

UNIVERSITY OF OTTAWA
HEART INSTITUTE
INSTITUT DE CARDIOLOGIE
DE L'UNIVERSITÉ D'OTTAWA

31ST ANNUAL

Ottawa Cardiovascular Research Day



April 30, 2018

Foustanellas Auditorium

University of Ottawa
Heart Institute



**The Ottawa Cardiovascular Research Day
Committee gratefully acknowledges the
support of our event partners.**

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The Polk Family Foundation

Ms. Coralie Lalonde

UOHI Electrophysiology Research Group

UOHI Trainee Committee

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Welcome to the 2018 Ottawa Cardiovascular Research Day

On behalf of the planning committee, it is with great pleasure we welcome you to the 2018 Ottawa Cardiovascular Research Day (formerly Research Day). This event is open to all cardiovascular research trainees in the Ottawa region, and is designed to give trainees an opportunity to showcase their outstanding projects and network with scientists and peers.

We are excited to share with you the following program highlights:

- Keynote lecture by Dr. Stanley Nattel, renowned cardiac electrophysiologist and researcher from the Montreal Heart Institute
- UOHI Investigator of the Year Lecture by Dr. Jennifer Reed, Scientist and Director, Exercise Physiology & Cardiovascular Health Laboratory, University of Ottawa Heart Institute (UOHI) and Assistant Professor, School of Epidemiology & Public Health, University of Ottawa
- Ottawa Region's Cardiovascular Trainee of the Year Lecture by Ms. My-Anh Nguyen, PhD Candidate working with Dr. Katey Rayner, Department of Biochemistry, Microbiology & Immunology, University of Ottawa and UOHI
- Presentation of the Dr. Robert Roberts Award for Research Excellence
- **NEW** The Coralie Lalonde Innovation Award Finals will be held in the Foustanelas Auditorium and open to all event attendees! This award recognizes innovative ideas and trainees' ability to effectively communicate to a lay audience. Attend to hear your colleagues pitch their work to a panel of external judges!!
- **NEW** The Award for the Best Fundamental Science Oral Presentation is now named in honour of Dr. Yves Marcel, former scientist and Chief Scientific Officer at UOHI
- UOHI Trainee Committee Awards for Best Trainee and PI Participation at the Work in Progress Rounds

With 14 abstract talks and 65 posters, we are confident the Ottawa Cardiovascular Research Day is a great venue to network with your colleagues and learn more about the work being done in the Ottawa region. The day will conclude with a networking session, and an awards ceremony to recognize the best oral presentations and posters.

We would like to thank our speakers, presenters, judges, session chairs, and organizers for making this event possible. We would also like to extend our gratitude to the Polk Family Foundation, Ms. Coralie Lalonde, the UOHI Electrophysiology Research Group, the UOHI Trainee Committee, and our Bronze Level Sponsor: AstraZeneca Canada Inc. for their generous support.

Join us on April 30 for an exciting meeting!

Sincerely,



Pablo Nery, MD
Chair, Research Day Committee



Erik Suuronen, PhD
Co-Chair, Research Day Committee

Day At A Glance

7:00 – 8:00	Registration and Poster Setup
8:00 – 8:15	<p>Opening Remarks Dr. Pablo Nery, Chair, Research Day Committee, UOHI</p> <p>Chief Scientific Officer Address Dr. Peter Liu, VP Research & Chief Scientific Officer, UOHI</p> <p>Welcome Address Dr. Thierry Mesana, CEO & President, UOHI</p>
8:15 – 9:30	<p>Oral Presentation Session 1 <i>Linkage to Heart Failure Innovation Hub</i> Chair: Ms. Supriya Hota, MSc Candidate, UOHI</p>
8:15 – 8:30	<p>O-1 Encapsulation of Explant-derived Cardiac Stem Cells Using a High Throughput Microfluidic Device for Cell Mediated Tissue Repair of Injured Myocardium Mr. Pushpinder Kanda, MD-PhD Candidate (Supervisor: Dr. Darryl Davis), UOHI</p>
8:30 – 8:45	<p>O-2 Gold Nanoparticle Incorporated Collagen-based Conductive Patch Improves Cardiac Function in Murine Myocardial Infarction Dr. Katsuhiko Hosoyama, Postdoctoral Fellow (Supervisors: Drs. Erik Suuronen & Emilio Alarcon), UOHI</p>
8:45 – 9:00	<p>O-3 Pharmacologic Inhibition of Fatty Acid Oxidation Improves Right Ventricular Function & Oxidative Metabolism in Pulmonary Arterial Hypertension Rats Dr. Ali Ahmadi, Postdoctoral Fellow (Supervisor: Dr. Lisa Mielniczuk), UOHI</p>
9:00 – 9:15	<p>O-4 Differential Effects of Female Sex Hormones on Severe Pulmonary Arterial Hypertension Induced by VEGFR2 Inhibition Dr. Ketul Chaudhary, Postdoctoral Fellow (Supervisor: Dr. Duncan Stewart), Ottawa Hospital Research Institute</p>
9:15 – 9:30	<p>O-5 Sex-Specific Trends in Incidence & Mortality for Urban & Rural Ambulatory Heart Failure Patients in Eastern Ontario from 1994-2013 Dr. Elizabeth Chan, Anesthesiology Resident (Supervisors: Drs. Louise Sun & Lisa Mielniczuk), UOHI</p>
9:30 – 9:40	Health Break

