Updated Scientific Program

WEDNESDAY, June 10, 2015
1:00 – 5:00pm  ON-SITE REGISTRATION (Only if Space is Available)

THURSDAY, June 11, 2015
7:00 – 8:00am Conference Registration
8:00 – 8:15am WELCOME
Giovanni Battista Luciani, MD, Verona, Italy (Local Chair)
Akif Ündar, PhD, Hershey, PA, USA
Alfredo Guglielmi, M. D.
Dean, University of Verona School of Medicine Verona, Italy
A. Craig Hillemeier, M.D.
Dean, Penn State College of Medicine
CEO, Penn State Hershey Medical Center and Health System
Senior Vice President for Health Affairs, Penn State, Hershey, PA, USA

8:15 – 8:45 am Key Note Lecture #1:
Cardiac Pathology Leading to Heart Failure in Pediatric Age
Gaetano Thiene, MD, Padua, Italy

8:45 - 10:15 am PLENARY SESSION #1:
Pediatric Mechanical Circulatory Support Systems: 2015 Update
(15 min Each)
Moderators: William S. Pierce, MD, Hershey, PA, USA, Lorenzo Galletti, MD, Bergamo, Italy, and Brigitte Stiller, MD, Freiburg, Germany

IL1. Pediatric Heart Failure and Transplantation in the VAD Era
Luca Ragni, MD, Bologna, Italy

IL2. The Excor VAD in Children: the Newcastle Experience
Massimo Griselli, MD, Newcastle-upon-Tyne, United Kingdom

IL3. The Heartware VAD in Children: the Zurich Experience
Michael Huebler, MD, Zurich, Switzerland

IL4. The Jarvik VAD in Children as Destination Therapy: the Rome Experience
Antonio Amodeo, MD, Rome, Italy

IL5. The VAD Update: the North American Experience
Chitra Ravishankar, MD, Philadelphia, PA, USA

Discussion: 15 min

10:15 - 11:00am Coffee Break/Exhibits/Posters
11:00 – 11:30am  Key Note Lecture #2:

**Thirty Years of Cardiac Transplantation in Italy**
Giuseppe Faggian, MD, Verona, Italy

11:30-11:45am  Presentation of Young Investigators’ Awards

Noon – 1:00 pm  Lunch Break

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

**ECLS: Utilization, Management, and Outcomes (15 min Each)**
Moderators: Antonio Amodeo, MD, Rome, Italy, and Michael Huebler, MD, Zurich, Switzerland

IL6. Role of ECMO in Neonatal and Pediatric End-Stage Heart Patients
**Brigitte Stiller, MD, Freiburg, Germany**

IL7. Timing of VA ECMO in Infants and Children
**Luca Lorini, MD, Bergamo, Italy**

IL8. Intensive Care Management of Prolonged Pediatric Mechanical Life Support
**Paola Cogo, MD, Rome, Italy**

IL9. Pediatric ECLS – A 30 Year Perspective
**Stephen B. Horton, PhD, CCP, Melbourne, Australia**

IL10. Long-Term Neuropsychological Outcome Following Neonatal ECMO
**Raisa Schiller, MSc, Rotterdam, The Netherlands**

IL11. Impact of the Pulsatile Extracorporeal Membrane Oxygenation
**Hideshi Itoh, CCP, Japan**

IL12. Penn State Hershey ECLS Approach - 2015 Update
**Robert K. Wise, CCP, Hershey, PA, USA**
Discussion: 15 min

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

3:45 – 5:45 pm  REGULAR SLIDE PRESENTATIONS #1 :

**Moderators: Giovanni Battista Luciani, MD, Verona, Italy and Chitra Ravishankar, MD, Philadelphia, PA, USA. (12 min each – 8 min presentation & 4 minute discussion)**

S1. Early Outcomes with HeartWare (HVAD) as a Bridge to Transplant in Children: A Single Institution Experience
**Giuseppe Ferro, MD, Raghav Murthy, MD, Derek Williams, MD, Vinod A. Sebastian, MD, Joseph M. Forbess, MD, Kristine J. Guleserian, MD, Cardiothoracic Surgery, Children’s Medical Center, Dallas, Texas, USA**

