



# 27<sup>th</sup> Annual **Research Day Program Guide**

**May 9, 2014**

**Foustanelas Auditorium  
University of Ottawa Heart Institute**

**[ottawaheart.ca/research-day](http://ottawaheart.ca/research-day)**

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

## **SILVER LEVEL SPONSORS:**



## **CONFERENCE SUPPORTERS:**



Ms. Coralie Lalonde  
The Polk Family Foundation

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# Welcome to the 27th Annual Research Day

Warmest welcome to the 2014 University of Ottawa Heart Institute (UOHI)'s Annual Research Day!

This year's Research Day is once again being held in conjunction with the [Ottawa Heart Research Conference](#) and open to all cardiovascular research trainees in the Ottawa region. This annual event is an excellent venue for Trainees and Principal Investigators alike to network and showcase their outstanding research. Here are a few highlights from this year's exciting program:

- We are honoured to have our keynote lecture entitled "*A Research Journey: From Bench to Bedside*" to be delivered by Dr. Jean-François Tanguay from the Montréal Heart Institute.
- At the lunch hour session, we will feature the UOHI 2014 Basic and Clinical Science Investigators of the Year Lectures by Dr. Alexandre Stewart, and Dr. David Birnie (via video recording), respectively. This session will also include the presentation of the Robert Roberts Research Excellence Award to the inaugural recipient: Dr. Peter Liu, the UOHI's VP Research and Chief Scientific Officer.
- Another highlight will be the second iteration of the Coralie Lalonde Innovation Award, which was launched last year to recognize the most innovative abstract which presents a new idea, process, technology, or product that could deliver on an unmet need or solve a critical problem in the cardiovascular field. This year, we received a total of 17 abstracts submitted for consideration of this prestigious award. The top 10 lay abstracts have been invited to present at the semi-finals on Research Day (please note the Innovation Award semi-finals are open to presenters only). Three finalists will then be selected to present to all Research Day attendees, and the Innovation Award Final Panel of Judges: Dr. Wilbert Keon; Mr. Ian Curry (CEO of DNA Genotek); and Ms. Coralie Lalonde, Chair of the Ottawa Heart Institute Research Corporation (OHIRC) Board of Directors and the sponsor of the award. Apart from the prize, this year's winner will receive a unique opportunity for a one-on-one mentoring session with Mr. Ian Curry. It is our pleasure to invite you to attend the Innovation Award final rounds (11:00 – 11:40 a.m. in the Foustanelas Auditorium).

We are confident that the special lectures, the Innovation Award, our oral abstract presentations and 55 posters which span all the four themes of the [ORACLE Strategic Plan](#), will make Research Day a great opportunity to network and learn more about the research being done at the UOHI and the Ottawa region. Research Day will conclude with a wine and cheese networking reception and an award 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 for their continued and generous support; our Silver Level Sponsors: AstraZenecaCanada Inc. and Servier Canada Inc., and our Conference Supporters: BayerHealthcare Canada and Ms. Coralie Lalonde, for their generous support.

We hope you will enjoy Research Day 2014!

Sincerely,



Derek So, MD  
Chair, Research Day Committee



Alexandre Stewart, PhD  
Co-Chair, Research Day Committee

# Day At A Glance

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|--------------|---|
| 7:00 – 8:00  | <b>Registration, Continental Breakfast, and Poster Setup</b>  |
| 8:00 – 8:15  | <b>Welcoming Address</b><br>Dr. Thierry Mesana, President & CEO, UOHI<br><b>Chief Scientific Officer Address</b><br>Dr. Peter Liu, VP Research & Chief Scientific Officer, UOHI<br><b>Introduction to Research Day 2014</b><br>Dr. Derek So, Chair, Research Day Committee, UOHI                                    |
| 8:15 – 8:50  | <b>Keynote Address</b><br><br><i>A Research Journey: From Bench to Bedside</i><br><br><b>Dr. Jean-François Tanguay, MD, FRCPC, FACC, FAHA, FESC</b><br>Professor, Director, MD-PhD & Intervention Cardiology Training Program,<br>Université de Montréal; Director, Coronary Care Unit, Montréal Heart<br>Institute |
| 8:50 – 9:00  | <b>Refreshment Break</b>  |
| 9:00 – 10:00 | <b>Oral Presentations – ORACLE Theme 1: Personal Tailored Health Solutions</b><br>Chair: Ms. Kerri-Anne Mullen, PhD Candidate, UOHI   |
| 9:00 – 9:15  | <b>O-1 Is there an Association between Myocardial Flow Reserve as Measured on Rubidium-82 Positron Emission Tomography and Allograft Rejection in Patients Following Cardiac Transplantation?</b><br>Dr. Brian McArdle, Clinical Fellow, UOHI<br>(Supervisor: Dr. Benjamin Chow)                                    |
| 9:15 – 9:30  | <b>O-2 Evaluation of Myocardial Coronary Flow Reserve with Cardiac PET Imaging in Heart Failure Patients with Preserved Ejection Fraction</b><br>Dr. Kajenny Srivatharajah, Resident, UOHI<br>(Supervisor: Dr. Lisa Mielniczuk)   |
| 9:30 – 9:45  | <b>O-3 Evolution of Left Ventricular Hypertrophy in Aortic Valve Replacement Patients: A Longitudinal Study of 639 Patients</b><br>Ms. Laura Mesana, MSc Candidate, UOHI<br>(Supervisor: Dr. Marc Ruel)   |
| 9:45 – 10:00 | <b>O-4 A Novel Regulatory Function of Interferon Regulatory Factor-3 in Cocksackievirus B3-Induced Myocarditis</b><br>Dr. David Smyth, Postdoctoral Fellow, UOHI<br>(Supervisor: Dr. Peter Liu)   |