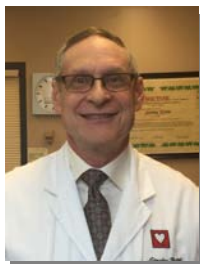
<p>9:40 – 10:40</p>	<p>Oral Presentation Session 2 <i>Linkage to Atherosclerosis & Cardiometabolic Diseases Innovation Hub</i> Chair: Dr. Ali Ahmadi, Postdoctoral Fellow, UOHI</p>
<p>9:40 – 9:55</p>	<p>O-6 Outcomes of Switching P2Y12 inhibitors in Patients Who Underwent Percutaneous Coronary Intervention: A Retrospective Cohort Study Dr. Angel Fu, Internal Medicine Resident (Supervisor: Dr. Derek So), UOHI</p>
<p>9:55 – 10:10</p>	<p>O-7 In-Hospital Outcomes of STEMI Patients on Warfarin Undergoing Primary PCI Dr. Jeffrey Marbach, Cardiology Resident (Supervisor: Dr. Michel Le May), UOHI</p>
<p>10:10 – 10:25</p>	<p>O-8 Sex Differences in Thoracic Aortic Aneurysm Growth: Role of Aortic Stiffness Dr. Kevin Boczar, Cardiology Resident (Supervisor: Thais Coutinho), UOHI</p>
<p>10:25 – 10:40</p>	<p>O-9 Utility of Novel Biomarkers in the Prediction of Congestive Kidney Injury Following Cardiac Surgery Mr. Jason Zelt, MD-PhD Candidate (Supervisor: Louise Sun), UOHI</p>
<p>10:40 – 11:10</p>	<p>Oral Presentation Session 3 <i>Linkage to Brain & Heart Innovation Hub</i> Chair: Ms. Samantha Sarkar, PhD Candidate, UOHI</p>
<p>10:40 – 10:55</p>	<p>O-10 One Size Does Not Fit All: Differential Effects of Cardiac Rehabilitation on Quality of Life in Patients with Obesity compared to Normal Weight Dr. Tasuka Terada, Postdoctoral Fellow (Supervisor: Dr. Jennifer Reed), UOHI</p>
<p>10:55 – 11:10</p>	<p>O-11 Heart Failure Induced Depression-Like Behaviour in Ovariectomized Rats is Prevented by Estrogen Replacement Theme 1 Ms. Fatimah Najjar, MSc Candidate (Supervisor: Dr. Frans Leenen), UOHI</p>
<p>11:10 – 11:25</p>	<p>Lunch</p>

<p>11:25 – 11:55</p>	<p>Coralie Lalonde Innovation Award Finalists' Pitches</p> <p>Moderator: Dr. Katey Rayner, Scientist, UOHI</p> <p>Chair & Member of Judging Panel: Ms. Coralie Lalonde, CEO, Katsura Investments</p>
	<p>I-1 Building Blocks to Repair a Broken Heart</p> <p>Ms. Justina Pupkaite, PhD Candidate (Supervisor: Dr. Erik Suuronen), UOHI</p> <p>I-2 Infection-fighting Gel for Treatment of Diabetic Foot Ulcers</p> <p>Ms. Caitlin Lazurko, MSc Candidate (Supervisor: Dr. Emilio Alarcon), UOHI</p> <p>I-3 Cocooned Stem Cells to Promote Tissue Repair & Regeneration in Heart Disease</p> <p>Mr. Nicholas Cober, PhD Candidate (Supervisor: Dr. Duncan Stewart), Ottawa Hospital Research Institute</p> <p>I-4 New Nuclear Scan for Early Diagnosis of Mild Heart Damage from Breast Cancer Treatment</p> <p>Dr. Samia Massalha, Fellow in Cardiac Imaging (Supervisors: Dr. Terry Ruddy & Benjamin Chow), UOHI</p>
<p>11:55 – 13:00</p> <p>11:55 – 12:00</p> <p>12:00 – 12:30</p> <p>12:30 – 12:35</p> <p>12:35 – 12:40</p> <p>12:40 – 13:00</p>	<p>Award Presentations & Investigator and Trainee of the Year Lectures</p> <p>Announcing the Recipient of the Dr. Robert Roberts Award of Research Excellence & Award Presentation</p> <p>Presented by: Dr. Thierry Mesana, CEO & President & Dr. Peter Liu, VP Research & Chief Scientific Officer, UOHI</p> <p>UOHI Investigator of the Year Lecture <i>HIIT-ing Heart Disease with Physical Activity</i></p> <p>Dr. Jennifer Reed, Scientist, UOHI</p> <p>Presentation of the Coralie Lalonde Innovation Award to the Winner</p> <p>Presented by: Ms. Coralie Lalonde, CEO, Katsura Investments</p> <p>UOHI Trainee Committee Awards: Best Participation in the Work-in-Progress Trainee Rounds</p> <p>Presented by Dr. Lisa Cotie & Ms. Sandrine Parent, UOHI</p> <p>Ottawa Cardiovascular Research Trainee of the Year Lecture <i>A Tale of Exosomes: What We Know about Macrophage Communication</i></p> <p>Ms. My-Anh Nguyen, PhD Candidate (Supervisor: Dr. Katey Rayner), UOHI</p>

