



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

35TH
ANNUAL

OTTAWA CARDIOVASCULAR
RESEARCH DAY



MAY 15-16, 2023

University of Ottawa Heart Institute • Auditorium

PROGRAM

The Ottawa Cardiovascular Research Day
Committee gratefully acknowledges the
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Helping, Encouraging And Recognizing Trainees

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Welcome

On behalf of the planning committee, it is with great pleasure that we welcome you to the 35th Ottawa Region Cardiovascular 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 investigators and peers.

For the first time, we have a two-day, in-person program to enable more opportunities for networking. We are excited to share the following program highlights:

- Keynote lecture by Véronique Cornelissen, PhD, Katholieke Universiteit Leuven, Belgium
- Presentation of the Ottawa Region's Cardiovascular Trainee Awards
- Inaugural Equity, Diversity & Inclusion (EDI) Award in Research Award Presentation
- The Innovation Award Competition this year will feature four finalists. The 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 innovation champions!
- Poster Swap – this session will feature pairs of trainees teamed up to present each other's research. The winning team will be decided by an audience vote!
- Networking Social Event

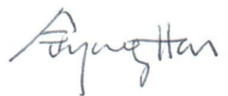
With 13 abstract talks and 51 posters, we are confident the Ottawa Region Cardiovascular Research Day is a great venue to network with colleagues and learn more about the work being done in the region. The event will conclude with an awards ceremony to recognize the best posters and oral presentations.

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 all sponsors for their generous support: Bronze Level Sponsors: Virica Biotech, Diamed, UOHI Trainee Committee; Silver Level Sponsors: Peter Liu, MD, The Polk Family Foundation; Gold Level Sponsor: Pfizer Canada; and Platinum Level Sponsor: UOHI Foundation.

Sincerely,



Jennifer Reed, PhD
Chair, Research Day Committee



Kyoung-Han Kim, PhD
Co-Chair, Research Day Committee

Planning Committee

Jennifer Reed, PhD

Chair, Research Day

Scientist and Director, Exercise Physiology and Cardiovascular Health Laboratory, UOHI

Associate Professor, School of Epidemiology and Public Health, Faculty of Medicine
University of Ottawa

Kyoung-Han Kim, PhD

Co-Chair, Research Day

Scientist and Director, Functional Genetics and Metabolism Laboratory, UOHI

Assistant Professor, Department of Cellular and Molecular Medicine, Faculty of Medicine
University of Ottawa

Kelsey Bolger

Lead Organizer, Research Day

Administrative Officer
Research Services, UOHI

Arianne Morissette, PhD

Innovation Award Coordinator,
Research Day

Grants Officer
Research Services, UOHI

Braeden Mair

PhD Candidate, UOHI

Chair, UOHI Trainee Committee

Alex Ross

PhD Candidate, UOHI

Co-Chair, UOHI Trainee Committee

Nadya Morrow

PhD Candidate, UOHI

Poster Swap Coordinator, Research Day
Work-in-Progress Rounds Coordinator
UOHI Trainee Committee

Marcelo Muñoz, PhD

Postdoctoral Fellow, UOHI

Work-in-Progress Rounds Coordinator
UOHI Trainee Committee

Valérie Rochon

MSc Candidate, UOHI

Social Coordinator, UOHI Trainee Committee

Fariborz Soheili

PhD Candidate, UOHI

Social Coordinator, UOHI Trainee Committee

An Duong

PhD Candidate, UOHI

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oHeart Committee

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Program Overview

DAY ONE: Monday May 15, 2023

8:15 – 8:30	Opening Remarks Jennifer Reed, PhD, Chair, Research Day Committee, UOHI Chief Scientific Officer Address Peter Liu, MD, CSO & VP Research, UOHI President Address Thierry Mesana, MD, PhD, President & CEO, UOHI Foustanelas Auditorium (H-2367)
8:30 – 10:00	Poster Session 1 UOHI Track (H-2339)
10:00 – 11:15	Poster Swap Foustanelas Auditorium (H-2367)
11:15 – 11:45	Trainee of the Year Awards Presentation Foustanelas Auditorium (H-2367)
11:45 – 12:15	Lunch
12:15 – 13:15	Equity, Diversity & Inclusion (EDI) in Research Award Foustanelas Auditorium (H-2367)
13:15 – 14:45	Poster Session 2 UOHI Track (H-2339)
15:00 – 15:15	Poster Tear Down
15:30 – 16:30	Mentoring Session with Véronique Cornelissen, PhD Executive Boardroom (H-2403) *Separate Registration Required Contact Research Services

