Wednesday, June 21

8:30am - 4:30pm  **ASAIO 5th ANNUAL PEDIATRIC MEDICAL DEVICE DAY**

8:30am  **Introduction**
Timothy Maul, CCP, PhD, Nemours Children's Hospital, Orlando, FL

8:35am - 10:15am  **Pediatric Day Session 1: Bringing Products To Market**

8:35am-8:55am  **Orphan Products Funding For Clinical Trials**
Eric Chen, MS, FDA, Silver Spring, MD

8:55am-9:25am  **Orphan Products PI Perspective**
Christopher Almond, MD, Stanford University, Palo Alto, CA

9:25am-9:45am  **Demystifying the FDA Process**
Iki Adachi, MD, Texas Children's Hospital, Houston, TX

9:45am-10:05am  **Where The CDRH Is Going**
Vasum Peiris, MD, FDA, Silver Spring, MD

10:05am-10:15am  **Discussion and Questions**

10:15am - 10:30am  **Pediatric Refreshment Break 1**

10:30am - 11:40am  **Pediatric Day Session 2: Updates From The Field**

10:30am-10:50am  **PediMacs**
Dr. Joseph Rossano, MD, MS, Children's Hospital of Pennsylvania, Philadelphia, PA

10:50am-11:10am  **Early Report From PumpKIN**
Timothy Baldwin, PhD, NHLBI/NIH, Bethesda, MD

11:10am-11:30am  **Quality Improvement Science Of VADs**
Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH

11:30am-11:45am  **Discussion and Questions**

11:45pm - 1:30pm  **Lunch Break**

1:30pm - 2:45pm  **Pediatric Day Session 3: Getting A Pediatric Device to Market**

1:30pm-2:15pm  **Pediatric Device Consortia Panel**
Julia Finkel, MD, Children’s National Health System, Washington, DC
Matthew Maltese, PhD, The Children’s Hospital of Philadelphia, Philadelphia, PA
Wenda C. Carlyle, PhD, CardioMed Device Consultants, Annapolis, MD

2:15pm - 2:30pm  **Pediatric Refreshment Break 2**
### Pediatric Day Session 4: New Ideas In Anticoagulation

**2:30pm - 4:30pm**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>2:30pm-2:50pm</td>
<td>DTIs</td>
<td>Patricia Massicotte, MD, University of Alberta, Edmonton, Alberta</td>
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<tr>
<td>2:50pm-3:10pm</td>
<td>Is TEG No Longer Needed?</td>
<td>David Rosenthal, MD, Stanford University, Palo Alto, CA</td>
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<tr>
<td>3:10pm-3:30pm</td>
<td>Surface Passivation</td>
<td>Lise Tchouta, MD, MS, MHS, Columbia University Medical Center, New York, NY</td>
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<tr>
<td>3:30pm-3:50pm</td>
<td>Bioinspired Surface Coating for Mechanical Circulator Support</td>
<td>Michael Super, PhD, Wyss Institute at Harvard, Boston, MA</td>
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<tr>
<td>3:50pm-4:10pm</td>
<td>Acute Stroke Management</td>
<td>Rebecca Ichord, MD, Children's Hospital Philadelphia, Philadelphia, PA</td>
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<tr>
<td>4:10pm-4:30pm</td>
<td>Discussion and Closing Comments</td>
<td>Timothy Maul, CCP, PhD, Nemours Children's Hospital, Orlando, FL</td>
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### VAD UNIVERSITY

**Course Director:** Pramod Bonde, MD, Yale University, New Haven, CT

- **How Engineering Influences Medicine**
  - Fundamentals of Engineering Principles in Design, Development and Testing of Circulatory Devices

- **How Medicine Helps Engineering Innovation**
  - Who Can and Cannot Benefit from VAD Therapy?
  - How Do We Expand the Potential Recipient Pool?

