use of iPSCs to delineate the cardiac developmental defects associated with RAF1 mutations in Noonan Syndrome (Maria Kontaridis; Beth Israel Deaconess Medical Center, Boston, Massachusetts)
2. Cardiac defects in muscular dystrophy (Ghassan Bkaily, Université de Sherbrooke)
3. Mechanisms of Iron Overload and Cardiomyopathy in Thalassemia (Gary Sweeney, York University)
4. Sudden Cardiac Arrest in Infants as a potential cause of SIDS (Glen Tibbits, Simon Fraser University)
5. Oral abstract: Phosphodiesterase-S is Elevated in Failing Single Ventricle Myocardium and Affects Cardiomyocyte Remodeling in vitro (Anastacia Garcia, UC Denver)

12:30 PM – 1:30 PM ISHR – NAS Council Meeting
Britannia Room

12:30 PM – 2:00 PM Lunch and Posters
Admiral Room & Georgian Lounge

2:00 pm – 3:30 pm Symposium 5: Cardiovascular diseases in females
Imperial Ballroom

CHAIRS: Pieter de Tombe (Loyola University), Randi Parks (NIH)

1. Sex differences in mechanisms of cardioprotection (Elizabeth Murphy, NIH)
2. Male-female differences in functional responses to physiological challenges (Lea Delbridge, University of Melbourne)
3. The Basis for Sex Differences in the Response to the Heart to Disease and Exercise (Leslie Leinwand, University of Colorado)
4. Sex, Redox Signaling and Myocardial Ischemia-reperfusion Injury (Mark Kohr, Johns Hopkins)
5. Oral abstract: Sex-specific acute beneficial effects of an estrogen receptor agonist added to cardioplegic solution in adult and aging mouse hearts (Anjali Ghimire, Dalhousie University)

2:00 PM – 3:30 PM
Symposium 6: Evolving trends in cardiac metabolism
Regency Ballroom

CHAIRS: Suresh Selvaraj Palaniyandi (Wayne State University), Kim Ho, University of Alberta

1. Nutrient sensing and substrate metabolism in heart failure (Christine DeRosiers, Université de Montréal)
2. Transcriptional Circuits Controlling Mitochondrial Phenotype in the Developing and Diseased Heart (Dan Kelly, University of Pennsylvania)
3. Metabolic therapies and heart failure (Jason Dyck, University of Alberta)
4. Mitochondria remodeling in heart failure (Rong Tian, University of Washington)
5. Oral abstract: Caloric restriction limits fatty acid oxidation and improves cardiac function in heart failure associated with obesity (Qutuba Karwi, University of Alberta)

3:30 PM – 4:00 PM Coffee Break
Admiral Room

4:00 PM – 5:30 PM
Symposium 7: Cardiac hypertrophy and heart failure  
(Sponsored by the Journal of Molecular and Cellular Cardiology)

CHAIRS: Ronglih Liao (Stanford), Anastacia Garcia (University of Colorado)

1. Renal innervation and heart failure (David Lefer, Louisiana State University)
2. Novel pathways for physiologic cardiac hypertrophy (Lynn Megeney, University of Ottawa)
3. CAM Kinase II and heart failure (Mark Anderson, Johns Hopkins)
4. Epigenetic regulation of heart failure (Joe Hill, UT Southwestern Medical Centre)
5. **Oral abstract:** Forkhead box protein O1 (FoxO1) is required for exercise-induced, but not PI3K-induced, physiological cardiac hypertrophy (Kate Weeks, Baker Heart and Diabetes Institute)

4:00 PM – 5:30 PM

Symposium 8: New advances in stem cell and gene therapy  
(Sponsored by the Dalhousie Medical Research Foundation)

CHAIRS: Keith Brunt (Dalhousie University), Christie Aguiar (Dalhousie University)