13:00 – 14:00	<p>KEYNOTE LECTURE</p> <p><i>Translational Research in Cardiology: How Clinical Curiosity can lead to Exciting and Potentially Important Research Findings</i></p> <p>Stanley Nattel, MD, FRCPC, FACC Director, Electrophysiology Research Program, Montreal Heart Institute Professor of Medicine and Paul-David Chair in Cardiovascular Electrophysiology, University of Montreal</p>
14:00 – 15:30	<p>Poster Session & Poster Judging (Track Area)</p> <p>(see page 16 for the List of Posters)</p>
15:30 – 16:15	<p>Oral Presentation Session 4</p> <p><i>Linkage to Arrhythmias Innovation Hub</i></p> <p>Chair: Ms. Sandrine Parent, MSc Candidate, UOHI</p>
15:30 – 15:45	<p>O-12 Dual Mechanisms of Cardiac Sodium Channel Inhibition by Wnt Signaling</p> <p>Dr. Aizhu Lu, Postdoctoral Fellow (Supervisor: Dr. Wenbin Liang), UOHI</p>
15:45 – 16:00	<p>O-13 Evaluation of Sympathetic Function with PET ¹¹C-Hydroxyephedrine & Ammonia (¹³N-NH³) in a Canine Pacing Model of Atrial Fibrillation</p> <p>Mr. Robert Miner, PhD Candidate (Supervisor: Robert deKemp), Carleton University & UOHI</p>
16:00 – 16:15	<p>O-14 Evaluation of a Novel Cardioversion Intervention for Atrial Fibrillation: the Ottawa AF Cardioversion Protocol</p> <p>Dr. Daniel Ramirez, Cardiology Resident (Supervisor: Dr. David Birnie), UOHI</p>
16:30 – 16:45	<p>Refreshment Break and Networking</p>

<p>16:45 – 17:00</p>	<p>Awards Ceremony Chair: Dr. Erik Suuronen, Co-Chair, Research Day Committee, UOHI</p>
	<p>Awards include:</p> <ul style="list-style-type: none"> • Dr. Yves Marcel Award for Best Basic Science Oral Presentation • Howard & Doris Polk Award for Best Clinical Science / Bio-behavioural & Population Health Oral Presentation • Award for Best Basic Science Poster • AstraZeneca Award for Best Clinical Science / Bio-Behavioural & Population Health Poster • Awards for Honourable Mentions
<p>17:00 – 17:05</p>	<p>Closing Remarks Dr. Pablo Nery, Chair, Research Day Committee, UOHI</p>
<p>17:05 – 17:15</p>	<p>Poster Tear-Down</p>

Keynote Speaker Profile



Stanley Nattel, MD, FRCPC, FACC

Director, Electrophysiology Research Program, Montreal Heart Institute

Professor of Medicine & Paul-David Chair in Cardiovascular Electrophysiology, University of Montreal

Dr. Stanley Nattel received his M.D. from McGill University in 1974 and undertook Internal Medicine and Clinical Pharmacology training at McGill between 1974 and 1978. He then obtained Cardiology clinical and basic research training at Indiana University and University of Pennsylvania (1978-1981) before joining the faculty at McGill in 1981. In 1987, he transferred to the University of Montreal and Montreal Heart Institute, where he directed the Research Center between 1990 and 2004.

He is presently Paul-David Chair in Cardiovascular Electrophysiology at the University of Montreal and Director of the Electrophysiology Research Program at the Montreal Heart Institute, where he continues to practice clinical cardiology. He is Editor in Chief of the Canadian Journal of Cardiology and Associate Editor of Cardiovascular Research, and is on the editorial board of a number of other journals including Circulation Research, Circulation Arrhythmia and Electrophysiology, Drugs, JACC, JACC Clinical Electrophysiology, Journal of Molecular and Cellular Cardiology, Journal of Cardiovascular Electrophysiology, Journal of Cardiovascular Pharmacology, and Nature Reviews in Cardiology.