- **Economics Of VAD Therapy: What You Need To Know?**
  - Infrastructure Needed
  - Dynamics of Healthcare Delivery
  - Financial Viability

- **Clinical Aspects of VAD Implantation & Approach**
  - Hemodynamic Stabilization of Acute Circulatory Shock
  - Approaches and Pitfalls
  - Technical Pearls
  - What Not To Do

- **The Four Cs of VAD Care**
  - Communication
  - Compliance
  - Coagulation
  - Complications

- **Total Artificial Heart**
  - Devices in the Pipeline
  - Clinical Implant and Care of TAH Patients
  - Programmatic Aspects

- **Prototype Challenge:**
  - This year's Design Challenge is to develop a physical prototype of a circulatory pump which may use pneumatic power and may belong to axial/mixed/centrifugal design and produce a flow >2L/min. Video demonstration of the prototype design, how it was built and actual working prototype with flow demonstration will be needed to qualify (Video 5 minutes and questions 5 minutes).
## Thursday, June 22

### GENERAL SESSION 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:45am</td>
<td>Introduction &amp; Welcome - Marvis Slepian, MD, ASAIO Program Chair, University of Arizona, Tucson, AZ</td>
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<tr>
<td>8:00am</td>
<td>Top Graded Abstracts</td>
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<tr>
<td>9:15am</td>
<td>ASAIO President's Address - William Fissell, MD, Vanderbilt University, Nashville, TN</td>
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<tr>
<td>9:45am</td>
<td>Top Graded Abstracts</td>
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<tr>
<td>10:30am</td>
<td>Medical Device Innovations - How Do We Drive It, Build It and Deliver It in the Future?</td>
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<tr>
<td>10:30am</td>
<td>Medical Device/Therapeutics Innovation - The Issue, The Need And The Process Marvis Slepian, MD, University of Arizona, Tucson, AZ</td>
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<tr>
<td>10:50am</td>
<td>Rapid Prototyping Additive Manufacturing</td>
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<td>11:00am</td>
<td>Modeling and Simulation Approaches - Enhancing Certainty, Reducing Animal Studies, Speeding Development Tina Morrison, PhD, FDA, Silver Spring, MD</td>
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<tr>
<td>11:30am</td>
<td>The Revolution In Material Development Art Coury, PhD, Northeastern University, Boston, MA</td>
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<td>11:30am</td>
<td>Efficiency in Regulatory Strategies Valerie Merkle, PhD, FDA, Silver Spring, MD</td>
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<tr>
<td>11:50am</td>
<td>The Revolution In Material Development Art Coury, PhD, Northeastern University, Boston, MA</td>
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<td>12:30pm</td>
<td>Fueling The Process - The VC/Financial Perspective</td>
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<td>1:30pm</td>
<td>Lunch Break</td>
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### CARDIAC 1

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<tr>
<th>Time</th>
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<tr>
<td>1:30pm</td>
<td>Panel: Patient Pump Interaction</td>
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<td>Panelists:</td>
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<td>John M. Stulak, MD, Mayo Clinic Hospital, Rochester, MN</td>
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<td>Robert Adamson, MD, Sharp Memorial Hospital, San Diego, CA</td>
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<td>Keith Aaronson, MD, University of Michigan, Ann Arbor, MI</td>
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<td>Mary Keebler, MD, Vanderbilt University, Nashville, TN</td>
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<tr>
<td>1:30pm</td>
<td>Surgical Challenges with Complex Case Scenarios - Multiple Reoperations and Pump Exchanges Simon Maltais, MD, PhD, Mayo Clinic, Rochester, MN</td>
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<td>1:45pm</td>
<td>Discussion</td>
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<td>1:50pm</td>
<td>Case #2:</td>
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<td>Patient Device Selection Difficulties - Thromboembolic Events and Gastrointestinal Bleeding Nir Uriel, MD, MSc University of Chicago, Chicago, IL</td>
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<td>2:05pm</td>
<td>Discussion</td>
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<td>2:30pm</td>
<td>BIOENGINEERING 1 - A New Era in Cardiac Research</td>
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<td>Chairman: Egemen Tuzun, MD, Texas A &amp; M, College Station, TX</td>
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<tr>
<td>1:30pm</td>
<td>MRI Compatible Ex-Vivo Beating Heart (Physioheart) Platform: A New Era in Cardiac Research Bas de Mol, MD, PhD, JD, University of Amsterdam, The Netherlands</td>
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<tr>
<td>2:00pm</td>
<td>Bioengineering Abstracts</td>
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</table>
Thursday, June 22 - continued

