# Wednesday, June 26

## 8:30am - 4:30pm

**ASAIO 8th Annual Pediatric Medical Device Day**  
*Plaza B* - *Lobby Level T1*

**Pediatric Day Chairs:**
- Christina VanderPluym, MD, Boston Children’s Hospital, Boston, MA
- Angela Lorts, MD, Cincinnati Children’s Hospital Med. Ctr., Cincinnati, OH
- Nicole Gillette, BS, FDA, Silver Spring, MD

### 8:30am - 10:00am

**Pediatric Day Session 1: Finding the Ideas to Fuel Pediatric Innovation**

**Co-Chairs:** David Morales, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH  
Trevor Snyder, PhD, Corwave, Clichy, France

8:30am-8:50am  
**Lessons Learned from a Lifetime of Innovation**  
Roland Hetzer, MD, PhD, Immanuel Cardio Centrum Berlin, Berlin, Germany

8:50am-9:10am  
**The Use of New Devices: Jarvik 2015 and Heartmate 3**  
David Sutcliffe, MD, University of Texas Southwestern, Dallas, TX

9:10am-9:30am  
**The Use of New Data and Collaboration in Children: ACTION**  
David Peng, MD, University of Michigan, Ann Arbor, MI

9:30am-9:50am  
**The Use of Devices in Underserved Population: Adult Congenital Heart Disease**  
Ari Cedars, MD, UT Southwestern Medical Center, Dallas, TX

9:50am-10:00am  
Discussion

### 10:00am-10:30am  
**Pediatric Refreshment Break**

### 10:30am - 11:45am

**Pediatric Day Session 2: Finding the Money to Fund Pediatric Innovation**

**Co-Chairs:** Christina VanderPluym, MD, Boston Children’s Hospital, Boston, MA  
Mr. Robert Kroslowitz, Berlin Heart Inc., The Woodlands, TX

10:30am-10:50am  
**FDA’s Pediatric Device Consortia (PDC) Grants Program**  
Katharine Chowdhury, BSE, MS, FDA, Silver Spring, MD

10:50am-11:10am  
**Economics of Pediatric Device Development**  
Joseph Rossano, MD, Children’s Hospital of Philadelphia, Philadelphia, PA

11:10am-11:30am  
**Funding Devices for the Future: Why Current Strategies Will Not Work**  
Peter Wearden, MD, PhD, Nemours Children's Hospital, Orlando, FL

11:30am-11:45am  
Discussion

### 12:00-1:15pm

**LUNCH BREAK**
## Wednesday, June 26 - Continued

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Co-Chairs</th>
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<tbody>
<tr>
<td>1:30pm - 2:15pm</td>
<td><strong>Pediatric Day Session 3: Finding the Way to Evaluate Pediatric Innovations</strong></td>
<td>David Rosenthal, MD, Stanford University, Palo Alto, CA</td>
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<td>Nicole Gillette, BS, FDA, Silver Spring, MD</td>
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<tr>
<td>1:30pm-1:45pm</td>
<td><strong>International Collaborations in Regulatory Bodies: Why and What Can We Do With It?</strong></td>
<td>Frank Ing, MD, UC Davis Health System, Sacramento, CA</td>
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<tr>
<td>1:45pm-2:00pm</td>
<td><strong>Pediatric Medical Device Life Cycle - What are the Steps?</strong></td>
<td>Nicole Gillette, BS, FDA, Silver Spring, MD</td>
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<tr>
<td>2:00pm-2:15pm</td>
<td><strong>Alternative Strategies to Pediatric Evaluation</strong></td>
<td>Christopher Almond, MD, MPH, Stanford University, Palo Alto, CA</td>
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<tr>
<td>2:15pm - 2:45pm</td>
<td><strong>Pediatric Refreshment Break 2</strong></td>
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<tr>
<td>2:45pm - 4:30pm</td>
<td><strong>Pediatric Day Session 4: Bringing Innovations to Our Pediatric Patients</strong></td>
<td>Hari Tunuguntla, MD, Baylor College of Medicine, Houston, TX</td>
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<td>David Sutcliffe, MD, University of Texas Southwestern, Dallas, TX</td>
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<tr>
<td>2:45pm-3:10pm</td>
<td><strong>How to Bring a Device to Market?</strong></td>
<td>Robert Kroslowitz, Berlin Heart Inc, The Woodlands, TX</td>
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<tr>
<td>3:10pm-3:35pm</td>
<td><strong>Centers for Devices and Radiologic Health Advancing Pediatric Mission</strong></td>
<td>Speaker to be Determined</td>
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<tr>
<td>3:35pm-4:00pm</td>
<td><strong>The Ongoing Prolific Use of Off Label Devices: Implications for Us and Our Patients</strong></td>
<td>Angela Lorts, MD, Cincinnati Children’s Hospital Med Ctr, Cincinnati, OH</td>
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<tr>
<td>4:00pm-4:25pm</td>
<td><strong>Ethical Challenges of Using Novel Technologies in Children: How to Start and When to Stop</strong></td>
<td>Seth Hollander, MD, Stanford University, Palo Alto, CA</td>
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<tr>
<td>4:25pm-4:30pm</td>
<td><strong>Discussion</strong></td>
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<tr>
<td>8:00am-5:30pm</td>
<td><strong>MCS/VAD University</strong></td>
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<td></td>
<td><strong>Session 1: History, Fundamentals and Indication for Durable MCS Therapy</strong></td>
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<td>8:00am-9:30am</td>
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<td>8:00am-8:45am</td>
<td><strong>Richard Wampler, MD, Oregon Health Sciences University, Loomis, OR</strong></td>
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<td>8:45am-9:30am</td>
<td><strong>James Antaki, PhD, Cornell University, Ithaca, NY</strong></td>
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### Session 2: Acute and Durable Support for INTERMACS I Patients?

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<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>9:30am-10:30am</td>
<td><strong>Acute Management of Shock in &quot;Crashing and Burning&quot; Patients</strong></td>
<td>Yoan Lamarche, MD, Montreal Heart Institute, Montreal, Canada</td>
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<tr>
<td>9:30am-9:45am</td>
<td><strong>Technology for the Care of Right Ventricular Failure: Indications and Options</strong></td>
<td>Mark Slaughter, MD, University of Louisville, Louisville, KY</td>
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<tr>
<td>9:45am-10:00am</td>
<td><strong>Recovery, Heart Transplantation, Timing and Strategies for Transition to Durable Support</strong></td>
<td>Sonna Patel-Raman, PhD, NuPulseCV Inc, Raleigh, NC</td>
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<tr>
<td>10:00am-10:15am</td>
<td><strong>Durable Left Ventricular Support and TAH</strong></td>
<td>Francisco Arabia, MD, Cedars-Sinai Medical Center, Los Angeles, CA</td>
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<tr>
<td>10:15am-10:30am</td>
<td><strong>Discussion</strong></td>
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<tr>
<td>Time</td>
<td>Session 3: The GOOD, the BAD, and the UGLY in Durable Device Therapy</td>
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<td>10:30am - 11:30am</td>
<td>Perioperative Management and Getting Through the First 30 Days</td>
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<td>Jeffrey Teuteberg, MD, Stanford University, Stanford, CA</td>
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<tr>
<td>11:00am - 11:30am</td>
<td>Hemocompatibility: The Human-Machine Interface</td>
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<td>Carlo Bartoli, MD, PhD, University of Pennsylvania, Philadelphia, PA</td>
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<tr>
<th>Time</th>
<th>Session 4: Technology, Entertainment, Design (TED) Style MCS</th>
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<tr>
<td>11:30am - 1:30pm</td>
<td>Dealing With a Thromboembolic Complication</td>
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<td>Speaker to be Determined</td>
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<tr>
<td>12:00pm - 12:30pm</td>
<td>Recognition and Treatment of Aortic Insufficiency of Durable Device Placement</td>
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<td>Jane Wilcox, MD, MSC, Northwestern University, Chicago, IL</td>
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<td>12:30pm - 1:00pm</td>
<td>Evaluation, Implications and Management of Concomitant Coronary Disease</td>
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<td>Simon Maltais, MD, PhD, Centre Hospitalier de l’Université de Montréal (CHUM), Montreal, Quebec, Canada</td>
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<tr>
<td>1:00pm - 1:30pm</td>
<td>&quot;Bridge to Heart Failure&quot;: Evaluation and Treatment After Durable Device Placement</td>
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<td>Mary Keebler, MD, Vanderbilt University Med Center, Nashville, TN</td>
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<th>Time</th>
<th>Session 5: Fundamental Principles and Engineering Advances to Enhance Technology Hemocompatibility and Outcomes</th>
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<tr>
<td>1:30pm - 2:30pm</td>
<td>Engineering Design to Reduce Adverse Events</td>
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<td>Daniel Timms, PhD, BiVACOR, Houston, TX</td>
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<tr>
<td>1:40pm - 1:50pm</td>
<td>Device Operation Strategies to Mitigate Adverse Events</td>
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<td>Christopher Cotter, MSME, Abbott, Burlington, MA</td>
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<td>1:50pm - 2:00pm</td>
<td>Evaluation of the Impact of Designs and Operation Strategies on Adverse Events</td>
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<td>Tadashi Motomura, MD, PhD, Evaheart Inc, Houston, TX</td>
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<td>2:00pm - 2:10pm</td>
<td>Advancements in the Field of MCS Aimed at Improving the Adverse Event Profile</td>
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<td>Jeff Gohean, PhD, Windmill Cardiovascular Systems Inc, Austin, TX</td>
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<td>2:10pm - 2:30pm</td>
<td>Discussion</td>
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<tr>
<th>Time</th>
<th>Session 6: Heart Transplantation and Challenges in Bridged Patients</th>
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<tr>
<td>2:30pm - 3:30pm</td>
<td>Organ Selection in Patients Bridged With An LVAD: Implications of New UNOS Allocation System</td>
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<td>Robert Kormos, MD, University of Pittsburgh Med Center, Pittsburgh, PA</td>
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<td>3:00pm - 3:30pm</td>
<td>Destination Therapy vs High-Risk Heart Transplantation In Older Patients / Patients With Device Complications</td>
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<td>Michel Carrier, MD, Montreal Heart Institute, Montreal, Canada</td>
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<th>Time</th>
<th>Session 7: When Device Therapy Goes Wrong…</th>
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<td>3:30pm - 4:30pm</td>
<td>Management of Non-Compliant Patients: Implications and Importance of Social Environment</td>
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<td>Sarah Schroeder, ACNP-BC, MSN, Bryan Heart, Lincoln, NE</td>
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<td>3:50pm - 4:10pm</td>
<td>Dealing With Devastating Complications On Support</td>
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<td>Sarah Schettle, PA-C, Mayo Clinic, Rochester, MN</td>
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<td>4:10pm - 4:30pm</td>
<td>Palliative Care Role and End-of Life Discussions</td>
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<td>Jacob Strand, MD, Mayo Clinic, Rochester, MN</td>
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### Session 8: Man or Machine: Managing Interaction and Interface Between MCS and Patients

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<th>Time</th>
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<th>Presenter/Institution</th>
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<tr>
<td>4:30pm - 4:45pm</td>
<td>MCS Performance Diagnostics and Matching Physiologic Demand</td>
<td>Chris Hayward, MD, St Vincent’s Hospital, Sydney, Australia</td>
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<tr>
<td>4:45pm - 5:00pm</td>
<td>Usability/Human factors of MCS - The Man-Machine-Interface Can Be Crucial</td>
<td>Heinrich Schima, PhD, Medical University Vienna, Vienna, Austria</td>
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<tr>
<td>5:00pm - 5:15pm</td>
<td>What’s Going Wrong With Our Field? Review of FDA MAUDE Database</td>
<td>Kelly Bauer, RN, BSN, FDA, Silver Spring, MD</td>
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<td>5:15pm - 5:30pm</td>
<td>Reminding Ourselves Why We are Applying MCS - Putting the Needs of the Patient First</td>
<td>Cara Wrigley, PhD, University of Sydney, Sydney, Australia</td>
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### ASAIO/ICCAC MCS Proficiency Verification Course (MPV)

**Co-Chairs:** Amanda Thomas, RN, BSN, Oregon Health & Science University, Portland, OR  
Heather Moody, MSN, APRN, University of Louisville, Louisville, KY

This Course features problem based scenarios covering management and troubleshooting of common issues surrounding MCS devices. Small group exercises are led by experienced MCS coordinators, Heart Failure Cardiologists, and Cardiac Surgeons who specialize in MCS support. There will be a minimum of eight small groups with a maximum of twelve participants each.