<p>7:45 – 8:00</p>	<p>Opening Remarks</p> <p>Kyoung-Han Kim, PhD, Co-Chair, Research Day Committee, UOHI</p> <p>Foustanellas Auditorium (H-2367)</p>
<p>8:00 – 9:30</p>	<p>Oral Presentation Session 1</p> <p>Foustanellas Auditorium (H-2367)</p> <p>Linkage to ORACLE Theme: Precision Medicine</p>
	<p>O-1 Measures of Aortic Function Independently Predict Adverse Events in Females with Thoracic Aortic Aneurysms Rebecca Crosier, MD, Cardiology Resident, UOHI Supervisor: Thais Coutinho, MD</p> <p>O-2 The Effects of Nordic Walking, High-Intensity Interval Training, and Moderate-to-Vigorous Intensity Continuous Training on Arterial Stiffness in Patients with Coronary Artery Disease Isabela Marçal, PhD Candidate, UOHI Supervisor: Jennifer Reed, PhD</p> <p>O-3 Common Drug – Rare Disease – Can Metformin Improve Cardiac Function in PAI-1 Deficient Mice? Serena Pulente, PhD Candidate, UOHI Supervisor: Erin Mulvihill, PhD</p> <p>O-4 Furin Proteolysis of PCSK9 Improves Its Interactions with Oxidized LDL and Cell Surface Receptors CD36 and LOX1. Ikhuosho Asikhia, PhD Candidate, UOHI Supervisor: Thomas Lagace, PhD</p> <p>O-5 Wnt5a is Arrhythmogenic in Rat Hearts & Human iPSC-Derived Cardiomyocytes Jerry Wang, PhD Candidate, UOHI Supervisor: Wenbin Liang, MD, PhD</p> <p>O-6 The Effects of High-Intensity Interval Training & Moderate-to-Vigorous Intensity Continuous Training on Cardiorespiratory Fitness in Patients with Persistent & Permanent Atrial Fibrillation Tasuku Terada, PhD, Postdoctoral Fellow, UOHI Supervisor: Jennifer Reed, PhD</p>
<p>9:30 – 9:45</p>	<p>Health Break</p>

<p>9:45 – 10:15</p>	<p>Oral Presentation Session 2 Foustanelas Auditorium (H-2367)</p> <p>Linkage to ORACLE Themes: Big Data and Healthy, Diverse Populations</p>
	<p>O-7 Impact of Cardiovascular Rehabilitation on Major Adverse Cardiovascular Events in Adults with Atrial Fibrillation Robert Pap, MSc Candidate, UOHI Supervisors: Jennifer Reed, PhD & George Wells, PhD</p> <p>O-8 Influence of Neighbourhood-Level Proportion of Visible Minorities on Prevalence of Hypertensive Disorders of Pregnancy Amy Johnston, PhD Candidate, UOHI Supervisors: Jodi Edwards, PhD & Thais Coutinho, MD</p>
<p>10:15 – 11:30</p>	<p>Innovation Award Finalists' Pitches Foustanelas Auditorium (H-2367)</p>
	<p>I-1 In-Situ 3D Bioprinting of Blood Vessels Maxime Emmanuel Comtois-Bona, MSc Candidate, UOHI Supervisor: Emilio Alarcón, PhD</p> <p>I-2 Metabolic Disorders - Bacteria to the Rescue! Jonathan Salazar, PhD, Postdoctoral Fellow, UOHI Supervisor: Katey Rayner, PhD</p> <p>I-3 Spatial Mapping of the Heart's Electrical Network Rimshah Abid, BSc Candidate, UOHI Supervisor: Kyoung-Han Kim, PhD</p> <p>I-4 Software for Planning the Treatment of Irregular Heart Rates Connor Haberl, MSc Candidate, UOHI Supervisor: Rob deKemp, PhD</p>
<p>11:30 - 12:30</p>	<p>Lunch</p>
<p>12:30 – 12:45</p>	<p>Innovation Award Presentation Foustanelas Auditorium (H-2367)</p>
<p>12:45 – 13:45</p>	<p>Keynote Lecture Foustanelas Auditorium (H-2367)</p> <p>Véronique Cornelissen, PhD (Bio) Associate Professor, Department of Rehabilitation Sciences Katholieke Universiteit Leuven, Belgium</p> <p>"How to Give Everyone the Right Amount of Exercise, Not Too Little and Not Too Much?"</p>