1:30pm-3:00pm  | PULMONARY 1 - Pro/Con of ECLS as Bridge to Recovery-Early Ambulation/Mobilization vs Rest and Get Off ECLS ASAP

Chairman: Bryan Whitson, MD, PhD, Ohio State University, Columbus, OH

1:30pm-1:45pm  | Pro: Don Hayes, Jr, MD, MS, Ohio State University, Columbus, OH
1:45pm-2:00pm  | Con: James Blum, MD, Emory University Hospital, Atlanta, GA

2:00pm-2:15pm  | Pro: Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY
2:15pm-2:30pm  | Con: William Lynch, MD, MS, University of Michigan, Ann Arbor, MI
2:30pm-3:00pm  | Panel Discussion

1:30pm-3:00pm  | RENAL 1 - Global Replacement Therapy: From Innovation to Finance

Chairman: Prabir Roy-Chaudhury, MD, PhD, University of Arizona, Tucson, AZ

Global RRT: An Overview
Miguelle Riella, MD, PhD, Catholic University of Parana, Curitiba, PR, Brazil
Innovating To Save Lives: New Approaches To RRT In Emerging Economics
ESRD Seamless Care Organizations: Will They Incentivize Innovation In Dialysis

2:45pm-3:00pm  | Renal Abstracts
3:00pm-3:45pm  | Visit Exhibits & Posters - Enjoy Refreshments

3:45pm - 5:00pm  | CARDIAC 2-Debate-VADS: Bioengineering and VADs

3:45pm-4:05pm  | Pro: New Pump Designs Have Recahed the "Perfect Pump"
David Feldman, MD, PhD, University of Cincinnati Med Ctr, Cincinnati, OH

4:05pm-4:25pm  | Con: LVAD Technology Imovement Can Further Improve Clinical Otcomes
John M. Stulak, MD, Mayo Clinic, Rochester, MN

3:45pm - 5:00pm  | BIOENGINEERING 2

Co-Chairs:
Howard Frazier, MD, Baylor College of Medicine, Houston, TX
Igor Gregoric, MD, University of Texas Health Science Ctr, Houston, TX
Egemen Tuzun, MD, PhD Texas A & M, College Station, TX

3:45pm - 4:15pm  | Biventricular Heart Assist with Devices Acting on the Epicardium
John Criscione, MD, PhD, Texas A&M University, College Station, TX

4:15pm-4:45pm  | Modeling Predictions of Arterial Adaptations to Continuous and Induced Pulse Mode
Left Ventricular Assist Devices In Heart Failure
Phuc Nguyen, PhD, CEO, Prolegon Biotechnologies, Houston, TX

4:45pm - 5:00pm  | Bioengineering Abstracts

3:45pm - 5:00pm  | VAD 1- Strategies for Every Day Life Within a VAD Program

Integration Of Processes Within VAD Programs
Pamela Combs, PhD, RN, Kentucky One Health, Louisville, KY

Telemonitoring: Challenges and Benefits
Michelle Kassemos, RN, University of California, San Francisco, CA

Enhancing Difficult MCS Team Decisions
Geetha Bhat, PhD, MD, Advocate Christ Medical Center, Oak Lawn, IL

Future Challenges with MCS
Mark Slaughter, MD, University of Louisville, Louisville, KY
### PULMONARY 2 - Lung Injury Mini-Summit - An ASAIO Innovation Opportunity

**Chairman:** Joe GN “Skip” Garcia, MD, University of Arizona, Tucson, AZ

- **3:45pm-4:25pm**
  - **Keynote:** Acute Lung Injury - From Genes to Tissue to Devices - A Role for Precision Medicine in Drug/Device Therapeutics
    - Joe GN “Skip” Garcia, MD, University of Arizona, Tucson, AZ

- **4:25pm-4:55pm**
  - **Pathobiology of Acute Lung Injury - What Are The Targets For Intervention?**
    - Jeffrey Jacobson, MD, University of Illinois, Chicago, IL

