

CARDIOLOGY 2023

26th Annual Update on Pediatric and
Congenital Cardiovascular Disease



FEB. 23 – 26, 2023

The Circulation:

What Makes the Blood Go 'Round in
Pediatric and Congenital Heart Disease?

Learn more at chop.edu/cardiology2023

Wyndham Grand Rio Mar
Puerto Rico Golf and Beach Resort
Río Grande, Puerto Rico



**Children's Hospital
of Philadelphia®**
Cardiac Center



CONFERENCE PROGRAM

♥ THURSDAY, FEB. 23

Opening Plenary Session: 4 – 6 p.m.

Rio Mar 5 and 6

Moderators: *Jonathan Chen and Joseph Rossano*

The Circulatory System: What Makes the Blood Go 'Round?

- 4 p.m. Welcome and Introduction to our Conference
Jack Rychik
- 4:15 p.m. A History of Discovery: Our Evolution of Understanding of the Heart and Circulation — from Harvey to Today
Joseph Rossano
- 4:30 p.m. Innovators and Innovations That Changed Our World: Pioneers and Discovery in Congenital Cardiovascular Disease
Meryl Cohen
- 4:45 p.m. Why a Circulation? The Purpose of the Human Cardiovascular System
Daniel Penny
- 5 p.m. What Makes the Circulation Work? Molecular Perspectives from a Pediatric Cardiologist
Shelley Miyamoto
- 5:15 p.m. From Prenatal Dependency to Independence: The Wonder of the Circulatory Transition from Fetal to Newborn Life
Shabnam Peyvandi
- 5:30 p.m. The Gateways of the Circulation: How Heart Valves Function and How Best to Understand Them
Matthew Jolley
- 5:45 p.m. The Principles of Physics That Impact Congenital Heart Disease: Can We Take Advantage of Nature and Turn Things in Our Favor?
William DeCampli
- 6 p.m. ADJOURN

6 – 8 p.m. Opening Reception

Vista Verde Garden

Sponsored by



“As one of the world’s largest and most prestigious conferences focused on pediatric and congenital cardiovascular disease, we offer a warm welcome to our many returning participants and greetings to new friends for joining us.”

♥ FRIDAY, FEB. 24

Sunrise Morning Coffee & Talk Sessions
Salons 1 – 4

7 – 8 a.m. **Reading the ECG: Clues, Tips and Pearls**
Mitchell Cohen and *Maully Shah*
Will not be @ Meeting

Plenary Session II: 8 – 10 a.m. Rio Mar 5 and 6

The Right Side of the Heart

Moderators: Laura Mercer-Rosa and Daniel Velez

- 8 a.m. Biology, Form and Function of the Right Ventricle
Sushma Reddy
- 8:15 a.m. Determining Adequacy and Viability of the Right Side of the Heart in Congenital Heart Disease
Michael Quartermain
- 8:30 a.m. The Terrors of the Tricuspid Valve: Care and Management of the Neonate with Ebstein's Anomaly or Severe Tricuspid Valve Dysplasia
Ricardo Garcia
- 8:45 a.m. Strategies and Outcomes for Tetralogy of Fallot Repair in Middle Income Countries
Nestor Sandoval
- 9 a.m. Innovations in Creating a Right Ventricle to Pulmonary Artery Pathway
David Winlaw
- 9:15 a.m. The Stressed Right Ventricle in Repaired Tetralogy of Fallot
Laura Mercer-Rosa
- 9:30 a.m. Catheter-based Strategies to Creating Valve Competence on the Right Side of the Heart
Bryan Goldstein
- 9:45 a.m. Maintaining the Circulation Long Term When the Systemic Ventricle Is a Morphological Right Ventricle
Carla Rodriguez
- 10 a.m. ADJOURN

Break/Visit the Exhibits

Caribbean Ballroom, Hallway and Salons 7 and 8
10 – 11 a.m.
Poster Session No. 1

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Friday, Feb. 24

Simultaneous Breakout Sessions 11 a.m. – 1 p.m.