S2. Heart Transplantation in Failing Univentricular Hearts
**Chiara Marrone, MD, Paolo Ferrero, MD, Simona Marcara, MD, Matteo Ciuffreda, MD, Laura Preda, MD, Marco Papa, MD, Attilio Iacovoni, MD, Roberta Sebastiani, MD, Duccio Federici, MD**,
Francesco Seddio, MD¹, Amedeo Terzi, MD², and Lorenzo Galletti, MD¹. Pediatric Cardiology and Cardiac Surgery Unit¹, Heart Transplantation Unit², Cardiovascular Department, Papa Giovanni XXIII Hospital, Bergamo, Italy

S3. Pediatric Heart Transplantation in Patient on ECMO or VAD
Enrico Aidala, MD, Andrea Valori, MD, Maria Teresa Cascarano, MD, Luca Deorsola, MD and Carlo Pace Napoletone, MD. Pediatric Cardiac Surgery, Regina Margherita Children's Hospital, Turin, ITALY

S4. Coagulation and Inflammatory Markers Predict Berlin Heart Excor Thromboembolic Events despite a Steroid Protocol: A Study of 32 Events
Reshma Biniwale, MD¹, Matthew Hung, BS², Kian Asanad, BS², Anthony Salimbangon, RN, BSN², Myke Federman, MD⁴. Department of Cardiothoracic Surgery¹, David Geffen School of Medicine². Department of Mechanical Circulatory Support³, Department of Pediatric Critical Care⁴, Ronald Reagan Medical Center, CA, USA

S5. Survival Outcomes in Children Less Than 10 Kg Bridged To Transplant with the Berlin Heart EXCOR Ventricular Assist Device
G. Brancaccio, PhD, Arianna Di Molfetta, PhD, S. Filippelli, PhD, R. Iacobelli, PhD, S. Morelli, MD, I. Favia, MD, P. Cogo, PhD, Antonio Amodeo, MD. Pediatric Hospital Bambino Gesù, Rome-Italy

R. Iacobelli, A. Di Molfetta, G. Brancaccio, S. Morelli, R. Adorisio, A. Toscano, A. Amodeo. Pediatric Hospital Bambino Gesù, Rome-Italy

S7. Platelet Mapping Assay is Not Suitable to Safely Monitor Antiplatelet Therapy during Ventricular Assist Device
C. Giorni¹, MD, M. Costopoulos², C. Bachelot-Loza³, C. Biselli, MD, M. Gabaldon¹, MD, N. Aboumerouane¹, MD, A. Mazzola¹, MD, C. Barbari¹, MD, P. Pouard¹, MD, D. Borge³, D. Lasne³. ¹Département d'Anesthésie Réanimation, Hôpital Necker, ²Service d'Hématologie Biologique, Hôpital Necker, ³INSERM U1140, ⁴Université Paris-Descartes, Sorbonne Paris Cité, ⁵INSERM U1176, Kremlin-Bicêtre, ⁶Université Paris Sud, UFR de Pharmacie, Chatenay-Malabry, Paris, France

S8. Biventricular Intra-corporeal Ventricular Assist Device in a 10 Year Old Child
Martin Schweiger, MD¹, Anna Cavigelli-Brunne, MD², Bernhard Krüger³, Michael Hübler, MD, Prof¹. University Children's Hospital Zurich, Department of Congenital Cardiovascular Surgery¹, University Children's Hospital Zurich, Department of Pediatric Cardiology², University Children's Hospital Zurich, Department of Anesthesiology³, Zurich, Switzerland
FRIDAY, June 12, 2015