- **4:55pm-5:25pm**
  - **Devices and Lung Injury - Ventilators/Oxygenators and Beyond - Foe or Friend? Can We Build Devices to Help?**
    - Christian Bime, MD, MSc, University of Arizona, Tucson, AZ

### RENAL 2 - Developing a Bioartificial Alternative to Dialysis

**Co-Chairs:** Shuvo Roy, PhD, University of California San Francisco, San Francisco, CA, William Fissell, MD, Vanderbilt University, Nashville, TN

- **Cellular Advances**
  - Dean Johnson, PhD, University of Rochester, Rochester, NY

- **Mechanical Breakthroughs**
  - Shuvo Roy, PhD, University of California San Francisco, San Francisco, CA

- **Implantable Dialysis: Myth Or Reality**
  - Shuvo Roy, PhD, University of California San Francisco, San Francisco, CA

- **The Regulatory Viewpoint**
  - Murray Sheldon, MD, FDA, Silver Spring, MD

- **4:45pm-5:00pm**
  - Renal Abstracts

### PEDIATRIC 1 : Short-Term MCS Bridge Debate

- **3:45pm-3:55pm**
  - **Impella Devices**
    - Melissa Webb, MD, University of Chicago, Chicago, IL

- **3:55pm-4:05pm**
  - **PediMag**
    - Peter Wearden, MD, PhD, Nemours Children’s Hospital, Orlando, FL

- **4:05pm-4:15pm**
  - **Rotaflow**
    - Angela Lorts, MD, Cincinnati Children’s Hospital, Cincinnati, OH

- **4:15pm-4:25pm**
  - **ECMO Is Best**
    - Ravi Thiagarajan, MBBS, MPH, Boston Children’s Hospital, Boston, MA

- **4:25pm-4:30pm**
  - Discussion

- **4:30pm-5:00pm**
  - Pediatric Abstracts

### ASAIO Welcome Reception

- **6:00pm - 7:00pm**
  - ASAIO Welcome Reception
Friday, June 23

**GENERAL SESSION 2**

Co-Chairs:
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI
Marvin Slepian, MD, University of Arizona, Tucson, AZ

8:00am - 8:30am  
**ASAIO fyi - for young innovators** - Rapid Fire Presentations

8:30am - 9:30am  
**ASAIO fyi - for young innovators** - Student Design Competition Presentations

9:30am - 9:50am  
**Keynote Address:**
Medical Devices, Artificial Organs, Organs-On-A Chip And Beyond: How To Impact Healthcare In The Future - Perspectives From The NIH
Roderic Pettigrew, MD, PhD, Director NIBIB/NIH, Bethesda, MD

9:50am - 10:15am  
**Keynote Address:**
Stretching Our Way into the Future - Flexible and Stretchable Electronics - New Materials and Sensors for Medicine
John Rogers, PhD, Northwestern University, Evanston, IL

10:15am-11:00am  
Visit Exhibits & Posters - Enjoy Refreshments

11:00am-12:00pm  
**GENERAL SESSION 2 - Continued**

11:00am-11:30am  
**ASAIO History Group**
Scientific Biography of William S Pierce, MD
Gerson Rosenberg, PhD, Penn State College of Medicine, Hershey, PA

11:30am-12:00pm  
**ASAIO Hastings Lecture**
The Total Artificial Heart - Past, Present and Future
Jack Copeland, MD, University of Arizona, Tucson, AZ

12:00pm-1:30pm  
**Lunch Break**

1:30pm-3:00pm  
**CARDIAC 3- Acute Temporary Support**

Panelists:
Jonathan Rich, MD, Northwestern University, Chicago, IL
Claudius Mahr, DO, University of Washington, Seattle, WA

1:30pm-1:45pm  
**Case #1:**
INTERMACS I Patient on Short-Term Support: Transition to Durable System and Timing
Ulrich Jorde, MD, Montefiore Medical Center, Bronx, NY

1:45pm-2:05pm  
**Case #2:**
Aly El Banayosy, MD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