His research focuses on clinically-relevant mechanisms of cardiac bioelectricity, particularly atrial fibrillation, proarrhythmia, cardiac remodeling, ion channel molecular physiology and mechanisms of drug action. His lab uses a wide range of molecular, cellular, whole-animal and theoretical methods to gain insights into clinically-relevant basic mechanisms and identify novel therapeutic targets. He has also been involved in the initiation and conduct of many clinical trials, and has sat on steering committees and participated in or chaired data monitoring and safety committees. He has supervised over 160 research trainees, published over 600 papers in peer-review journals, has an h-index of 125, and is a Fellow of the Royal Society of Canada (Academy of Science), the Royal College of Physicians of Canada, the American College of Cardiology and the Heart Rhythm Society.

Have you heard...? The Institute's "*Ask Me About Clinical Research*" campaign, developed in conjunction with Network of Networks (N2), has been launched!



Help us improve patient care, get involved in our research activities.

THERE ARE TWO WAYS YOU CAN HELP

- ✓ Become a Patient Partner in Research
- ✓ Join a Clinical Research Study

For more information ottawaheart.ca/clinicalresearch

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N2 NETWORK OF NETWORKS
RÉSEAU DES RÉSEAUX

The purpose of this campaign is to:

- Increase public awareness of clinical trials
- Get patients and staff talking about clinical trials so patients can consider clinical trials as a potential option
- Encourage patients to approach staff about clinical trials in order to assist with dispelling any misconceptions & increase access to clinical trial resources
- Increase patient awareness on how they can become a Patient Partner in Research

Visit our booth to get more information on how you can participate in the campaign!

UOHI Investigator of the Year



Jennifer Reed, PhD

**Scientist and Director, Exercise Physiology & Cardiovascular Health Laboratory, UOHI
Assistant Professor, School of Epidemiology & Public Health, Faculty of Medicine,
University of Ottawa**

Dr. Jennifer Reed directs the Exercise Physiology and Cardiovascular Health Laboratory at the University of Ottawa Heart Institute (UOHI), and is appointed as an Assistant Professor in the Department of Epidemiology, Faculty of Medicine at the University of Ottawa.

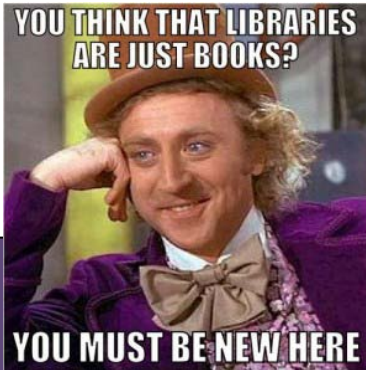
Dr. Reed's research is focused on understanding the role of exercise in the prevention of heart disease and during the rehabilitation following a cardiac event. She is particularly interested in the role of exercise in the management and treatment of heart rhythm disorders, developing novel exercise training strategies for patients with heart disease, and developing workplace interventions to improve heart health. Dr. Reed's work spans from basic science to clinical practice and population health, with a focus on women's heart health.

In only a few short years since establishing her independent research program in late 2013, Dr. Reed has quickly earned national and international recognition. Just in this past year, she was awarded a Canadian Institutes of Health Research (CIHR) Project Grant; a Servier Investigator-Initiated Research Grant; a Heart and Stroke Foundation's Emerging Research Leader Initiative Award; and an Ontario Early Researcher Award. Dr. Reed is the recipient of a CIHR Clinician Scientist Award, a prestigious grant to recognize research excellence by an early career investigator.

Dr. Reed has published 37 peer-reviewed articles, 20 of which are first-authored. Eight of these articles were published within this past year alone. Notable papers from the last year included a systematic review and meta-analysis, "The Impact of Workplace Physical Activity Interventions on Physical Activity and Cardiometabolic Health among Working-age Women" in the 'Go Red for Women Issue' in *Circulation: Cardiovascular Quality and Outcomes*, and an original study examining the physical activity and cardiovascular health of nurses in the Champlain region of Ontario. The results of the latter have been brought forward to key local, provincial and national stakeholders at the Nurses' Night Dissemination Event led by Dr. Reed herself.

Dr. Reed serves on grant committees for the Canadian National Transplant Research Program, CIHR Project Scheme Program, and the Health Research Board of the Research Institute in Dublin, Ireland.

Dr. Reed is regularly invited to speak at national and international meetings.



Visit the Berkman Library booth in the poster display (track area) to learn more.

There will be chocolate at the booth!

Ottawa Region Trainee of the Year



My-Anh Nguyen, MSc

**PhD Candidate (Supervisor: Dr. Katey Rayner),
University of Ottawa & UOHI**

Ms. My-Anh Nguyen is completing her doctoral study at the University of Ottawa Heart Institute under the tutelage of Dr. Katey Rayner.

