10th International Conference on Pediatric Mechanical Circulatory Support Systems & Pediatric Cardiopulmonary Perfusion

The Hall of Flags, University of Pennsylvania, Philadelphia, PA, USA
May 28-31, 2014

Conference Founder
Akif Ündar, PhD, USA

Local Program Chair
Chitra Ravishankar, MD, USA

Honorary Co-Chairs
Aydin Aytaç, MD, Turkey
William S. Pierce, MD, USA

Keynote Lecturers
Thomas L. Spray, MD, USA
Emile A. Bacha, MD, USA

Planning/Scientific Committee
Chitra Ravishankar, MD, USA
Kerem Pekkan, PhD, USA
Tami Rosenthal, CCP, MBA, USA
Shigang Wang, MD, USA
J. Brian Clark, MD, USA
John L. Myers, MD, USA
Akif Ündar, PhD, USA

Conference Coordinators
Heather Stokes
Jennifer Stokes
Erlee Meyers

International & Local Members, Moderators & Wet Lab Instructors
Mehmet Ağırbaşlı, MD, Turkey
Atıf Akçevin, MD, Turkey
Tijen Alkan-Bozkaya, MD, Turkey
Emile A. Bacha, MD, USA
Emre Belli, MD, France
Meghan Burkhardt, MS, OTR, USA
Michael P. Brewer, MS, CCP, USA
Idâgene Cestari, PhD, Brazil
Paul J. Chai, MD, USA
J. Brian Clark, MD, USA
Jack G. Copeland, MD, USA
Haydon Dando, CCP, Australia
Lakshmi P. Dasi, PhD, USA
Yves Durandy, MD, France
Pirooz Eghtesady MD, PhD, USA
Talya Frey, CCP, USA
Stephanie Fuller, MD, USA
Robert A. Hales, RN, USA
Sertan Haydin, MD, Turkey
Rebecca Hoffritz, PT, DPT, PCS, USA
Brad Keller, MD, USA
Roxanne Kirsch MD, USA
Javier Lasa, MD, USA
Giovanni Battista Luciani, MD, Italy
Thomas Markmann, MBA, Germany
Christopher Mascio, MD, USA
Meredith McDonough, MS, CCLS, USA
John L. Myers, MD, USA
Vinay M. Nadkarni, MD, USA
Maryam Naim, MD, USA
Aruna Nathan, MD, USA
Matthew O’Connor, MD, USA
Ender Ödemiş, MD, Turkey
Linda Pauliks, MD, MPH, USA
David Palanzen, CCP, USA
Stacie Peddy, MD, USA
Kerem Pekkan, PhD, USA
William S. Pierce, MD, USA
Chitra Ravishankar, MD, USA
Gregg Roach, CCP, USA
Tami Rosenthal, CCP, MBA, USA
Joseph Rossano, MD, USA
Thomas L. Spray, MD, USA
Ravi Thiagarajan, MD, USA
Amy Throckmorton, PhD, USA
Alexis Topjian, MD, USA
Akif Ündar, PhD, USA
Shigang Wang, MD, USA
Wei Wang, MD, PhD, China
Introduction

The 10th International Conference is intended for pediatric heart surgeons, biomedical engineers, cardiologists, intensivists, neonatologists, scientists, anesthesiologists, neurologists, nurses, pediatric perfusionists, respiratory therapists, residents, fellows, and students. All are invited and encouraged to attend.

Purpose and Overview

The purpose of the proposed meeting is to bring together internationally known clinicians, bioengineers, and basic scientists involved in research on pediatric mechanical cardiac support systems and pediatric cardiopulmonary bypass procedures. The primary focus will be to describe explicitly the problems with current pediatric mechanical circulatory support systems, methods, techniques during acute and chronic support and suggest solutions with novel approaches.

Learning Objectives

Upon completion of the 10th Annual conference, participants will be able to:

- Evaluate the impact of unique features and outcomes for pediatric mechanical circulatory support systems.
- Compare the benefits and risks of current and new extracorporeal life support systems (ECLS) systems.
- Determine how and where to implement cutting edge bioengineering approaches in their practice of pediatric cardiovascular medicine.
- Critique new & current devices including pediatric heart pumps, oxygenators, etc., and the cite areas where additional physician training may be required for successful implementation.