- **Nob Hill 1** - Medtronic – HVAD
- **Nob Hill 2 & 3** - Abbott – HeartMate 3
- **Nob Hill 4 & 5** - Abbott - Centrimag & Berlin Heart - EXCOR
- **Nob Hill 6 & 7** - Abiomed - Impella
- **Nob Hill 8 & 9** - SynCardia – TAH
- **Nob Hill 10** - Abbott - HeartMate II
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<th>Time</th>
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<tr>
<td>8:00am - 12:00pm</td>
<td>GENERAL SESSION 1</td>
<td>Grand Ballroom A - Ballroom Level T1</td>
<td>Co-Chairs: Steven Koenig, PhD, University of Louisville, Louisville, KY&lt;br&gt;Egemen Tuzun, MD, PhD, Texas A&amp;M University, College Station, TX</td>
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<td>8:00am-8:15am</td>
<td>Introduction and Welcome: ASAIO Program Chairman, Egemen Tuzun, MD, PhD, Texas A&amp;M University, College Station, TX</td>
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<td>8:15am-9:15am</td>
<td>Top Abstract Presentations</td>
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<td>8:15am-8:25am</td>
<td>Comparison of Neurological Event Rates Among HeartMate II, HeartMate 3, and HVAD</td>
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<td>Song Li, MD, University of Washington, Seattle, WA</td>
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<td>8:25am-8:35am</td>
<td>A Perfusion Device to Preserve Liver Function in an Ex Vivo Environment for Multiple Days</td>
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<td>Dustin Becker, ETH Zurich, Zurich, Switzerland</td>
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<td>8:35am-8:45am</td>
<td>First North American Clinical Experience with the Jarvik 2015: A Case Series</td>
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<td>Joseph Spinner, MD, Baylor College of Medicine, Houston, TX</td>
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<td>8:45am-8:55am</td>
<td>How a CFD Model Can Help to Predict Gas Transfer in Artificial Lungs Early During Development</td>
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<td>Andreas Kaesler, Institute for Applied Medical Engineering, Aachen, Germany</td>
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<td>Keum Hee Ko, The University of Sydney, Australia - ASAIO Y Nosé International Fellowship</td>
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<td>9:15am-9:45am</td>
<td>ASAIO President’s Address - Extraordinary Opportunities to Be the Change, Innovate, and Shape ASAIO's Future</td>
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<td>Steven Koenig, PhD, University of Louisville</td>
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<td>Introduced by Mark Slaughter, MD, University of Louisville, Louisville, KY</td>
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<td>9:45am-10:30am</td>
<td>VISIT EXHIBITS &amp; POSTERS - ENJOY REFRESHMENTS</td>
<td>Grand Ballroom B - Ballroom Level T1</td>
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<td>10:30am-12:00pm</td>
<td>GENERAL SESSION 1 - Continued</td>
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<tr>
<td>10:30am-11:00am</td>
<td>Keynote Address - Carrie L. Byington, MD, Texas A&amp;M Univ Health Science Center, Houston, TX</td>
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<td>“Engineering Medicine: Developing Physicianeers to Shape the Future of Healthcare Through Innovation”&lt;br&gt;Introduced by Egemen Tuzun, MD, PhD, Texas A&amp;M University, College Station, TX</td>
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<td>11:00am-12:00pm</td>
<td>Medical Device Entrepreneur’s Forum - MDEF</td>
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<td>Chairman: H. David Humes, MD, University of Michigan, Ann Arbor, MI&lt;br&gt;Panelists:&lt;br&gt;Edward Berger, PhD, Larchmont Strategic Advisors, Chestnut Hill, MA&lt;br&gt;Katharine Chowdhury, BSE, MS, FDA, Silver Spring, MD</td>
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<td>The “MICELI” (MICrofluidic, Electrical, Impedance) – Point-of-Care Platelet Aggregometry System</td>
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<td>John Jackson, MBS, University of Arizona, Tucson, AZ</td>
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<td>Etracorporeal CO Removal – ECCOR</td>
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<td>Niklas Steuer M. Sc, RWTH Aachen University, Aachen, Germany</td>
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<td>Natalia Suarez MSc, Universidad de los Andes, Bogota, Columbia</td>
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<td>12:00-1:30pm</td>
<td>LUNCH BREAK</td>
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| 1:30pm-3:00pm| CARDIAC 1: The Future of MCS     | Grand Ballroom A - Ballroom Level T1 | Co-Chairs: Mark Slaughter, MD, University of Louisville School of Medicine, Louisville, KY  
Jennifer Beckman, MSN, ARNP, University of Washington Medical Center, Seattle, WA |
|              | Abstract Presentations           |                        |                                                                           |
| 1:30pm-1:40pm| Clinical Experience With Pressure Sensor Based Autoregulation of Blood Flow in an Artificial Heart |                        | Ivan Netuka, MD, PhD, Institute for Clinical and Experimental Medicine, Prague, Czech Republic |
| 1:40pm-1:50pm| Hemocompatibility Adverse Event Results From the NuPulseCV iVAS Feasibility Study |                        | Joshua Woolley, PhD, NuPulseCV, Raleigh, NC                              |
| 1:50pm-2:00pm| Temporal Adverse Event Profile Following LVAD Implantation via a Thoracotomy Approach: 2 Year Follow-up of the LATERAL Trial |                        | Georg Wieselthaler, MD, University of California San Francisco, CA        |
| 2:00pm-2:10pm| HVAD Intelligent Control for Dynamic Ventricular Unloading |                        | Richard Wampler, MD, Oregon Health Sciences University, Loomis, CA        |
| 2:10pm-2:20pm| Characteristics and Outcomes of Gastrointestinal Bleeding in Patients with Continuous-flow Left Ventricular Assist Devices: A Systematic Review |                        | Laura Carlson, Thomas Jefferson University, Philadelphia, PA               |
| 2:20pm-2:30pm| Inflow Cannula Depth of Insertion Influences LVAD Thrombogenic Risk |                        | Alberto Aliseda, PhD, University of Washington, Seattle, WA               |
| 2:30pm-3:00pm| Panel Discussion - The Future of MCS |                        | Panelists:  
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI  
Marvin Slepian, MD, University of Arizona, Tucson, AZ  
Robert Kormos, MD, University of Pittsburgh Med Center, Pittsburgh, PA  
O. Howard Frazier, MD, Texas Heart Institute, Houston, TX |
| 1:30pm-3:00pm| BIOENGINEERING 1: Device Innovation | Imperial A - Ballroom Level T1 | Co-Chairs: John Criscione, MD, PhD, Texas A&M University, College Station, TX  
Daniel Timms, PhD, BiVACOR, Houston, TX |
| 1:30pm-2:00pm| Device Innovation                |                        |                                                                           |
| 2:00pm-2:10pm| Discussion                       |                        |                                                                           |
| 2:10pm-2:20pm| A Long-term Cavopulmonary Assist Device to Reverse the Fontan: In-silico and In-vitro Studies |                        | Guruprasad Giridharan, PhD, University of Louisville, Louisville, KY      |
| 2:20pm-2:30pm| Red Blood Cell Damage in a Magnetically Levitated Shearing Device |                        | James Krisher, Rochester Institute of Technology, Rochester, NY           |
| 2:30pm-2:40pm| Development of a Sutureless LVAD Outflow Graft Anastomotic Quick-connect System |                        | Landon Tompkins, Meng, University of Louisville, Louisville, KY - ASAIO/fyi Fellowship |
| 2:40pm-2:50pm| Endovascular Cavo-Pulmonary Right Ventricular Assist Device |                        | Jiheum Park, PhD, Yale University, New Haven, CT                         |
| 2:50pm-3:00pm| Trans Catheter, Durable, Bio-Mimetic, Wireless-less Left Ventricular Assist Device for End Stage Heart Failure |                        | Jiheum Park, PhD, Yale University, New Haven, CT                         |
### Pulmonary 1: Bioengineering Conundrums In Artificial Lung Development

**Plaza Room B - Lobby Level T1**

**Co-Chairs:** Zhongjun Wu, PhD, University of Maryland School of Medicine, Baltimore, MD
Jeffrey Javidfar, MD, Emory University School of Medicine, Decatur, GA

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<tr>
<td>1:30pm-1:50pm</td>
<td>Shear Stress and Blood Trauma, Stagnancy and Thrombosis</td>
<td>Zhongjun Wu, PhD, Univ of Maryland School of Medicine, Baltimore, MD</td>
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<tr>
<td>1:50pm-2:10pm</td>
<td>Surface-Focused Anticoagulation for Long-Term Artificial Lungs</td>
<td>Keith Cook, PhD, Carnegie Mellon University, Pittsburgh, PA</td>
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<td>2:10pm-2:30pm</td>
<td>Pittsburgh Paracorporeal Ambulatory Assist Lung</td>
<td>William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA</td>
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<td>2:30pm-2:50pm</td>
<td>The Osaka Ultra Compact Durable ECMO System</td>
<td>Tomonori Tsukita, PhD, National Cerebral &amp; CV Center Research Inst, Osaka, Japan</td>
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<td>2:50pm-3:00pm</td>
<td>7-day In Vivo Performance of a Low-Flow Extracorporeal CO₂ Removal Device</td>
<td>Alexandra May, BS, University of Pittsburgh, Pittsburgh, PA</td>
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### Renal 1: Vascular Access: Innovative Devices

**Plaza Room A - Lobby Level T1**

**Co-Chairs:** Lenar Yessayan, MD, MS, University of Michigan, Troy, MI
Alexander Yevzlin, MD, University of Michigan, Ann Arbor, MI

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<tr>
<td>1:30pm-1:50pm</td>
<td>Fundamentals of Ultrasound Speckle Tracking for Vascular Access</td>
<td>William Weitzel, MD, VA Ann Arbor Health System, Ann Arbor, MI</td>
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<tr>
<td>1:50pm-2:10pm</td>
<td>An Update On Intergraft Trial</td>
<td>Alexander Yevzlin, MD, University of Michigan, Ann Arbor, MI</td>
</tr>
<tr>
<td>2:10pm-2:30pm</td>
<td>Humacyte, A Founder's Experience</td>
<td>Laura Niklason, MD, PhD, Yale University, New Haven, CT</td>
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<tr>
<td>2:30pm-2:40pm</td>
<td>Large Animal Hemodialysis Model for the Benchtop: LAHMB</td>
<td>Dean Johnson, PhD, University of Rochester, Rochester, NY</td>
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<tr>
<td>2:40pm-2:50pm</td>
<td>In Vivo Evaluation of Novel PEGylated Small Intestinal Submucosa Vascular Grafts for Arteriovenous Connection: Exploring Microscopic Structure-Function Relationships</td>
<td>Karen Valencia Rivero, MSc, PhD, Universidad de los Andes, Bogota, Colombia</td>
</tr>
</tbody>
</table>

### Pediatric 1: The Pros and Cons to Achieving Pediatric Labelling: Do We Need It?

**Imperial B - Ballroom Level T1**

**Co-Chairs:** Nicole Gillette, BS, FDA, Silver Spring, MD
Robert Kroschwitz, President & CEO, Berlin Heart Inc., The Woodlands, TX

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Institution</th>
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<tbody>
<tr>
<td>1:30pm-1:50pm</td>
<td>FDA Perspective</td>
<td>Nicole Ibrahim, PhD, FDA, Silver Spring, MD</td>
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<tr>
<td>1:50pm-2:30pm</td>
<td>Industry Perspective</td>
<td>Donald Middlebrook, Abbott, Pleasanton, CA</td>
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<td>Vince Cannon, RN, BSN, MBA, Medtronic, Framingham, MA</td>
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<tr>
<td>2:30pm-2:50pm</td>
<td>Providers Perspective</td>
<td>David Morales, MD, Cincinnati Children's Hosp Med Ctr, Cincinnati, OH</td>
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<tr>
<td>2:50pm-3:00pm</td>
<td>Open Panel Discussion and Forum</td>
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</tbody>
</table>
### Nursing - Allied Health - Circulatory Support Abstracts

**Franciscan C - Ballroom Level**

**Co-Chairs:** Pamela Combs, PhD, RN, University of Chicago, Chicago, IL  
        Jesus Casida, PhD, RN, APN-C, Johns Hopkins School of Nursing, Baltimore, MD