Ms. Nguyen's research is focused on macrophage communication via exosomal transfer of microRNAs during the development of atherosclerosis. Based on the understanding of how macrophages use exosomes to send signals to nearby cells, her research also aims to design nanoparticles that mimic macrophage-derived exosomes to deliver key miRNAs or other therapeutics directly to the atherosclerotic plaque, enabling the development of new strategies to treat heart disease.

Ms. Nguyen is recognized for the excellent research accomplishments already achieved at this early stage of her career. In this past year, Ms. Nguyen published a first-authored paper in *Arteriosclerosis, Thrombosis, and Vascular Biology*. This work demonstrated that microRNAs derived from extracellular vesicles from atherogenic macrophages may accelerate the development of plaque formation, by decreasing cell migration and promoting macrophage entrapment in the vessel wall. The publication received editorial highlights in the same issue. Ms. Nguyen also co-authored another study published in *Circulation Research*.

Ms. Nguyen has received travel awards from CIHR and other organizations to present at regional and international scientific meetings. She has presented at the Gordon Research Conference; the Arteriosclerosis, Thrombosis, and Vascular Biology meeting; the Canadian Lipoprotein Conference and have won several best presentation awards for both abstract talks and posters. She has received the University of Ottawa Cardiac Endowment Fund at the Heart Institute Graduate Award; the University of Ottawa Excellence Award in Graduate Studies; and the Ontario Graduate Scholarship in support of her doctoral research.

Ms. Nguyen is also recognized for her leadership in the trainee community. She is a teaching assistant for the undergraduate Biochemistry program. She is involved with the University of Ottawa's Let's Talk Science and provided hands-on lab demonstrations to primary and secondary students. She recently served on the UOHI Trainee Committee and led the organization of workshops for trainees. In the laboratory, Ms. Nguyen teaches new trainees the skills and critical thinking concepts needed to succeed in research. She is the go-to-person on her floor. Ms. Nguyen truly embodies the spirit of collaboration, drive, and dedication to research excellence.

List of Posters: Basic Science

- P-1 **Preliminary development & evaluation of selective MMP-13 radiotracers for imaging of atherosclerosis**
Rami Al-Haddad, MSc Candidate, UOHI
(Supervisor: Dr. Benjamin Rotstein)
- P-2 **Exploring alternate conformations of PCSK9: effects on LDL & LDL receptor binding**
Ikhuosho Asikhia, MSc Candidate, UOHI
(Supervisor: Ds. Thomas Lagace)
- P-3 **PCSK9 Mediated Degradation of the LDL Receptor is Influenced by Ca²⁺ Levels in the Early Endosome**
Dr. Curtis Brandt, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Thomas Lagace)
- P-4 **Development of selective PET radiotracers for matrix metalloproteinase-13**
Ariel Buchler, BSc Hon Candidate, UOHI
(Supervisor: Dr. Benjamin Rotstein)
- P-5 **Selective impairment in fatty acid oxidation is associated with maladaptive right ventricular remodeling & failure in pulmonary arterial hypertension**
Dr. Virgilio Cadette, Postdoctoral Fellow, Ottawa Hospital Research Institute
(Supervisor: Dr. Duncan Stewart)
- P-6 **Spontaneous mutation in Pituitary Tumor Transforming Gene-1 (PTTG1) leads to increased susceptibility to severe pulmonary arterial hypertension in rats**
Dr. Ketul Chaudhary, Postdoctoral Fellow, Ottawa Hospital Research Institute
(Supervisor: Dr. Duncan Stewart)
- P-7 **Microencapsulation of endothelial progenitors in matrix-supplemented hydrogels improves cell retention & therapeutic efficacy in pulmonary arterial hypertension**
Mr. Nicholas Cober, PhD Candidate, Ottawa Hospital Research Institute
(Supervisor: Dr. Duncan Stewart)
- P-8 **Differences in cardiac image noise for two SPECT camera designs**
Ms. Sarah Cuddy-Walsh, PhD Candidate, Carleton University/UOHI
(Supervisor: Dr. R. Glenn Wells)
- P-9 **Functional relationship of the CARS2 locus to CAD**
Ms. Anh-Thu Dang, MSc Candidate, UOHI
(Supervisor: Dr. Ruth McPherson)
- P-10 **Effects of inducible over-expression of Glyoxalase-1 (GLO1) on cardiac function in GATA6 heterozygous mice**
Dr. Godwin Dogbevia, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Erik Suuronen)