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<th>Time</th>
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<tr>
<td>7:00 – 8:00 am</td>
<td>Conference registration</td>
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<td>8:00 – 8:30 am</td>
<td>Key Note Lecture #3</td>
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<td><strong>The Future of Neonatal Cardiopulmonary Bypass in the Era of Hybrid Surgery</strong></td>
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<td>Emile Bacha, MD, FACS, New York, NY, USA</td>
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<td>8:30 – 10:15 am</td>
<td>PLENARY SESSION #3:</td>
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<td><strong>Minimizing Adverse Effects of CPB in neonates and infants: Global Multi-disciplinary Team Approach (15 min Each)</strong></td>
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<td>Moderators: Emile Bacha, MD, FACS, New York, NY, USA and Massimo Griselli, MD, Newcastle Upon Tyne, UK</td>
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<td>IL13. Anticoagulation during Pediatric Cardiopulmonary Bypass</td>
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<td>Marco Ranucci, MD, Milan, Italy</td>
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<td>IL14. Paediatric Cardiopulmonary Bypass – an RCH Perspective</td>
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<td>Stephen B. Horton, PhD, CCP, Melbourne, Australia</td>
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<td>IL15. Selective Cerebral and Myocardial Perfusion for Neonatal Arch Repair</td>
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<td>Emanuela Angeli, MD, Bologna, Italy</td>
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<td>IL16. The Role of Hybrid Stage I in Averting Cardiopulmonary Bypass Risk in Neonates</td>
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<td>Adriano Carotti, MD, Rome, Italy</td>
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<td>IL17. Risk Management in Pediatric Cardiopulmonary Bypass</td>
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<td>Frank Merkle, CCP, Dipl-med.paed., Berlin, Germany</td>
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<td>IL18. Impact of Pulsatile Flow on Vital Organ Recovery during CPB in Neonates and Infants</td>
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<td>Akif Ündar, PhD, Hershey, PA, USA</td>
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<td>Discussion: 30 min</td>
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<td>10:15 – 11:00 am</td>
<td>Coffee Break/Exhibits/Posters</td>
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<td>11:00 – 11:30 am</td>
<td>Key Note Lecture #4</td>
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<td><strong>Myocardial Protection in Infants and Children: Building an Evidence-Based Strategy</strong></td>
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<td>Massimo Caputo, MD, Chicago, USA</td>
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<td>11:30 – 12:00 am</td>
<td>Key Note Lecture #5</td>
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<td><strong>Stem Cell Therapy in Congenital Heart Disease</strong></td>
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<td>Shunji Sano, MD, Okayama, Japan</td>
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<td>Noon – 1:00 pm</td>
<td>Lunch Break</td>
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1:00 – 3:00pm  REGULAR SLIDE PRESENTATIONS #2:

Moderators: Atif Akcevin, MD, Istanbul, Turkey, Carlo Pace Napoletone, MD, Turin, Italy and Akif Ündar, PhD, Hershey, PA, USA  (12 min each – 8 min presentation & 4 minute discussion)

S9. Improved Outcome of Cardiac ECMO in Infants and Children Using Magnetic Levitation Centrifugal Pumps
Giovanni Battista Luciani, MD, Luca Barozzi, MD, Rungatscher A, MD, Salvatore Torre, MD, Stiljan Hoxha, MD, Tiziano Menon, CCP, Giuseppe Faggian, MD. Division of Cardiac Surgery, Department of Surgery, University of Verona School of Medicine, Verona, Italy

S10. Early results of Infants Requiring Postoperative Extracorporeal Membrane Oxygenation after Norwood Palliation for Hypoplastic Left Heart Syndrome
Ko Yoshizumi, MD, Shingo Kasahara, MD, Yasuhiro Kotani, MD, Takuya Kawabata, MD, Yosuke Kuroko, MD, Sadahiko Arai, MD Shunji Sano, MD. Department of Cardiovascular Surgery, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan

S11. Impact of Anticoagulation Strategy on ECMO Bleeding and Thrombotic Complications
Hinah Parker, BS¹, Pippa Simpson, PhD², Mahua Dasgupta, MS², Robert A Niebler, MD¹. Department of Pediatrics, Sections of Critical Care¹ and Quantitative Health Sciences², Medical College of Wisconsin; Milwaukee, WI, USA

S12. ECLS Experience of Hacettepe University Ihsan Dogramaci Children’s Hospital
Murat Tanyildiz, MD¹, Selman Kesici, MD¹, Benan Bayrakci, MD¹, A. Filiz Yetimakman, MD¹, Burcak Bilgin, MD¹, H. Hakan Aykan, MD², Oktay Korun, MD², Ulus Kumbasar, MD³, Metin Demircin, MD³. Pediatric Critical Care Unit¹, Pediatric Cardiology², Department of Cardiovascular Surgery³, Hacettepe University Ihsan Dogramaci Children’s Hospital, Ankara, Turkey

S13. Continuous Metabolic Monitoring in Infant Cardiac Surgery: Towards an Individualized Cardiopulmonary Bypass Strategy
Salvatore Torre, MD, Elisa Biondani, CCP, Tiziano Menon, CCP, Diego Marchi, CCP, Mauro Franzoi, CCP, Daniele Ferrari, CCP, Rocco Tabet, CCP, Stiljan Hoxha, MD, Luca Barozzi, MD, Giuseppe Faggian, MD, Giovanni Battista Luciani, MD. Division of Cardiac Surgery, Department of Surgery, University of Verona School of Medicine, Verona, Italy