13:45 – 14:00	Health Break
14:00 – 15:15	<p>Oral Presentation Session 3 Foustanelas Auditorium (H-2367)</p> <p>Linkage to ORACLE Theme: Discovery to Translational Innovations</p>
	<p>O-9 Bisphosphonate Worsens Arterial Calcification in MgpKO Mice Fariborz Soheili, PhD Candidate, UOHI Supervisor: Alexandre Stewart, PhD</p> <p>O-10 Novel Role for DPP4 in Inflammation and Atherosclerosis Andrew Clement, MSc Candidate, UOHI Supervisor: Erin Mulvihill, PhD</p> <p>O-11 Investigating the Roles of MAVS and PINK1 in Post-MI Cardiac Metabolism and Remodeling Teagan Haggerty, MSc Candidate, UOHI Supervisor: Peter Liu, MD</p> <p>O-12 Elastic Motion Correction Improves Rb-82 Cardiac PET ECG-Gated Image Quality Yuchen Dai, MD Candidate, UOHI Supervisors: Rob Beanlands, MD & Rob deKemp, PhD</p> <p>O-13 Rapid Protocol for Rest/Stress Tc99m Tetrofosmin CZT SPECT Imaging with Early Image Acquisition: A Feasible Alternative to Conventional Late Imaging Yoshito Kadoya, MD, Clinical Research Fellow, UOHI Supervisor: Terrence Ruddy, MD</p>
15:15 – 16:15	Networking Social
16:15 – 16:45	<p>Awards Ceremony Moderator: Kyoung-Han Kim, PhD Co-Chair, Research Day Committee, UOHI</p> <p>Foustanelas Auditorium (H2367)</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 • Award for Best Clinical Science / Bio-Behavioural & Population Health Poster • Awards for Honourable Mentions
16:45	<p>Closing Remarks Jennifer Reed, PhD, Chair, Research Day Committee, UOHI</p>

Keynote Speaker



Véronique Cornelissen, PhD

Associate Professor
Department of Rehabilitation Sciences
Katholieke Universiteit Leuven, Belgium

Prof. Véronique Cornelissen is an associate professor at the Department of Rehabilitation Sciences (KU Leuven). She holds a Master's Degree in Kinesiology (Specialization: Physical fitness, physical activity and health), a Postgraduate degree in Biomedical and Clinical Engineering and a PhD in Kinesiology.

She is secretary of the nucleus of Secondary Prevention and Rehabilitation of the European Association of Preventive Cardiology and an active member of the Belgian Working group of Cardiovascular Prevention and Rehabilitation.

Her main area of research, clinical practice and academic education focus on

1. identification and validation of exercise therapies that aim to optimally improve physical fitness and cardiovascular health;
2. enhance implementation of evidence-based exercise guidelines by the development of innovative technological solutions;
3. understanding determinants of responses to exercise therapy.

For her research she received several (inter) national research grants.

Ottawa Region Cardiovascular Trainee of the Year Award

2023 Ottawa Region Cardiovascular Research Trainee of the Year, Fellow, Basic Science



Congratulations to **Marcelo Muñoz, PhD**, who was selected as the Ottawa Region Cardiovascular Research Trainee of the Year, Fellow, Basic Science. Dr. Muñoz's research (under the supervision of Emilio Alarcón, PhD) focuses on regenerative medicine.

Dr. Muñoz has been recognized with the 2023 CIHR Fellowship for the 3D bioprinting of small blood vessels, the 2022 Top Trainee Award for Biostatistics for Biomedical Research Workshop awarded by the Stem Cell Network, the 2022 Faculty of Medicine's Michael W. McBurney Postdoctoral Fellow award, the 2021 Ottawa Cardiovascular Research Day Innovation Award, and the 2020 University of Ottawa Heart Institute (UOHI) Endowed Fellowship. In recognition of his meaningful contribution to the University of Ottawa's goal of creating equity, diversity, and inclusion for all, Dr. Muñoz was awarded the EDI Champion recognition in 2022.

Since starting his postdoctoral fellowship in 2018, Dr. Muñoz has made significant contributions to his field of research. He has authored 17 publications in prestigious peer-reviewed journals like ACS Nano, Science, and ACS AMI, to mention a few. In addition, he developed and patented a mask respirator decontamination device (N95 masks) and published this work in Scientific Reports. With the skills acquired in the academic and private sectors, Dr. Muñoz was recently appointed as the manager of the peptide synthesis facility in Dr. Alarcón's lab, which has contributed to several high-impact publications.

Dr. Muñoz is recognized for his outstanding leadership in the research and trainee communities. He serves as Chair of the University of Ottawa Faculty of Medicine's Postdoctoral Association. He is also a member of the UOHI Trainee committee and chairs the weekly Work-In-Progress Trainee Rounds. He is an exceptional mentor and role model to junior trainees and a caring co-worker.

Dr. Muñoz exemplifies the next generation of research leaders.

Ottawa Region Cardiovascular Trainee of the Year Award

2023 Ottawa Region Cardiovascular Research Trainee of the Year, Fellow, Clinical/Bio-behavioural Science



Congratulations to **Karen Bouchard, PhD**, who was selected as the Ottawa Region Cardiovascular Research Trainee of the Year, Fellow, Clinical/Bio-Behavioral Science. Dr. Bouchard's research (under the supervision of Heather Tulloch, PhD) examines the psychosocial determinants of health among patients with cardiovascular diseases and their family members.