Nursing Breakout 1 – Oral presentation of the top eight nursing abstracts
Salons 9 and 10

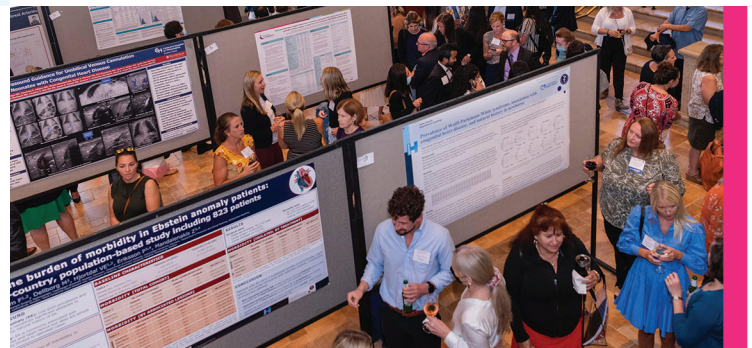
Characterizing Form and Function of the Circulation for Decision Making
Salons 1 – 4

Moderators: Meryl Cohen and Stephen Paridon

- 11 a.m. Advanced ECHO Techniques: Utility in Critical Decision Making
Laura Mercer-Rosa
- 11:15 a.m. Prenatal Cardiovascular Imaging
Jack Rychik
- 11:30 a.m. Advanced Cardiac MRI Techniques: Utility in Critical Decision Making
Mark Fogel
- 11:45 am Advanced Cardiac CT Imaging: Utility in Critical Decision Making?
David Biko
- Noon Multimodality Imaging for Comprehensive Characterization of the Circulation
Matthew Jolley
- 12:15 p.m. Understanding Hemodynamics: Optimizing the Cardiac Catheterization Laboratory in Complex Conditions
Bryan Goldstein
- 12:30 p.m. **Utilizing Exercise Testing for Critical Decision Making**
Stephen Paridon Mike McBride will replace
- 12:45 p.m. Panel Discussion – Q & A
Faculty
- 1 P.M. ADJOURN

Friday program continued on next page>

Maully Shah will replace



Advanced Cardiac Therapies to Support the Failing Circulation

Rio Mar 5 and 6

Moderators: Aliessa Barnes and Joseph Rossano

- 11 a.m. Medications for the Failing Heart: What's New for the Pediatric Patient?
Joseph Rossano
- 11:15 a.m. Maintaining the Circulatory System When in a Critical State: Intensive Care Unit Management for a Failing Circulation
Antonio Cabrera
- 11:30 a.m. Deciding Who Is a Candidate and When to Initiate Mechanical Circulatory Support
Carol Wittlieb-Weber
- 11:45 a.m. Strategies for Mechanical Support: What's Available? Choosing the Right Technology for the Right Condition
Constantine Mavroudis
- Noon Transitioning the Patient with Mechanical Support from the Operating Room to the Intensive Care Unit: Pearls and Pitfalls
Richard Melchior
- 12:15 p.m. Challenges of Sustaining "Long-term" Mechanical Circulatory Support in the Young
Nancy Ghanayem
- 12:30 p.m. Panel Discussion – Q & A
Faculty
- 1 P.M. ADJOURN

Outdoor Luncheon

Vista Verde Garden

1 – 2 p.m.

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Moderated Panel of Experts – The Surgeon's Salon 2 – 3 p.m.

Rio Mar 5 and 6

A Conversation Amongst Pediatric Cardiac Surgeons on Styles, Strategies, Successes and Stressors in Pediatric & Congenital Cardiovascular Surgery

Moderator: Jonathan Chen and

Discussants: Paul Chai, Sitaram Emani, Christian Kreutzer, Victor Morell, James O'Brien, and David Winlaw

The Top Abstracts: Oral Presentations 3 – 4 p.m.

Rio Mar 5 and 6

Moderators: Shelley Miyamoto and J. William Gaynor

Plenary Session III: 4 – 6 p.m.

Rio Mar 5 and 6

The Left Side of the Heart

Moderators: Shaine Morris and Paul Chai

- 4 p.m. A Circuitry that Drives Ventricular Maturation
Daniel Kelly
- 4:15 p.m. Determining Adequacy and Viability of the Left Ventricle
Meryl Cohen
- 4:30 p.m. Rehabilitating or "Growing" the Left Ventricle: Promise and Pitfalls
Sitaram Emani
- 4:45 p.m. Getting the Correct Vessel onto the Left Ventricle: Techniques for Optimizing Aortic Relocation in Complex Conotruncal Anomalies
Victor Morell
- 5 p.m. Aortic Valve Disease: Catheter-based Strategies for Now and in the Future
Christopher Petit
- 5:15 p.m. Surgical Options for Aortic Valve Insufficiency in the Young
Andrew Goldstone
- 5:30 p.m. The Aortopathies: How They Manifest in the Young and Progress with Time
Shaine Morris
- 5:45 p.m. Q & A
Faculty
- 6 p.m. ADJOURN

♥ SATURDAY, FEB. 25

Sunrise Morning Coffee & Talk Sessions

- 7 – 8 a.m. CASE-BASED PRESENTATIONS
Salons 1 – 4
Case Discussions of CHD, Management Challenges and Lessons Learned
Moderator: Chitra Ravishankar
Discussants: Monique Gardner, Shelley Miyamoto and Manish Aggarwal
- 7 – 8 a.m. **Pacer Workshop: Everything You Wanted to Know About Pacemakers but Were Afraid to Ask**
Salons 9 & 10
Mitchell Cohen

CANCELLED

Plenary Session IV: 8 – 10 a.m.

