

*International Cardiovascular Genomic Medicine and
SickKids Cardiac Precision Medicine Conference*
**Cardiac Precision Medicine in the 21st Century
Event Program**

OCTOBER 29- 31, 2025 | TORONTO, ON, CANADA

DAY 1: REGISTRATION AND WORKSHOPS

3:00 pm REGISTRATION & WELCOME

4:30 pm WORKSHOP 1: GENOMIC TOOLS FOR THE CLINICIAN

This interactive workshop will provide a primer on indications for whole genome sequencing, interpreting genomic results, returning findings to patient families, and simple to use genomic tools and resources.

When to Perform Genome Sequencing
Handling Primary Findings
Secondary Findings and Return of Results
Utilizing Genomic Tools

Christian Marshall
Laura Zahavich
Eriskay Liston
Rebekah Jobling

4:30 pm WORKSHOP 2: AI AND DIGITAL TOOLS IN PRECISION MEDICINE

This interactive workshop will provide a primer on AI and digital tools in healthcare, and discuss AI approaches to analyzing genomic data, physiological data and developing and integrating prediction algorithms into electronic health records to enable precision care.

Primer On AI for Clinicians
AI Tools in Bioinformatics
Smart Wearables
Integrating Predictive Algorithms into EMR

Cedric Manlhiot
Robert Lesurf
Aamir Jeewa
Lillian Sung

7:00 pm FACULTY DINNER

DAY 2: PRECISION MEDICINE IN THE OMICS ERA

7:00 am BREAKFAST | EXHIBITOR SHOWCASE

8:00 am WELCOME

Welcome Remarks
International Cardiovascular Genomic Medicine: The Past Two Decades
Ted Rogers Centre for Heart Research: Collaborative Approach to Heart Failure
The Future of Precision Child Health

Seema Mital
Dhavendra Kumar
Mansoor Husain
Stephen Scherer

8:30 am SESSION 1: GENOMIC DISCOVERIES IN CARDIAC DISEASE

This session will explore cutting-edge advancements in genomics and the transformative impact of genomic discoveries on 21st-century precision medicine.

Searching The Dark Matter of the Genome: An AI Approach
Reducing Uncertainty: Multiplex Functional Assays for Variant Interpretation
Polygenic Risk Scores for Disease Risk Prediction
Genetic Perspectives from An Asian Population
Genomics for All: Newborn Genome Sequencing

Robert Lesurf
Frederick Roth
Rafik Tadros
Hiroyuki Yamagishi
Nathaly Sweeney

DAY 2 CONT'D: PRECISION MEDICINE IN THE OMICS ERA**10:30 am SESSION 2: PRECISION CARE FOR CARDIOMYOPATHY – A SPOTLIGHT ON HCM**

This session will shed light on hypertrophic cardiomyopathy (HCM) from a lifespan perspective and discuss individualized approaches to care of patients with HCM.

Natural History of Pediatric HCM	Alyssa Power
Evidence-Based Care in HCM: Personalizing Guidelines	Steve Ommen
Targeted Therapies in Adult HCM	Martin Maron
Sudden Death Risk Prediction – An Implementation Science Approach	Tanya Papaz
Personalized Exercise Regimen in HCM	Barbara Cifra
Smart Wearables: Physiological Monitoring in Heart Disease	Daniel Franklin

12:30 pm LUNCH & POSTERS**2:00 pm KEYNOTE: WILLIAM HARVEY ORATION**

Sharlene Day

Dr. Day will explore the intersection of molecular pathogenesis and genetics, with a focus on the molecular foundation of MYBPC3 mutations, their role in cardiac disease and translational approaches to therapy.

2:45 pm ORAL ABSTRACTS**3:20 pm SESSION 3: BEYOND GENOMICS TO MULTIOMICS**

This session will explore how multi-omics approaches are changing the face of precision medicine research and identifying novel diagnostic and therapeutic targets in disease.

Title to be confirmed	Perry Elliott
Circulating Proteomic Profiling in Heart Disease	Sushma Reddy
Metabolomic Profiling in Congenital Heart Disease	Marie-Alexandre Chaix
Blood-Based Transcriptomics– a New Approach to Genetic Diagnostics	Diana Baralle
Long Read Transcriptome Sequencing	Kartik Chundru

5:00 pm POSTERS & EXHIBITORS**6:00 pm RECEPTION****DAY 3: PRECISION MEDICINE IN THE AI AND DIGITAL ERA****7:30 am BREAKFAST | EXHIBITOR SHOWCASE****8:30 am KEYNOTE: DR. MICHAEL BRAUDO LECTURE**

Ma'n Zawati

Dr. Zawati will discuss the legal, ethical, and policy issues surrounding AI and digital health in the context of precision medicine.

10:30 am SESSION 4: AI AND DIGITAL HEALTH – READY FOR PRIMETIME?

This session will explore the transformative potential of artificial intelligence and digital health technologies, and address the readiness and potential impact of these technologies in advancing precision medicine through multiple lenses.

An AI Approach to Cardiac Imaging	Mark Friedberg
Personalizing Surgeries with 3D Printing	Osami Honjo
Integrating Digital Health Technology into Electronic Health Records.	Cedric Manlhiot
Genetic Counseling in the Digital Era	Yvonne Bombard
Research Ethics Framework in Healthcare AI Applications	Danton Char
Precision Genomics: An International Perspective	Etienne Richer

DAY 3 CONT'D: PRECISION MEDICINE IN THE AI AND DIGITAL ERA

11:45 am SESSION 5: PRECISION THERAPIES

This session will explore the current landscape and future applications of precision therapies from targeted drugs, to genetic and pharmacogenetic therapies, and their potential to personalize patient care.

Gene Therapy – Where Are We Headed?

Ronald Cohn

Targeted Therapy for Rasopathies

Gregor Andelfinger

Targeted Therapy for Cardiomyopathies

Joseph Rossano

Metabolic therapies in heart failure

Mansoor Husain

Pharmacogenetic-Guided Therapy

Tamorah Lewis

Genotype Guided Surgical Interventions for Aortopathy

Nimesh Desai

1:45 pm CLOSING REMARKS

FACULTY

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Dhavendra Kumar (co-Chair)

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