1. Rejuvenation of diseased myocardium using stem cell based therapies (Ren-Ke Li, University of Toronto)
2. Stem Cell Therapy for Aging Frailty (Joshua M. Hare, University of Miami)
3. Cardiac progenitor cells and heart regeneration (Mark Sussman, San Diego State University)
4. Models of Atrial Fibrillation using Human Embryonic Stem Cell-Derived Atrial Tissue (Peter Backx, York University)
5. **Oral abstract:** Mitochondrial Dysfunction and Senescence of Human Cardiac Progenitor Cells Are Prevented by Hypoxic Culture (Dieter Kubli, San Diego State Univ)

5:30 PM – 7:00 PM Posters & Reception – Poster Session II  
Georgian Lounge & Admiral Room

7:00 PM – 10:00 PM ECI Social (Ticket Required) – Sponsored by Temple University & Dr. W Koch
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<td>8:00 AM</td>
<td>2018 ISHR Distinguished Leader Award Presentation</td>
<td>Imperial Ballroom</td>
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<td>Recipient: Rick Moss (University of Wisconsin)</td>
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<td>Jeff Molkentin (Cincinnati Children's Hospital Medical Center)</td>
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<td>Title “Mechanism whereby cell therapy benefits the heart post MI injury”</td>
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### Thursday May 31, 2018

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9:00 AM – 10:30 AM

**Symposium 9: Contribution of the extracellular matrix to heart disease:**
beyond the structural support

*Imperial Ballroom*

*(Sponsored by the CIHR Institute of Circulatory and Respiratory Health)*

**CHAIRS:** Michael Czubryt (University of Manitoba), Manuel Rosa (UCLA)

1. Multi-functional role of the extracellular matrix in heart disease (Zam Kassiri, University of Alberta)
2. Defining the cardiac fibroblast (Michelle Tallquist, University of Hawaii)
3. Cardiac fibroblasts in heart failure (Burns Blaxall, Cincinnati Children's Hospital Medical Center)
4. Role of epigenetics in regulating cardiac hypertrophy and fibrosis in heart failure (Timothy McKinsey, University of Colorado)
5. **Oral abstract:** Epicardium-derived resident mesenchymal cells promote cardiac fibrosis (Pearl Quijada, Univ of Rochester Med Ctr)

9:00 AM – 10:30 AM

**Symposium 10: Lipid metabolism and signaling in cardiovascular disease**

*Regency Ballroom*

*(Sponsored by the CIHR Institute of Nutrition, Metabolism and Diabetes)*

**CHAIRS:** Brian Rodrigues (University of British Columbia), Natasha Fillmore (NIH)

1. Lysophospholipid signaling and cardiovascular disease (Petra Kienesberger, Dalhousie University)
2. Dietary Modulation of Plasma Oxylipins in Conditions of Cardiovascular Disease (Grant Pierce, University of Manitoba)
3. Lipid droplet: Signaling hub for cardiac function (Guenter Haemmerle, University of Graz, Austria)
4. Temporal Control of Cardiac Metabolism: From Physiologic Significance to Pathologic Consequence (Martin Young, University of Alabama)
5. **Oral abstract:** Magnesium Supplementation Improves Cardiac Mitochondrial and Diastolic Function (Man Liu, Univ of Minnesota – to be confirmed)

10:30 AM – 10:45 AM **Coffee Break**

*Admiral Room*

10:45 AM – 12:15 PM

**Symposium 11: Mechano-electric coupling: altered mechanics & cardiac arrhythmias**

*Imperial Ballroom*

*(Sponsored by the Journal of Molecular and Cellular Cardiology)*

**CHAIRS:** Litsa Kranias (University of Cincinnati), Eilidh MacDonald (Dalhousie University)

1. Mechano-electric coupling-induced arrhythmias in disease and with age (Alex Quinn Dalhousie University)
2. Human atrial fibroblasts beyond fibrosis - voltage-dependent and mechanosensitive ion channels (Ursula Ravens, Freiburg)
3. The Role of Matrix-Myocyte Interactions In Cardiac Remodeling (Jen Davis, University of Washington)
4. Studying pathophysiological mechano-electrical interactions in human (Igor Efimov, University of Washington)
5. **Oral abstract:** The role of Natriuretic Peptide Receptor C in atrial electrophysiological remodelling in hypertensive heart disease to be decided from poster submissions (Hailey Jansen, University of Calgary)