Disclosure of Relevant Financial Relationships and Unapproved Uses of Products

Complete faculty disclosure information will be provided to conference participants at registration in the conference materials and syllabi at the beginning of the conference. Faculty members are also expected to disclose to participants any discussions of off-label and/or investigational uses of pharmaceutical products within their presentations.
Educational Credit

- Physicians: 19.5 AMA PRA Category 1 Credit(s)™
- Perfusionists: 24.3 Category 1 CEU's
- Nurses: 19.5 Category 1 CEU's

ACCME Accreditation Statement
The Children's Hospital of Philadelphia is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

AMA PRA Credit Designation Statement
The Children's Hospital of Philadelphia designates this live activity for a maximum 19.5 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Registration

ONLINE REGISTRATION ONLY. Registration is accessible via the conference web site:

http://pennstatehershey.org/web/pedscpb/home

On-site registration can be accepted only if space is available.

Exhibit Opportunities

Companies wishing to exhibit should visit the conference web site.

http://pennstatehershey.org/web/pedscpb/home

Cancellation Policy

Cancelations received before April 1, 2014 will be assessed a $200 processing fee. No refunds will be made for cancellations received after April 1, 2014. Substitutes are accepted at any time.

Americans with Disabilities Act

If you have a disability and require assistance to participate in this conference, please contact Pedsabstracts@hmc.psu.edu as early as possible, but no later than five (5) business days before the meeting.
Important Dates (2013-2014)

<table>
<thead>
<tr>
<th>DATE</th>
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<tr>
<td>December 16, 2013</td>
<td>Conference &amp; Hotel Registration Begins</td>
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<tr>
<td>December 16, 2013</td>
<td>Abstract Submission Begins – Online Only</td>
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<tr>
<td>March 1, 2014</td>
<td>Exhibitor Booth Registration Deadline</td>
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<tr>
<td>March 1, 2014</td>
<td>Final Day for Abstract Submissions</td>
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<td>March 7, 2014</td>
<td>Notification of Accepted Abstracts</td>
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<tr>
<td>April 1, 2014</td>
<td>Early Registration Ends</td>
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<td>April 18, 2014</td>
<td>Final Day for Manuscript Submissions Being Considered for Conference Awards</td>
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<td>April 1-May 27, 2014</td>
<td>Late Registration</td>
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<tr>
<td>May 28-31, 2014</td>
<td>On-site Registration (Only if Space is Available)</td>
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Fees

Conference fees include instruction, handout materials, 3 breakfasts, 3 lunches, and 6 coffee breaks.

<table>
<thead>
<tr>
<th>Participants</th>
<th>If registered by April 1, 2014</th>
<th>If registered after April 1, 2014</th>
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<tbody>
<tr>
<td>MD/PhD (Physicians and scientists)</td>
<td>$500</td>
<td>$600 (on-site $700)</td>
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<td>Members of International Society - MD/PhD- Physicians, Scientists</td>
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<td>Nurses, Perfusionists, Students &amp; Others</td>
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<tr>
<td>Members of International Society - Nurses, Perfusionists, Students &amp; Others</td>
<td>$350</td>
<td>$450 (on-site $550)</td>
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Hotel Accommodations

The Inn at Penn, A Hilton Hotel

Address: 3600 Sansom Street, Philadelphia, PA, 19104


Telephone: 215-222-0200 / 1-800-231-4587

Reduced prices for participants: Single/Double Room: $169 (USD) per night
Final Scientific Program

WEDNESDAY, MAY 28, 2014
1:00 – 5:00pm ON-SITE REGISTRATION (Only if Space is Available)

THURSDAY, MAY 29, 2014
7:00 – 8:00am Breakfast / Conference Registration
8:00 – 8:15am WELCOME
Akif Ündar, PhD, Penn State Hershey Children’s Hospital & Penn State Hershey College of Medicine, Hershey, PA, USA
Chitra Ravishankar, MD, (Local Chair), Children’s Hospital of Philadelphia (CHOP), Philadelphia, PA, USA

8:15 - 10:00am PLENARY SESSION #1:

Pediatric MCS and Heart Transplantation: Current and Future Trends (20 min Each)
Moderators: William S. Pierce, MD, Hershey, PA, USA, Joseph Rossano, MD, Philadelphia, PA, USA, and J. Brian Clark, MD, Hershey, PA, USA

II1. Diagnosis and Management of Myocarditis in Children
Matthew O’Connor, MD, Philadelphia, PA, USA