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| 9:00 – 11:00  | <b>Coralie Lalonde Innovation Award Semi-Finals - Open to Innovation Award Presenters Only (Multimedia Room H-2373)</b><br>Chair: Ms. Coralie Lalonde, Chair, OHIRC Board   |
| 9:00 – 9:10   | <b>Toxic Metabolites in Heart Failure</b><br>Mr. Nick Blackburn, PhD Candidate, UOHI<br>(Supervisor: Dr. Erik Suuronen)   |
| 9:10 – 9:20   | <b>Use of Stem Cells to Improve Vessel Formation in Engineered Lungs</b><br>Dr. Ketul Chaudhary, Postdoctoral Fellow, Ottawa Hospital Research Institute (OHRI)<br>(Supervisor: Dr. Duncan Stewart)   |
| 9:20 – 9:30   | <b>Does Higher Hospital Spending Improve Survival Outcomes for Myocardial Infarction? Examining the Cost-Outcomes Relationship using Time-Varying Covariates</b><br>Ms. Deborah Cohen, PhD Candidate, OHRI<br>(Supervisor: Dr. Doug Manuel) |
| 9:30 – 9:40   | <b>Mice Myocardial Blood Flow Response to Hypercapnia for Assessment of the Coronary Endothelial Function using Micro-PET Imaging</b><br>Dr. Etienne Croteau, Postdoctoral Fellow, UOHI<br>(Supervisor: Dr. Rob deKemp)                     |
| 9:40 – 9:50   | <b>A Role For SLMAP in GLUT4 Trafficking</b><br>Aaraf Dewan, Undergraduate Student, uOttawa<br>(Supervisor: Dr. Balwant Tuana)  |
| 9:50 – 10:00  | <b>Deep versus Mild Cooling of Blood Circulation for Limited Aortic Surgery</b><br>Dr. Juanda, Nadzir, Resident, UOHI<br>(Supervisor: Dr. Munir Boodhwani)  |
| 10:00 – 10:10 | <b>Impact of Left Ventricular Dilatation and Dysfunction on Outcome Following Aortic Valve Repair: Multicenter Results in 760 Patients</b><br>Dr. Tarek Malas, Resident, UOHI<br>(Supervisor: Dr. Munir Boodhwani)                          |
| 10:10 – 10:20 | <b>HACE1-dependent Protein Degradation Provides Cardiac Protection in Response to Haemodynamic Stress</b><br>Mr. Mark Moon, PhD Candidate, UOHI<br>(Supervisor: Dr. Peter Liu)  |
| 10:20 – 10:30 | <b>Investigating How Blood Cholesterol Levels Are Affected by the Protein PCSK9</b><br>Ms. Samantha Sarkar, MSc Candidate, UOHI<br>(Supervisor: Dr. Thomas Lagace)  |
| 10:30 – 10:40 | <b>Regulation of Endothelial Nitric Oxide Synthase in Human Blood Outgrowth Endothelial Progenitor Cells</b><br>Yifan Yuan, PhD Candidate, OHRI<br>(Supervisor: Dr. Duncan Stewart)   |