Dr. Bouchard holds an impressive record of laudable awards and accomplishments. She was recently honored by the Association of Psychological Science as a "Rising Star" – a prestigious award that globally recognizes 40 "top tier early career researchers" in health psychology. In 2022, she was awarded the SSHRC Insight Development Grant as the Nominated Principal Investigator; this is the first SSHRC operating grant to be awarded to the University of Ottawa Heart Institute (UOHI). Of note, Dr. Bouchard was previously awarded a SSHRC Fellowship that ranked #1 in the competition. Dr. Bouchard is a Co-Investigator on three CIHR Project Grants and (two in 2022 and one in 2021) a Heart and Stroke Foundation Grant-in-Aid (2021). She has authored 23 manuscripts in peer-reviewed journals, one of which was published in *Circulation* and wrote a chapter of the book entitled "Biology of Women's Heart Health" published by Springer-Nature. She has presented at international and national conferences, shared her expertise on caregiving for Wear Red Canada and most recently was invited to speak at the Canadian Women's Heart Health Summit in Vancouver (2023).

She has demonstrated exceptional leadership in the research community. She established collaborations with the UOHI Patient Alumni Association, patient partners, and caregivers to develop guides provided to patients at hospital discharge. These guides are intended for caregivers and explain how to live well when a loved one has cardiovascular disease (CVD), as well as parents with CVD. She is an active member of the UOHI Patient Partnership Council and the Quality-of-Care Committee. Dr. Bouchard provides support to UOHI scientists in mixed methods and qualitative research and patient engagement strategies. She is a highly valued team member and a dedicated mentor to junior trainees.

Dr. Bouchard exemplifies the next generation of research leaders.

Ottawa Region Cardiovascular Trainee of the Year Award

2023 Ottawa Region Cardiovascular Research Trainee of the Year, PhD Candidate (Late Stage)



Congratulations to **Sabrina Robichaud**, who was selected as the Ottawa Region Cardiovascular Research Trainee of the Year, PhD Candidate (Late Stage). Sabrina's research (under the supervision of Mireille Ouimet, PhD) focuses on atherosclerosis and lipid metabolism.

Ms. Robichaud has had immense success in scholarships and awards throughout her training to date. She has been recognized with a Vanier Canada Graduate Scholarship, a CIHR Doctoral Research Award and a CIHR Canada Graduate Scholarship - Master's Award. She has also received a number of accolades including the Faculty of Medicine's Syed Sattar PhD Student Award and was a finalist for the Emerging Scientist Award for Women (Vascular Discovery 2022).

Sabrina is the first author of four manuscripts published in *Circulation Research*, *Autophagy*, *Arteriosclerosis, Thrombosis, and Vascular Biology*, and *Methods in Molecular Biology*. Additionally, she has contributed to nine other manuscripts. These are testaments to Ms. Robichaud's outstanding scientific productivity. In 2023, she delivered an invited talk at the Medical College of Georgia (Augusta, GA, USA).

Sabrina is highly involved in knowledge translation and community outreach. She has served as the Discussion Leader for the Gordon Research Seminar on Atherosclerosis and was an invited panelist for the *Circulation Research: 2022 Highlights and Initiative Session*. She has been instrumental in organizing several scientific meetings, including the Ottawa Region Cardiovascular Research Day 2018-22, the MetabTrainees Symposium 2021, and the Faculty of Medicine Bio-Med Discovery Day 2018-19.

Ms. Robichaud exemplifies the next generation of research leaders.

Ottawa Region Cardiovascular Trainee of the Year Award

2023 Ottawa Region Cardiovascular Research Trainee of the Year, PhD Candidate (Early Stage)



Congratulations to **Nadya Morrow**, who was selected as the Ottawa Region Cardiovascular Research Trainee of the Year, PhD Candidate (Early Stage). Nadya's research (under the supervision of Erin Mulvihill, PhD) focuses on the postprandial regulation of chylomicron secretion.

Ms. Morrow has been awarded a CIHR Doctoral Award and a University of Ottawa Cardiac Endowment Fund at the Heart Institute. She recently was recognized with the Syed Sattar Award for the top PhD Candidate in the Department of Biochemistry, Microbiology, and Immunology at the University of Ottawa.

Nadya has published eight articles as first author, including in *Arteriosclerosis, Thrombosis and Vascular Biology*, *Biochem Biophys Acta Molecular and Cell Biology of Lipids* and *Frontiers in Cell and Development Biology*. She has additionally contributed as a co-author to a manuscript published in *JCI Insight* and another with revisions resubmitted to *iScience*. These are testaments to Nadya's exceptional productivity at this early career stage.