Rio Mar 5 and 6

The Pulmonary Circulation in Pediatric & Congenital Heart Disease

Moderators: Catherine Avitabile and Andrew Glatz

- 8 a.m. Biology, Form and Function of the Pulmonary Vasculature
David Frank
- 8:15 a.m. The Clinical Spectrum of Pulmonary Arterial Hypertension: Who Has It? Is It the Same Disease in All?
Catherine Avitabile
- 8:30 a.m. The Spectrum of Treatment Strategies for Pulmonary Arterial Hypertension in the Young
Manish Aggarwal
- 8:45 a.m. State-of-the-art Treatment of a Patent Ductus Arteriosus in the Premature Infant
Francisco Diaz
- 9 a.m. How Best to Augment Pulmonary Blood Flow in the Newborn with Congenital Pulmonary Obstruction?
Andrew Glatz
- 9:15 a.m. Surgical Techniques for Pulmonary Arterial Rehabilitation in Pulmonary Atresia with Aorto-Pulmonary Collaterals
Muhammad Nuri
- 9:30 a.m. Is Pulmonary Vein Stenosis a Treatable Disease?
Ryan Callahan
- 9:45 a.m. Does Pulmonary Vasodilation Impact the Fontan Circulation?
David Goldberg
- 10 a.m. ADJOURN

Break/Visit the Exhibits

Caribbean Ballroom, Hallway and Salons 7 and 8

10 – 11 a.m.

Poster Session No. 2

The Heart Center

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Saturday, Feb. 25

Simultaneous Breakout Sessions: 11 a.m. – 1 p.m.

Nursing Breakout 2: Case-based discussions of CHD and management challenges Salon 9 and 10

Faculty: Kathryn Dodds, Anna Gay, Lynne Ha, Mary Hoang, Sherri Kubis, Jarae Payne, Jose Ramos and Stacy Reynolds

The Lymphatic Circulation: New Understandings and Novel Treatments Rio Mar 5 and 6

Moderators: Vibeke Hjortdal and Yoav Dori

- 11 a.m. Biology, Form and Function of the Lymphatic Vasculature
Vibeke Hjortdal
- 11:15 a.m. Magnetic Resonance Imaging for Visualization of the Lymphatic Circulation
David Biko
- 11:30 a.m. Diagnostic Innovations to Accurately Map the Lymphatic System
Chris Smith
- 11:45 a.m. Surgical Strategies to Treat Lymphatic Insufficiency in Congenital Heart Disease
Christian Kreutzer
- Noon Building a Lymphatics Program: The Team Approach
Erin Pinto
- 12:15 p.m. What Are the Next Set of Challenges to Overcome in Caring for Lymphatic Conditions?
Yoav Dori
- 12:30 p.m. Case-based Lessons in Lymphatic Conditions
David Biko, Yoav Dori, Vibeke Hjortdal, Christian Kreutzer and Chris Smith
- 1 P.M. ADJOURN

The "Pump": Myocardial Conditions Affecting the Circulation in the Young

Salons 1 – 4

Moderators: Kimberly Lin and Carol Wittlieb-Weber

- 11 am Genetic Conditions Influencing Myocardia Function
Shaine Morris
- 11:15 a.m. Myocardial Conditions in Prenatal Life
Shabnam Peyvandi
- 11:30 a.m. Dilated Cardiomyopathy
Aliessa Barnes
- 11:45 a.m. Arrhythmogenic Cardiomyopathies
Mitchell Cohen **Maully Shah will replace**
- Noon Hypertrophic Cardiomyopathy
Kimberly Lin
- 12:15 p.m. Cancer Therapy and Its Impact on the Heart
Shelley Miyamoto
- 12:30 p.m. Anesthetic and Supportive Care Considerations When There Is a Fragile Myocardium
Andrew Costarino
- 12:45 p.m. Panel Discussion Q & A
Faculty
- 1 P.M. ADJOURN

Adjourn for the day! Visit Old San Juan, El Yunque Rain Forest or Enjoy the Beautiful Beaches of Rio Grand

Sunrise Morning Coffee & Talk Sessions
Salon 1 – 4

7 – 8 a.m. Case-based Discussions of Fetal Cardiovascular Disease, Management Challenges and Lessons Learned
Moderator: Jack Rychik
Discussants: Keila Lopez and Shaine Morris