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| 10:00 – 11:00 | <b>Oral Presentations –ORACLE Theme 3: Optimizing Technology &amp; Human Interface in Heart &amp; Vessels</b><br>Chair: Mr. Ali Ahmadi, PhD Candidate, UOHI  |
| 10:00 – 10:15 | <b>O-5 Functional Enhancement of Circulating Angiogenic Cells Cultured on a Collagen Biomaterial Using the Cysteine-rich Angiogenic Inducer 61 (CYR-61) Protein</b><br>Dr. Brian McNeill, Postdoctoral Fellow, UOHI<br>(Supervisor: Dr. Erik Suuronen)   |
| 10:15 – 10:30 | <b>O-6 The Use of Endothelial Colony Forming Cells (ECFCs) to Optimize Revascularization of Acellular Rat Lung Scaffolds</b><br>Dr. Ketul Chaudhary, Postdoctoral Fellow, OHRI<br>(Supervisor: Dr. Duncan Stewart)   |
| 10:30 – 10:45 | <b>O-7 The Effects of a Novel Endothelin Receptor Antagonist, Macitentan, on Right Ventricular Energetics and Function in a Sugen5416/Hypoxia Rat Model of Severe Pulmonary Artery Hypertension</b><br>Ms. Kasia Drozd, MSc Candidate, UOHI,<br>(Supervisors: Drs. Jean DaSilva & Lisa Mielniczuk) |
| 10:45 – 11:00 | <b>O-8 Deep versus Mild Hypothermia for Limited Aortic Arch Surgery</b><br>Dr. Nadzir Juanda, Resident, UOHI<br>(Supervisor: Dr. Munir Boodhwani)  |
| 11:00 – 11:40 | <b>Coralie Lalonde Innovation Award Final Rounds &amp; Award Presentation</b><br>Chair: Ms. Coralie Lalonde, Chair, OHIRC Board<br><br>The three finalists will be selected from the semi-final rounds.<br>The winner will be presented with the prize.  |
| 11:40 – 13:00 | <b>Lunch/ Dr. Robert Roberts Research Excellence Award/ Investigator of the Year Lectures</b><br>Chair: Dr. Derek So, Chair, Research Day Committee, UOHI  |
| 11:40 – 12:00 | <b>Lunch</b>   |
| 12:00 – 12:10 | <b>Robert Roberts Research Excellence Award</b><br>Award recipient: Dr. Peter Liu, VP Research & Chief Scientific Officer, UOHI<br>Presented by: Dr. Thierry Mesana, President & CEO, UOHI   |
| 12:10 – 12:35 | <b>UOHI 2014 Basic Science Investigator of the Year Lecture</b><br>Dr. Alexandre Stewart   |
| 12:35 – 13:00 | <b>UOHI 2014 Clinical Science Investigator of the Year Lecture</b><br>Dr. David Birnie via video recording (Dr. Birnie is not available to attend due to a previous engagement)  |

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| 13:00 – 14:30 | <b>Poster Session and Poster Judging (Track Area)</b><br>(see page 14 for List of Posters)   |
| 14:30 – 15:30 | <b>Oral Presentations – ORACLE Theme 2: Unlocking Novel Causes of Cardiovascular Disease</b><br>Chair: Dr. Brian McNeill, Postdoctoral Fellow, UOHI  |
| 14:30 – 14:45 | <b>O-9 A Role For SLMAP in GLUT4 Trafficking</b><br>Aaraf Dewan, BSc Hon Candidate, uOttawa<br>(Supervisor: Dr. Balwant Tuana)   |
| 14:45 – 15:00 | <b>O-10 Caspase-dependent Pathways Governing Cardiac Hypertrophy</b><br>Ms. Charis Putinski, OHRI<br>(Supervisor: Dr. Lynn Megeney)  |
| 15:00 – 15:15 | <b>O-11 Glyoxalase-1 Over-expression Preserves Cardiac Function Post-MI by Enhancing Vascularity and Reducing AGE Accumulation and Cardiomyocyte Apoptosis</b><br>Mr. Nick Blackburn, PhD Candidate, UOHI<br>(Supervisor: Dr. Erik Suuronen) |
| 15:15 – 15:30 | <b>O-12 HACE1-dependent Protein Degradation Provides Cardiac Protection in Response to Haemodynamic Stress</b><br>Mr. Mark Moon, PhD Candidate, UOHI<br>(Supervisor: Dr. Peter Liu)  |
| 15:30 – 16:00 | <b>Oral Presentations – ORACLE Theme 4: Community Intervention, Health Systems and Health Policy Innovations in Cardiovascular Health</b><br>Chair: Dr. Stephanie Prince Ware, Post-Doctoral Fellow, UOHI                                    |
| 15:30 – 15:45 | <b>O-13 How Physically Active Are Canadian Registered Nurses Working in a Tertiary Care Cardiovascular Health Centre?</b><br>Dr. Jennifer Reed, Associate Scientist, UOHI<br>(Supervisor: Dr. Andrew Pipe)                                   |
| 15:45 – 16:00 | <b>O-14 Health, Healthcare, and Economic Impacts of a Hospital-based Smoking Cessation Intervention</b><br>Ms. Kerri-Ann Mullen, PhD Candidate, UOHI<br>(Supervisor: Dr. Doug Manuel)  |
| 16:00 – 16:45 | <b>Networking Reception and Poster Session</b>   |