Timpa J, O'Meara C, Jackson K, Goldberg K, Phillips J, Crawford J, Alten J. Department of Cardiovascular Perfusion, Children's of Alabama, Birmingham, Alabama, USA

S15. A New Perspective in Cardioplegia: Valsartan Improves Myocardial Protection and Oxidative Stress Tolerance during Ischemia/Reperfusion in Isolated Neonatal Rat Heart
Gianluca Lucchese¹,³, MD, PhD, Giovanni Battista Luciani¹, MD, Stiljan Hoxha¹, MD, Ian Cummings³, MD, Mohamed Nassar³, MD, PhD, Pietro Amedeo Modesti², MD, PhD, Giuseppe Faggian¹, MD. Pediatric Cardiac Surgery Unit, University of Verona, Italy. ¹Department of Medical and Surgical Critical Care, University of Florence, Italy. ²Department of Medical Critical Care, University of Verona, Italy.

S16. A Pilot Study of Antithrombin Replacement Prior to Cardiopulmonary Bypass in Neonates
Robert A. Niebler¹, Katherine Woods¹, Nancy Ghanayem¹, George Hoffman², Michael Mitchell², Rowena Punzalan¹, John Paul Scott¹, Pippa Simpson⁴, James Tweddell³. Departments of Pediatrics¹, Anesthesia², Cardiothoracic Surgery³, and Quantitative Health Sciences⁴, Medical College of Wisconsin, Milwaukee, WI, USA.

S17. Multisite Near-Infrared Spectroscopy during Cardiopulmonary Bypass in Pediatric Heart Surgery
Enrico Cetrano¹, M.D, Zaccaria Ricci², M.D, Paola Cogo², M.D, Ondina La Salvia¹, Adriano Carotti¹, M.D. Department of Pediatric Cardiology and Cardiac Surgery¹, Department of Pediatric Anesthesiology², Bambino Gesù Children’s Hospital, IRCCS, Rome, Italy.

S18. Effects of Mini-Volume Priming on Clinical Outcomes in Low-Body-Weight Neonates: Less Transfusion and Post-operative ECMO Support
Sang Yoon Kim, MD¹, Sungkyu Cho, MD¹, Eunseok Choi, MD², Woong-Han Kim, MD, PhD¹. Department of Thoracic and Cardiovascular Surgery, College of medicine, Seoul National University Hospital, Seoul, Korea. Department of Thoracic and Cardiovascular Surgery, Cardiovascular Center, Sejong General Hospital, Bucheon, Republic of Korea².

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

3:00 – 3:45pm MODERATED POSTER PRESENTATIONS (at the Exhibit Hall)

Moderators: Giovanni Battista Luciani, MD, Verona, Italy, Lucia Rossetti, MD, Verona, Italy and Mauro Franzoi, CCP, Verona, Italy
(4 min each)
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<td>3:45 – 6:45pm</td>
<td>PARALLEL SESSIONS</td>
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<td>3:45 – 6:45pm</td>
<td>WET-LABS (at the Exhibit Hall)</td>
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<td>Moderators: Robert K. Wise, CCP, Hershey, PA, USA, Tiziano Menon, CCP, Verona, Italy, Daniele Ferrarini, CCP, Verona, Italy and Mauro Franzoi, CCP, Verona, Italy</td>
<td>Hands-On Experience with the Newest Pediatric CPB/ECLS/MCS Systems - Wet-Labs by the industry</td>
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<td>3:45 – 6:45pm</td>
<td>Pediatric ECLS/ECMO Simulation (at the Exhibit Hall)</td>
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<td>Moderators: Matteo Di Nardo, MD, Rome, Italy, Francesca Stoppa, MD, Rome, Italy, Rocco Tabbi, CCP Verona, Italy and Diego Marchi, CCP, Verona, Italy</td>
<td>(advanced registration is required: max 30 participants)</td>
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SATURDAY, June 13, 2015

8:00 – 10:00am  PLENARY SESSION #4:

**Experimental Approach to Pediatric Cardiovascular Medicine (15 min Each)**

*Moderators: Christian Vergara, PhD, Milan, Italy and Amy Throckmorton, PhD, Philadelphia, PA, USA*