II2. The Use of VAD Support in Children: the State of the Art
Christopher Mascio, MD, Philadelphia, PA, USA

II3. Myths and Facts of Pulsatile Flow during Acute and Chronic MCS in Neonates and Infants
Akif Ündar, PhD, Hershey, PA, USA

II4. Pediatric Cardiac Transplantation for Complex Congenital Heart Disease
Paul Chai, MD, New York, NY, USA

II5. VADs and Outcomes Post Transplantation: What We Know and What We Don’t Know?
Pirooz Eghtesady MD, PhD, St. Louis, MO, USA

10:00 - 10:45am Coffee Break/Exhibits/Posters

10:45 - Noon Key Note Lecture #1:

Aortic Valve Surgery in Neonates, Infants, and Children: Has Anything Changed during My Career?
Thomas L. Spray, MD, Chief, Division of Cardiothoracic Surgery, Alice Langdon Warner Endowed Chair in Pediatric Cardiothoracic Surgery, Professor of Surgery, Perelman School of Medicine at the University of Pennsylvania, The Children’s Hospital of Philadelphia, Philadelphia, PA, USA

Introduction: Stephanie Fuller, MD, Philadelphia, PA, USA
11:45am – Noon  Presentation of Young Investigators’ Awards

Noon - 1:00pm  Lunch Break

1:00 - 3:00pm  PLENARY SESSION #2:

**Minimizing Adverse Effects of CPB: a Multi-disciplinary Team Approach (20 min Each)**

*Moderators: Paul Chai, MD, New York, NY, USA, Pirooz Eghtesady MD, PhD, St. Louis, MO, USA and Talya Frey, CCP, Philadelphia, PA, USA*

IL6. Anesthesiologist’s Perspective
   Aruna Nathan, MD, Philadelphia, PA, USA

IL7. Surgeon’s Perspective
   Emre Belli, MD, Le Plessis Robinson, France

IL8. Perfusionist’s Perspective
   Haydon Dando, CCP, Sydney, Australia

IL9. Cardiac Intensivist’s Perspective
   Roxanne Kirsch MD, Philadelphia, PA, USA

IL10. Apolipoprotein E Levels in Pediatric Patients Undergoing Cardiopulmonary Bypass
   Mehmet Ağırbaşlı, MD, Istanbul, Turkey

IL11. Alternative Transcatheter Procedures to Surgery in the Treatment of Congenital Heart Disease
   Ender Ödemiş, MD, Istanbul, Turkey

3:00 - 3:45am  Coffee Break/Exhibits/Posters/Wet-Labs

3:45 - 5:45pm  PLENARY SESSION #3:

**ECPR & ECLS: Utilization, Management, and Outcomes (20 min Each)**

*Moderators: Vinay M. Nadkarni, MD, Philadelphia, PA, USA, Stephanie Fuller, MD, Philadelphia, PA, USA and Ravi Thiagarajan, MD, Boston, MA, USA*

IL12. The Utilization of ECPR in the Pediatric Population
   Javier Lasa, MD, Philadelphia, PA, USA

IL13. Outcomes of ECPR for Cardiac Indications
   Maryam Naim, MD, Philadelphia, PA, USA

IL14. Role of Post Arrest Management and Neuromonitoring in Improving Outcomes
   Alexis Topjian, MD, Philadelphia, PA, USA
IL15. Novel Diagonal ECLS System Improves Outcomes in Pediatric Cardiac Patients
Sertaç Haydin, MD, Istanbul, Turkey

IL16. Long-term Outcome and Quality of Life after ECLS
Ravi Thiagarajan, MD, Boston, MA, USA

IL17. Impact of the Recent Influenza Season on ECMO Programs
David Palanzo, CCP, Hershey, PA, USA
FRIDAY, MAY 30, 2014

7:00 – 8:00 am  Breakfast / Conference registration

8:00 – 10:00am  PLENARY SESSION #4:

**Engineering Approach to Pediatric Cardiovascular Medicine (20 min Each)**

*Moderators: Kerem Pekkan, PhD, Pittsburgh, PA, USA and Giovanni Battista Luciani, MD, Verona, Italy*

IL18. An Intravascular Therapeutic Device for Pediatric Patients with Congenital Heart Disease: Mechanical Support of the Fontan Physiology
Amy Throckmorton, PhD, Philadelphia, PA, USA

IL19. Functionalized Tissue Engineered Patches for Pediatric Surgical Reconstructions
Brad Keller, MD, Louisville, KY, USA,