2:05pm-2:15pm  
Discussion

2:15pm-3:00pm  
Cardiac Abstracts
Friday, June 23 - continued

1:30pm-3:00pm  BIOENGINEERING 3
Co Chairs:
Tom Sugar, PhD, ASU Polytech Engineering Program, Mesa, AZ
Arun Jayaram, PhD, PT, Rehabilitation Institute of Chicago, Chicago, IL

1:30pm-1:40pm Mobility Exoskeletons, Robots: Artificial Organs Too!
Marvin J. Slepian, MD, University of Arizona, Tucson, AZ

1:40pm-1:55pm Exoskeletons & Augmentation Systems - Present and Emerging Technology and Applications
Tom Sugar, PhD, Arizona State University, Mesa, AZ

1:55pm-2:10pm The Hidden Mechanics of Human Locomotion and Relevance to Wearable Robots
Elliot J. Rouse, PhD, Rehabilitation Institute of Chicago, Chicago, IL

2:10pm-2:25pm Medical and Rehab Applications of Exoskeletons and Robotics
Arun Jayaram, PhD, PT, Rehabilitation Institute of Chicago, Chicago, IL

2:25pm-2:40pm Funding Opportunities and Commercialization of Robotics and Mobility Systems
Bruce Floersheim, PhD, GoX Studios, Tempe, AZ

2:40pm-3:00pm Q&A

1:00pm-3:00pm VAD 2 Shark Tank

1:30pm-3:00pm PULMONARY 3-Bioartificial Lungs
Chairman: Bryan Whitson, MD, PhD, Ohio State University, Columbus, OH

1:30pm-2:00pm Dorfang Wang, MD, PhD, University of Kentucky, Lexington, KY

2:00pm-2:30pm William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA

2:30pm-3:00pm Panel Discussion

1:30pm-3:00pm RENAL 3-Quantum Leaps: From Biology to Technology to Clinical Care

Biomaterial Advances
Dimitrios Stamatialis, PhD, University of Twente MRS Institute Netherlands, Enschede, Netherlands

Living Membranes

Organ On A Chip

Bioengineered Organs

2:45pm-3:00pm Renal Abstracts
Friday, June 23 - continued

1:30pm-3:00pm  **PEDIATRIC 2: ECMO**

1:30pm-1:50pm  Quadrox as a Central Shunt  
  David Hoganson, MD, Boston Children's Hospital, Boston, MA

1:50pm-2:05pm  ECMO and the FDA: Update  
  Fernando Aguel, MS, FDA, Silver Spring, MD

2:05pm-2:30pm  Debate: Using a "Right Sized" ECMO Circuit  
  Adult Circuits Are Fine for Small Patients  
  Neale Zingle, BS, LP, CCP, Lurie Children's Hospital, Chicago, IL  
  ECMO Circuits Should Be Appropriately Sized for the Patient  
  Robert Bartlett, MD, University of Michigan, Ann Arbor, MI

2:30pm-3:00pm  **Pediatric Abstracts**

3:00pm-3:45pm  **Visit Exhibits & Posters - Enjoy Refreshments**

3:45pm-5:00pm  **CARDIAC 4-Debate-VADS: Options for the Elderly**  
  **Co Chairs:**  
  James Long, MD, PhD, INTEGRIS Baptist Medical Center, Oklahoma City, OK  
  Randall Starling, MD, Cleveland Clinic, Cleveland, OH

3:45pm-4:05pm  Pro: Heart Transplantation Should Be Favored Over Durable VAD Strategy  
  Emma Birks, MD, PhD, Univ of Louisville, Louisville, KY

3:45pm-4:05pm  Con: All Elderly Patients Should Be Approached with VADS First  
  Simon Maltais, MD, PhD, Mayo Clinic, Rochester, MN

3:45pm-5:00pm  **BIOENGINEERING 4**  
  **Chairman:** Peter Wearden, MD, PhD, Nemours Children's Hospital, Orlando, FL

3:45pm - 4:15pm  Managing the Future of Cardiovascular Imaging in Children  
  Rajesh Krishnamurthy, MD, Nationwide Children's Hospital, Columbus, OH

4:15 - 4:45pm  Falling in Love With Your Own Technology! Pros, Cons and Hitchhiking  
  Kurt Dasse, PhD