#### Abstract Presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
<th>Institution/Location</th>
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</thead>
<tbody>
<tr>
<td>1:30pm-1:40pm</td>
<td>Designing Digital Systems to Prevent Emotional Fatigue: Promoting Vocalisation and Reflective Practices within MCS Nursing</td>
<td>Ling yi (Yanyi) Feng</td>
<td>University of Sydney, Sydney, Australia</td>
</tr>
<tr>
<td>1:40pm-1:50pm</td>
<td>LVAD versus CABG Patients’ Pre and Postoperative Sleep Patterns: An Exploratory Analysis</td>
<td>Jesus Casida, PhD, RN, APN-C</td>
<td>Johns Hopkins School of Nursing, Baltimore, MD</td>
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<tr>
<td>1:50pm-2:00pm</td>
<td>Understanding Emotional Demands: Digital Channel Design Opportunities for VAD Patients with Differing Treatment Pathways</td>
<td>Presentation Cancelled</td>
<td></td>
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<tr>
<td>2:00pm-2:10pm</td>
<td>Opioid Prescribing Trends in Left Ventricular Assist Device (LVAD) Patients</td>
<td>Sarah Schettle, PA-C</td>
<td>Mayo Clinic, Rochester, MN</td>
</tr>
<tr>
<td>2:10pm-2:20pm</td>
<td>Anticoagulation Quality and Frequency of INR Point-of-Care Testing in LVAD Patients: A Correlation to Hemocompatibility Related Adverse Events and Outcomes</td>
<td>Thomas Schleghofer, MSc</td>
<td>Medical University of Vienna, Vienna, Austria</td>
</tr>
<tr>
<td>2:20pm-2:30pm</td>
<td>Effect of Smoking on Surgical Outcomes after Left Ventricular Assist Device Implantation and the Relation to Nicotine Cessation Treatments: A Pilot Retrospective Study</td>
<td>Pamela Combs, PhD, RN, The Univ of Chicago Biological Sciences</td>
<td>Chicago, IL</td>
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<tr>
<td>2:30pm-2:40pm</td>
<td>A Conceptual Definition of Quality of Life for LVAD-DT Recipients: Preliminary Results</td>
<td>David Dwyer, MSN</td>
<td>University of Wisconsin, Milwaukee, WI</td>
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<tr>
<td>2:40pm-2:50pm</td>
<td>VAD Coordinators' Nursing Care Time for Patient-Caregiver Care</td>
<td>Jesus Casida, PhD, RN, APN-C</td>
<td>Johns Hopkins School of Nursing, Baltimore, MD</td>
</tr>
<tr>
<td>2:50pm-3:00pm</td>
<td>TelecareVAD - Ideas and Expectations of VAD Patients</td>
<td>Thomas Berg, MA</td>
<td>University Hospital RWTH Aachen, Aachen, Germany</td>
</tr>
</tbody>
</table>

### Critical Care / Anesthesiology / Pathology Session 1 - Pathology of Cardiovascular Devices and the Clinical Translation

**Nob Hill 2 - Sixth Floor**

**Co-Chairs:** Staci Jessen, PhD, CV Pathology Lab Texas A&M Univ, College Station, TX  
        Nicole Mehta, MS, BS, Texas A&M University, College Station, TX

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<thead>
<tr>
<th>Time</th>
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<th>Institution/Location</th>
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</thead>
<tbody>
<tr>
<td>1:35pm-2:00pm</td>
<td>Cardiovascular Pathology for Biomedical Engineers</td>
<td>Fred Clubb, DVM, PhD</td>
<td>Texas A&amp;M University Cardio Path Lab, College Station, TX</td>
</tr>
<tr>
<td>2:00pm-2:20pm</td>
<td>A Review of Thrombosis in a Device Context</td>
<td>Staci Jessen, PhD, CV Pathology Lab Texas A&amp;M Univ</td>
<td>College Station, TX</td>
</tr>
<tr>
<td>2:20pm-2:40pm</td>
<td>An Overview of Histopathology Strategies for Medical Devices</td>
<td>Nicolette Jackson, DVM, MS, DACVP</td>
<td>StageBio, Mason, OH</td>
</tr>
<tr>
<td>2:40pm-3:00pm</td>
<td>What Did My Company Do Wrong? The FDA Is Questioning My Pathology Report</td>
<td>Annabelle Crusan, DVM, MS, FDA</td>
<td>Silver Spring, MD</td>
</tr>
</tbody>
</table>

### VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS

**Grand Ballroom B - Ballroom Level T1**
3:45pm - 5:00pm  | **CARDIAC 2: Reducing Neurologic Complications in MCS**  
**Grand Ballroom A - Ballroom Level T1**  
Co-Chairs: Claudius Mahr, DO, University of Washington, Seattle, WA  
Antonio Loforte, MD, PhD, S. Orsola Malpighi, Bologna, Italy  

**Abstract Presentations**

3:45pm-3:55pm  | Mean Arterial Pressure Significantly Impacts Stroke-Related Mortality in Destination Therapy Patients  
Claudius Mahr, DO, FACC, FESC, University of Washington, Seattle, WA

3:55pm-4:05pm  | Safety of Early Anticoagulation After Stroke in LVAD Patients  
Chinwe Ibeh, MD, University of Washington, Seattle, WA

4:05pm-4:15pm  | Ingested versus De Novo Thrombus Formation of HVADs  
Staci Jessen, PhD, CV Pathology Lab Texas A&M Univ, College Station, TX

4:15pm-4:25pm  | Risk of Pump Thrombosis and Cerebrovascular Events in Continuous Flow Left Ventricular Assist Device Patients Experiencing Gastrointestinal Bleeding  
Phillip Weeks, Pharm D, Memorial Hermann - Texas Medical Center, Houston, TX

4:25pm-4:35pm  | Impact of Intensive Blood Pressure Control in Patients with Centrifugal Left Ventricular Assist Devices on Reducing Neurologic Events  
Song Li, MD, University of Washington, Seattle, WA

4:35pm-5:00pm  | Panel Discussion - Reducing Neurologic Complications in MCS  
Panelists:  
David Tirschwell, MD, MSc, University of Washington, Seattle, WA  
Nir Uriel, MD, MSc, University of Chicago, Chicago, IL  
Claudius Mahr, DO, FACC, FESC, University of Washington, Seattle, WA  
Mark Slaughter, MD, University of Louisville, Louisville, KY  
William Holman, MD, University of Alabama at Birmingham, AL

3:45pm - 5:00pm  | **BIOENGINEERING 2: Modeling Innovation**  
**Imperial A - Ballroom Level T1**  
Co-Chairs: Max Armour, BSBME, MSBME, University of Pittsburgh Medical Center, Pittsburgh, PA  
Guruprasad Giridharan, PhD, University of Louisville, Louisville, KY

3:45pm-4:00pm  | Road Map for Commercialization - The Essentials of Quality and Design Controls  
Priscilla Petit, Inspired Therapeutics LLC, Cocoa, FL

4:00pm-4:15pm  | The Progression of Modeling in Medical Device Development  
James Antaki, PhD, Cornell University, Ithaca, NY

4:15pm-4:30pm  | Emerging Regulatory Frameworks for Modeling  
Brent Craven, PhD, FDA, Silver Spring, MD

4:30pm-4:45pm  | CFD and VAD Design  
Greg Burgreen, PhD, Mississippi State University, Starkville, MS

4:50pm-5:00pm  | LVAD Redesign: Pump Variation for Minimizing Thrombus Susceptibility Potential  
Christopher Scheib, BSE, Penn State College of Medicine, Hershey, PA
### VAD 1: Ideas to Evolve an MCS Program

**Franciscan A&B - Ballroom Level T1**

**Panelists:**
- James Churgai, BSN, RN, CCRN, University of Washington Medical Center, Seattle, WA
- Karl Nelson, RN, MBA, ALKOS Consulting LLC, Salt Lake City, UT

**3:45pm - 4:00pm**
- **Change Is Good, Yet Why Do We Stay?**
  - Karl Nelson, RN, MBA, ALKOS Consulting LLC, Salt Lake City, UT

**4:00pm - 4:15pm**
- **Initiations, Transitions and Incorporations – Orientation of VAD Coordinator**
  - Tonya Elliott, MSN, RN, MedStar Washington Hosp Center, Washington DC

**4:15pm - 4:30pm**
- **Effects of New UNOS Criteria on VAD Programs**
  - Brenda Smith, BSN, RN CCTC, Sentara Healthcare Systems, Norfolk, VA

**4:30pm - 4:45pm**
- **FDA Decision Tree for MCS Therapy**
  - Sonna Patel-Raman, PhD, NuPulseCV Inc, Raleigh, NC

**4:45pm - 5:00pm**
- **Discussion**

### PULMONARY 2: VA ECMO for Resuscitation of Massive Pulmonary Embolism (PE)

**Plaza Room B - Lobby Level T1**

**Co-Chairs:** Kurt Dasse, PhD, Vadovations, Oklahoma City, OK
- Jacqueline Kading, BS, University of Michigan, Ann Arbor, MI

**3:45pm - 4:05pm**
- **Massive Pulmonary Embolism Patients Receiving VA ECMO: Survivors vs Non-Survivors**
  - Zachary Kon, MD, University of Maryland School of Medicine, Baltimore, MD

**4:05pm - 4:25pm**
- **The Role of V-A ECMO After Pulmonary Endarterectomy: Indication and Outcome**
  - Xiaotong Hou, MD, PhD, Beijing Anzhen Hospital, Beijing, China

**4:25pm - 4:45pm**
- **Right Heart Assist: RVAD vs VA ECMO**
  - I-wen Wang, MD, PhD, Memorial Healthcare System, Hollywood, FL

**Abstract Presentation**

**4:45pm - 4:55pm**
- **Long-Term ECMO-Connection - Numerical Investigation of the Connection to the Common Iliac Veins**
  - Niklas Steuer, MSc, RWTH Aachen University, Aachen, Germany

### RENAL 2: Cannulas and Cardiac Assist Devices, What the Nephrologist Needs to Know

**Plaza Room A - Lobby Level T1**

**Co-Chairs:** Lenar Yessayan, MD, MS, University of Michigan, Ann Arbor, MI
- Balazs Szamosfalvi, MD, University of Michigan, Ann Arbor, MI

**3:45pm - 4:00pm**
- **Ventricle Assist Devices**
  - Jonathan Haft, MD, University of Michigan, Ann Arbor, MI

**4:00pm - 4:15pm**
- **Total Artificial Heart**
  - Francisco Arabia, MD, Cedars-Sinai Medical Center, Los Angeles, CA

**4:15pm - 4:30pm**
- **ECMO and ECCO-R: Integration With CRRT and Early Clinical Use**
  - Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY

**4:30pm - 4:45pm**
- **CVC for Dialysis**
  - Stephen Ash, MD, HemoCleanse Technologies LLC, Lafayette, IN

**4:45pm - 5:00pm**
- **Discussion**
Thursday June 27 - Continued

3:45pm - 5:00pm  **PEDIATRIC 2: ACTION Learning Collaborative for Pediatrics**  
*Imperial B - Ballroom Level T1*

Co-Chairs:  David Rosenthal, MD, Stanford University, Palo Alto, CA  
Angela Lorts, MD, Cincinnati Children’s Hospital Med Ctr, Cincinnati, OH

**Abstract Presentation**

4:50pm-5:00pm  
**Reduction in Incidence of Pump Exchanges for Suspected Thrombosis: Impact of Collaborative Learning**  
Farhan Zafar, MD, Cincinnati Children's Hosp Medical Center, Cincinnati, OH

**Open Discussion**

Moderators:
David Rosenthal, MD, Stanford Univ, School of Medicine, Palo Alto, CA  
Angela Lorts, MD, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

3:45pm - 5:00pm  **Critical Care / Anesthesiology / Pathology Session 2 - Pathology of Cardiovascular Devices and the Clinical Translation**  
*Nob Hill 2 - Sixth Floor*

Co-Chairs:  Nicolette Jackson, DVM, MS, DACVP, StageBio, Mason, OH  
Christian Bermudez, MD, Hospital of the Univ of Pennsylvania, Philadelphia, PA

3:45pm-4:05pm  
**LVAD Pathology - Perspective From A Clinician’s Experience**  
Pramod Bonde, MD, Yale University, New Haven, CT

4:05pm-4:20pm  
**Pathology of an Implantable Cardiac Valve With A Bioresorbable Stent Scaffold**  
Maureen O'Brien, DVM, MS, DACVP, Charles River Laboratories Inc, Frederick, MD

4:20pm-4:40pm  
**A Review of Hydrogels and Strategies for Evaluation**  
Nicole Mehta, MS, BS, Texas A&M University, College Station, TX

4:40pm-5:00pm  
**Panel Discussion - Translational Medicine and the Importance of Multidisciplinary Scientific Collaboration in Medical Technology Development**

Panelists:
Gerard McCloskey, MBBch, BAO, Yale School of Medicine, New Haven, CT  
Maureen O’Brien, DVM, MS, DACVP, Charles River Laboratories Inc, Frederick, MD  
Staci Jessen, PhD, CV Pathology Lab Texas A&M Univ, College Station, TX  
Fred Clubb, DVM, PhD, Texas A&M Univ Cardio Path Lab, College Station, TX

6:00pm - 7:00pm  **ASAIO Welcome Reception**  
*Grand Ballroom B - Ballroom Level T1*
## Thursday June 27 - Continued