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|-----------------------------|---|
| <p><b>16:45 – 17:00</b></p> | <p><b>Award Ceremony</b><br/> Chair: Dr. Alexandre Stewart, Co-Chair, Research Day Committee, UOHI</p>  |
|                             | <p><b>Awards Include:</b></p> <ul style="list-style-type: none"> <li>• Howard and Doris Polk Award for the Best Clinical Science / Bio-behavioural &amp; Population Health Presentation</li> <li>• Servier Award for Best Basic Science Oral Presentation</li> <li>• Best Basic Science Poster</li> <li>• AstraZeneca Award for Best Clinical Science / Bio-behavioural &amp; Population Health Poster</li> <li>• Oral Presentation and Poster Honourable Mentions</li> </ul> |
| <p><b>17:00 – 17:05</b></p> | <p><b>Closing Remarks</b><br/> Dr. Derek So, Chair, Research Day Committee, UOHI</p>  |
| <p><b>17:05 – 17:30</b></p> | <p><b>Poster Tear-Down</b></p>  |

## Keynote Speaker Profile



**Jean-François Tanguay, MD, FRCPC, FACC, FAHA, FESC**  
Professor of Medicine, Director, MD-PhD & Interventional  
Cardiology Training Programs, Université de Montréal,  
Director, Coronary Care Unit, Montreal Heart Institute

Dr. Jean-François Tanguay received his M.D. degree from the Université de Montréal School of Medicine, where he completed his internship, internal medicine residency and cardiology fellowship. After an interventional fellowship at the Montreal Heart Institute,

he trained at Duke University Medical Center as Post-Doctoral Fellow in the Interventional Program. He is an internationally recognized expert in the field of interventional cardiology and in translational research. His current research interests focus on improving vascular healing, stabilizing vulnerable plaque and reducing restenosis.

During his research fellowship, Dr Tanguay studied the early prototypes of bioresorbable drug eluting stents platforms in pre-clinical and thrombosis models. He contributed to the discovery of a P-Selectin inhibitor to block platelet-leukocyte interactions and to prevent restenosis. These findings could lead to a new class of medication inhibiting pathologic interactions between platelets, leucocytes and endothelial cells. Dr. Tanguay's more recent investigations also brought promising discoveries related to 17beta-estradiol and the specific contribution of estrogen receptors in vascular healing. Most recently, he performed the first coronary implantation of a drug-eluting bioresorbable scaffold (ABSORBTM) in North-America.

Dr. Tanguay is President of the CCS Anti Platelet Guidelines Committee and their guidelines' recommendations were published in the Canadian Journal of Cardiology in 2011. A Focused Update has also been published in 2013 in the Canadian Journal of Cardiology. He is a Fellow of the American Heart Association (FAHA), the American College of Cardiology (FACC), the Royal College of Physicians and Surgeons of Canada (FRCPC) and the European Society of Cardiology (FESC). He acted as President of the Canadian Association of Interventional Cardiology (CAIC) from 2002-2005 and is co-director of the Interventional Cardiology Montreal-Live Symposium. He has been elected Governor in Quebec for the American College of Cardiology.

Author or co-author of more than 300 scientific publications, abstracts and book chapters, he acts as grant reviewer for the Fonds de Recherche en Santé du Québec, the Heart and Stroke Foundation of Canada and the Canadian Institutes of Health Research. Dr. Tanguay is the Principal investigator of many clinical trials at the Montreal Heart Institute and received funding by peer-review grants (FRSQ, CIHR, HSFC). He is a reviewer for many scientific Journals including Circulation, the Canadian Journal of Cardiology, the American Journal of Cardiology, Catheterization and Cardiovascular Intervention and the European Heart Journal.

## Robert Roberts Research Excellence Award Recipient



**Peter Liu, MD**

VP Research and Chief Scientific Officer, UOHI  
Director, Cardiac Function Laboratory, UOHI  
Professor, Faculty of Medicine, University of Ottawa

Dr. Peter Liu joined the Heart Institute in 2012 and currently holds the position of Chief Scientific Officer.

Dr. Liu is widely recognized for his transformative research and contributions to heart failure and cardiac inflammation research. Dr. Liu discovered how viruses can enter the myocardium and trigger inflammation, and how innate and acquired immunity contribute to cardiac remodeling and heart failure progression following injury. His current research focuses on innovative proteomic biomarkers to detect early and personalize treatment for cardiac diseases, and elucidate novel mechanisms of disease.