10:45 AM – 12:15 PM
**Symposium 12: Repair of the vulnerable heart**  
*Regency Ballroom*

**CHAIRS:** Tim Kamp (University of Wisconsin), Ron Vagnozzi (Cincinnati Children’s Hospital)

1. Cardiac Repair & Injury (Steve Houser, Temple University)
2. Biophysical characteristics of human pluripotent stem cells (Jonathan Cordeiro, Masonic Medical Research Laboratory)
3. Biomaterials and Optimizing the Host Substrate Environment for Cardiac Repair (Erik Suuronen, University of Ottawa Heart Institute)
4. Building better scars (Peter Kohl, Freiburg)
5. **Oral abstract:** Inhibition of inflammatory serine proteases promotes vascularization and enhances cardiac repair after myocardial infarction (Mikhail Kolpakov, Temple University)

12:15 PM – 2:00 PM **Lunch**  
*Admiral Room*

12:15 PM – 1:15 PM **ISHR – NAS Council Meeting**  
*Britannia Room*

2:00 PM – 3:30 PM
**Symposium 13: Frailty and cardiovascular diseases in males and females**  
*Imperial Ballroom*  
*(Sponsored by the Dalhousie Medical Research Foundation)*

**CHAIRS:** John Sapp (Dalhousie University), Alice Kane (Harvard University)

1. How frailty and sex affect heart disease risk and expression in ageing humans and in mice (Ken Rockwood, Dalhousie University)
2. Frailty and ventricular function: sex differences in the results of intervention studies (Susan Howlett; Dalhousie University)
3. Frailty modifies sinoatrial node and atrial structure and function in aging (Robert Rose, University of Calgary)
4. The influence of age on cardiovascular function in a large animal model (Katherine Dibb, University of Manchester)
5. **Oral abstract:** Chronic treatment with the ACE inhibitor enalapril attenuates the development of frailty, prevents cardiac hypertrophy and increases IL-10 levels in aging male C57BL/6 mice (Alice Kane, Dalhousie Univ/Harvard Univ)

2:00 PM – 3:30 PM
Symposium 14: Myocardial contractile & regulatory proteins in heart disease Regency Ballroom (Sponsored by the Journal of Molecular and Cellular Cardiology)

**CHAIRS:** Beata Wolska (University of Illinois at Chicago), Stephan Lange (University of California San Diego)

1. A Novel Therapeutic Strategy Targeting Cardiac Myosin to Treat Failing Hearts: Energizing with deoxy-ATP (Mike Regnier, University of Washington).
2. Put a Cap On It: The role of cardiac CapZ in the response to stress (WG Pyle, University of Guelph)
3. Walking a Thin Line: The role of thin filament proteins in cardiomyopathies and their therapeutic potential (JC Tardiff, University of Arizona)
4. Beta-arrestin in the sacomere/cytoskeletal network (David Ryba, University of Illinois at Chicago)
5. **Oral abstract:** Age-specific changes in myofibril mechanics in pediatric dilated cardiomyopathy (Kathleen Woulfe, UC Denver)

3:30 PM – 3:45 PM **Coffee Break** Admiral Room

3:45 PM – 5:15 PM

Symposium 15: Cardiovascular diseases in neonates and children Imperial Ballroom

**CHAIRS:** Scott Grandy (Dalhousie University), Kathleen Woulfe (University of Colorado)

1. Metabolic changes in the neonatal heart (Gary Lopaschuk, University of Alberta)
2. The pathogenesis of heart failure in children and adults: key differences and treatment implications (Kika Sucharov, University of Colorado)
3. Cardiovascular risk in the pediatric population: why maternal metabolic status matters (Jennifer Thompson, University of Calgary)
4. Defining the role of an epicardial specific miRNA in the growth and adaptation of the postnatal heart (Patrick Burgon, University of Ottawa Heart Institute)
5. **Oral abstract:** Determination of the Possible Role of Cardiac Troponin I Mutation in Sudden Cardiac Death in Infants Using Human Induced Pluripotent Stem Cell-derived Cardiomyocytes (Sanam Shafaattalab, Simon Fraser Univ)