### 9:30am - 4:00pm

**Poster Presentations - Grand Ballroom B - Ballroom Level T1**

#### Cardiac Posters

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<th>No.</th>
<th>Title</th>
<th>Author(s)</th>
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<tbody>
<tr>
<td>101</td>
<td>Biliary Pathology and Cholecystectomy in Mechanical Circulatory Support Patients</td>
<td>Akbarshakh Akhmerov, MD, Cedars-Sinai Medical Center, Los Angeles, CA</td>
<td></td>
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<tr>
<td>102</td>
<td>Self Management of Anticoagulant Therapy in Continuous Flow Left Ventricular Assist Device Patients</td>
<td>Masatoshi Akiyama, MD, Tohoku University Hospital, Sendai, Japan</td>
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<tr>
<td>103</td>
<td>A Retrospective Look at Mechanical Heart Valves in Left Ventricular Assist Device Patients</td>
<td>Tareq Al Saadi, MD, Advocate Christ Medical Center, Oak Lawn, IL</td>
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<tr>
<td>105</td>
<td>Testing the Obesity Paradox in Patients on Long-term Milrinone Infusion for End Stage Heart Failure</td>
<td>Mina Benjamin, MD, Medical College of Wisconsin, Milwaukee, WI</td>
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<tr>
<td>106</td>
<td>Evaluation of the Effect of Heart Rate on Real-Time Output of HeartMate3 Using a Mock Circulation</td>
<td>Edward Betterton, BS, Banner University Medical Center, Tucson, AZ</td>
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<tr>
<td>107</td>
<td>The HeartMate 6</td>
<td>Muath Bishawi, MD, Duke University, Durham, NC</td>
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<tr>
<td>108</td>
<td>Reversal of Heart Failure with Continuous-flow LVAD is Associated with Deactivation of Inflammatory Pathways in Long-Term Survivors</td>
<td>Birati Edo, MD, University of Pennsylvania, Philadelphia, PA</td>
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<tr>
<td>109</td>
<td>Very Long Term Outcomes of LVAD Support</td>
<td>Nicolas Brozzi, MD, University of Miami, Miami, FL</td>
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<tr>
<td>110</td>
<td>ECMO as a Bridge to Heart-Lung Transplantation and Post-Operative Recovery in a Patient with Dextrocardia, Atrial Septal Defect, and Pulmonary Hypertension</td>
<td>Antonio Coppolino, MD, Brigham and Women’s Hospital, Boston, MA</td>
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<tr>
<td>111</td>
<td>Generating Different Heart Failure Conditions on the Bench to Predict VAD Performance</td>
<td>Gavin D’Souza, PhD, U.S. Food and Drug Administration, Silver Spring, MD</td>
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<tr>
<td>112</td>
<td>Should it Stay or Should it Go? A Review of LVAD Explants</td>
<td>Lauren Eyadiel, PA-C, University of Wisconsin, Milwaukee, WI</td>
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<td>113</td>
<td>Ultrasound Strain Imaging of LVAD-Supported Ex vivo Beating Hearts</td>
<td>Louis Fixsen, Eindhoven University of Technology, Eindhoven, Netherlands</td>
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<td>114</td>
<td>Evaluation of Cytokine Expression in Regional Principal Organ During Cardiopulmonary Bypass</td>
<td>Yutaka Fujii, PhD, Niigata University of Health and Welfare, Niigata, Japan</td>
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<td>115</td>
<td>Application of the Utah Bleeding Risk Score to LVAD Supported Patients at Advocate Christ Medical Center: A Retrospective Study</td>
<td>George Gavrilos, Advocate Christ Medical Center, Oak Lawn, IL</td>
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<tr>
<td>117</td>
<td>Complete Sternotomy-Sparing HeartMate 3 Implantation Produces Excellent 3 Month Outcomes</td>
<td>Igor Gosev, MD, University of Rochester, Rochester, NY</td>
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**Cardiac Posters Continued**

118 Preoperative Assessment of Left Ventricular Thrombi in Patients Undergoing Left Ventricular Assist Device Implantation and Short-term Outcomes of Patients with Left Ventricular Thrombi
Igor Gregoric, MD, University of Texas Health Sci Center, Houston, TX

119 Short-to-shield in Patients with a Heartmate II LVAD
Igor Gregoric, MD, University of Texas Health Sci Center, Houston, TX
ASIC-based Miniature Ultrasound Transit Time Flowmeter
John Haberstock, MBA, Transonic, Ithaca, NY

120 Design Parameters for a Light-weight, Low-power Flowprobe to be ntricular Assist Device Integrated within a Ve
John Haberstock, MBA, Transonic, Ithaca, NY

121 Antiplatelet Therapy Monitoring for Durable Mechanical Circulatory Support Utilizing TEG-Platelet Mapping
Brooke Stanton, Pharm D, Allegheny General Hospital, Pittsburgh, PA

122 Epicardial Pressure Analysis for Soft Robotic Direct Cardiac Compression Sleeve
Jooli Han, Carnegie Mellon University, Pittsburgh, PA

123 Menorrhagia and Menstrual Bleeding in Patients Supported with Ventricular Assist Devices
Catherine Heith, MD, Boston Children's Hospital, Boston, MA

124 Shear Stress-Induced Exosome Production: A Potential Biomarker of VAD Complications?
Rebecca James, PhD, Calon Cardio-Technology Ltd., Swansea, United Kingdom

125 Use of Nitric Oxide After Lvd Implantation Leads to Worse Outcomes
Mateja Jezovnik, MD, PhD, The Univ of Texas Health Sci Center, Houston, TX

126 Use of Intraoperative Extracorporeal Membrane Oxygenation (ECMO) Bypass During Open-Thoracoabdominal Aortic Aneurysm Repair (TAAA)
Matthew Jorgensen, BS, Mayo Clinic, Jacksonville, FL

127 New Technique for Effective Cardiac Deairing in Minimally Invasive Cardiac Surgery: Early In Vivo Testing
Jamshid Karimov, MD, PhD, The Cleveland Clinic, Cleveland, OH

128 Novel Aortic and Arterial Encircling Technique for Immediate Hemostatic Control
Jamshid Karimov, MD, PhD, The Cleveland Clinic, Cleveland, OH

129 Surgical Unroofing of an Anomalous Left Coronary Artery on VA-ECMO
Muhammad Khan, MD, Advocate Christ Medical Center, Oak Lawn, IL

130 Percutaneous Coronary Intervention in Patients with Durable LVAD
Alex Farr, MD, Baylor College of Medicine, Houston, TX

131 A Hybrid Experimental-Computational Modeling Framework for Cardiovascular Device Testing
Ethan Kung, PhD, Clemson University, Clemson, SC

132 Management Strategies of Invasive Mechanical Unloading in High Risk Redo-open Heart Surgeries with Heart Failure
Samy Lashin, MD, Air Force Specialized Hospital, New Cairo, Egypt

133 Left Ventricular Assist Device Therapy for Systolic Heart Failure Secondary to Peripartum Cardiomyopathy
Gregory Long, BS, Baylor College of Medicine, Houston, TX

134 Left Ventricular Assist Devices as Destination Therapy
Assel Medressova, MD, PhD, National Research Center for Cardiac Surgery, Astana, Kazakhstan
Thursday June 27 - Continued

**Cardiac Posters Continued**

135 Impact of VAD Speed and MAP on Intraventricular Hemodynamics: Influence on Flow Patterns, Platelet Activation and Thrombogenicity
Marissa Miramontes, BS, University of Washington, Seattle, WA

**Bioengineering Posters**

136 Functional Aminosilane Based Coatings for Improved Gas Exchange in PDMS Oxygenators
Emily Abada, BS, University of California, San Francisco, CA

137 Left Atrial Assist Device Function at Variable Beat Rates Using a Mock Circulatory Loop Platform
Joseph Adams, Cleveland Clinic, Cleveland, OH

138 CFD Analysis of Segmented MicroCT Data of Ventricular Assist Devices: A Comparative Study
Emmanouil Agrafiotis, Medical University of Graz, Graz, Austria

139 Hemocompatibility of Biodegradable Polymers for Endovascular Devices
Marvin Slepian, MD, University of Arizona, Tucson, AZ

140 A Growing Database for Viscosity Profiles of Bovine Blood with Varying Hematocrits Across Shear Rates
Sophia Boucher, BS, Medtronic, Miami Lakes, FL

141 Concept of Safety Embedded Systems Control applied to a 4.0 Ventricular Assist Device
Andre Cavalheiro, PhD, Fundacao Santo Andre, Santo Andre, Brazil

142 Experimental Investigation of the Flow Inside the Rotor Passage of an Axial Ventricular Assist Device
Huang Chen, PhD, The Johns Hopkins University, Baltimore, MD

143 Design and Experimental Evaluation of a Right Ventricular Assist Device
Presentation Cancellation

144 Scripting an Anatomical Study Protocol
Christian Doose, RWTH Aachen University, Aachen, Germany

145 Designing a Visual Analogue Scale Questionnaire to Determine the Emotional Impact of Wearable Components of Ventricular Assist Devices (VADs)
Jessica Lea Dunn, University of Sydney, Sydney, Australia

146 Centrifugal Blood Pump as Ventricular Assist Device evaluation in the Hybrid Cardiovascular Simulator
Jeison Fonseca, Institute Dante Pazzanese of Cardiology, Sao Paulo, Brazil

147 Flow Distribution Analysis in Peripheral VA ECMO By Interposition Graft
Gionata Fragomeni, PhD, Magna Graecia University, Catanzaro, Italy

148 Optimization of Artificial Vascular Tissue Bioreactor for Use with Peristaltic LVAD
Zachary Frankman, BS, Medical University of Gdansk, Gdansk, Poland

149 Parametric Studies of a Centrifugal Heart Pump for Total Artificial Heart (TAH) Using Genetic Algorithms
Ganesh Gampa, PhD, Kakatiya Inst of Technology and Science, Warangal, India

150 Design Domain Identification of a Beating Left Ventricular Simulator with Finite Element Modelling
Utku Gulbulak, BS, Texas Tech University, Lubbock, TX

151 Non-Homogeneous Haematocrit Distribution into VAD Modelling Practice to Improve Blood Damage Prediction
Sajal Gurung, Calon Cardio-Technology, Swansea, United Kingdom

152 Development of a Pediatric Paracorporeal Centrifugal Blood Pump
Mariana Hernandez, MD, Carol Coracoes Artificialis, Arujá, Brazil
| 153 | Development of Novel Artificial Pericardium with Biodegradable Poly-lactide Sheet  
Kazuyuki Ishibashi, MD, Yonemori Hospital, Kagoshima, Japan |
| 154 | Cardiac Assist Device Design Guided by Computational Modeling  
Robert Smith, NuPulseCV, Raleigh, NC |
| 155 | Development of the 2nd Generation DermaPort Ported Vascular Access System (PVAS)™  
Abram Janis, DermaPort, Inc, Grayslake, IL |
| 156 | The Effect of Preserving Mitral Valve Function by Left Atrial Assist Device:  
*In Vitro* Mock Circulation Loop Model  
Yuichiro Kado, MD, PhD, Cleveland Clinic, Cleveland, OH |
| 157 | CFD Study on the Effect of Central versus Peripheral VA ECMO Support  
Steven Keller, MD, PhD, Brigham and Women's Hospital, Boston, MA |
| 158 | Design of a Magnetic Bearing Couette Flow Shearing Device for Testing Blood Fragility  
James Krisher, Rochester Institute of Technology, Rochester, NY |
| 159 | Advanced Graphical User Interface for Control and Testing of Mechanical Circulatory Support Devices  
Barry Kuban, BS, Cleveland Clinic, Cleveland, OH |

**Nursing / Allied Health / Circulatory Support Posters**

| 160 | Closing the Gap: Introducing the VAD Specialist  
Peggy Blood, MSN, RN, Univ of Alabama at Birmingham Med Ctr, Birmingham, AL |
| 161 | Utility of Bedside Valsalva Maneuver to Enhance Detection of Suction Events in HVAD Patients  
James Churgai, RN, University of Washington, Seattle, WA |
| 162 | Tethered to Life...for Life  
Jill Giordano, MA, MSW, Newark Beth Israel Medical Center, Newark, NJ |
| 163 | Must I Always Be Burdened by This Gift  
Jill Giordano, MA, MSW, Newark Beth Israel Medical Center, Newark, NJ |
| 164 | Emergency Line: Bridging the Communication Gap  
Stacy Haverstick, RN, Michigan Medicine, Ann Arbor, MI |
| 165 | SIM: Increasing Nurse Confidence in the Care of Ventricular Assist Device Patients  
Stacy Haverstick, RN, Michigan Medicine, Ann Arbor, MI |
| 166 | Including an Advance Practice Nurse in the SHOCK Team  
Viktoriya Kagan, MSN, Northwestern Memorial Hospital, Chicago, IL |
| 167 | Reduced Quality of Life in LVAD Patients with Aortic Insufficiency  
Colleen LaBuhn, University of Chicago Medical Center, Chicago, IL |
| 168 | Left Ventricular Assist Device Peripheral Equipment Utilization Following LVAD Implantation  
Matthew Lawrence, BS, Tufts Medical Center, Boston, MA |
| 169 | Ventricular Assist Device Program Models: An International Study  
Karen Meehan, MSN, ACNS, University of Chicago, Chicago, IL |
| 170 | Patient Health Monitoring & Life Cycle Management of LVAD Through IOT Enabling  
Alapati Rao, PhD, Sreenidhi Institute of Sci & Technology, Hyderabad, India |
### Nursing / Allied Health / Circulatory Support Posters Continued