IL20. Translating Technology into Clinical Practice: a Brazilian Pediatric Ventricular Assist Device Development
Idágene Cestari, PhD, Sao Paolo, Brazil

IL21. Advances in Heart Valve Bioengineering with Special Emphasis on Scaling
Lakshmi P. Dasi, PhD, Denver, CO, USA

IL22. Computational Fluid Dynamics in Congenital Aortic Valve Disease
Giovanni Battista Luciani, MD, Verona, Italy

IL23. Progress in Computational Modeling of Neonatal Cardiopulmonary Bypass Hemodynamics with Detailed Circle of Willis Anatomy
Kerem Pekkan, PhD, Pittsburgh, PA, USA

10:00 – 11:00am  Coffee Break/Exhibits/Posters

11:00 – Noon  Key Note Lecture #2

**Individualized Strategy for HLHS: Norwood/Sano, Norwood/BT Shunt or Hybrid?**

*Emile Bacha, MD, FACS, Calvin F. Barber Professor of Surgery, Chief, Division of Cardiotoracic Surgery, New York-Presbyterian/Columbia University Medical Center, Director, Pediatric Cardiac Surgery, Morgan Stanley Children's Hospital, New York, NY, USA*

*Introduction: Paul J. Chai, MD, New York, NY, USA*

Noon – 1:00pm  Lunch Break
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<th>Time</th>
<th>Session</th>
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<td>1:00 – 3:00pm</td>
<td>PARALLEL SESSIONS</td>
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<td>1:00 - 3:00pm</td>
<td>PLENARY SESSION #5:</td>
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<td></td>
<td><strong>VAD &amp; ECLS (20 min Each)</strong></td>
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<td>Moderators: Atıf Akçevin, MD, Istanbul, Turkey and Emre Belli, MD, Paris, France</td>
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<td>IL24.</td>
<td>Is It Time to Go Back to Pulsatile Flow: Consequences of Non-Pulsatile and Pulsatile Flow in Cardiopulmonary Bypass and Mechanical Circulatory Support Devices?</td>
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<tr>
<td>Jack G. Copeland, MD, San Diego, CA, USA</td>
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<tr>
<td>IL25.</td>
<td>Rehabilitation after VAD: Role of Ancillary Staff</td>
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<tr>
<td>Rebecca Hoffritz, PT, DPT, Meghan Burkhardt, MS, OTR (L), Meredith McDonaugh, MS, CCLS IV, Philadelphia, PA, USA</td>
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<td>IL26.</td>
<td>Extracorporeal Life Support for Low Flow Applications ECLS Set 2.8 - First Standardized Solution</td>
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<tr>
<td>Thomas Markmann, MBA, Rastatt, Germany</td>
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<tr>
<td>IL27.</td>
<td>Extracorporeal Membrane Oxygenation in Infants</td>
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<tr>
<td>Atıf Akçevin, MD, Istanbul, Turkey</td>
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<td>IL28.</td>
<td>Extracorporeal Circulation: Ten-year Practices in China</td>
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<tr>
<td>Wei Wang, MD, PhD, Shanghai, China</td>
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<tr>
<td>S1.</td>
<td>Monitoring Cerebral and Somatic NIRS Values (Renal and Hepatic) during Cardiac Surgery in Neonates and Infants</td>
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<td>Tijen Alkan-Bozkaya¹, Tuğrul Örmeci², Cihangır Ersoy¹, Arda Özyüksel¹, Burak Arkan¹, Akif Ündar³, Atıf Akçevin¹, Halil Türkoğlu¹, Istanbul Medipol University, Dept. of Cardiovascular Surgery¹ and Radiology², Istanbul, TURKEY, and Penn State University, Children’s Hospital, Hershey, PA, USA³</td>
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3:00pm – 3:30pm Coffee Break/Exhibits/Posters/Wet-Labs
Hands-On Experience with the Newest Pediatric CPB/ECLS/MCS Systems

Moderators: Talya Frey, CCP, Philadelphia, PA, USA, David Palanzo, CCP, Hershey, PA, USA and Akif Ündar, PhD, Hershey, PA, USA

Six wet-labs (30 min each)

1:00 – 5:30pm PARALLEL SESSIONS

1:00 - 5:30pm ECLS Simulation & Cardiac ICU Rounds and Case Presentations:
(Advanced Registration is Required)