The Robert Roberts Award specifically recognizes Dr. Liu's publication on HACE1 in *Nature Communications*. Dr. Liu and his team have discovered that HACE1, in human cells and mouse models, plays a protective role in heart failure – by regulating the removal of damaged proteins in cardiac cells following injury. These findings have important implications in our search for ways to protect the heart as we age, as well as implications for other chronic diseases.

Dr. Liu plays an instrumental role in knowledge translation, having harmonized and simplified the major national guidelines using a novel evidence-based consensus approach (C-CHANGE program). He is also passionate about finding ways to maximize knowledge translation globally using innovative technologies.

## UOHI Basic Science Investigator of the Year



### **Alexandre Stewart, PhD**

Principal Investigator, the Ruddy Canadian  
Cardiovascular Genetics Centre, UOHI

Associate Professor, Departments of Medicine, and  
Biochemistry, Microbiology & Immunology, University  
of Ottawa

Dr. Alexandre Stewart is the Principal Investigator at the Ruddy Canadian Cardiovascular Genetics Centre based at the UOHI.

Dr. Stewart is recognized as the 2014 UOHI Basic Science Investigator of the Year. Since joining the Institute in 2005, Dr. Stewart has successfully built an independent research program in Vascular Biology, and consistently demonstrated leadership through various activities including managing the Ruddy Canadian Cardiovascular Genetics Centre and serving on numerous internal as well as external Committees.

Dr. Stewart's current CIHR and NSERC grants attest to his success as an independent researcher. Over the years, he has held over \$3.5M in peer-reviewed funding from major agencies both as Principal Investigator and Co-Investigator. He has published over 50 papers in peer reviewed journals and is first or senior author on 11.

Dr. Stewart's most recent publication in Cell Reports—which was prominently featured on the front page of the [journal's web site](#) and also received a joint release between Cell Press and the Heart Institute—is ground breaking. It is the first to identify a mechanistic link between the Q688 variant of SPG7 and mitochondrial ROS production that is likely to be associated with multiple clinical phenotypes. This paper builds on the work he has done with the Ottawa Heart Genomic Study in which he served as one of the principal leaders.

Dr. Stewart holds three patents and has been involved as a key player in the discovery of the 9p21 gene as an independent risk factor for myocardial infarction.

Dr. Stewart has trained 26 graduate students and postdoctoral fellows.

## UOHI Clinical Science Investigator of the Year



### **David Birnie, MD**

Director, Arrhythmia Service

Director, Research, Division of Cardiology, UOHI

Associate Professor, Department of Medicine, University of Ottawa

Dr. Birnie serves as the Director, Arrhythmia Service and Director, Research, Division of Cardiology at the UOHI.

Dr. Birnie is recognized as an expert in implantable cardiac devices. He has led a number of influential studies that result in high impact, practice-changing publications. Most notably is his recent publication of the BRUISE Trial results in the prestigious *New England Journal of Medicine*. His work has transformed the pre-operative management of anticoagulation for pacemaker and implantable defibrillator surgery, and ultimately is improving patient care.

Dr. Birnie has an excellent record in holding peer reviewed grants. He has been continuously awarded peer reviewed funding since joining the UOHI in 2002. This track record is the more impressive at a time of scarce funding coupled with fierce competition. His recent success with the Heart and Stroke Foundation's Grant-in-Aid (as Principal Investigator) and the CIHR Institute of Circulatory and Respiratory Health's Emerging Network Grant in Atrial Fibrillation (as Co-Principal Investigator) are only two of these many testaments.

Dr. Birnie has mentored many junior faculty members, medical students as well as nursing staff.