- P-11 **Evaluation of Myocardial Apoptosis in Surgically Induced Myocardial Infarction & Ischemia/Reperfusion Mice with Dual-Tracer MicroSPECT**
Mr. Daniel Duan, Technologist, UOHI
(Supervisor: Dr. Terrence Ruddy)
- P-12 **Mechanisms of atheroprotection by the anti-inflammatory mediator Resolvin D1**
Dr. AnneClaire Duchez, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Katey Rayner)
- P-13 **Combined methylglyoxal scavenger & collagen hydrogel therapy improves function of the infarcted heart**
Cagla Eren-Cimenci, PhD Candidate, UOHI
(Supervisor: Dr. Erik Suuronen)
- P-14 **Identifying the predominant subtype & genetic determinants of macrophage lipophagy**
Mr. Garrett Fairman, BSc Hon Candidate, UOHI
(Supervisor: Dr. Mireille Ouimet)
- P-15 **Wnt signaling regulates calcium channels in cardiomyocytes**
Ms. Kaya Gaudet, MSc Candidate, UOHI
(Supervisor: Dr. Wenbin Liang)
- P-16 **Unveiling GATA6 multicellular control of Sinoatrial node development & function**
Dr. Lara Gharibeh, University of Ottawa
(Supervisor: Dr. Mona Nemer)
- P-17 **Collagen Age-related expression of matricellular proteins Nov & Wisp1 & their role in cardiac repair & remodelling**
Ms. Danielle Giroux, MSc Candidate, UOHI
(Supervisor: Dr. Erik Suuronen)
- P-18 **Endothelial-Targeted Diphtheria Toxin Mediated Cell Injury Leads to Pulmonary Arterial Hypertension Followed by Rapid Repair & Resolution**
Dr. Rafael Godoy, Postdoctoral Fellow, Ottawa Hospital Research Institute
(Supervisor: Dr. Duncan Stewart)
- P-19 **Methylglyoxal Effects in Cell Therapy for Myocardial Infarction**
Mayte Gonzalez-Gomez, MSc Candidate, UOHI
(Supervisor: Dr. Erik Suuronen)
- P-20 **Endogenous Expression of Translationally Controlled Tumour Protein Regulates Growth of Pulmonary Microvascular Endothelial Cells**
Dr. Miriel Ho, Postdoctoral Fellow, Ottawa Hospital Research Institute
(Supervisor: Dr. Duncan Stewart)

- P-21 **Reconstructing the Tree of Life: Co-Delivery of Induced Pluripotent Stem Cell-derived Endothelial & Smooth Muscle Cells Enhances Recellularization of Decellularized Lung Scaffolds**
Dr. Mirabelle Ho, Postdoctoral Fellow, Ottawa Hospital Research Institute
(Supervisor: Dr. Duncan Stewart)
- P-22 **Synthesis of selective MMP-13 inhibitor for radiolabeling**
Abdillahi Kadir Abdi, Undergraduate Research Student, UOHI
(Supervisor: Dr. Benjamin Rotstein)
- P-23 **Essential role for vascular smooth muscle cell Gata5 in aortic valve formation**
Dr. Alice Lau, Postdoctoral Fellow, University of Ottawa
(Supervisor: Dr. Mona Nemer)
- P-24 **Collagen Hydrogels for the Treatment of Diabetic Foot Ulcers**
Ms. Caitlin Lazurko, MSc Candidate, UOHI
(Supervisor: Dr. Emilio Alarcon)
- P-25 **Effects of Exercise Training & TrkB blockade on Cardiac BDNF-TrkB signaling post Myocardial Infarction in Rats**
Dr. Heow Won Lee, PhD Candidate, UOHI
(Supervisor: Dr. Frans Leenen)
- P-26 **Innate immune nod1/rip2 signaling is essential for cardiac hypertrophic response with a surprising critical interaction with mitochondrial danger activator**
Dr. Han-Bin Lin, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Peter Liu)
- P-27 **Rhodium-catalyzed coupling of organozinc halides and isocyanates for preparing carbon-11 radiolabeled amides**
Braeden Mair, BSc Hon Candidate, UOHI
(Supervisor: Dr. Benjamin Rotstein)
- P-28 **Data-driven respiratory gating in cardiac PET/CT using the Positron Emission Tracking algorithm**
Mr. Spencer Manwell, PhD Candidate, Carleton University/UOHI
(Supervisor: Dr. Rob deKemp)
- P-29 **Recombinant Human Collagen for Cardiac Repair**
Ms. Sarah McLaughlin, PhD Candidate, UOHI
(Supervisor: Dr. Erik Suuronen)
- P-30 **An Injectable CCN1-Collagen Matrix for Cardiac Cell Support & Improving Left Ventricular Function Post Myocardial Infarction**
Dr. Brian McNeill, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Erik Suuronen)