4:45pm-5:00pm  **Bioengineering Abstracts**

3:45pm-5:00pm  **PULMONARY 4 - ELCS and Big Data: Driving Innovation and Outcome**  
  **Chairman:** Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY

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

4:00pm-4:15pm  James Blum, MD, Emory University Hospital, Atlanta, GA

4:15pm-4:30pm  Steven Conrad, MD, PhD, Louisiana State Univ HCS, Shreveport, LA

4:30pm-4:45pm  Panel Discussion

3:45pm-5:00pm  **RENAL 4-Vascular Access: From Bedside to Bench to Bedside**  
  **Chairman:** William Fissell, MD, Vanderbilt University, Nashville, TN

3:45pm-4:00pm  Biology Of Vascular Access Dysfunction  
  Prabir Roy-Chaudhury, MD, PhD, University of Arizona, Tucson, AZ

3:45pm-4:00pm  Novel Therapies for Vascular Access Dysfunction

3:45pm-4:00pm  Clinical trials In Vascular Access: Time For A Change

3:45pm-4:00pm  Patient Perspectives on Vascular Access: Not to Be Forgotten  
  Terry Foust Litchfield, Lifeline, Vernon Hills, IL

3:45pm-5:00pm  Renal Abstracts
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<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter/Institution</th>
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<tbody>
<tr>
<td>3:45pm-5:00pm</td>
<td>PEDIATRIC 3: Beyond Bridge to Transplant</td>
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<tr>
<td>3:45pm-4:00pm</td>
<td>Destination Therapy</td>
<td>Christopher Almond, MD, MPH, Stanford University, Palo Alto, CA</td>
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<tr>
<td>4:00pm-4:15pm</td>
<td>Psychosocial Issues for VAD Patients: Sex, Drugs, and Rock n’ Roll</td>
<td>Christina Vanderpluyym, MD, Boston Children’s Hospital, Boston, MA</td>
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<td>4:15pm-4:30pm</td>
<td>Remote Monitoring</td>
<td>Holger Buchholz, MD, Stollery Children’s Hospital, Edmonton, Alberta</td>
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<td>4:30pm-4:45pm</td>
<td>Home Echo</td>
<td>David Rosenthal, MD, Stanford University, Palo Alto, CA</td>
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<td>4:45pm-5:00pm</td>
<td>End of Life Issues</td>
<td>Beth Kaufman, MD, Stanford University, Palo Alto, CA</td>
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<td>5:15pm-5:45pm</td>
<td>ASAIO Member Business Meeting</td>
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### MEDICAL DEVICE ENTREPRENEUR'S FORUM

**Chairman:** David Humes, MD, University of Michigan, Ann Arbor, MI  
**Proposals Due:** Monday, March 20, 2017

### ADULT ECMO COURSE

**Course Director:** Aly El Banayosy, MD, INTEGRIS Baptist Med Ctr, Oklahoma City, OK

#### SESSION I

<table>
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<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:10am-8:30am</td>
<td>ELSO Report</td>
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<td>8:30am-8:50am</td>
<td>Hemocompatibility of Short-Term Support Devices</td>
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<tr>
<td>8:50am-9:10am</td>
<td>Inflammatory Response in Adult ECMO Patients</td>
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<td>9:10am-9:40am</td>
<td>What Is in the Pipeline?</td>
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<td>9:40am-10:00am</td>
<td>Panel Discussion</td>
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#### SESSION II

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<th>Time</th>
<th>Event</th>
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</table>
| 10:15am-10:35am | Approaching Cardiogenic Shock Patients Beyond Medical Management: Which Way to Go?  
_Aly El Banayosy, MD, INTEGRIS Baptist Med Ctr, Oklahoma City, OK_ |
| 10:35am-10:55am | Impact of New Technology on Complications Profile |
| 10:55am-11:15am | Data from Oklahoma ECMO Network Model |
| 11:15am-11:35am | Transition from ECMO to Durable MCS Devices: Long-Term Results |
| 11:35am-12:00pm | Panel Discussion |