## LIST OF POSTERS

### Basic Science

- P-1** *A Collagen-Chitosan Injectable Hydrogel Improves Vascularization and Cardiac Remodeling in a Mouse Model of Chronic Myocardial Infarction*  
Mr. Ali Ahmadi, PhD Candidate, UOHI  
(Supervisor: Dr. Erik Suuronen)
- P-2** *SPG7 Variant Escapes Phosphorylation-Regulated Processing by AFG3L2, Elevates Mitochondrial ROS and Associates with Coronary Artery Disease*  
Mr. Naif Almontashiri, PhD Candidate, UOHI  
(Supervisor: Dr. Alexandre Stewart)
- P-3** *In Utero Undernutrition Programs Metabolic Adaptations in Skeletal Muscle and Heart Associated with Obesity and Weight Loss Resistance in Adult Mice*  
Ms. Brittany Beauchamp, PhD Candidate, uOttawa  
(Supervisor: Dr. Mary-Ellen Harper)
- P-4** *Muscle Enriched A-Type Lamin Interacting Protein (MLIP) Impacts Myocardial Metabolism and Function*  
Dr. Marie-Elodie Cattin, Postdoctoral Fellow, UOHI  
(Supervisor: Dr. Patrick Burgon)
- P-5** *Collagen Matrix Improves Angiogenesis and Cardiac Function Following Myocardial Infarction: Evidence for a miR-92a and Integrin Mediated Mechanism*  
Ms. Helene Chiarella-Redfern, MSc Candidate, UOHI  
(Supervisor: Dr. Erik Suuronen)
- P-6** *Mice Myocardial Blood Flow Response to Hypercapnia for Assessment of the Coronary Endothelial Function using Micro-PET Imaging*  
Dr. Etienne Croteau, Postdoctoral Fellow, UOHI  
(Supervisor: Dr. Rob deKemp)
- P-7** *Test-Retest Repeatability of Renal Blood Flow in Mice using  $^{11}\text{C}$ -Acetate Micro-PET*  
Dr. Etienne Croteau, Postdoctoral Fellow, UOHI  
(Supervisor: Dr. Rob deKemp)
- P-8** *High Renal Retention of [ $^{18}\text{F}$ ]FPyKYNE-Losartan in Pigs: Translational Work Towards Imaging  $\text{AT}_1$  Receptors*  
Ms. Maryam Hachem, MSc Candidate, UOHI  
(Supervisor: Dr. Jean DaSilva)
- P-9** *Consequences of IRF2BP2 Loss of Function in Mouse Development and Muscle Regeneration*  
Ms. Tiffany Ho, MSc Candidate, UOHI  
(Supervisor: Dr. Alexandre Stewart)

- P-10**    *Evaluation of [18F]FPyKYNE-Losartan as a Novel PET Tracer for Imaging Kidney AT1 Receptors in Rats*  
Ms. Basma Ismail, PhD Candidate, UOHI  
(Supervisors: Drs. Jean DaSilva & Rob Beanlands)
- P-11**    *IGF-1 Engineered Human Cardiac Stem Cells Promote Repair of Ischemic Myocardium by Improving Transplant Cell Survival*  
Ms. Robyn Jackson, MSc Candidate, UOHI  
(Supervisor: Dr. Darryl Davis)
- P-12**    *Strain-Specific Differences in the Response to SU5416 in the Rat Model of Severe Pulmonary Arterial Hypertension*  
Dr. Baohua Jiang, OHRI  
(Supervisor: Dr. Duncan Stewart)
- P-13**    *Anti-miR-33 Therapy Promotes PGC-1 alpha Expression, Mitochondrial Function and Immunometabolic Pathways in Macrophages in Atherosclerosis*  
Dr. Denuja Karunakaran, Postdoctoral Fellow, UOHI  
(Supervisor: Dr. Katey Rayner)
- P-14**    *BDNF mRNA Expression in Brain Nuclei in Rats Post MI*  
Ms. Heow Won Lee, PhD Candidate, UOHI  
(Supervisor: Dr. Frans Leenen)
- P-15**    *Intensive Hemodialysis Improves Cardiac Remodeling*  
Dr. Guo Hua Li, UOHI  
(Supervisor: Dr. Peter Liu)
- P-16**    *Central Mechanisms Mediating AngII-Salt Hypertension in Rats*  
Jiao Lu, MSc Candidate, UOHI  
(Supervisor: Dr. Frans Leenen)
- P-17**    *Interleukin 6 Mediates Post Infarct Repair by Human Cardiac Stem Cells*  
Ms. Audrey Mayfield, MSc Candidate, UOHI  
(Supervisor: Dr. Darryl Davis)
- P-18**    *Optimization of Cardiac Stem Cells for Clinical Translation*  
Mr. Seth Mount, Undergraduate Student, UOHI  
(Supervisor: Dr. Darryl Davis)
- P-19**    *Type I Collagen Matrix Activates the Hedgehog Pathway in CD34+ Cells and Enhances Their Function*  
Ms. Aleksandra Ostojic, MSc Candidate, UOHI  
(Supervisor: Dr. Erik Suuronen)