- P-31 **Biomimetic Polymeric Materials for Cardiac Tissue Repair**
Dr. Christopher McTiernan, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Emilio Alarcon)
- P-32 **A Comparison of the Stem Cell Characteristics of Single Donor Cardiac-Derived Cell Products**
Mr. Connor Michie, MSc Candidate, UOHI
(Supervisor: Dr. Darryl Davis)
- P-33 **Effects of inflammatory cytokines on the immune-modulatory properties of Mesenchymal Stem Cell**
Dr. Luciana Moneira, Postdoctoral Fellow, Ottawa Hospital Research Institute
(Supervisors: Drs. Shirley Mei & Duncan Stewart)
- P-34 **Encapsulation of Cardiac Stem Cells Enhances Paracrine Activity and Promotes Regeneration of Ischemic Cardiomyopathy**
Ms. Sandrine Parent, MSc Candidate, UOHI
(Supervisor: Dr. Darryl Davis)
- P-35 **Non-toxic Chemically Crosslinked Collagen Scaffolds for Cell Engraftment**
Ms. Justina Pupkaite, PhD Candidate, UOHI
(Supervisor: Dr. Erik Suuronen)
- P-36 **New rubidium-82 generator efficiency improves over time**
Ms. Jennifer Renaud, Research Analyst, UOHI
(Supervisor: Dr. Rob deKemp)
- P-37 **Eating up the plaque: Investigating the metabolism of foam cell lipid droplets**
Ms. Sabrina Robichaud, Undergraduate Research Student, UOHI
(Supervisor: Dr. Mireille Ouimet)
- P-38 **The Regulation of PCSK9 by Lipoprotein Interactions**
Ms. Samantha Sarkar, PhD Candidate, UOHI
(Supervisor: Dr. Thomas Lagace)
- P-39 **Automated Synthesis & Validation of [18F]mFBG for Cardiac Sympathetic Denervation Imaging**
Uzair Sayani, MSc Candidate, UOHI
(Supervisor: Dr. Benjamin Rotstein)
- P-40 **Mitochondrial dynamics & the effects on macrophage polarization in the context of atherosclerosis**
Ms. Leah Susser, MSc Candidate, UOHI
(Supervisor: Dr. Katey Rayner)

- P-41 **N-terminal Enrichment Based Proteomics: Revealing the DPP4 Proteome**
Ms. Natasha Trzaskalski, PhD Candidate, UOHI
(Supervisor: Dr. Erin Mulvihill)
- P-42 **Micro-RNA-205 Regulates Heart Size Through Direct Modulation of the Hippo Pathway**
Mr. Jonathan Weldrick, PhD Candidate, UOHI
(Supervisor: Dr. Patrick Burgon)
- P-43 **Identification of Novel GATA4 Interacting Partners Required for Endocardial Development**
Ms. Elizabeth Jamieson Whitcomb, PhD Candidate, University of Ottawa
(Supervisor: Dr. Mona Nemer)
- P-44 **Semi-Automatic Segmentation of the Myocardial Scar from 3D Late Gadolinium Enhancement Magnetic Resonance Images Using a Deep Learning Approach**
Fatemeh Zabihollahy, PhD Candidate, Carleton University
(Supervisor: Dr. Eranga Ukwatta)
- P-45 **Methylglyoxal negatively affects fibroblast-ECM interactions through altered integrin expression**
Ms. Julia Zhu-Pawlowsky, Research Student, UOHI
(Supervisor: Dr. Erik Suuronen)

List of Posters: Clinical Science

- P-46 **Reducing the Burden of Low Risk Chest Pain Admissions: Role of The Expedited Outpatient Stress Testing Quality Improvement Initiative**
Dr. Aws Almufleh, Cardiology Resident, UOHI
(Supervisor: Dr. Benjamin Chow)
- P-47 **Incidence and Risk Factors of Leucopenia Post Heart Transplantation: A Single Center Experience**
Dr. Aws Almufleh, Cardiology Resident, UOHI
(Supervisor: Dr. Ellamae Stadnick)
- P-48 **Sex differences in physical and mental health outcomes following aerobic interval training**
Dr. Daniele Chirico, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Jennifer Reed)
- P-49 **The Results of Maximal and Submaximal Functional Capacity Test in Cardiac Rehabilitation Settings: Understanding Sex Differences**
Dr. Lisa Cotie, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Bob Reid)
- P-50 **eHealth interventions aimed to increase moderate-to-vigorous intensity physical activity levels among working age women: a systematic review and meta-analysis**
Dr. Lisa Cotie, Postdoctoral Fellow, UOHI
(Supervisor: Dr. Bob Reid)
- P-51 **Compositional analysis of physical activity sedentary time and sleep and associations with work performance and mental health among nurses: an analysis of the cross-sectional Champlain Nurses Study**
Ms. Sonia Hajo, BSc Hon Candidate, UOHI
(Supervisor: Dr. Stephanie Prince Ware)
- P-52 **Associations of Arterial Hemodynamic Measures with Accelerated Thoracic Aortic Aneurysm Growth**
Dr. Waseem Hindieh, Clinical Fellow, UOHI
(Supervisor: Dr. Thais Coutinho)
- P-53 **Sex Differences in the Associations of Arterial Stiffness and Pulsatile Hemodynamics with Thoracic Aortic Aneurysm Size**
Dr. Jennifer Jue, Clinical Fellow, UOHI
(Supervisor: Dr. Thais Coutinho)
- P-54 **Treadmill Exercise Responses in Newly Diagnosed Hypertensive African Women**
Dr. Olabimpe Lamai, Clinical Fellow, UOHI
(Supervisor: Dr. Richard Davies)