Instructors: Roxanne Kirsch MD, Philadelphia, PA, USA, Stacie B. Peddy, MD, Philadelphia, PA, USA and Roberta L. Hales MHA, RRT-NPS, RN

1:15- 3:00pm Group #1:
CICU Rounds (Advanced Registration is Required)

Group #2:
ECLS Simulation (Advanced Registration is Required)

3:00 – 3:30pm Coffee Break/Exhibits/Posters/Wet-Labs

3:30 - 5:30pm Group# 3:
CICU Rounds (Advanced Registration is Required)

Group #4:
ECLS Simulation (Advanced Registration is Required)

ECLS Simulator Training:
This session is for ICU physicians, CT surgeons, nurses, perfusionists and respiratory therapists involved in ECMO cannulation and management. The session will use simulation to facilitate ECPR hands on training. In addition, this program focuses on techniques to train residents/fellows and nurses for a successful ECMO program as well as techniques to build a simulation program. This program will run twice in the afternoon, and each session will incorporate a maximum of 20/session.

Cardiac ICU Rounds and Case Presentations:
These sessions will be held in the CICU at The Children’s Hospital of Philadelphia and lead by CICU staff. Each session will be interactive during which active discussion from attendees is invited regarding all aspects of management and outcomes. There will be 2 sessions, each of 90 minutes duration, and space is restricted to 25 participants for each session. The session will be suitable for all staff involved in the management of critically ill children with heart disease and will include a tour of the unit and discussion regarding resources and staffing requirements.
SATURDAY, MAY 31, 2014

8:00 – 10:00am  PLENARY SESSION #6:

**Pediatric Perfusion: 2014 Update (20 min Each)**

*Moderators: Haydon Dando, CCP, Sydney, Australia, and Talya Frey, CCP, Philadelphia, PA, USA*


*Haydon Dando, CCP, Sydney, Australia*

**IL30. Ex Vivo Lung Perfusion**

*Gregg Roach, CCP, Philadelphia, PA, USA*

**IL31. Use of Blood Products in Pediatric Cardiac Surgery**

*Yves Durandy, MD, Le Plessis Robinson, France*

**IL32. Bloodless Unifocalization Repair on 3.5 kilo Jehovah's Witness Patient**

*Michael P. Brewer, MS, CCP, New York, NY*

**IL33. Evaluation of Different Diameter Arterial Tubing and Arterial Cannulae in Simulated Pediatric CPB Circuits**

*Shigang Wang, MD, Hershey, PA, USA*

**IL34. Developing a Culture of Safety**

*Talya Frey, CCP, Philadelphia, PA, USA*

10:00 – 10:45am  Coffee Break/Exhibits/Posters/Wet-Labs

10:45 – 1:00pm  REGULAR SLIDE PRESENTATIONS:

**Pediatric MCS, ECLS and CPB (Selected from Abstracts)**

*Moderators: Yves Durandy, MD, Le Plessis Robinson, France, and Linda Pauliks, MD, MPH, USA*

**S2. Total Artificial Heart Bridge to Transplantation in Pediatric Patients, a 10 Year Follow-up in 3 Patients**

*Hannah Copeland, Richard G Smith, Francisco Arabia, Jack G Copeland. Loma Linda University, Loma Linda, CA USA*

**S3. Pediatric Centrifugal Assist Devices in a Developing Country: An Efficient and Economical Option to Treatment the Postcardiotomy Heart Failure - Institutional Experience**

*[^4] James Parada, MD, ^‡Antonio Benita, MD, ^‡Jorge Cervantes, MD and ^‡Samuel Ramírez, MD. ^‡Department of Pediatric Cardiac Surgery and Congenital Heart Malformations. National Institute of Cardiology Ignacio Chavez, Mexico City*

**S4. Interhospital Transport with Extracorporeal Life Support in Pediatric Patients**
S5. Determination of a New Mutation in MT-ND1 gene of a Patient with Dextrocardia, Ventriculoarterial Discordance and Tricuspid Atresia
Ali Can Hatemi\(^1,2\), Aris Çakiris\(^3\), Aybala Tongur\(^7\), Hakan Ceyran\(^2\), Duran Üstek\(^3\). \(^1\)Istanbul University, Institute of Cardiology, Department of Cardiovascular Surgery, \(^2\)Kartal Kosuyolu Education and Research Hospital, Department of Cardiovascular Surgery, \(^3\)Istanbul University, Institute for Experimental Medical Research, Department of Molecular Genetics, Istanbul, Turkey