- P-20** *Expression Mapping of the Gene Encoding the Muscle A-Type Lamin Interacting Protein (MLIP) Reveals Three Germ-Line Specific Promoters That Regulate MLIP's Expression*  
Ms. Anastasia Pimenova, Undergraduate Student, UOHI  
(Supervisor: Dr. Patrick Burgon)
- P-21** *An Iterative Triple Energy Window (TEW) Approach to Cross Talk Correction in Quantitative Small Animal Tc99m and In111 SPECT*  
Mr. Paul Prior, MSc Candidate, UOHI  
(Supervisor: Dr. Glenn Wells)
- P-22** *Defining the Molecular Relationship Between Ex Vivo Proliferated and In Situ Resident Cardiac Stem Cells*  
Ms. Ola Qassim, MSc Candidate, UOHI  
(Supervisor: Dr. Darryl Davis)
- P-23** *Cardiac Stem Cells from Donors with Advanced Age and Ischemic Cardiomyopathy Exhibit Superior Regenerative Performance*  
Ms. Ghazaleh Rafatian, PhD Candidate, UOHI  
(Supervisor: Dr. Darryl Davis)
- P-24** *MLIP (Muscle enriched A-type Lamin Interacting Protein) Structure and Function*  
Mr. Fawaz Saleh, MSc Candidate, UOHI  
(Supervisor: Dr. Patrick Burgon)
- P-25** *Association of Low-density Lipoprotein (LDL) with PCSK9, and Its role in Regulating LDL-Cholesterol Levels*  
Ms. Samantha Sarkar, MSc Candidate, UOHI  
(Supervisor: Dr. Thomas Lagace)
- P-26** *Agreement between Patient and Heart Motion during Dynamic Cardiac PET Imaging*  
Anbhu Sritharan, MSc Candidate, UOHI  
(Supervisor: Dr. Ran Klein)
- P-27** *Recruitment of Endogenous Stem Cells and Salvage of Reversibly Damaged Myocardium Underlies SDF1 $\alpha$  Effects on CSC-Mediated Cardiac Repair*  
Mr. Everad Tilokee, MSc Candidate, UOHI  
(Supervisor: Dr. Darryl Davis)
- P-28** *Epistasis Analysis Identifies Extracellular Matrix Genes Interacting with the COL4A1/COL4A2 Coronary Artery Disease Locus*  
Mr. Adam Turner, PhD Candidate, UOHI  
(Supervisor: Dr. Ruth McPherson)
- P-29** *Elucidating the Role of an Uncharacterized Amniotic Gene*  
Mr. Jonathan Weldrick, MSc Candidate, UOHI  
(Supervisor: Dr. Patrick Burgon)



- P-30**    *Regulation of Endothelial Nitric Oxide Synthase in Human Blood Outgrowth Endothelial Progenitor Cells*  
Yifan Yuan, PhD Candidate, OHRI  
(Supervisor: Dr. Duncan Stewart)

## **Clinical Science and Bio-behavioural & Population Health**

- P-31**    *A Personalized Strategy to Anti-Platelet Therapy Is Superior to Ticagrelor in Achieving a Therapeutic Window*  
Dr. Joseph Abunassar, Resident, UOHI  
(Supervisor: Dr. Derek So)
- P-32**    *Shorter Door to Balloon Times Are Equally Important in Elderly STEMI Patients*  
Dr. Joseph Abunassar, Resident, UOHI  
(Supervisor: Dr. Michel Le May)
- P-33**    *Ticagrelor versus Clopidogrel among Patients using Triple Therapy after Percutaneous Coronary Intervention: The CAPITAL ATACC Study*  
Dr. Joseph Abunassar, Resident, UOHI  
(Supervisor: Dr. Derek So)
- P-34**    *Interpretation of In-Silico Pathogenicity Prediction of a Rare Splice Site Variant*  
Dr. Arnon Adler, Postdoctoral Fellow, UOHI  
(Supervisor: Dr. Michael Gollob)
- P-35**    *Large Duplication in KCNQ1 Gene in a Patient with Long QT Syndrome*  
Dr. Arnon Adler, Postdoctoral Fellow, UOHI  
(Supervisor: Dr. Michael Gollob)
- P-36**    *The Impact of Clopidogrel plus Aspirin versus Aspirin Alone on the Progression of Native Coronary Artery Disease after Bypass Surgery: Analysis from the CASCADE Randomized Trial*  
Dr. Talal Al-Atassi, Resident, UOHI  
(Supervisor: Dr. Marc Ruel)
- P-37**    *Intra-Aortic Balloon Pump in Patients with Cardiogenic Shock Complicating Myocardial Infarction: A Meta-Analysis of Randomized Trials*  
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- P-43** *First versus Second-Generation Drug-Eluting Stents in the Treatment of In-Stent Restenosis: The University of Ottawa Heart Institute Experience*  
Dr. Sean Gallagher, Cardiology Fellow, UOHI  
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- P-44** *The Relationship between a Common Single Nucleotide Polymorphism on 4q25 and Pulmonary Vein Anatomy*  
Dr. Samir Hazra, Resident, UOHI  
(Supervisor: Dr. Michael Gollob)
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Ms. Laura Jones, UOHI  
(Supervisor: Dr. Bob Reid)
- P46** *Appropriate Use Criteria for Cardiac Computed Tomography: Does CT have incremental value in All AUC Categories?*  
Dr. Jasmine Lamba, Clinical Fellow, UOHI  
(Supervisor: Benjamin Chow)
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Dr. Tarek Malas, Resident, UOHI  
(Supervisor: Dr. Munir Boodhwani)
- P-48** *The use of Visualization in Surgical Simulation Training to Evaluate the Performance of Vascular Anastomosis on a Bench Model*  
Dr. Tarek Malas, Resident, UOHI  
(Supervisor: Dr. Khanh Lam)