**IL19. Mechanical Circulatory Assistance of the Fontan Physiology**

*Amy Throckmorton, PhD, Philadelphia, PA, USA*

**IL20. The Use of VAD in Univentricular Physiology: The Role of Numerical Models**

*Arianna Di Molfetta, PhD, Rome, Italy*

**IL21. Computational Study of the Fluid-Dynamics in Ascending Aorta in Presence of a Normally Functioning Bicuspid Valve**

*Christian Vergara, PhD, Milan, Italy*

**IL22. Real-Time Tracking of Novel Biomarkers during Neonatal Extracorporeal Circulation**

*Jeffrey D. Zahn, PhD, Piscataway, NJ, USA*

**IL23. Experimental Small Animal Models of Extracorporeal Circulation and Right Heart Failure: a Window for Translational Research in Pediatric Cardiac Surgery**

*Alessio Rungatscher, MD, Verona, Italy*

**Discussion:** 30 min

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

10:45 – 12:45 pm  REGULAR SLIDE PRESENTATIONS #3:

*Moderators: Luca Barozzi, MD, Verona, Italy, Jeffrey D. Zahn, PhD, Piscataway, NJ, USA. (12 min each – 8 min presentation and 4 minute discussions)*

**S19. Surgical Options for the Treatment of Right Ventricular Failure in LVAD Patients: A Simulation Study**

*Arianna Di Molfetta, PhD¹, Gianfranco Ferrari, PhD², Maria Giulia Gagliardi, PhD³, Libera Fresiello, PhD³, Roberta Iacobelli, PhD¹, Alessandra Toscano, PhD¹, Sergio Filippelli, PhD¹, and Antonio Amodeo, PhD¹. Pediatric Hospital Bambino Gesù¹, Rome-Italy; CNR, Institute of Clinical Physiology², Rome-Italy; Catholic University of Leuven², Leuven-Belgium*

**S20. Application of CFD-modelling in the Development of Russian Pediatric VAD Systems**

*Valentin Morozov, PhD¹, Leonid Belyaev, PhD¹, Georgy Itkin, PhD², Alexander Ivanchenko, PhD¹, Alexey Zhdanov, PhD¹. Department of Mechanical Engineering¹, Department of Biotechnical Systems*
S21. Mechanically Assisted Total Cavopulmonary Connection with an Axial Flow Pump: Computational and in Vivo Study
°Department of Pediatric Cardiac Surgery, Bambino Gesù Children’s Hospital IRCCS, Rome, Italy; *Department of Technology & Health, Italian National Institute of Health, Rome, Italy; ^Department of Pediatric Cardiac Surgery, Bambino Gesù Children’s Hospital IRCCS, Rome, Italy; ‘Department of cardiology, Policlinico A. Gemelli, Rome, Italy

S22. The Use of a Numerical Model to Simulate the Cavo-Pulmonary Assistance in Fontan Circulation: A Preliminary Verification
Arianna Di Molfetta, PhD1, Gianfranco Ferrari, PhD2, Fabrizio Gandolfo, M.D.1, Giuseppina Testa, M.D.1 and Antonio Amodeo, M.D.1 Pediatric Hospital Bambino Gesù1, Rome-Italy; CNR, Institute of Clinical Physiology2, Rome-Italy

S23. Effect of the Pulsatile Extracorporeal Membrane Oxygenation on Hemodynamic Energy and Systemic Microcirculation under Acute Cardiac Failure Model in Piglets
Hideshi ITOH1,2, Shingo ICHIBA2, Yoshihito UJIKE2, Takuma DOUGUCHI3, Hideaki OBATA4, Shuji INAMORI1, Tatsuo IWASAKI5, Shingo KASAHARA4, Shunji SANO4, Akif Ündar7. Junshin Gakuen University, Department of Medical Engineering1. Fukuoka, Japan. Okayama University Graduate School of Medicine, Department of Emergency and Intensive Care Medicine2, Department of Clinical Engineering3, Department of Anesthesiology3, Department t of Cardiovascular Surgery4, Okayama, Japan. Okayama University of Science, Department of Biomedical Engineering5,Okayama, Japan; Department of Pediatrics, Surgery & Bioengineering, Penn State Hershey Pediatric Cardiovascular Research Center, Penn State College of Medicine, Penn State Hershey Children’s Hospital, Hershey, PA, USA7