S6. Cardiopulmonary Bypass Priming Using Autologous Cord Blood in Neonates with Congenital Heart Disease
Eun Seok Choi, MD, Woong-Han Kim, MD, Sungkyu Cho, MD, Woo Sung Jang, MD. Department of Thoracic and Cardiovascular Surgery, Seoul National University Children’s Hospital, Seoul National University College of Medicine, Seoul, Korea

\(^*\)Ryan Halter, PhD, \(^\dagger\)Karen Moodie, DVM, \(^\ddagger\)Joseph DeSimone, MD, and \(^\ddagger\)Mark Farrell. \(^*\)Thayer School of Engineering, \(^\ddagger\)Geisel School of Medicine, Dartmouth College, Hanover, NH, USA; and \(^\ddagger\)Dartmouth-Hitchcock Medical Center, Lebanon, NH, USA

S8. Myocardial Histology of Neonatal Piglets after Cardioplegic Protected Cardiac Arrest on Cardiopulmonary Bypass
Tirilomis T, Bensch M, Waldmann-Beushausen R, Schoendube FA. Dept. for Thoracic, Cardiac, and Vascular Surgery, University of Goettingen, Goettingen, Germany

S9. Blood-Surface Interaction and Aggregation of Serum Proteins during Extracorporeal Circulation with Phosphorylcholine-Coated Tubing Lines: S100A8/A9 is it the Trigger for Inflammation?
Ali Can Hatemi\(^1\), Aris Çakiris\(^2\), Kadir Çeviker\(^3\), Neslihan Abacı\(^2\), Fulya Coşan\(^2\), Öznur Ağlar\(^2\), Hülya Azaklı\(^2\), Zeliha Ökten\(^2\), Erhan Kansız\(^1\), Duran Üstek\(^2\). \(^1\)Istanbul University, Institute of Cardiology, Department of Cardiovascular Surgery, \(^2\)Istanbul University, Institute for Experimental Medical Research, Department of Molecular Genetics, Istanbul, Turkey

S10. Danger of Pre-Pump Clamping and Negative Pressure-Associated Gaseous Microemboli during ECLS – In-Vitro Study
Brian J Chin\(^1\), Frank Gentile\(^1\), Shigang Wang, MD\(^1\), Allen R. Kanselman, MD\(^2\), Akif Ündar, PhD\(^1,3\). Penn State Hershey Pediatric Cardiovascular Research Center, Department of Pediatrics\(^1\), Public Health and Sciences\(^3\), Surgery and Bioengineering\(^3\). Penn State Milton S. Hershey Medical Center, Penn State Hershey College of Medicine, Penn State Hershey Children’s Hospital, Hershey, PA, USA
THURSDAY 8:00am - SATURDAY 1:00pm

REGULAR POSTER PRESENTATIONS:

*Moderators: Tijen Alkan-Bozkaya, MD, Istanbul, Turkey and Shigang Wang, MD, Hershey, PA, USA

P1. Use of a Novel Diagonal Pump in an In Vitro Neonatal Pulsatile Extracorporeal Life Support Circuit
   *Pediatric Cardiovascular Research Center, Department of Pediatrics,
   †Public Health Sciences, ‡Surgery, Penn State Milton S. Hershey Medical Center, Penn State Hershey College of Medicine, Hershey, PA; and
   §Bioengineering, College of Engineering, Pennsylvania State University, University Park, PA, USA

P2. Weaning Strategy in Pediatric Extracorporeal Support for Lung Disease
   Jeng-Wei Chen, Yih-Sharng Chen, Nai-Hsin Chi, Chih-Hsien Wang, Shu-Chien Huang. Cardiac Surgical Division, Surgical Department, National Taiwan University Hospital, Taipei, Taiwan

P3. Surgical Approach to Aorticopulmonary Window Accompanied by Interrupted Aortic Arch in Newborns
   Cihangir Ersoy¹, Tijen Alkan-Bozkaya¹, Arda Özyüksel¹, Atıf Akçevin¹, Halil Türkoğlu¹, Vedat Bayer², Tuğrul Paker². Istanbul Medipol University, Dept. of Cardiovascular Surgery¹ and VKV, American Hospital, Dept. of Cardiovascular Surgery², Istanbul, TURKEY