*171 Left Ventricular Assist Device (LVAD) Metropolitan Emergency Medical Service (EMS) Provider Education Pilot*
- Brittany Rhoades, RN, Baylor St. Luke’s Medical Center, Houston, TX

*172 Preparing for an Emergency: Training Staff to Recognize and Respond to ECMO Complications*
- Rebecca Rose, University of Chicago Medicine, Chicago, IL

*173 A New Approach to Driveline Exit Site Care*
- Newman Huie, BSN, Cedars-Sinai Medical Center, Los Angeles, CA

*174 Differences in Mechanical Circulatory Support Programmatic Make-Ups: Defining Delineation of Duties*
- Sarah Schroeder, ACNP-BC, MSN, Bryan Heart, Lincoln, NE

### Critical Care / Anesthesiology / Pathology (CAP) Posters

*175 Impact of Plasma-free Hemoglobin (PHb) on Endothelialization of Coronary Artery Stents*
- Jan Simoni, DVM, PhD, Texas HemoBioTherapeutics & BioInnovation Center, Lubbock, TX

*176 ECMO in Post Cardiac Arrest Myocardial Dysfunction, Single Centre Experience*
- Maged Abdalla, MD, Cairo University, Cairo, Egypt

*177 Efficacy of a Bundle Approach for Safety in Adult Patients on ECMO*
- Monika Tukacs, BSN, RN, CCRN, Columbia Univ Irving Med Center, New York, NY

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### Friday, June 28

#### 8:30am - 12:00pm

**GENERAL SESSION 2**

*Grand Ballroom A - Ballroom Level T1*

**Co-Chairs:** Pramod Bonde, MD, Yale University, New Haven, CT
- Marvin Slepian, MD, University of Arizona, Tucson, AZ

<table>
<thead>
<tr>
<th>Time</th>
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| 8:30am-9:30am   | **ASAIOfyi** (*for young innovators*) - Student Design Competition**<br>**ASAIOfyi** SDC Chairs:<br>  
- Alice Sweedo, University of Arizona, Tucson, AZ<br>  
- Tarik Afnoukh, MD, Brigham and Women's Hospital, Boston, MA<br>  
- Staci Jessen, PhD, CV Pathology Lab Texas A&M University, College Station, TX |
| 8:30am-8:40am   | Dynamic Flow Biomimetic Vascularized Fat-on-a-Chip Model to Study Early Stages of Obesity  
- Darshi Shah, Boston University, Boston, MA |
| 8:40am-8:50am   | Rice StimPill  
- Isaac Chang, Rice University, Houston, TX |
| 8:50am-9:00am   | FlowMate  
- Yunonne Bai, Johns Hopkins University, Baltimore, MA |
| 9:00am-9:10am   | Cardi-Action  
- Tori Sager, University of Louisville, Louisville, KY |
| 9:10am-9:20am   | SymMEDtry  
- Katie McCarren, Johns Hopkins University, Baltimore, MD |
| 9:20am-9:30am   | A Virtual Reality Feedback System for High Quality CPR Training  
- Gisselle Gonzalez, The University of Arizona, Tucson, AZ |
| 9:30am - 10:00am| **Keynote Address:** Charles Fraser, MD, Univ of Texas at Austin, Austin, TX  
Mechanical Circulatory Support in Children: Still A Long Way To Go  
*Introduction by Egemen Tuzun, MD, PhD, Texas A&M University, College Station, TX* |
**Friday, June 28 - Continued**

<table>
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<th>Time</th>
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<tr>
<td>10:00am - 10:45am</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS - ENJOY REFRESHMENTS</strong>&lt;br&gt;Grand Ballroom B - Ballroom Level T1</td>
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<tr>
<td>10:45am - 12:00pm</td>
<td><strong>GENERAL SESSION 2 - Continued</strong></td>
</tr>
<tr>
<td>10:45am-11:15am</td>
<td><strong>ASAIO Hastings Lecture:</strong> William Holman, MD, Univ of Alabama, Birmingham, AL&lt;br&gt;Innovation in Medical Devices: Lessons from the Past for Planning Our Future&lt;br&gt;Introduction by Mark Slaughter, MD, University of Louisville, Louisville, KY</td>
</tr>
<tr>
<td>11:15am-11:45am</td>
<td><strong>ASAIO History Committee</strong>&lt;br&gt;Co-Chairs: George Pantalos, PhD, University of Louisville, Louisville, KY&lt;br&gt;Mark Kurusz, BA, CCP, Windmill Cardiovascular Systems Inc, Austin, TX&lt;br&gt;Tribute to Dr. Don Olsen by Lyle Joyce, MD, PhD, Medical College of Wisconsin, Milwaukee, WI&lt;br&gt;Tribute to Mr. Ken Butler by Richard Wampler, MD, Oregon Health Sciences University, Loomis, CA</td>
</tr>
<tr>
<td>11:45am-12:00pm</td>
<td><strong>ASAIO Fellowship Award Announcements</strong> - Steven Koenig, PhD - President ASAIO</td>
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<tr>
<td>12:00pm-1:30pm</td>
<td><strong>LUNCH BREAK</strong></td>
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<tr>
<td>1:30pm-3:00pm</td>
<td><strong>CARDIAC 3: Acute Heart Failure and Cardiogenic Shock</strong>&lt;br&gt;Grand Ballroom A - Ballroom Level T1&lt;br&gt;Co-Chairs: Simon Maltais, MD, PhD, Centre Hospitalier de l’Université de Montréal (CHUM), Montreal, Quebec, Canada&lt;br&gt;Michelle Ploutz, MD, MPH, Phoenix Children’s Hospital, Scottsdale, AZ&lt;br&gt;<strong>Abstract Presentations</strong>&lt;br&gt;1:30pm-1:40pm&lt;br&gt;Acute Decompensated Heart Failure Therapy: Impella 5.0 versus VenoArterial ECMO&lt;br&gt;Mario Aguillon, RN, Smidt Heart Institute at Cedars-Sinai, Los Angeles, CA&lt;br&gt;1:40pm-1:50pm&lt;br&gt;Pre-operative Serum Lactate Predicts Mortality in Patients Implanted with Veno-Arterial Extracorporeal Membrane Oxygenation (VA-ECMO)&lt;br&gt;Nour Tashtish, MD, University Hospital Cleveland Medical Center, Cleveland, OH&lt;br&gt;1:50pm-2:00pm&lt;br&gt;Predictors of Poor Outcome in Acute Cardiogenic Shock Supported By Percutaneous Ventricular Assist Device (Impella)&lt;br&gt;Tomohiro Nakajima, MD, PhD, Washington Univ in St. Louis, St. Louis, MO&lt;br&gt;2:00pm-2:10pm&lt;br&gt;Which Type of Impella Should We Select in Cardiogenic Shock Patients Supported with Extracorporeal Membrane Oxygenation?&lt;br&gt;Tomohiro Nakajima, MD, PhD, Washington Univ in St. Louis, St. Louis, MO&lt;br&gt;2:10pm-2:20pm&lt;br&gt;Retrospective Review of Left Ventricular Unloading Strategies During Veno-arterial Extracorporeal Membrane Oxygenation&lt;br&gt;Laura Piechura, MD, Brigham and Women’s Hospital, Boston, MA&lt;br&gt;2:20pm-2:30pm&lt;br&gt;Outcomes of Non-Ischemic Patients in Cardiogenic Shock&lt;br&gt;Anh Do, DO, Pharm. D, Henry Ford Hospital, Detroit, MI&lt;br&gt;2:30pm-3:00pm&lt;br&gt;Panel Discussion - Acute Heart Failure and Cardiogenic Shock&lt;br&gt;Panelists: Koji Takeda, MD, PhD, Columbia Univ Irving Med Ctr, New York, NY&lt;br&gt;Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY&lt;br&gt;Biswajit Kar, MD, Memorial-Hermann Heart &amp; Vascular Instit, Houston, TX</td>
</tr>
</tbody>
</table>
1:30pm-3:00pm  **BIOENGINEERING 3: Technical Controversy: Pulse or Not**  
*Imperial A - Ballroom Level T1*

**Co-Chairs:** James Krisher, MSME, Rochester Institute of Technology, Camillus, NY  
Egemen Tuzun, MD, PhD, Texas A&M University, College Station, TX

1:30pm-1:50pm  **Physiologic Perspective**  
Kiyotaka Fukamachi, MD, PhD, Cleveland Clinic, Cleveland, OH

1:50pm-2:10pm  **Engineering Perspective**  
Doug Vincent, BSME, Design Mentor, Inc., Pelham, NH

2:10pm-2:20pm  **Discussion**

**Abstract Presentations**

2:20pm-2:30pm  **Underlying Mechanism of Right Heart Failure Induced by LVAD: A Simulation Study**  
Hao Lin, BS, Artificial Organ Technology Lab, Suzhou, China

2:30pm-2:40pm  **In Vivo Performance of an Advanced Ventricular Assist Device with Pulse Augmentation and Regurgitant Flow Shutoff**  
Takuma Miyamoto, MD, PhD, Cleveland Clinic, Cleveland, OH

2:40pm-2:50pm  **Shear-Mediated Activation of Platelets is Associated with Global and Regional Changes in Biomechanical Properties: Implications for Mechanism and Therapy**  
Alice Sweedo, University of Arizona, Tucson, AZ

2:50pm-3:00pm  **Portable Driver Optimization for NuPulseCV IVAS Chronic Counterpulsation Cardiac Support**  
Sonna Patel-Raman, PhD, NuPulseCV, Raleigh, NC

1:30pm-3:00pm  **VAD 2: Debates: "Pros" versus "Cons" in Challenging Situations**  
*Franciscan A&B - Ballroom Level T1*

**Panelists:**

Bill Shay, MS, RN, Christiana Care Health System, Newark, DE  
Kenyon Larsen, RN, BSN, Intermountain Medical Center, Murray, UT

1:30pm-2:00pm  **Emergent VAD Evaluations: A Reality or Should They Be Offered?**  
**Pro:** Anthony Dan Paul Salimbangon, RN, BSN, CCRN, UCLA Med Ctr, Los Angeles, CA  
**Con:** Jill Giordano, MA, MSW, LCSW, Newark Beth Israel Med Ctr Newark, NJ

2:00pm-2:30pm  **Ethics: Just Because We Can, Should We?**  
**Pro:** Karen Meehan, MSN, ACNS, University of Chicago, Chicago, IL  
**Con:** Lori Anderson, MS, RN, Tampa General Hospital, Tampa, FL

2:30pm-3:00pm  **Controversy or Not: Legalized Marijuana and It's Effects On A VAD Program**  
**Pro:** Jami Bennett, RN, BSN, University of Colorado Hospital, Aurora, CO  
**Con:** Erin August, RN, BSN, Memorial Regional Hospital, Hollywood, FL
Friday, June 28 - Continued

1:30pm-3:00pm  **PULMONARY 3: Extracorporeal Lung Support/Ambulatory Artificial Lung for End Stage Lung Diseases**

*Plaza Room B - Lobby Level T1*

Co-Chairs: I Wen Wang, MD, PhD, Memorial Healthcare System, Hollywood, FL
            Cherry Croft, PhD, University of Kentucky, Lexington, KY

1:30pm-1:50pm  **Overview of Outcomes Data on ECMO Bridging to Lung Transplantation**

Mani Daneshmand, MD, Emory University, Atlanta, GA

1:50pm-2:10pm  **Cannulation Strategies for ECMO Bridging in the Lung Transplant Context**

Keshava Rajagopal, MD, PhD, University of Texas Houston, TX

2:10pm-2:30pm  **How to Approach Individual Scenarios in ECMO Bridging to Lung Transplantation**

Charles Hoopes, MD, MPH, Univ of Alabama at Birmingham, Birmingham, AL

2:30pm-2:50pm  **Development of Durable ECMO and "ICMO" Systems**

Jose Garcia, MD, IU Health - Methodist Hospital, Indianapolis, IN

**Abstract Presentation**

2:50pm-3:00pm  **A Quantitative Approach to Detection of Increased Circuit Resistance During ECMO**