S24. In-Vivo Hemodynamic Performance Evaluation of Novel ECG-Synchronized Pulsatile and Non-pulsatile Cardiac Assist System in an Adult Swine Model
Shigang Wang, MD1, Jenelle M. Izer, DVM, MS2, Joseph B. Clark, MD1,3, Sunil Patel, MBBS4, Linda Pauliks, MD, MPH1, Allen R. Kunselman, MA5, Donald Leach, BS1, Timothy K. Cooper, DVM, PhD2,5, Ronald P Wilson, VMD, MS2 and Akif Ündar, PhD1,3,6
Penn State Hershey Pediatric Cardiovascular Research Center, Department of Pediatrics1, Comparative Medicine2, Surgery3, Public
P1. Clinical Outcome of Benign Cardiac Tumors Detected Prenatally: A Ten-Year Experience
Camilla Sandrini*, MD, Stiljan Hoxha, MD, Lucia Rossetti*, MD, Micol Rebonato*, MD, Antonia Maria Prioli*, MD, Salvatore Torre, MD, Luca Barozzi, MD, Corrado Vassanelli*, MD, Giuseppe Faggian, MD, Giovanni Battista Luciani, MD. Division of Cardiac Surgery, Department of Surgery, and Division of Cardiology*, Department of Medicine, University of Verona School of Medicine, Verona, Italy

P2. Laboratory Evaluation of Hemolysis and Systemic Inflammatory Response in Neonatal Nonpulsatile and Pulsatile Extracorporeal Life Support Systems
Shigang Wang, MD1, Conrad Krawiec, MD1,2, Sunil Patel1,3, Allen R. Kuselmann, MA4, Jianxun Song, PhD5, Fengyang Lei, PhD5, Larry D. Baer, CCP6, and Akif Ündar, PhD1,7. Pediatric Cardiovascular Research Center, Department of Pediatrics1, Pediatric Critical Care Unit2, Pediatric Cardiology3, Department of Public Health Sciences4, Microbiology & Immunology5, Heart and Vascular Institute6, Surgery and Bioengineering7, Penn State Milton S. Hershey Medical Center, Penn State Hershey College of Medicine, Penn State Hershey Children’s Hospital, Hershey, PA, USA

P3. Childhood Obesity and Extracorporeal Membrane Oxygenation: Where do We Draw the Line?
Reshma Biniwale, MD1, Amit Iyengar, MS2, Kian Asanad, MS2, Jessica Samson, CCP3. Department of Cardiothoracic Surgery1, David Geffen School of Medicine2, Department of Perfusion Services3, Ronald Reagan Medical Center, CA, USA

P4. Development of Microfluidic Immunoassays for Multiplexed Biomarker Measurements
Mehdi Ghodbane, Lawrence A. Sasso, Andrew Pskowski, Eamon Collins, Rene S. Schloss, Martin L. Yarmush, and Jeffrey D. Zahn. Department of Biomedical Engineering, Rutgers University, Piscataway, New Jersey, USA

P5. In-vitro Hemodynamic Evaluation of Five 6 Fr and 8 Fr Arterial Cannulae in Simulated Neonatal CPB Circuits
P6. Role of Oxygenator in Producing Leucocyte Activation and Systemic Inflammatory Response in Experimental Model of Extracorporeal Circulation

Elisabetta Milani, MD\textsuperscript{1}, Alessio Rungatscher, MD, PhD, FAHA\textsuperscript{1}, Maddalena Tessari, PhD\textsuperscript{1}, Daniele Linardi, MD\textsuperscript{1}, Tiziano Menon, MSc\textsuperscript{1}, Chiara Stranieri, PhD\textsuperscript{2}, Erika Solani, PhD\textsuperscript{3}, Alessio Montresor, PhD\textsuperscript{2}, Giovanni Battista Luciani, MD\textsuperscript{1}, Giuseppe Faggian, MD\textsuperscript{1}. Department of Surgery, Division of Cardiac Surgery\textsuperscript{1}, Department of Pathology\textsuperscript{2}, University of Verona, Verona, Italy

P7. Twenty-Year Outcome after RVOT Repair Using Heterotopic Pulmonary Conduits in Infants and Children