P4. Evaluation of Four Pediatric Cardiopulmonary Bypass Circuits in Terms of Perfusion Quality and Capturing Gaseous Microemboli
   Ryan K. Mathis¹, Judith Lin¹, Natalie M. Dogal¹, Feng Qiu¹, Allen R. Kunselman², Shigang Wang¹ and Akif Ündar¹,‡. Pediatric Cardiovascular Research Center, Departments of Pediatrics¹, Public Health and Sciences², Surgery and Bioengineering³, Penn State College of Medicine, Penn State Children’s Hospital, Hershey, Pennsylvania, USA

P5. Is It Important the Cerebral NIRS Monitoring during Pediatric Aortic Coarctation and/or Arch Repair?
   Tijen Alkan-Bozkaya, Atıl Akçevin, Halil Türkoğlu, Cihangir Ersoy. Istanbul Medipol University, Dept. of Cardiovascular Surgery, Istanbul, TURKEY

P6. Is There a Difference Between Pulsatile and Nonpulsatile Perfusion Mode According to Cyanotic or Not as Perioperative Parameters in Pediatric Cardiac Surgery with CPB?
   Yeliz Koçoğlu¹,², Atıl Gürsoy¹,³, Tijen Alkan-Bozkaya¹, Halil Türkoğlu¹, Atıl Akçevin¹.¹ Istanbul Medipol University, Graduate School of Health Sciences, Dept. of Cardiovascular Surgery, Istanbul, TURKEY, Marmara University, Pendik Education and Research Hospital, Dept. of
Cardiovascular Surgery, 3 Sakarya Ada Medicine, Dept. of Cardiovascular Surgery, Turkey

P7. Novel Pulsatile ECLS System with Superior Hemodynamic Energy
Shigang Wang1, Sunil Patel2, Allen R. Kunselman3, and Akif Ündar1,4,5
1 Pediatric Cardiovascular Research Center, 2 Pediatric Cardiology Division, Department of Pediatrics, 3 Public Health Sciences, 4 Surgery, Penn State Milton S. Hershey Medical Center, Penn State Hershey College of Medicine, Hershey, PA; and 5 Bioengineering, College of Engineering, Pennsylvania State University, University Park, PA, USA

P8. Hemodynamic Evaluation of Novel i-cor® Pulsatile MCS System during Various Cardiac Arrhythmias: In Vitro Pilot Study
* Pediatric Cardiovascular Research Center, Department of Pediatrics, £ Pediatric Cardiology Division, £ Public Health Sciences, £ Surgery, Penn State Milton S. Hershey Medical Center, Penn State Hershey College of Medicine, Hershey, PA; and § Bioengineering, College of Engineering, Pennsylvania State University, University Park, PA, USA

P9. Perioperative Cerebral and Renal Perfusion Monitoring with NIRS in Pediatric Patients Undergoing Cardiac Surgery
Arda Özyüksel1, Tijen Alkan-Bozkaya1, Pelin Karaaslan2, Cihangir Ersoy1, Tuğrul Örmeci3, Burak Arkan1, Atıf Akçevin1, Halil Türkoğlu1.
Istanbul Medipol University, Dept. of Cardiovascular Surgery1, Anesthesiology2, and Radiology3, Istanbul, TURKEY

P10. Comparative Effects of Pulsatile and Nonpulsatile Flow on Plasma Fibrinolytic Balance in Pediatric Patients Undergoing Cardiopulmonary Bypass
Mehmet A. Ağırbaşlı1, Jianxun Song2, Fengyang Lei2, Shigang Wang3, Allen R. Kunselman4, Joseph B. Clark3,5, John L. Myers3,5, and Akif Ündar5,6. 1 Department of Cardiology, College of Medicine, Istanbul, Turkey; 2 Department of Cardiology, College of Medicine, Istanbul, Turkey; 3 Department of Microbiology and Immunology, 3 Pediatric Cardiovascular Research Center, Department of Pediatrics, 4 Public Health Sciences, 5 Surgery, and 6 Bioengineering, Penn State College of Medicine, Penn State Children’s Hospital, Hershey, Pennsylvania, USA

1:00pm CLOSING REMARKS
Mission

The mission of this society is to focus on the current problems associated with pediatric cardiac patients during and after acute or chronic cardiac support. The society will bring together as many distinguished clinicians, bioengineers, and basic scientists as possible to precisely define current problems and suggest novel approaches and solutions.