Ms. Morrow has demonstrated an outstanding leadership ability and made significant contributions to the trainee community at the local, regional, and national levels. She is actively involved in several committees, including the UOHI Trainee, UOHI Work in Progress Rounds, the 2022 and 2023 Ottawa Region Cardiovascular Research Day, and the UOHI Regenerative Medicine Research Day. Nadya has served as VP, Professional Development in the Biochemistry, Microbiology, and Immunology Graduate Student Association. She was instrumental in organizing a national training group for the Canadian Society of Atherosclerosis, Thrombosis and Vascular Biology/ Canadian Lipoprotein Conference trainees. This initiative provides trainees with a monthly forum to present and discuss their research as well as a SLACK group and has been met with high levels of enthusiasm.

Ms. Morrow exemplifies the next generation of research leaders.

About the UOHI EDI in Research Award

UOHI's Equity, Diversity, and Inclusion (EDI) in Research Award aims to recognize outstanding contributions to research excellence and a thriving research environment, by a UOHI-based student or fellow.

We seek awardees who challenge the status quo, spark change and take action to reduce persistent systemic barriers, and who expand our research impact or team effectiveness as a result. Nominees are distinguished by their passion and commitment to better research design, and/or a better workplace, reducing barriers to access and inclusion of under-represented groups as research partners, participants, team members or peers.

Removing barriers to equity, diversity and inclusion (EDI) might look like:

- Innovative research approaches that reduce disparate health outcomes or systemic bias in research design or methods
- An activity, practice, tool or partnership that removes barriers and increases access or participation of students and fellows from under-represented groups
- Innovative supervision, peer support or mentoring
- Creating a more open, supportive, effective research environment, leading to increased contributions from others
- Making a work environment more accessible (physical, technical, logistical, cultural)
- Catalyzing change to procedures, policies, or practices to make them fair or more inclusive
- Community service, such as creating supports, innovation, best practices sharing
- Innovative outreach to under-represented communities as research partners or participants

UOHI EDI in Research Award

Award winner: Amy Johnston, PhD Candidate



Ms. Johnston is a tireless and extraordinarily effective champion for EDI best practices in research, the academic workplace, and in the community.

Her wide-ranging research design impacts include a 2021 CJC Open paper about the use of race, ethnicity, and national origin in cardio-obstetrics research, and a 2021 UOJM commentary about the COVID-19 vaccine evidence gap for pregnant and breastfeeding women, as well as a 2019 JAHA paper about sex differences in long-term survival after major cardiac surgery. She contributed to studies ranging from analysis of demographic data for the recent 2023 Biochemistry and Cell Biology paper about graduate student financial challenges; to peer-support interventions for women with CVD; and the effect of physician's sex/ gender on processes of care and clinical outcomes in cardiac operative care.

Ms. Johnston is the inaugural, elected EDI Coordinator for UOHI's Research Trainee Committee, where she works ceaselessly towards fostering a more inclusive trainee experience at the UOHI by promoting EDI initiatives, providing trainees with resources for success, and advocating for trainees throughout UOHI and uOttawa. She has developed resources ranging from an Indigenous Territory acknowledgement, to a wellness document for trainees that includes resources for training and EDI, mental health and well-being, religious services, academic support, emergency services and more.

As a member of the UOHI-wide EDI Task Group, she brought trainee needs to the fore in designing the Institute-wide EDI survey, as well as numerous institutional EDI initiatives from townhalls to new internal funding opportunities. She helped re-shape the selection criteria for UOHI's publication award to include the use of altimetric and field-specific impact measurements.

Further, Ms. Johnston has led the development, design, and conduct of various women's+ heart health-related advocacy projects, including Wear Red Canada educational videos, and presentations to community groups. She co-organized Soapbox Science Ottawa events designed to promote the work of women and non-binary scientists. Her social media impact is considerable: she promotes scientific evidence to the public related to the CVD health of women, gender-diverse and BIPOC individuals, through a Twitter account with over 3,500 followers, Instagram and a blog.

In her advocacy as in her research, Ms. Johnston provides not just info but a call to action to support anti-racism, and promote justice and equality, and a model for how it can be done.

UOHI EDI in Research Honorable Mentions

Honorable mention: Sol Vidal Almela, PhD Candidate

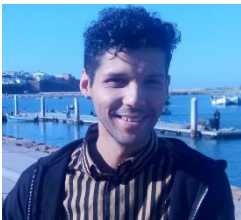


Ms. Vidal Almela addresses the underrepresentation of females in exercise trials in AF. She has determined that: (i) despite patient concerns, exercise may not acutely worsen AF symptoms in either sex; (ii) there are sex differences in physical health profile and AF symptoms; (iii) improvements in cardiorespiratory fitness and health measures don't differ by sex following exercise training, but females experience smaller improvements in AF severity, general health perceptions and systolic blood pressure following exercise training.