Stiljan Hoxha, MD, Salvatore Torre, MD, Alessio Rungatscher, MD, Micol Rebonato, MD, Luca Barozzi, MD, Giuseppe Faggian, MD, Giovanni Battista Luciani, MD. Division of Cardiac Surgery, Department of Surgery, University of Verona School of Medicine, Verona, Italy

P8. Extracellular Histones May Be a Rapid Prognostic Indicator for Children after Open-Heart Surgery

Hongxiang GAO, Xi MO, Wei WANG. Department of Pediatric Thoracic and Cardiovascular Surgery, Shanghai Children’s Medical Center, China

P9. The Intraoperative Pulmonary Flow Study Is a Sensitive Predictor for Ventricular Septal Defect Closure after Complete Unifocalization in Patients with Pulmonary Atresia, Ventricular Septal Defect and Major Aortopulmonary Collateral Arteries

Matteo Trezzi, Antonio Albano, Enrico Cetrano, Sonia B. Albanese, Adriano Carotti. Unit of Pediatric Cardiac Surgery, Bambino Gesù Children Hospital IRCCS, Rome, Italy

P10. Use of CDI 500 during ECMO: Reliability of Data and Benefits

Ghitti Davide, CCP EBCP\textsuperscript{1}, Fumagalli Elisabetta. CCP\textsuperscript{1}, Grazio Lorenzo, MD\textsuperscript{2}, Cattaneo Sergio. MD\textsuperscript{2}, Federici Duccio, MD\textsuperscript{3}, Didedda Giovanni, MD\textsuperscript{2}, Galletti Lorenzo, MD\textsuperscript{3}, Lorini F. Luca, MD\textsuperscript{3}. Perfusion Service\textsuperscript{1}, Departement of Anesthesia and Intensive Care\textsuperscript{2}, Pediatric Cardiac Surgery Unit\textsuperscript{3}, Azienda Ospedaliera “Papa Giovanni XXIII” Bergamo - Italy

P11. Potential Danger of Pre-pump Clamping on Negative Pressure-Associated Gaseous Microemboli Generation during ECLS - An In-Vitro Study

Shigang Wang, MD\textsuperscript{1}, Brian J Chin\textsuperscript{1}, Frank Gentile\textsuperscript{1}, Allen R. Kunselman, MA\textsuperscript{2}, David Palanzo, CCP\textsuperscript{3}, and Akif Ündar, PhD\textsuperscript{1,4}. Penn State Hershey
P12. Impact of Pulsatility and Flow Rates on Hemodynamic Energy Transmission in an Adult ECLS System
Rachel Wolfe¹, Ashton Strother¹, Shigang Wang, MD¹, Allen R. Kunselman, MA², and Akif Ündar, PhD¹,³. Pediatric Cardiovascular Research Center, Department of Pediatrics¹, Public Health Sciences², Surgery and Bioengineering³, Penn State Milton S. Hershey Medical Center, Penn State Hershey College of Medicine, Penn State Hershey Children’s Hospital, Hershey, PA, USA

P13. Drowning Accident with Deep Hypothermia
Theodor Tirilomis, MD, PhD¹, Martin Friedrich, MD, PhD¹, Anselm Braeuer, MD, PhD², Daniel Heise, MD, PhD², Christian Bireta, MD¹, Michael Steinmetz, MD, PhD³ and Wolfgang Ruschewski, MD, PhD¹. Department of Thoracic, Cardiac, and Vascular Surgery¹, Department of Anesthesiology², Department of Pediatric Cardiology³, University Hospital Göttingen, Germany

Ghitti Davide, CCP, EBCP¹, Federici Duccio, MD², Viscardi Silvia, CCP¹, del Pesco Federica, CCP¹, Genova Stefania, CCP¹, Ariano Andrea, CCP¹, Cattaneo Sergio, MD³, Didedda Giovanni, MD³, Lorini Luca, MD³, Galletti Lorenzo, MD³, Perfusion Service¹, Pediatric Cardiovascular Surgery Unit², Departement of Cardiovascular Disease³, Azienda Ospedaliera “Papa Giovanni XXIII” – Bergamo – Italy

P15. Patient-Specific Computer-Aided Planning of Pulmonary Outflow Patch Reconstruction in Pediatric Congenital Heart Patients - Proof of Concept
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P16. The Results and Correlations between Hepatic Near-Infrared Spectroscopy Measurements and Portal Vein Flow Dynamics and Early Postoperative Outcomes in Pediatric Cardiac Surgery
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