#### SESSION III

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<th>Time</th>
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<tbody>
<tr>
<td>1:10pm-1:30pm</td>
<td>Quality Measures for ECMO Programs</td>
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<tr>
<td>1:30pm-1:50pm</td>
<td>Difficult Cannulation: Tips and Tricks</td>
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<tr>
<td>1:50pm-2:10pm</td>
<td>rECMO: Programming Challenge and Clinical Results</td>
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<tr>
<td>2:10pm-2:30pm</td>
<td>ECMO Beyond Your Imagination</td>
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<td>2:30pm-2:45pm</td>
<td>Panel Discussion</td>
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**Break**
### Saturday, June 24 - continued

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<tr>
<th>3:00pm-5:00pm</th>
<th><strong>SESSION IV</strong></th>
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<td>3:00pm-3:20pm</td>
<td>ARDS: Lessons Learnt from Recent Trials</td>
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<td>3:20pm-3:40pm</td>
<td>VV ECMO in ARDS Patients: Excellent Outcomes</td>
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<td>3:40pm-4:00pm</td>
<td>Prone vs VV ECMO Trial in ARDS Patients: Are We There Yet?</td>
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<tr>
<td>4:00pm-4:20pm</td>
<td>Screening and Infection Management in Adult ECMO Patients</td>
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<tr>
<td>4:20pm-4:40pm</td>
<td>Role of ECMO in Organ Donation</td>
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<tr>
<td>4:40pm-4:55pm</td>
<td>Panel Discussion</td>
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<tr>
<td>4:55pm-5:00pm</td>
<td>Closing Remarks</td>
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<tr>
<th>8:30am-10:00am</th>
<th><strong>CARDIAC 5-Debate-VADS: Finances, Cost of Therapy, and VADs</strong></th>
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</thead>
</table>
|                | **Co-Chairs:** Ashish Shah, MD, Vanderbilt University Medical Ctr, Nashville, TN  
|                | Jonathan Haft, MD, University of Michigan, Ann Arbor, MI |
| 8:30am-8:50am  | **Pro: VADs is a Cost-Effective Therapy** |
| 8:50am-9:10am  | **Con: Our Community May Have to Limit VAD Therapy**  
|                | Keith Aaronson, MD, University of Michigan, Ann Arbor, MI |
| 9:15am-10:00am | **Cardiac Abstracts** |

| 8:30am-10:00am | **BIOENGINEERING 5 - Abstracts** |

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<tr>
<th>8:30am-10:00am</th>
<th><strong>PULMONARY 5</strong></th>
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<td><strong>Chairman:</strong> Donfang Wang, MD, PhD, University of Kentucky, Lexington, KY</td>
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| 8:30am-8:50am  | **Lung Scaffolding/Printing**  
|                | Bryan Whitson, MD, PhD, Ohio State University, Columbus, OH |
| 8:50am-9:10am  | **Liquid Ventilation**  
|                | Ron Hirschl, MD, CS Mott Children's Hospital, Ann Arbor, MI |
| 9:10am-9:30am  | **Lung Stem Cell Transplantation**  
|                | Don Hayes, Jr, MD, MS, Ohio State University, Columbus, OH |
| 9:30am-10:00am | **Panel Discussion** |

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<tr>
<th>8:30am-10:00am</th>
<th><strong>RENAI 5- Patient Preferences in Kidney Disease: If Not Now When...</strong></th>
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<tbody>
<tr>
<td></td>
<td><strong>The Science Of Measuring Patient Preferences</strong></td>
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<td><strong>First Things First</strong></td>
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<td><strong>Patient Driven Clinical Research</strong></td>
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<td><strong>Patient Preferences as a Regulatory Tool</strong></td>
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### Saturday, June 24 - Continued