Ms. Vidal Almela is increasing research participation of under-represented groups, for example by: (i) giving talks to diverse community organizations, e.g. to attract older participants, (ii) ensuring flyers depict diverse populations, and, (iii) providing parking passes. Through social media she has informed Spanish-speaking communities about COVID-19 and vaccines, and held a live Instagram Q&A session on community-based physical activity programs for women in cardiac rehabilitation.

Ms. Vidal Almela has enhanced her environment through: (i) integrating sex & gender questions into WIP trainee rounds; (ii) sharing best practices in EDI in grant-writing; (iii) presenting UOHI's Outreach in Nunavut; (iv) addressing inequitable scholarship/ TA eligibility criteria; (v) translating women's heart health messages; (vi) hosting EDI-focused BEaTS Research Radio episodes.

Honorable mention: Saad Balamane, MD Candidate



Mr. Balamane is leading a research project entitled "Referral Bias in Cardiac Computed Tomography: Racial Differences, Disparities or Discrimination?" Racial discrimination in medicine is likely widespread, but underrecognized. The team therefore sought to assess the existence of racial biases in diagnostic cardiac testing and cardiac CT.

Consecutive patients undergoing CCTA were prospectively enrolled into a Cardiac CT database, with data including patient's medical history, self-reported race, referring physician and lab results. Race of referring physician was determined by two independent reviewers, using the combination of: 1) personal knowledge, 2) public CPSO data, 3) social media, 4) public images. The frequency of CT referrals for each race was normalized to their proportion in the Champlain catchment population.

Analysis is ongoing, and data suggests there is an ethnic referral bias for CCTA, which appears to be independent of both the ethnic background of physicians and years of practice. Based on the findings, the team's next steps will include similar studies assessing different imaging modalities at UOHI. Their goal is to identify potential areas of education for referring MDs.

Poster Presentations: Basic Science

- P-1 **Spatial Transcriptomic Analysis of the Cardiac Conduction System**
Rimshah Abid, BSc Candidate, UOHI
Supervisor: Kyoung-Han Kim, PhD
- P-2 **Synthesis and Evaluation of Selective MMP-13 Quinazoline Inhibitors for PET Radiotracer Development**
Myriam Adi, BSc Candidate, UOHI
Supervisor: Benjamin Rotstein, PhD
- P-3 **Comparing the Effect of Two High-Intensity Interval Training Programs on Cardiac Function in Female Mice After Myocardial Infarction**
Ines Amara, PhD, Postdoctoral Fellow, UOHI
Supervisor: Erik Suuronen, PhD
- P-4 **Ketogenesis-Dependent Effects of Intermittent Fasting Against Diet-Induced Obesity and Fatty Liver Disease in C57BL6/J Mice**
Termeh Aslani, MSc Candidate, UOHI
Supervisor: Kyoung-Han Kim, PhD
- P-5 **Attenuation Correction in Parallel-hole Cardiac SPECT by Data Consistency and ECG-Gating**
Taylong Clark, PhD Candidate, Carleton University
Supervisor: Glenn Wells, PhD
- P-6 **In-Situ 3D Bioprinting of Blood Vessels**
Maxime Emmanuel Comtois-Bona, MSc Candidate, UOHI
Supervisor: Emilio Alarcón, PhD
- P-7 **GDF3 Suppresses LPS-Induced QT Prolongation**
An Duong, PhD Candidate, UOHI
Supervisor: Alexandre Stewart, PhD
- P-8 **OPA1-Mediated Supercomplex Formation in the Prevention of Heart Failure**
Claire Fong-McMaster, PhD Candidate, uOttawa
Supervisors: Mary-Ellen Harper, PhD and Erin Mulvihill, PhD
- P-9 **Evaluation of Data-Driven Motion Correction Algorithm for Myocardial Blood Flow Imaging of Test-Retest ^{82}Rb PET Scans**
David Gao, MD Candidate, UOHI
Supervisor: Robert deKemp, PhD
- P-10 **Development of Polydopamine-Coated Particles for the Delivery of Therapeutic Agents Post Myocardial Infarction**
Roja Gauda, MSc Candidate, UOHI
Supervisor: Erik Suuronen, PhD
- P-11 **Being a Target for Glycation by Methylglyoxal Contributes to Therapeutic Efficacy of Injectable Collagen Hydrogels Post-Myocardial Infarction**
Xixi Guo, PhD Candidate, UOHI
Supervisor: Erik Suuronen, PhD
- P-12 **A 4D visualization Tool for Treatment Planning of Non-Invasive Radioablation in Patients with Ventricular Tachycardia**
Connor Haberl, MSc Candidate, UOHI
Supervisor: Robert deKemp, PhD
- P-13 **Role of Oxysterol-Binding Protein-Related Protein (ORP) 6 in Amyloid Beta Production and Cognitive Impairment**
Arlette Aluma Kasongo, MSc Candidate, UOHI
Supervisor: Mireille Ouimet, PhD