- P-49**    *Myocardial Fatty Acid and Glucose Metabolism in Patients with Pulmonary Arterial Hypertension*  
 Dr. Hiroshi Ohira, Clinical Fellow, UOHI  
 (Supervisor: Dr. Rob Beanlands)
- P-50**    *Determinants of Patient Radiation Exposure in Coronary Angiography and Intervention: the CAPITAL PCI Registry Transradial Experience*  
 Dr. Ali Pourdjabbbar, Resident, UOHI  
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- P-52**    *Safety and Efficacy of Bivalirudin during Primary PCI in Conjunction with Therapeutic Hypothermia for Survivors of Out-of-Hospital Cardiac Arrest*  
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- P-53**    *Clinical Outcomes among Patients with Extreme Obesity Undergoing Elective Coronary Revascularization: Evaluation of Post-Procedural Complications in Contemporary Practice*  
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 (Supervisor: Dr. Derek So)
- P-54**    *Contemporary Mid-Term Echocardiographic Outcomes of Bentall Procedure and Aortic Valve Sparing Root Replacement*  
 Dr. Hadi Toeg, Resident, UOHI  
 (Supervisor: Dr. Munir Boodhwani)
- P-55**    *Implantation of ABSORB Bioresorbable Vascular Scaffold in Patients Undergoing Percutaneous Coronary Intervention*  
 Mr. Luan Tran, Research Student, UOHI  
 (Supervisor: Dr. Derek So)

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### **All Presenters and Attendees**

#### **Research Day Speakers**

Dr. Jean-François Tanguay (Montréal Heart Institute & Université de Montréal). Drs. Rob Beanlands; Peter Liu, VP Research & Chief Scientific Officer; Thierry Mesana, President & CEO; Derek So; Alexandre Stewart (UOHI)

#### **Innovation Award Judges & Coordinator**

Session Chair: Ms. Coralie Lalonde, Chair, OHIRC Board. Final  
Round Judges: Dr. Wilbert Keon (UOHI Founder); Mr. Ian Curry, CEO, DNA Genotek; Ms. Coralie Lalonde. Mentor to the Innovation Award winner: Mr. Ian Curry (DNA Genotek). Semi-final Round Judges: Drs. Tofy Mussivand, Katey Rayner (UOHI); Ms. Carole Chouinard (Gowlings); Mr. Joe Irvine (uOttawa); Mr. Hugh Winsor (Heart Institute Board). Panel Coordinator: Ms. Aisha Weaver (UOHI).

#### **Oral Session Chairs**

Mr. Ali Ahmadi, Dr. Brian McNeill, Ms. Kerri-Anne Mullen, Dr. Stephanie Prince Ware (UOHI)

#### **Oral Presentation Judges**

Basic Science: Drs. Patrick Burgon, Ruth McPherson, Alexandre Stewart (UOHI). Clinical Science and Bio-behavioural & Population Health: Drs. Rob Beanlands, Lisa Mielniczuk, Bob Reid, Derek So (UOHI); Dr. Duncan Stewart (OHRI); Dr. Jean-François Tanguay (Montréal Heart Institute & Université de Montréal).

#### **Poster Judges**

Basic Science: Drs. Myra Cocker, Darryl Davis, Pasan Fernando, Frans Leenen, Ruth McPherson, Donna Padavan, Glenn Wells (UOHI); Dr. Chaim Birnboim (DNA Genotek); Drs. Lynn Megeney, Xiaohui Zha (OHRI). Clinical Science and Bio-behavioural & Population Health: Drs. Christopher Glover, Brian McArdle, Jennifer Reed, Derek So, Diem Tran (UOHI); Dr. Brian O'Rourke (Canadian Agency for Drugs & Technologies in Health); Dr. Elena Pena Fernandez (TOH).

### **Abstract Reviewers**

Basic Science: Drs. Rob deKemp, Michael Gollob, Ben Hibbert, Rosalind Labow, Thomas Lagace, Erik Suuronen (UOHI). Clinical Science and Bio-behavioural & Population Health: Drs. Ian Burwash, Aun-Yeong Chong, George Fodor, Pablo Nery, Sophia Papadakis (UOHI); Dr. Elena Pena Fernandez (TOH)

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