3:45 PM – 5:15 PM

Symposium 16: Ischemia & cardioprotection in hearts at risk Regency Ballroom

**CHAIRS:** JF Legaré (Dalhousie University), Qutuba G. Karwi (University of Alberta)

1. Role of RIP3 and CaMKII in ischemia- and oxidative stress-induced myocardial damage damage (Rui-Ping Xiao, Institute of Molecular Medicine, Peking University)
2. A novel role for GRK2 in the ischemic Heart (Walter Koch, Temple University)
3. Role of iron in cardiovascular disease (Hossein Ardehali, Northwestern University)
4. Sulhydration and the Diabetic Heart (John Calvert, Emory University)
5. **Oral abstract:** MCL-1 Couples Mitochondrial Dynamic Machinery to Mitochondrial Quality Control in Response to Stress (Alexandra Moyzis, UC San Di Diego)
5:45-6:15 PM **Board Buses to Banquet**  
Lord Nelson Hotel & Suites

7:00 PM – 9:30 PM **Lobster Banquet and Awards Ceremony**  
Pier 21 Museum

10:30 PM – 11:45 PM **Board Buses for return to Lord Nelson Hotel**  
Pier 21 Museum
Friday June 1, 2018
Overview

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<td>Symposium 18: Epigenetics and lineage commitment</td>
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<td>11:00 AM</td>
<td>Symposium 19: Mitochondria in hearts at risk</td>
<td>Imperial Ballroom</td>
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<td>11:00 AM</td>
<td>Symposium 20: Heart diseases in pregnancy</td>
<td>Regency Ballroom</td>
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<td>12:30 PM</td>
<td>Lunch and Closing</td>
<td>Georgian Room</td>
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8:00 AM – 9:00 AM Breakfast

9:00 AM – 12:00 PM Registration

9:00 AM – 10:30 AM

Symposium 17: Cardiac excitation-contraction coupling & heart disease across the life course

(Sponsored by the CIHR Institute of Circulatory and Respiratory Health)

CHAIRS: Crystal M. Ripplinger (University of California Davis), Hirad Feridooni (Dalhousie University)

1. Impact of CAM-Kinase dependent phosphorylation of the RyR on cardiac contraction (Don Bers, UC Davis)
2. Myocardial calcium handling in diastolic dysfunction (William Louch, University of Oslo)
3. New roles for junctophilin in the failing heart (Xander Wehrens, Baylor)
4. Molecular mechanisms of RyR activation and regulation (SR Wayne Chen, University of Calgary)
5. Oral abstract: Dual optical mapping of the innervated mouse heart reveals unique electrophysiological responses during fight-or-flight (Lianguo Wang, UC Davis)

9:00 AM – 10:30 AM

Symposium 18: Epigenetics and lineage commitment

(Sponsored by the Dalhousie Medical Research Foundation)

CHAIRS: Sanjiv Dhingra (University of Manitoba), Brittney Allen (Dalhousie University)

1. Molecular mechanisms regulating cardiac progenitor cell proliferation and differentiation (Kishore Pasumarthi, Dalhousie University)
2. Origin of cardiac lineages: insights for regeneration (Reza Ardehali, UCLA)
3. Chromatin structure in the normal and failing heart (Thomas Vondriska, UCLA)
4. Proteomic analyses of chromatin in heart failure (Sarah Franklin, University of Utah)
5. **Oral abstract:** P2Y14 nucleotide receptor defines a novel cardiac progenitor subpopulation with enhanced functional responses (Farid Khalafalla, San Diego State Univ)

10:30 AM – 11:00 AM **Coffee Break**  
Georgian Room

11:00 AM – 12:30 PM  
**Symposium 19: Mitochondria in hearts at risk**  
Regency Ballroom