- P-55 **A Novel Method for Registering left atrium Fibrosis from LGE-MRI to Electroanatomical Maps**
 Jinny Lee, MSc Candidate, Carleton University
 (Supervisor: Dr. Eranga Ukwatta)
- P-56 **Detection of Apoptosis with 99mTc-rh Annexin-V 128 in Patients with Early Stages Breast Cancer Receiving Doxorubicin- Based Chemotherapy**
 Dr. Samia Massalha, Cardiac Imaging Fellow, UOHI
 (Supervisors: Drs. Terrence Ruddy & Benjamin Chow)
- P-57 **Detection of Apoptosis with 99mTc-rhAnnexin V-128 Imaging in Asymptomatic Patients with Carotid Atherosclerosis Plaque**
 Dr. Samia Massalha, Cardiac Imaging Fellow, UOHI
 (Supervisors: Drs. Terrence Ruddy & Benjamin Chow)
- P-58 **Assessing Clinical Prevalence and Significance of Hyperkalemia in Patients with Heart Failure with Reduced Ejection Fraction**
 Dr. Andrew Moeller, Clinical Fellow, UOHI
 (Supervisor: Dr. Lisa Mielniczuk)
- P-59 **Association of Intraoperative Hypotension and Renal Replacement Therapy After Cardiac Surgery**
 Dr. Janet Ngu, Cardiac Surgery Resident, UOHI
 (Supervisor: Dr. Louise Sun)
- P-60 **Are hospital nurses in the Champlain region of Ontario at risk of not meeting Canadian strength training guidelines?**
 Mr. Kyle Scott, PhD Candidate, UOHI
 (Supervisor: Dr. Jennifer Reed)
- P-61 **Standard versus low-dose rubidium-82 dynamic positron emission tomography imaging with scanner-dependent bias correction for myocardial perfusion imaging and blood flow quantification**
 Ms. Brenda Truong, Undergraduate Research Student, UOHI
 (Supervisors: Dr. Rob deKemp & Ms. Jennifer Renaud)
- P-62 **Removal of residual blood-background activity in FDG PET myocardial viability imaging may improve quantification of hibernation and total scar burden**
 Mr. Matt Wiles, Research Student, UOHI
 (Supervisor: Ms. Jennifer Renaud)
- P-63 **Reproducibility and Repeatability of Cardiac 11C-Hydroxyephedrine PET Sympathetic Nervous System Imaging and Kinetics**
 Mr. Kai Yi Wu, MD Candidate, UOHI
 (Supervisors: Drs. Rob deKemp & Rob Beanlands)

P-64 **Simplified Estimation of Myocardial Flow Reserve using Stress/Rest Activity Ratios with Nitrogen-13-Ammonia and Rubidium-82 PET**

Mr. Kai Yi Wu, MD Candidate, UOHI
(Supervisors: Drs. Rob deKemp & Rob Beanlands)

P-65 **Fluorine-18 LMI1195 Positron Emission Tomography Provides Accurate Measure of Cardiac Sympathetic Innervation Compared to Carbon-11 Hydroxyephedrine**

Mr. Jason Zelt, MD-PhD Candidate, UOHI
(Supervisor: Dr. Rob Beanlands)

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Dr. Stanley Nattel, Montreal Heart Institute.
Drs. Thierry Mesana, CEO & President; Peter Liu, VP Research & Chief Scientific Officer; Pablo Nery; Erik Suuronen; Jennifer Reed & Ms. My-Anh Nguyen (UOHI).

INNOVATION AWARD REVIEWERS & JUDGES & SESSION MODERATOR

Chair: Ms. Coralie Lalonde, CEO, Katsura Investments. Judges: Ms. Coralie Lalonde; Mr. Richard Deboer; Mr. Simon Kennedy, Deputy Minister, Health Canada; Drs. Katey Rayner & Derek So (UOHI). Session Moderator: Dr. Katey Rayner (UOHI). Innovation Award Abstract Reviewers: Drs. Darryl Davis & Katey Rayner (UOHI).

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Heather Tulloch (UOHI).

POSTER JUDGES

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Dr. Rebecca Thornhill, The Ottawa Hospital; Drs. Ali Ahmadi, Rob deKemp,
Katsuhiko Hosoyama, Han Kim, Wenbin Liang, Erin Mulvihill, Katey Rayner,
David Smyth, Sebastien Soubeyrand, Erik Suuronen, Glenn Wells, & Branka
Vulesevic (UOHI). Clinical Science and Bio-behavioural & Population Health:
Drs. Andrew Crean, Jodi Edwards, Mehrdad Golian, David Messika-Zeitoun,
Pablo Nery, & Jennifer Reed (UOHI).

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