Vishaal Dhamotharan, University of Pittsburgh, Pittsburgh

1:30pm-3:00pm  **RENA 3: Sensing Technologies Relevant to RRT And Clinical Use**

*Plaza Room A - Lobby Level T1*

Co-Chairs: Lenar Yessayan, MD, MS, University of Michigan, Troy, MI
            Balazs Szamosfalvi, MD, University of Michigan, Ann Arbor, MI

1:30pm-1:45pm  **Ion Selective Sensing**

Fokko Pieter Wieringa, PhD, IMEC/Holst Centre, Eindhoven, Netherlands

1:45pm-2:00pm  **The MediBeacon Transdermal GFR Measurement System**

Richard Dorshow, PhD, MediBeacon Inc., St. Louis, MO

2:00pm-2:15pm  **Detecting Hemodynamic Instability (AHI and Drive)**

Rodney Daniels, MD, University of Michigan, Ann Arbor, MI

2:15pm-2:30pm  **Wearable Bio-impedance Spectroscopy**

Seulki Lee, PhD, IMEC/Holst Centre, Eindhoven, The Netherlands

**Abstract Presentations**

2:30pm-2:40pm  **Miniature Libs Sensor for Real-time and In-line Multicomponent Analysis of Dialysis Fluids**

Michiel Oderwald, The Netherlands Organisation for Applied Scientific Research TNO, Delft, Netherlands

2:40pm-2:50pm  **Feasibility of Wearable Fluid Status Monitoring of End Stage Renal Disease Patients**

Seulki Lee, PhD, IMEC/Holst Centre, Eindhoven, The Netherlands

2:50pm-3:00pm  **Gradual Escalation of Blood Flow and Dialysate/Replacement Fluid Bicarbonate Concentration Improved Clinical Tolerability of Hemodiafiltration in Maintenance Hemodialysis Patients**

Tibor Fülöp, MD, PhD, Medical University of South Carolina, Charleston, SC
### PEDIATRIC 3: Pediatric Perspective on Hemostasis, Thrombogenicity and Hemocompatibility

**Imperial B - Ballroom Level T1**  
**Co-Chairs:** Jennifer Conway, MD, Stollery Children’s Hospital, Edmonton, Alberta, Canada  
Lindsay May, MD, University of Utah, Salt Lake City, UT

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</table>
| 1:30pm-3:00pm | **Unique Aspects of Developmental Hemostasis**  
Patricia Massicotte, MD, MSc, MHSc, University of Alberta, Alberta, Canada | Imperial B - Ballroom Level T1 | Patricia Massicotte, MD, MSc, MHSc, University of Alberta, Alberta, Canada                      |
| 1:50pm-2:10pm | **FDA Considerations for Pre-clinical Hemocompatibility Evaluation of Devices**  
Qi Jin Lu, PhD, FDA, Silver Spring, MD | Imperial B - Ballroom Level T1 | Qi Jin Lu, PhD, FDA, Silver Spring, MD                                                          |
| 2:10pm-2:30pm | **Hemocompatibility and Renal replacement Therapy**  
David Kwiatkowski, MD, MS, Stanford University, Palo Alto, CA | Imperial B - Ballroom Level T1 | David Kwiatkowski, MD, MS, Stanford University, Palo Alto, CA                                 |
| 2:30pm-2:40pm | **Discussion**                                                                                 | Imperial B - Ballroom Level T1 |                                                                                               |

### Critical Care / Anesthesiology / Pathology Session 3 - Topics in Critical Care And Anesthesiology

**Nob Hill 3 - Sixth Floor**  
**Co-Chairs:** Robert Kormos, MD, University of Pittsburgh Medical Center, Pittsburgh, PA  
Catherine Heith, MD, Boston Children’s Hospital, Boston, MA

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</table>
| 1:30pm-1:55pm | **Transeophageal Echocardiography for the Intra-Operative Management of the LVAD Patient**  
Gerard McCloskey, MBBch, BAO, Yale School of Medicine, New Haven, CT | Nob Hill 3 - Sixth Floor     | Gerard McCloskey, MBBch, BAO, Yale School of Medicine, New Haven, CT                           |
| 1:55pm-2:20pm | **Acute on Chronic RV Failure Following Assist Device Implantation: Diagnosis and Management in the ICU**  
Manuel Fontes, MD, Yale University, New Haven, CT | Nob Hill 3 - Sixth Floor     | Manuel Fontes, MD, Yale University, New Haven, CT                                               |
| 2:20pm-2:40pm | **Management of Pulmonary Vascular-Right Ventricular Axis Following Mechanical Circulatory Support**  
Mihai Podgoreanu, MD, Duke University, Durham, NC | Nob Hill 3 - Sixth Floor     | Mihai Podgoreanu, MD, Duke University, Durham, NC                                               |

### IFAQO Session - Frontiers of Bio-Material With Surface Treatment and Biological Tissues

**Franciscan C - Ballroom Level**  
**Co-Chairs:** Toru Masuzawa, PhD, Ibaraki University, Ibaraki University, Japan  
Steven Koenig, PhD, University of Louisville, Louisville, KY

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| 1:30pm-1:50pm | **Frontiers of Biomaterials: Immunomodulation and Biological Tissues**  
Tsuyoshi Kimura, Tokyo Medical and Dental University, Tokyo, Japan | Franciscan C - Ballroom Level | Tsuyoshi Kimura, Tokyo Medical and Dental University, Tokyo, Japan                            |
| 1:50pm-2:10pm | **Use of Polysaccharides to Make Biomimetic Surface Coatings and Hydrogels to Guide Cell Differentiation for Tissue Engineering Applications**  
Thomas Groth, PhD, Martin Luther University Halle-Wittenberg, Germany | Franciscan C - Ballroom Level | Thomas Groth, PhD, Martin Luther University Halle-Wittenberg, Germany                         |
| 2:10pm-2:30pm | **Innovations in Materials: Flexible, Stretchable and Transient Electronics: Opportunities for Incorporation in Next Generation Medical Device and Organ Systems**  
Marvin Slepian, MD, University of Arizona, Tucson, AZ | Franciscan C - Ballroom Level | Marvin Slepian, MD, University of Arizona, Tucson, AZ                                           |
3:00pm-3:45pm
VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
Grand Ballroom B - Ballroom Level T1

3:45pm-5:00pm
CARDIAC 4: Debate - The Future of Advanced Heart Failure: VAD vs Transplant
Grand Ballroom A - Ballroom Level T1
Co-Chairs: Veli Topkara, MD, MSc, Columbia University Medical Center, New York, NY
Charles Hoopes, MD, MPH, University of Alabama, Birmingham, AL

Abstract Presentations

3:45pm-3:55pm
Outcomes in Patients Supported on Left Ventricular Assist Devices Awaiting Heart and Heart-Kidney Transplant: A UNOS Database Analysis
Matthew Weber, MS, Thomas Jefferson University, Philadelphia, PA

3:55pm-4:05pm
Left Ventricle Assist Device and Gastric Sleeve as a Combination Therapy for Morbidly Obese Transplant Patients
Mateja Jezovnik, MD, PhD, University of Texas Health Sci Center, Houston, TX

4:05pm-4:15pm
Implanting Durable MCS in Non-Compliant Patients: Do the Outcomes Outweigh the Risks?
Heather Barone, RC-BC, MSN, Cedars-Sinai Medical Center, Los Angeles, CA

4:15pm-4:25pm
Development of Malignancies and Their Outcomes in Patients Supported on Continuous-flow Left Ventricle Assist Devices
Jonathan Gordon, BA, Thomas Jefferson University, Philadelphia, PA

4:25pm-4:35pm
Impact of LVAD Support on Outcomes after Combined Heart-Kidney Transplantation
Nicolas Brozzi, MD, University of Miami, Miami, FL

4:35pm-5:00pm
Debate:
The Future is Transplant
Simon Maltais, MD, PhD, Chirurgie, Montreal, Canada
The Future is VAD
Eduardo Rame, MD, University of Pennsylvania, Philadelphia, PA

3:45pm-5:00pm
BIOENGINEERING 4: Artificial Organs and Tissue Engineering
Imperial A - Ballroom Level T1
Co-Chairs: John Criscione, MD, PhD, Texas A&M University, College Station, TX
Kiyotaka Fukamachi, MD, PhD, Cleveland Clinic, Cleveland, OH

Abstract Presentations

4:00pm-4:10pm
A Bioreactor Containing Primary Human Renal Epithelial Cells Supported In Vivo without Immunosuppression
Rebecca Gologorsky, MD, University of California, San Francisco, CA

4:10pm-4:20pm
Assessing Hemocompatibility of a Small-Scale Microfluidic Artificial Lung
Alex Thompson, PhD, University of Michigan - ECMO Lab, Ann Arbor, MI

4:20pm-4:30pm
Computational Comparison of Ventricular Assist Device Implantation Sites Within Single Ventricle Hearts
Anne-Marie Ginn-Hedman, BS, Texas A&M University, College Station, TX

4:30pm-4:40pm
A Virtual Reality Feedback System for High Quality CPR Training
Gisselle Gonzalez, BS, The University of Arizona, Tucson, AZ

4:40pm-4:50pm
Alterations to Cardiac Decellularized Extracellular Matrix Hydrogel Processing Affects Material Strength and Cell Viability
Nicole Mehta, MS, BS, Texas A&M University, College Station, TX

4:50pm-5:00pm
Thoughts on FDA Benchmark Blood Pump - Insights from Physics-based Approach
Choon-Sik Jhun, PhD, Penn State College of Medicine, Hershey, PA
### PULMONARY 4: Innovative Technologies for Respiratory Support

**Plaza Room B - Lobby Level T1**  
Co-Chairs: Zhongjun Wu, PhD, University of Maryland School of Medicine, Baltimore, MD  
Staci Jessen, PhD, Texas A&M University, College Station, TX

- **3:45pm-4:05pm**: Intravascular Oxygenation: Past and Potential for the Future  
  William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA

- **4:05pm-4:25pm**: Use of Microbubbles As An Approach to Blood Oxygenation  
  Shingo Ichiba, MD, PhD, Nippon Medical School Hospital, Tokyo, Japan

- **4:25pm-4:45pm**: Recent Progress on Microfluidic Artificial Lungs  
  Joseph Potkay, PhD, University of Michigan & VA Ann Arbor Healthcare System, Ann Arbor, MI

- **4:45pm-4:55pm**: Long-term Evaluation of an Ultra Compact ECMO System with Built-in Monitors in Chronic Animal Experiments for Up to 5 Weeks  
  Nobumasa Katagiri, PhD, National Cerebral & CV Ctr Research Institute, Osaka, Japan

### RENAL 4: Innovative Approaches to Extracorporeal Renal Support With Clinical Application

**Plaza Room A - Lobby Level T1**  
Co-Chairs: Balazs Szamosfalvi, MD, University of Michigan, Ann Arbor, MI  
Lenar Yessayan, MD, MS, University of Michigan, Troy, MI

- **3:45pm-4:00pm**: Ultrafiltration for Advanced Heart Failure Using Tablo  
  Sevag Demirjian, MD, Cleveland Clinic, Cleveland, OH

- **4:00pm-4:15pm**: Outside-In Hemofiltration for Prolonged Operation Without Clogging – Hydrodynamics, Filter Designs and Challenges  
  Mohamed Labib, PhD, Novaflux Technologies, Princeton, NJ

- **4:15pm-4:30pm**: Remote Data Collection Systems In Home Hemodialysis  
  Aditya Patel, NxStage Medical Inc, Lawrence, MA

- **4:30pm-4:45pm**: Data Analytics for Continuous Renal Replacement Therapy  
  Ronald Usovsky, BA, BSN, RN, Baxter Healthcare Corporation, Deerfield, IL

- **4:50pm-5:00pm**: IMENGIti: A Working Prototype of a Portable Tidal Peritoneal Dialysis System  
  Azrul Hamzah, PhD, University Kebangsaan Malaysia, Bangi, Selangor, Malaysia
### 3:45pm-5:00pm

#### PEDIATRIC 4: Pediatric Abstracts

**Plaza Room A - Lobby Level T1**

**Co-Chairs:** David Sutcliffe, MD, University of Texas Southwestern, Dallas, TX  
George Mychaliska, MD, C.S. Mott Children's Hospital, Ann Arbor, MI