- P-14 **Carbon-11 Radiotracers for PET Imaging Prostate Specific Membrane Antigen**
Talia Knuth, BSc Candidate, UOHI
Supervisor: Benjamin Rotstein, PhD
- P-15 **Novel Selective Tools to Investigate Macrophage Lipophagy in Atherosclerosis**
Thomas Laval, PhD, Postdoctoral Fellow, UOHI
Supervisor: Mireille Ouimet, PhD
- P-16 **KD Intervention Slows Atherosclerosis and Reduces Liver Fat, but Does Not Improve Insulin Secretion and Glucose Metabolism**
Cassandra Locatelli, PhD Candidate, UOHI
Supervisor: Erin Mulvihill, PhD
- P-17 **Wnt/ β -Catenin Signalling Inhibits T-type Calcium Current and Causes Sinoatrial Node Dysfunction**
Aizhu Lu, PhD, Research Associate, UOHI
Supervisor: Wenbin Liang, MD, PhD
- P-18 **Injectable Materials to Repair Degenerated Tissues**
Aidan Macadam, PhD Candidate, UOHI
Supervisor: Emilio Alarcón, PhD
- P-19 **Development and Testing of an AI Tool for Motion Detection in SPECT Myocardial Perfusion Imaging**
Dylan Malenfant, PhD Candidate, Carleton University
Supervisor: Glenn Wells, PhD
- P-20 **Tunable Photo-Sealant for Wound Closure**
German Andres Mercado-Salazar, MSc Candidate, UOHI
Supervisor: Emilio Alarcón, PhD
- P-21 **Endogenous Incretin Hormone Signalling Is Required for Obesity Progression in Male And Female Mice**
Nadya Morrow, PhD Candidate, UOHI
Supervisor: Erin Mulvihill, PhD
- P-22 **Multiarray Peptide Array Formulation for Improved Endothelialization**
Marcelo Muñoz, PhD, Postdoctoral Fellow, UOHI
Supervisor: Emilio Alarcón, PhD
- P-23 **Loss of Histone H4K16 Acetylation Promotes Error-Prone DNA Damage Repair in Hutchinson-Gilford Progeria Vascular Smooth Muscle Cells**
Mzwanele Ngubo, PhD, Postdoctoral Fellow, OHRI
Supervisor: William L. Stanford, PhD
- P-24 **Transcriptomic Landscape of the Postnatal Cardiac Conduction System**
Yena Oh, PhD Candidate, UOHI
Supervisor: Kyoung-Han Kim, PhD
- P-25 **The Role of *Irx5* in Establishing Ventricular Transmural Heterogeneities in the Heart**
Julie Pan, BSc Candidate, UOHI
Supervisor: Kyoung-Han Kim, PhD
- P-26 **BMP-9 and BMP-10 as Novel Mediators of Atrial Fibrillation Pathophysiology**
Alex Pham, MSc Candidate, UOHI
Supervisors: Peter Liu, MD
- P-27 **Regulation of LDL-Cholesterol Levels by Circulating PCSK9 and its Natural Variants**
Alana Renon, MSc Candidate, UOHI
Supervisor: Thomas Lagace, PhD

- P-28 **Autophagy Activation Promotes Atherosclerosis Regression**
Sabrina Robichaud, PhD Candidate, UOHI
Supervisor: Mireille Ouimet, PhD
- P-29 **Hyperlipidemia Increases Inflammation and BBB Loss in the Hippocampus**
Jonathan Salazar, PhD, Postdoctoral Fellow, UOHI
Supervisor: Katey Rayner, PhD
- P-30 **3D Printed Electromechanical Heart Case for Ex Vivo Cardiac Tissue Maturation**
Ana Spasojevic, BSc Candidate, UOHI
Supervisor: Emilio Alarcón, PhD
- P-31 **The Development of New Therapies Targeting Pneumonia-Accelerated Atherosclerosis**
Cameron Stotts, PhD Candidate, UOHI
Supervisor: Katey Rayner, PhD
- P-32 **Impaired Mitochondrial Fusion Promotes Anti-Inflammatory Macrophage Phenotypes Via Histone Lactylation**
Leah Susser, PhD Candidate, UOHI
Supervisor: Katey Rayner, PhD
- P-33 **It Takes Two to Tango: Modulation of Cardiovascular Function with Combination DPP4 Inhibitor and Metformin Treatment**
Natasha Trzaskalski, PhD Candidate, UOHI
Supervisor: Erin Mulvihill, PhD
- P-34 **Mechanistic Investigations of Meta-[18F]fluorobenzylguanidine ([18F]mFBG) in Cells and Animals**
Jadde de Carvalho Tso, BSc Candidate, UOHI
Supervisor: Benjamin Rotstein, PhD
- P-35 **Pharmaceutical Characterization of Single Enantiomers of the Circadian Modulator SR9009**
Alex Yang, BSc Candidate, UOHI
Supervisor: Benjamin Rotstein, PhD