**CHAIRS:** Chris Baines (University of Missouri-Columbia), TBA

1. Mitochondrial dysfunction in heart disease (Brian O’Rourke, Johns Hopkins)
2. New insights into the molecular regulation of mitochondrial calcium exchange (John Elrod, Temple University School of Medicine)
3. Mitochondrial imaging (Eva Rog-Zielinska, Freiburg)
4. MicroRNAs and mitochondrial function (Sam Das, Johns Hopkins)
5. **Oral abstract:** The E3 Ubiquitin Ligase Parkin Regulates Mitophagy from the Nucleus (Sarah Shires, UC San Diego)

**Symposium 20: Heart diseases in pregnancy**  
Imperial Ballroom

**CHAIRS:** Sarah Wells (Dalhousie University), Rushita Bagchi (University of Colorado)

1. Regulation of cardiac automaticity during pregnancy (Céline Fiset, Université de Montréal)
2. The impact of in utero particulate matter exposure on heart disease in adulthood (Loren Wold, Ohio State)
3. Cardiac pyruvate oxidation in pregnancy (Zolt Arany, University of Pennsylvania)
4. Cardiac remodeling in pregnancy: role of sex hormones (Mansoureh Eghbali, UCLA)
5. **Oral abstract:** Activation of Ca2+-dependent signaling causes postpartum cardiac hypertrophy in rats with gestational diabetes (Sanda Despa, University of Kentucky)

11:00 AM – 12:30 PM

12:30 PM **LUNCH and CLOSING**  
Georgian Room
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Imperial Ballroom</th>
<th>Regency Ballroom</th>
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</thead>
<tbody>
<tr>
<td>May 30, 2018</td>
<td>9:00 am-10:30 am</td>
<td>Symposium 1  Cell death, cancer treatment &amp; cardiovascular disease</td>
<td>Symposium 2  Proteomics and proteotoxicity in the heart and impact of co-morbid illness</td>
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<td>11:00 am-12:30 pm</td>
<td>Symposium 3  Autophagy: fundamentals to cardiovascular disease</td>
<td>Symposium 4  Rare diseases, cardiomyopathy and heart failure</td>
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<tr>
<td></td>
<td>2:00 pm-3:30 pm</td>
<td>Symposium 5  Cardiovascular diseases in females</td>
<td>Symposium 6  Evolving trends in cardiac metabolism</td>
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<td>4:00 pm-5:30 pm</td>
<td>Symposium 7  Cardiac hypertrophy and heart failure</td>
<td>Symposium 8  New advances in stem cell and gene therapy</td>
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<tr>
<td>May 31, 2018</td>
<td>9:00 am-10:30 am</td>
<td>Symposium 9  Contribution of the extracellular matrix to heart disease: beyond the structural support</td>
<td>Symposium 10  Lipid Metabolism and Signaling in Cardiovascular Disease</td>
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<td>11:00 am-12:30 pm</td>
<td>Symposium 11  Mechano-electric coupling (MEC): altered mechanics &amp; cardiac arrhythmias</td>
<td>Symposium 12  Repair of the vulnerable heart</td>
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<td>2:00 pm-3:30 pm</td>
<td>Symposium 13  Frailty and cardiovascular diseases in males and females</td>
<td>Symposium 14  Myocardial contractile and regulatory proteins in heart disease</td>
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<tr>
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<td>3:45 pm-5:15 pm</td>
<td>Symposium 15  Cardiovascular diseases in neonates and children</td>
<td>Symposium 16  Ischemia, cardioprotection and mitochondria in hearts at risk</td>
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<tr>
<td>June 1, 2018</td>
<td>9:00 am-10:30 am</td>
<td>Symposium 17  Cardiac excitation-contraction coupling and heart disease across the life course</td>
<td>Symposium 18  Epigenetics and lineage commitment</td>
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<tr>
<td></td>
<td>11:00 am-12:30 pm</td>
<td>Symposium 19  Mitochondria in hearts at risk</td>
<td>Symposium 20  Heart diseases in pregnancy</td>
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