Plenary Session V: 8 – 10 a.m.
Awards and Featured Lectures
Rio Mar 5 and 6

2023 Featured Lectures

8 a.m. Introduction of the Annual Jack Downes Lecturer
Andrew Costarino

8:05 a.m. Annual Jack Downes Lecture
Nancy Ghanayem

8:20 a.m. Starting a New Tradition: The Thomas L. Spray Featured Lectureship
J. William Gaynor

8:25 a.m. Introduction of the Inaugural Thomas L. Spray Lecturer in Pediatric & Congenital Cardiovascular Surgery
Jonathan Chen

8:30 a.m. 1st Annual Spray Lecture in Pediatric & Congenital Cardiovascular Surgery
James O'Brien

8:45 a.m. Introduction of the Rauch Memorial Lecturer
Sherri Kubis

8:50 a.m. Annual Rauch Memorial Lecture
Ruth Frey

9:05 a.m. Introduction of the Annual Pediatric and Congenital Cardiovascular Basic Science Lecturer
Joseph Rossano

9:10 a.m. Annual Pediatric and Congenital Cardiovascular Basic Science Lecture
Daniel Kelly

9:25 a.m. Introduction of the Annual William J. Rashkind Lecturer
Joseph Rossano

9:30 a.m. Annual William J. Rashkind Lecture
Jacqueline Kreutzer

9:45 a.m. Awards for Best Abstracts
Kathryn Dodds and David Goldberg

Break/Visit the Exhibits
Caribbean Ballroom, Hallway and Salons 7 and 8

10 – 11 a.m.
Poster Session No. 3

Sponsored by  **Children's Mercy**
KANSAS CITY

Sunday, Feb. 26

Simultaneous Breakout Sessions: 11 a.m. – 1 p.m.
Salons 9 and 10

Nursing Breakout 3 – Cardiac Medications Review: Vasoactive Medications, Sedation/Pain Management, Heart Failure Management, Anticoagulation, Arrhythmia Management, Pulmonary Hypertension Management

Faculty: Lisa Laddish, Kathryn Dodds, Anna Gay, Lynne Ha, Jarae Payne, Mary Hoang and Stacy Reynolds

In Support of the Circulation: Factors Impacting What Makes the Blood Go 'Round

Rio Mar 5 and 6

Moderators: Keila Lopez and Chitra Ravishankar

11 a.m. Cardiac Remodeling and Secretion of Heart Derived Hormones that Communicate with other Organs
Liming Pei

11:15 a.m. Nutrition and Growth in Congenital Heart Disease
Chitra Ravishankar

11:30 a.m. When it's More than Just the Heart: Cardiac and Non-Cardiac Organ Transplantation
William J. Dreyer

11:45 a.m. Exercise Training to Improve CHD Outcomes: What Do We Know? What Needs to be Discovered?
Sasha Opatowsky

Noon Patient & Family Emotional and Behavioral Health in CHD
Nadine Kasparian

12:15 p.m. Social Factors Influencing Circulatory Health
Keila Lopez

12:30 p.m. Healthcare Provider Wellness: Physician Heal Thyself!
Carol Wittlieb-Weber

12:45 p.m. Panel Discussion Q & A
Faculty

1 P.M. ADJOURN

Focus on Challenges and Issues of Concern to the Pediatric Heart Communities of Latin America
Salons 1 – 4

Moderator: Enrique Carrion

11 a.m. Prenatal Cardiology
Roberto Canessa

11:20 a.m. Hypertension in the Young
Janice Crespo

11:40 a.m. Challenges and Opportunities Related to Neonatal Cardiac Surgery in Mexico
Alexis Palacios

Noon Adult Congenital Heart Disease
Carla Rodriguez

12:20 p.m. After 50 Years of the Fontan Operation – Is It Possible Everywhere?
Nestor Sandoval

12:40 p.m. Panel Discussion Q & A
Faculty

1 P.M. ADJOURN

Nursing Luncheon: 1 – 2 p.m. Seabreeze

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Boxed Lunch for Non-Nursing Attendees
Caribbean Ballroom

2 – 3 p.m. Moderated Panel: Case-based Discussion of Management Challenges and Lessons Learned in Single Ventricle and Fontan Circulation
Rio Mar 5 and 6

Moderator: David Goldberg

Discussants: Kiona Allen, Shelley Miyamoto, Jack Rychik and Daniel Velez

Plenary Session VI: 3 – 5 p.m. Rio Mar 5 and 6

Battling Against Nature: Sustaining a Single Ventricle Circulation Throughout the Lifespan