#### Abstract Presentations

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<th>Presenter</th>
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<tr>
<td>3:45pm-3:55pm</td>
<td>Evaluation of New DLC-based Cavopulmonary Assist in Failing Fontan Simulation Loop/Sheep Model</td>
<td>Li Li, MD, University of Kentucky, Lexington, KY</td>
</tr>
<tr>
<td>3:55pm-4:05pm</td>
<td>Mechanically Assisted Fontan Completion for Bridge to Heart Transplant: A Case Series</td>
<td>Joseph Spinner, MD, Baylor College of Medicine, Houston, TX</td>
</tr>
<tr>
<td>4:05pm-4:15pm</td>
<td>I Will Survive! A Single-center Outpatient Pediatric Ventricular Assist Device Experience</td>
<td>Hari Tunuguntla, MD, Baylor College of Medicine, Houston, TX</td>
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<tr>
<td>4:15pm-4:25pm</td>
<td>Evolution of Vascular Access for the Artificial Placenta: From Two-Vessel Single-Lumen Venovenous Cannulation to Single-Vessel Cannulation with Tidal Flow</td>
<td>Jacqueline Kading, BS, University of Michigan, Ann Arbor, MI - ASAIO/FYI Fellowship</td>
</tr>
<tr>
<td>4:35pm-4:45pm</td>
<td>Use of Protek Duo Cannula for Temporary Support in Pediatric VAD Patients</td>
<td>Michelle Ploutz, MD, Phoenix Children’s Hospital, Phoenix, AZ</td>
</tr>
<tr>
<td>4:45pm-4:55pm</td>
<td>Survival and Neurologic Outcomes of Extracorporeal Membrane Oxygenation in Patients with Congenital Heart Disease</td>
<td>Hiroshi Taka, Okayama University Hospital, Okayama, Japan</td>
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### 5:15pm - 5:45pm

#### ASAIO Member Business Meeting

**Franciscan D - Ballroom Level T2**

### 9:30am - 4:00pm

#### Poster Presentations - Grand Ballroom B - Ballroom Level T1

**Cardiac Posters**

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<th>Poster Number</th>
<th>Title</th>
<th>Author/Institution</th>
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<tr>
<td>178</td>
<td>Simulated Performance of the Cleveland Clinic Continuous-Flow Total Artificial Heart Using the Virtual Mock Loop: Comparison with an In Vivo Study</td>
<td>Takuma Miyamoto, MD, PhD, Cleveland Clinic, Cleveland, OH</td>
</tr>
<tr>
<td>179</td>
<td>First Acute In Vivo Study of the Advanced Ventricular Assist Device as a Left and Right Ventricular Assist Device</td>
<td>Takuma Miyamoto, MD, PhD, Cleveland Clinic, Cleveland, OH</td>
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<tr>
<td>180</td>
<td>A New Hemodynamic Index to Identify Different Profiles in Patients Implanted with Last Generation Centrifugal Pump</td>
<td>Andrea Montalto, MD, San Camillo Hospital, Rome, Italy</td>
</tr>
<tr>
<td>181</td>
<td>Streamlining and Audio Analysis Device for Doctor Patient Encounters</td>
<td>Sean Moore, University of Arizona, Tucson, AZ</td>
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<tr>
<td>182</td>
<td>Higher Vasoactive Inotropic Score is Associated with Incidence of Acute Kidney Injury in Adult Cardiogenic and Respiratory Shock</td>
<td>Tomohiro Nakajima, MD, PhD, Washington Univ in St. Louis, St. Louis, MO</td>
</tr>
<tr>
<td>183</td>
<td>Renal Replacement Therapy in Patients with Continuous Flow Left Ventricular Assist Devices</td>
<td>Umang Parikh, Baylor College of Medicine, Houston, TX</td>
</tr>
<tr>
<td>184</td>
<td>Impact of Less Invasive Extra-Pericardial Placement (LIEPP) of LVAD Devices on Right Ventricular Dysfunction</td>
<td>Jiheum Park, PhD, Yale University School of Medicine, New Haven, CT</td>
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Friday, June 28 - Continued

**Cardiac Posters Continued**

185 Successful Kidney Transplant on Veno-arterial Support After Heart Transplant
   **Anthony Pham, MS, Mayo Clinic Florida, Jacksonville, FL**

186 Device Differences in LVAD Pump Thrombosis: A Systematic Review
   **Giselle Raitz, MD, University of Miami, Miami, FL**
   HVAD Parameters Risk Score
   **Veronica Ramos, BS, Medtronic, Miami Lakes, FL**

187 Characterization of Compliance Chamber Performance for Pre-Clinical VAD Testing
   **Britton Richardson, Centreville High School, Clifton, VA**

188 Hemodilution Enhances the Mechanical Fragility of Blood During In Vitro Hemolysis Testing
   **Christian Robinson, PhD, Calon Cardio-Technology Ltd, Swansea, United Kingdom**

189 High-Speed Visualization of Ingested and Ejected Red Thrombus from the HeartMate II Left Ventricular Assist Device
   **Grant Rowlands, Cornell University, Ithaca, NY**

190 ECLS Studies in a Mock Circulatory System
   **Marcel Rutten, PhD, TU Eindhoven, Eindhoven, Netherlands**

191 Efficacy of Therapeutic Modalities to Address Aortic Valve Insufficiency in the Setting of Left Ventricular Assist Device Support
   **Nadeen Sarsour, BS, University of Michigan Medical School, Ann Arbor, MI**

192 Opioid Usage in Patients Undergoing Left Ventricular Assist Device Implantation: Correlation to Patient Characteristics and Outcomes?
   **Sarah Schettle, PA-C, Mayo Clinic, Rochester, MN**

193 Flow Field Visualization in the Assisted Isolated Heart During Mechanical Circulatory Support
   **Heinrich Schima, PhD, Medical University of Vienna, Vienna, Austria**

194 Effect of Atrial Inflow Conditions on Ventricular Blood Flow During LVAD Support Using Particle Tracking
   **Heinrich Schima, PhD, Medical University of Vienna, Vienna, Austria**

195 Oncostatin M (OSM): A Novel Biomarker to Predict Infection in (VAD) Recipients
   **James Long, MD, PhD, INTEGRIS Baptist Medical Center, Oklahoma City, OK**

196 Mechanical Circulatory Support in Coronary Revascularization and Severe Left Ventricular Dysfunction Permits Bridge to Recovery
   **Nathan Smith, MD, Medical College of Wisconsin, Milwaukee, WI**

197 Low Shear, High Flow, and Physiologic Pulsatility: The Corwave LVAD
   **Trevor Snyder, PhD, Corwave, Clichy, France**

198 Does a Tighter International Normalized Ratio (INR) Target Range Decrease Adverse Events (AEs) in Left Ventricular Assist Device (LVAD) Patients?
   **Elizabeth Stauder, BS, Intermountain Medical Center, Murray, UT**

199 The Influence of Hemodynamics on Cerebral Perfusion and Thromboembolic Risk of LVAD Therapy
   **Angelica Straccia, BS, University of Washington, Seattle, Wa**

200 Left Ventricular Assist Device Caregiver Health Outcomes: A Systematic Review of Qualitative and Quantitative Studies
   **Megan Streur, PhD, University of Washington, Seattle, WA**

201 Evaluation of tNIRS-1 Combined with Bis Monitor for Cardiac Surgery Patients
   **Atsushi Sugiura, MSEE, Showa University Northern Yokohama Hospital, Yokohama, Japan**
Cardiac Posters Continued

202 Stretchable Electronic Motion Capture in Heart Failure Affords Quantitation While Revealing Motion Signatures
Hailey Swanson, BS, University of Arizona, Tucson, AZ

203 Successful Cardiac and Renal Transplant in a Highly Sensitized Patient Bridged from Left Ventricular Assist Device
Presentation Cancelled

204 Development of an Extracorporeal Ventricular Assist Device with a Novel Centrifugal Pump with a Hydrodynamically Levitated Impeller
Tomonori Tsukiya, PhD, The National Cerebral and CV Center, Osaka, Japan

205 Impact of Delayed Systemic Heparinisation on Bleeding and Thromboembolism During Post-cardiotomy Extracorporeal Membrane Oxygenation in Neonates
Maria von Stumm, MD, University Heart Center Hamburg, Hamburg, Germany

206 *In Vivo* Evaluation of the CH Biomedical Left Ventricular Assist System in Bovine Model for 60 Days
Yaxin Wang, PhD, Texas Heart Institute, Houston, TX

207 Steroid Use in *Ex-Vivo* Normothermic Heart Perfusion
William Weir, MD, Michigan Medicine, Ann Arbor, MI

208 Medication Regimens and Adherence in VAD Patients
Adrianna Damato, MD, Icahn School of Medicine at Mount Sinai, New York, NY

209 Multi-Scale, Multi-Resolution Simulation of Thrombosis in the HVAD
Mansur Zhussupbekov, BS, Cornell University, Ithaca, NY

Bioengineering Posters

210 Optimization of the Permanent Magnetic Bearings Construction Providing Force Balance in Religa Heart® ROT Centrifugal Blood Pump
Przemyslaw Kurtyka, BS, Foundation of Cardiac Surgery Development, Zabrze, Poland

211 Fabrication and Evaluation of Chitosan-based Nanofibrous Membrane as an Effective Tissue Adhesion Barrier
Oh Hyeong Kwon, PhD, Kumoh National Institute of Technology, Gumi, Republic of Korea

212 CFD Modeling of the FDA Benchmark Centrifugal Pump Using a Cut-Cell Method with Automatic Mesh Generation and Adaptive Mesh Refinement
Yanheng Li, PhD, Convergent Science Inc., Madison, WI

213 Co-development of Regulatory-compliant and Commercializable Clinical Diagnostics and Medical Devices Solutions
Thomas Li, PhD, Agency for Science, Technology and Research (A*STAR), Singapore

214 Evaluation of Plasma Leakage in Extracorporeal Membrane Oxygenators Based on the Gas Inlet Pressure
Yuki Nakamura, BS, Osaka Electro-Communication University Graduate School, Osaka, Japan

215 Development of Multiple Point Bowel-sound Analysis System (MPBAS) for the Optimization of the Bowel Sound Measurement Position
Junji Nishioka, BS, Tokushima University Graduate School, Tokushima City, Japan

216 Tissue-Inducing Characteristics of Titanium Fiber Mesh with One Side Sealed with Non-Porous Material for Its Application to Artificial Heart
Eiji Okamoto, PhD, Tokai University, Sapporo, Japan

217 Sensing Algorithm Code in Arduino Microcontroller for Autonomous Function of a Total Artificial Heart Model
Wilmo Orejola, MD, Hackensack University Medical Center, Pompton Plains, NJ
Bioengineering Posters Continued

218  Platelet Margination Affects Thrombogenicity in LVAD Therapy  
     Rodrigo Osuna-Orozco, BS, University of Washington, Seattle, WA

219  On FHIR: Clinical Data Automation and the ELSO Registry  
     Matthew Paden, MD, Emory University, Atlanta, GA

220  “Hey ELSO”: Natural Language Processing (NLP) for ELSO Registry Queries  
     Matthew Paden, MD, Emory University, Atlanta, GA

221  Development of a Soft Robotic Organosynthetic Left Ventricle  
     Clara Park, Massachusetts Institute of Technology, Cambridge, MA

222  Trans-catheter Septal Myectomy for Hypertrophic Cardiomyopathy: Results from an Innovative Design and Testing  
     Jiheum Park, PhD, Yale University School of Medicine, New Haven, CT

223  In Vitro Antifouling Assessment of Diethylene Glycol Dimethyl Ether Coating on Silicon Substrates  
     Avinash Patil, PhD, University of California, San Francisco, CA

224  Effect of PEG Chain Length and Solvent Composition on Antifouling Capacity of Silane-PEG Coatings  
     Avinash Patil, PhD, University of California, San Francisco, CA

225  Comparative Analysis of 3D Printed Mock Ventricular Assist Devices Using Computational Fluid Dynamics and In-Vitro Benchtop Testing  
     Liana Polikaitis, BS, Texas A&M University, College Station, TX

226  Dissolution of Nitinol Wire within Tissue - Expanding the Use of Paraffin Histology for Medical Device Evaluation  
     Cedric Robinson, BS, MS, Texas A&M University, College Station, TX

227  Humans and Pigs: Are We That Different? The Effect of Shear Stress and Biochemical Activation on Porcine Platelets  
     Yana Roka Moiia, PhD, University of Arizona, Tucson, AZ

228  Staying Connected in the Loop: Shear Stress Errors Induced by Connector Elements within Pre-Clinical Testing of Ventricular Assist Device Thrombogenicity  
     Marvin Slepian, MD, University of Arizona, Tucson, AZ

229  Evaluation of Decellularized Porcine Artery as Vascular Grafts with Sustained Endothelial Formation  
     Natália Suárez, Universidad de los Andes, Bogotá, Colombia

230  Observation of Thrombus Formation around TAVI models including Leakage Flows by Optical Systems and the Evaluation by CFD Analysis  
     Presentation Cancelled

231  Apico Aortic Blood Pump: Short Term In Vivo Experiments  
     Bruno Utiyama, PhD, Instituto Dante Pazzanese de Cardiologia, São Paulo, Brazil

232  Rotary Blood Pump Control Strategy for Physiologic Perfusion, Suction Prevention, and Augmentation of Vascular Pulsatility  
     Yu Wang, PhD, Dalian University of Technology, Dalian, China