Poster Presentations: Clinical Science

- P-36 **Spontaneous Coronary Artery Dissection Across the Healthcare Pathway: A national, multicentre, patient-informed investigation**
Karen Bouchard, PhD, Postdoctoral Fellow, UOHI
Supervisor: Heather Tulloch, PhD
- P-37 **Management of Thoracic Aortic Aneurysms in Older Adults: Surveillance versus Surgery**
Veronica Chan, MD Candidate, uOttawa
Supervisor: Munir Boodhwani, MD
- P-38 **Insomnia and Anxiety Among Patients with Spontaneous Coronary Artery Dissection: Preliminary data from the PsySCAD Study**
Alexandra Chiarelli, Clinical Research Coordinator, UOHI
Supervisors: Heather Tulloch, PhD
- P-39 **Exercise Flow Reserve Imaging with 18F-Flurpiridaz PET Rules Out High-Risk Obstructive Coronary Artery Disease**
Justen Choueiry, MD Candidate, UOHI
Supervisor: Robert deKemp, PhD
- P-40 **Cardiology Professionals' Assessments of Social Robots in Augmenting Heart Failure Patient Care**
Michael Dans, Clinical Research Coordinator, UOHI
Supervisor: Heather Tulloch, PhD
- P-41 **Transition and Transfer of Congenital Heart Disease Care from Pediatrics to Adulthood: Targeting the wait list**
Joanne Joseph, MD, Cardiology Resident, UOHI
Supervisors: Markus Schwerzmann, MD and David Birnie, MD
- P-42 **Enhancing the Diagnostic Performance of CZT SPECT Myocardial Perfusion Imaging with Myocardial Blood Flow Information**
Yoshito Kadoya, MD, Clinical Research Fellow, UOHI
Supervisor: Terrence Ruddy, MD
- P-43 **Effect Modification of Age on Cancer & Prevalence of Stroke – A Cross-Sectional Study**
Ronda Lun, MD, Neurology Resident, The Ottawa Hospital
Supervisor: Dar Dowlatshahi, MD
- P-44 **Evaluation of Imaging Techniques for the Measurement of Extracranial Internal Carotid Artery Stenosis: A systematic scoping review**
Holly Sim, MD, Neurology Resident, uOttawa
Supervisor: Michel Shamy, MD
- P-45 **Agreement & Reliability of CTA and Doppler in a Population of Consecutive Patients Undergoing Carotid Artery Stenting**
Kyra Steiner, MD Candidate, uOttawa
Supervisor: Michel Shamy, MD
- P-46 **Sex Differences in Attenuation and Need for Correction with SPECT/CT MPI**
Anahita Tavvosi, MD, Clinical Fellow, UOHI
Supervisor: Terrence Ruddy, MD

- P-47 **PET Assessment of Microvascular Dysfunction in Patients with Angina and Non-Obstructive Coronary Artery Disease**
Anahita Tavoosi, MD, Clinical Fellow, UOHI
Supervisor: Rob Beanlands, MD
- P-48 **Is the Therapeutic Relationship and its Elements Considered When Planning for the use of Patient Decision Aids for Implantable Cardioverter-Defibrillator Therapy? A qualitative investigation**
Arianne Linda Vallières, MSc Candidate, uOttawa
Supervisor: Krystina Lewis, PhD
- P-49 **Sex Differences and Changes in Physical and Mental Health Outcomes Following Exercise Training in Those with Persistent and Permanent Atrial Fibrillation**
Sol Vidal Almela, PhD Candidate, UOHI
Supervisor: Jennifer Reed, PhD
- P-50 **The Selection of Cardiopulmonary Exercise Testing Protocols for Patients with Coronary Artery Disease**
Jennie Wong, MSc Candidate, UOHI
Supervisor: Jennifer Reed, PhD
- P-51 **Comparing the Diagnostic Accuracy of Inflammatory Markers of Blood-Brain Barrier Permeability for Dementia Classification**
Jasmine Yu, BSc Candidate, UOHI
Supervisor: Jodi Edwards, PhD

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