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Details</th>
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<tr>
<td>8:30am-10:00am</td>
<td><strong>PEDIATRIC 4</strong></td>
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<tr>
<td>8:30am-8:50am</td>
<td><strong>Failing Fontan Pump</strong></td>
<td>Amy Throckmorton, PhD, Drexel University, Philadelphia, PA</td>
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<td>8:50am-9:10am</td>
<td><strong>Improving Fontan Circulation</strong></td>
<td>Richard Figliola, PhD, PE, Clemson University, Clemson, SC</td>
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<tr>
<td>9:15am-10:00am</td>
<td><strong>Pediatric Abstracts</strong></td>
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<td>10:00am-10:45am</td>
<td><strong>Enjoy Refreshments</strong></td>
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<tr>
<td>10:45am-12:00pm</td>
<td><strong>Cardiac 6 - Debate - VADs: Total Artificial Heart (TAH), Continuous-Flow Biventricular Support or Heart Transplant</strong></td>
<td>Chairman: Yoshifumi Naka, MD, PhD, Columbia University, New York, NY</td>
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<tr>
<td>10:45am-11:15am</td>
<td><strong>Pro: Durable Mechanical Circulatory Support Should Be Favored for Most Indications</strong></td>
<td>Francisco Arabia, MD, Cedars-Sinai Medical Center, Los Angeles, CA</td>
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<tr>
<td>11:15am-11:45am</td>
<td><strong>Con: Heart Transplantation Should Be the Primary Strategy for Most Indications</strong></td>
<td>Randy Starling, MD, MPH, Cleveland Clinic, Cleveland, OH</td>
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<td>11:45am-12:00pm</td>
<td><strong>Discussion</strong></td>
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<td>10:45am-12:00pm</td>
<td><strong>BIOENGINEERING 6 - Abstracts</strong></td>
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<tr>
<td>10:45am-12:00pm</td>
<td><strong>PULMONARY 6: Mechanical Treatment of PH &amp; RV Failure: Impella, Tandem, Nova Lung</strong></td>
<td>Chairman: Harold Ott, MD, Harvard Medical School, Boston, MA</td>
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<td>10:45am-11:05am</td>
<td><strong>Navin Kapur, MD, Tufts Medical Ctr, Boston, MA</strong></td>
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<td>11:05am-11:25am</td>
<td><strong>Erik Osborn, MD, Ft. Belvoir Hospital, Ft. Belvoir, VA</strong></td>
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<td>11:25am-11:45am</td>
<td><strong>Christian Bermudez, MD, Hospital of the Univ of Pennsylvania, Philadelphia</strong></td>
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<td>11:45am-12:00pm</td>
<td><strong>Panel Discussion</strong></td>
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<td>10:45am-12:00pm</td>
<td><strong>RENAI 6 - Pro/Con Debate - Hemodifiltration vs Home Dialysis</strong></td>
<td><strong>Home Dialysis</strong></td>
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<td>12:00pm-1:00pm</td>
<td><strong>IFAO SESSION</strong></td>
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<td><strong>Co-Chairs:</strong></td>
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<td>Bernd Stegmayr, MD, PhD, Umea University, Umea, AC, Sweden</td>
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<td>Marvin Slepian, MD, University of Arizona, Tucson, AZ</td>
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<td><strong>Biomedical Application of Decellularized Tissues</strong></td>
<td>Akio Kishida, Tokyo, Japan - representing JSAO</td>
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<td><strong>Effectively Increasing Safety and Survival of VAD Patients</strong></td>
<td>Heinrich Schima, PhD, Medical University of Vienna, Vienna, Austria - representing ESAO</td>
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ASAIO / ICCAC MCS Proficiency Verification Courses (6)

Course Co-Chairs:
Dawn Christensen, MS, FNP-BC, Innovative Program Solutions, LLC, Pine Grove, PA
Thomas Schloeglhofer, BSc, Medical University of Vienna, Vienna, Austria

This is the second offering for this novel course. The overall objective of this course is to develop critical thinking skills in providers who care for the MCS population. It is designed to foster critical thinking skills of the novice through expert MCS clinician through highly interactive small group problem-based learning scenarios developed surrounding the patients with advanced CHF and LVAD support.

Highlights of the Course include:
1) A minimum of 8 small group (maximum 12 participants each) problem-based scenarios covering management and troubleshooting of common issues surrounding MCS devices
2) Small group exercises are led by experienced MCS coordinators, Heart Failure Cardiologists, and Cardiac Surgeons who specialize in MCS Support
3) Devices covered in the scenarios include:
   - HVAD
   - HeartMate II and HeartMate 3
   - Centrimag
   - Impella
   - Berlin Heart Excor
   - Syncardia TAH