233  Controlling the Variance of In Vitro Hemolysis Test per ASTM Standards: Experience and Recommendations  
     Liudi Zhang, PhD, Soochow University, Suzhou, China

Pediatric Posters

234  Human Factors Design of Pediatric Ventricular Assist System  
     James Antaki, PhD, Cornell University, Ithaca, NY

235  Is the Serum Level of Salusin-α Associated with Hypertension and Atherosclerosis in the Pediatric Population?  
     Anna Wasilewska, MD, PhD, Medical University of Białystok, Białystok, Poland
8:30am-10:00am  **CARDIAC 5: Optimizing MCS Outcomes and Reducing Complications: Pulsatility, Blood pressure, Speed Optimization**

*Yosemite A-B  Ballroom Level T1*

**Co-Chairs:** Egemen Tuzun, MD, PhD, Texas A&M University, College Station, TX
Mandar Aras, MD, PhD, University of California, San Francisco, CA

### Abstract Presentations

8:30am-8:40am  **Atrial Fibrillation Triggers Chaotic Flow in the Left Ventricle and Increases LVAD Thrombogenicity**

Jennifer Beckman, MSN, ARNP, FNP, Univ of Washington Med Ctr, Seattle, WA

8:40am-8:50am  **Mild Aortic Insufficiency at the Time of Left Ventricular Assist Device Implantation: Should It Be Repaired?**

Yuki Tanaka, MD, Washington University School of Medicine, St. Louis, MO

8:50am-9:00am  **In Vitro Investigation of the Effect of the Hvad Lavare Cycle on Intraventricular Hemodynamics**

Fanette Chassagne, PhD, University of Washington, Seattle, WA

9:00am-9:10am  **The Impact of LVAD Pulsatility Modes on Thrombogenicity**

Alberta Aliseda, PhD, University of Washington, Seattle, WA

9:10am-9:20am  **Assessment of Left Ventricular Contractility During LVAD Support: Modeling and Validation**

Eric Chen, Eindhoven University of Technology, Eindhoven, Netherlands

9:20am-9:30am  **Shorter Duration of Pulsatility During Left Ventricular Assist Device (LVAD) Therapy is Associated with Vasoplegia at the Time of Heart Transplantation**

Mandar Aras, MD, PhD, University of California, San Francisco, CA

9:30am-10:00am  **Panel Discussion**

Panelists:
Antonio Loforte, MD, PhD, S. Orsola Malpighi, Bologna, Italy
Pramod Bonde, MD, Yale University, New Haven, CT
Liviu Klein, MD, MS, Univ of California San Francisco, San Francisco, CA
Thomas Schloeglhofer, MSc, Medical Univ of Vienna, Vienna, Austria

8:30am-10:00am  **BIOENGINEERING 5: Innovation InSight**

*Imperial A - Ballroom Level T1*

**Co-Chairs:** Daniel Timms, PhD, BiVACOR, Houston, TX
Steven Koenig, PhD, University of Louisville, Louisville, KY

### Abstract Presentations

8:30am-8:50am  **Artificial Eye Development**

Robert Greenberg, MD, PhD, Alfred Mann Foundation, Valencia, CA

8:50am-9:10am  **Innovations in Optical Pressure Sensors**

Thorsten Siess, PhD, Abiomed Europe GmbH, Aachen, Germany

9:10am-9:20am  **Clot Detection in Membrane Oxygenators using Micro-Computed-Tomography - A Feasibility Measurement**

Clemens Birkenmaier, Technical University of Applied Sciences, Regensburg, Germany

9:20am-9:30am  **The Effect of Shear Rate and Exposure Time on the Size of Platelet Aggregations**

Chris Hoi Houng Chan, PhD, Griffith University, Gold Coast, Australia

9:30am-9:40am  **Induced Spiral Flow and Helical Washout Mechanics**

J. Yasha Kresh, PhD, Drexel University College of Medicine, Philadelphia, PA

9:40am-9:50am  **Destruction of von Willebrand Factor Occurs Despite the Absence of Hemolysis: In-Vitro Study**

Choon-Sik Jhun, PhD, Penn State College of Medicine, Hershey, PA

9:50am-10:00am  **Patient Hacks and User-Designed Problem Solutions for the Wearable Components of Ventricular Assist Devices (VADs): A Content Analysis of Online Sources**

Jessica Lea Dunn, University of Sydney, Sydney, Australia
## Saturday, June 29

### 8:30am-10:00am

**PULMONARY 5: Controversies in Artificial Lung Support**  
*Plaza Room B - Lobby Level T1*

Co-Chairs: Marie Cornell, BS, LATg, University of Michigan, Ann Arbor, MI  
Alvaro Rojas-Peña, MD, University of Michigan Medical School, Ann Arbor, MI

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>8:30am-8:50am</td>
<td>Roles for ECMO in Traumatic Respiratory Failure</td>
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<td>Ismael Salas de Armas, MD, The Univ of Texas Health Sci Ctr-Houston, TX</td>
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<tr>
<td>8:50am-9:10am</td>
<td>Etiology and Management of Hypoxemia on ECMO Support</td>
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<td>Michael Broome, MD, PhD, Karolinska University Hospital, Solna, Sweden</td>
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<td>9:10am-9:30am</td>
<td>Combined Respiratory Failure and Distributive Shock: Options and How to Choose Among Them</td>
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<td>Edward Cantu, MD, MSCE, Hosp of the Univ of Pennsylvania, Philadelphia, PA</td>
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<td>9:30am-9:50am</td>
<td>Respiratory Failure In the Obese: ECMO Outcomes?</td>
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<td>Bindu Akkanti, MD, McGovern Medical School, Houston, TX</td>
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<td>9:50am-10:00am</td>
<td>Simple New Method to Measure Cardiac Output in VV ECMO Patients</td>
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<td>Nikolai Krivitski, PhD, DSc, Transonic Systems Inc, Ithaca, NY</td>
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### 8:30am-10:00am

**RENAL 5: KHI: Enabling Technologies for Wearable Dialysis and Implanted Artificial Kidney**  
*Plaza Room A - Lobby Level T1*

Co-Chairs: Balazs Szamosfalvi, MD, University of Michigan, Ann Arbor, MI  
Stephen Ash, MD, FACP, HemoCleanse Technologies LLC, Lafayette, IN

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<tr>
<td>8:30am-8:50am</td>
<td>Kidney Health Initiative - Defining the Purpose and Mission</td>
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<td>Murray Sheldon, MD, FDA, Silver Spring, MD</td>
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<td>8:50am-9:05am</td>
<td>Silicon Membranes for Implantable Dialysis</td>
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<td>Shuvo Roy, PhD, University of California San Francisco, San Francisco, CA</td>
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<td>9:05am-9:25am</td>
<td>Electro-oxidation As A Strategy for Urea Removal in the Dialysate Recycling Process</td>
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<td>Karin Gerritsen, MD, PhD, UMC Utrecht, Utrecht, Netherlands</td>
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<td>9:25am-9:40am</td>
<td>Sorbent Technology</td>
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<td>Stephen Ash, MD, HemoCleanse Technologies LLC, Lafayette, IN</td>
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<td>9:40am-9:50am</td>
<td>Wearable Artificial Kidney</td>
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<td>Victor Gura, MD, Geffen School of Med at UCLA, Beverly Hills, CA</td>
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<td>9:50am-10:00am</td>
<td>Possible Resolution to Problem of Massive Disposal and Replacement of Artificial Kidney Filtrate</td>
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<td>Arnold Lande, MD, Northport Navigable Waters Institution, Northport, MI</td>
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### 10:00am-10:45am

**ENJOY REFRESHMENTS**  
*Grand Ballroom B - Ballroom Level T1*
10:45am-12:00pm  CARDIAC 6: RV Failure and BiV Failure in the Era of Centrifugal Flow
Yosemite A-B  Ballroom Level T1
Co-Chairs: William Cotts, MD, MS, Advocate Christ Medical Center, Oak Lawn, IL
Ismael Salas de Armas, MD, The Univ of Texas Health Science Center, Houston, TX

Abstract Presentations

10:45am-10:55am  Comparison of Total Artificial Heart and Heartware HVAD Biventricular Support for Management of Biventricular Heart Failure: A Systematic Review and Meta-analysis
Jessica Luc, MD, University of British Columbia, Vancouver, Canada

10:55am-11:05am  Mechanical Circulatory Support Hemodynamics for Biventricular Heart Failure Using Continuous Flow Total Artificial Heart
Jamshid Karimov, MD, PhD, Cleveland Clinic, Cleveland, OH

11:05am-11:15am  Promising Parameters for Predicting Right Heart Failure After LVAD Therapy
Faith Gumus, MD, Ankara University, Ankara, Turkey

11:15am-11:25am  Outcomes of Percutaneous Temporary Biventricular Mechanical Support: A Systematic Review
Matthew Weber, MS, Thomas Jefferson University, Philadelphia, PA

11:25am-11:35am  Dual Antiplatelet Therapy is Not Associated with Increased Bleeding in Patients Implanted with Veno-arterial Extracorporeal Membrane Oxygenation
Erica Zanath, MD, University Hospitals Cleveland Medical Center, Cleveland, OH

11:35am-12:00pm  Panel Discussion - RV Failure and BiV Failure in the Era of Centrifugal Flow
Panelists:
Christian Bermudez, MD, Hosp of the Univ of Pennsylvania, Philadelphia, PA
Jens Garbade, MD, PhD, University Leipzig Heart Center, Leipzig, Germany
Antonio Loforte, MD, PhD, S. Orsola Malpighi, Bologna, Italy
Jeffrey Teuteberg, MD, PhD, Stanford University, Stanford, CA

10:45am-12:00pm  BIOENGINEERING 6 - Ex-Vivo Perfusion Models
Imperial A - Ballroom Level T1
Co-Chairs: Choon-Sik Jhun, PhD, Penn State College of Medicine, Hershey, PA
Guruprasad Giridharan, PhD, University of Louisville, Louisville, KY

Abstract Presentations

10:45am-11:00am  Are We Ready to Replace in-vivo Models With ex-vivo Ones?
Egemen Tuzun, MD, PhD, Texas A&M University, College Station, TX

11:00am-11:10am  An In-vitro Human Endothelial Cell-Smooth Muscle Cell Co-culture Model to Study the Effects of Pulsatility
Moustafa Meki, BS, University of Louisville, Louisville, KY

11:10am-11:20am  Development of a Pumpless Artificial Lung for Pediatric End Stage Lung Failure
Alex Thompson, PhD, University of Michigan, Ann Arbor, MI

11:20am-11:30am  Extracorporeal Support Without Systemic Anticoagulation: Nitric Oxide (NO) Releasing Circuits Combined with NO Sweep in Sheep
Mark Jeakle, BS, University of Michigan, Ann Arbor, MI

11:30am-11:40am  Drag Reducing Polymers Improve Oxygen Transfer Rate In Miniature Hollow Fiber Membrane Oxygenators
Dan Crompton, BS, University of Pittsburgh, Pittsburgh, PA

11:40am-11:50am  Endovascular Reconstitution of Aortic Sinotubular (eRAS) Junction for Type A Dissection
Jiheum Park, PhD, Yale University, New Haven, CT

11:50am-12:00pm  Study of the Effect of Turbulence on Red Blood Cell Damage and Platelet Activation In Vitro
Shivbaskar Rajesh, BS, University of Pittsburgh, Pittsburgh, PA
10:45am-12:00pm  RENAL 6: Emerging Strategies in Acute Kidney Injury and Extracorporeal Support

Plaza Room A - Lobby Level T1

Co-Chairs: Balazs Szamosfalvi, MD, University of Michigan MD, Ann Arbor, MI
H David Humes, MD, University of Michigan, Ann Arbor, MI

10:45am-11:05am  Safe CRRT-RCA Prescribing: Relative Importance of Protocol Design vs Expertise
Balazs Szamosfalvi, MD, University of Michigan, Ann Arbor, MI

11:05am-11:20am  Spectral Apheresis Machine - An Open Platform for CRRT and Hemoperfusion
Gualitero Guadagni, PhD, Spectral Diagnostics Inc, Toronto, Canada

11:20am-11:30am  Abstract Presentations

Edward Leonard, PhD, Columbia University, New York, NY

11:30am-11:40am  Mixed Matrix Membrane for Achieving Endotoxin Free Dialysate Combined with High Removal of Uremic Toxins From Human Plasma
Dimitrios Stamatialis, PhD, University of Twente, Enschede, Netherlands

11:40am-11:50am  Drainage with Normal Saline in Two Directions for Washing of the Clogging Filter During Cell-free and Concentrated Ascites Reinfusion Therapy
Naoki Igata, Tokushima University, Tokushima city, Japan

11:50am-12:00pm  Discussion