Moderators: Kiona Allen and J. William Gaynor

- 3 p.m. Prenatal Life with Single Ventricle: Is This a Golden Opportunity?
Jack Rychik
- 3:15 p.m. Individualizing Initial Management for the Newborn with HLHS
Jonathan Chen
- 3:30 p.m. The Successful and Dramatic Reduction in Inter-stage Mortality: How Did We Do This?
Monique Gardner
- 3:45 p.m. Considerations and Challenges for Single Ventricle Palliation at Altitude
Alexis Palacios
- 4 p.m. Understanding the Wide Variability in Outcomes for the Individual with a Fontan Circulation
Kiona Allen
- 4:15 p.m. Innovative Molecular Analysis Offers Insights into Fontan Associated Liver Disease
Liming Pei
- 4:30 p.m. Keeping the Beat When There Is Only One Pump: Controversies in Arrhythmia Management in the Fontan Circulation
Maully Shah
- 4:45 p.m. Transplantation in Single Ventricle: Timing and Strategies for Success
Kimberly Lin
- 5 p.m. ADJOURN



“ Maintaining the best outcomes for our patients throughout the lifespan can only be achieved through continuous update and education. Our community must strive to avail itself of the educational resources necessary to maintain and advance the skills and knowledge base required to provide the best outcomes possible. ”

See You Next Year!

FACULTY

Faculty

Manish Aggarwal
St. Louis Children's Hospital

Kiona Allen
Chicago Lurie Children's Hospital

Catherine Avitabile
Children's Hospital of Philadelphia

Aliessa Barnes
Children's Mercy Kansas City

David Biko
Children's Hospital of Philadelphia

Antonio Cabrera
Primary Children's Hospital Utah

Ryan Callahan
Children's Hospital of Philadelphia

Roberto Canessa
Montivideo, Uruguay

Enrique Carrion
University of Puerto Rico, San Juan

Paul Chai
Children's Healthcare of Atlanta

Jonathan Chen
Children's Hospital of Philadelphia

Meryl Cohen
Children's Hospital of Philadelphia

Mitchell Cohen
Inova Children's Hospital Fairfax

Andrew Costarino
Children's Hospital of Philadelphia

Janice Crespo
University of Puerto Rico, San Juan

William DeCampi
Arnold Palmer Hospital Orlando

Francisco Diaz
University of Puerto Rico, San Juan

Kathryn Dodds
Children's Hospital of Philadelphia

Yoav Dori
Children's Hospital of Philadelphia

William J. Dreyer
Texas Children's Hospital

Sitaram Emani
Boston Children's Hospital

Mark Fogel
Children's Hospital of Philadelphia

David Frank
Children's Hospital of Philadelphia

Ruth Frey
Children's Hospital of Philadelphia

Ricardo Garcia
University of Puerto Rico, San Juan

Monique Gardner
Children's Hospital of Philadelphia

Anna Gay
Children's Healthcare of Atlanta

J. William Gaynor
Children's Hospital of Philadelphia

Nancy Ghanayem
University of Chicago Comer Children's Hospital

Andrew Glatz
St. Louis Children's Hospital

David Goldberg
Children's Hospital of Philadelphia

Bryan Goldstein
Children's Hospital of Pittsburgh

Andrew Goldstone
Morgan Stanley Children's Hospital New York

Lynne Ha
Children's Hospital of Philadelphia

Vibeke Hjortdal
Rigshospitalet Copenhagen University

Mary Hoang
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Matthew Jolley
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Daniel Kelly
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Jacqueline Kreutzer
Children's Hospital of Pittsburgh

Sherri Kubis
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Lisa Laddish
Children's Mercy Kansas City

Kimberly Lin
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Keila Lopez
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Constantine Mavroudis
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Richard Melchior
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Laura Mercer-Rosa
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Shelley Miyamoto
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Victor Morell
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Shaine Morris
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Muhammad Nuri
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Liming Pei
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Stacy Reynolds
Children's Mercy Kansas City

Carla Rodriguez
Centro Cardiovascular de Puerto Rico y el Caribe

Joseph Rossano
Children's Hospital of Philadelphia

Jack Rychik (Course Director)
Children's Hospital of Philadelphia

Nestor Sandoval
Fundacion Cardioinfantil, Instituto de Cardiologia, Bogota Columbia

Maully Shah
Children's Hospital of Philadelphia

Chris Smith
Children's Hospital of Philadelphia

Daniel Velez
Phoenix Children's Hospital

David Winlaw
Cincinnati Children's Medical Center

Carol Wittlieb-Weber
Children's Hospital of Philadelphia



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