ASAIO PROGRAM 2015

Science, Medicine and Industry
Innovating for the Future.

PROGRAM

ASAIO 61st Annual Conference – Chicago
“Success Through Synergy”
June 24 – 27, 2015

In Conjunction with the International Federation of Artificial Organs
The only blood pump proven to work longer than ours.

Left ventricular assist device (LVAD) implantations are on the rise. Patients are living longer on support, too, creating a sizable population for your center to manage over the long term.

HeartMate II® is the solution.

It’s the only LVAD approved for Destination Therapy and Bridge to Transplantation in the United States,1 with proven outcomes in multiple patient types.1-3 So, whichever patient you’re evaluating, you know HeartMate II will perform for the long term. And with minimal complications, too.

Thoratec® continuously seeks to improve the safety profile of HeartMate II implantation and long-term support. In fact, recent studies validated a surgical technique that significantly reduces the incidence of driveline infection.4

Easier management of more patients who are living longer and better. That’s HeartMate II.

Find out more at ASAIO booth #1.
PROGRAM INDEX

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ASAIO EDUCATIONAL GRANT SPONSORS

Diamond Level

HeartWare

Silver Level

Berlin Heart

Bronze Level

Fresenius Medical Care

Educational Grants

Syncardia Systems, Inc.
ASAIO FELLOWSHIPS 2015

ASAIO Y Nose’ International Fellowship
Sponsored by the Y Nose Fellowship Fund

Teruhiko Imamura, MD, PhD
Research Assistant Professor,
University of Tokyo, Tokyo, Japan
“Prophylactic Intra-Aortic Balloon Pumping Support before Ventricular Assist Device Implantation Improves Post-operative Clinical Course in Patients with INTERMACS Profile 2”

ASAIO Fellowships
Sponsored by the Paul S Malchesky Fellowship Fund

Patrick McGah, PhD
Postdoctoral Research Associate,
University of Washington, Seattle, WA
“Convective Leakage Renders Heparin Lock of Central Venous Catheters Ineffective Within Seconds”

Vakhtang Tchantchaleishvili, MD
Cardiothoracic Surgery Resident,
University of Rochester, Rochester, NY
“Interaction of Mitral and Tricuspid Regurgitation Influences the Survival in Patients with Continuous-flow Left Ventricular Assist Devices”

ASAIO Fellowships
Sponsored by ASAIO

Susan Hastings, BS, BME
Graduate Research Assistant,
Georgia Institute of Technology, Atlanta, GA
“Thrombosis in Pediatric ECMO: Comparison Centrifugal and Roller Pumps”

Zengsheng Chen, PhD
Postdoc Cardiovascular and Thoracic Surgery,
University of Louisville, Louisville, KY
“Shear-induced Platelet Dysfunction by Non-physiological High Shear Stress With Short Exposure Time: Activation and Receptor Shedding”

Francesca Condemi, PhD
Postdoc Cardiothoracic Surgery,
University of Kentucky, Lexington, KY
“CFD Analysis of a Paired Membrane Umbrella Double Lumen Cannula for Failing Fontan Support”
The above individuals constitute the ASAIO Executive Board.
ASAIO 61st Annual Conference
The Chicago Hilton - Floor Plan

3rd Floor
Joliet
- ASAIO Member Business Meeting
Williford C
- ECMO Course

2nd Floor
Grand Ballroom
- General Sessions 1 & 2
- Cardiac Sessions 1 - 4

Lobby Level
Continental Ballroom
- Cardiac 5 & 6 - Saturday

Lower Level
Salon A
A-1
- Pediatric Medical Device Day - Wednesday
- Bioengineering Sessions 1 - 6
A-2
- VAD Proficiencies 2 - Wednesday
- Pulmonary 1 - 6
A-3
- VAD Simulations - Wednesday
- Renal Sessions 1 - 6
A-4
- VAD Sessions 1, 2 & 3
A-5
- VAD Proficiencies 1 - Wednesday
- Pediatric 1 - 4

Salon C (Lower Level)
- ASAIO Conference Registration
- Exhibits
- Posters
- ASAIO Refreshment Breaks - Thursday - Saturday
- ASAIO Welcome Reception - Thursday

Mobley Room (Lower Level)
- ASAIO Speaker Ready Room
ASAIO 61st Annual Conference
The Chicago Hilton - Salon C

Exhibits | Posters | Registration

ASAIO Refreshment Breaks

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<th>Thursday</th>
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<th>Saturday</th>
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<tbody>
<tr>
<td>9:45 - 10:30am</td>
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<td>3:00 - 3:45pm</td>
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Alexion Pharmaceuticals, Inc. is a biopharmaceutical company focused on serving patients with severe and ultra-rare disorders through the innovation, development and commercialization of life-transforming therapeutic products. Alexion is the global leader in complement inhibition and has developed and markets a treatment for patients with PNH and aHUS, two debilitating, ultra-rare and life-threatening disorders caused by chronic uncontrolled complement activation. The treatment is currently approved in more than 40 countries for the treatment of PNH, and in the United States and the European Union for the treatment of aHUS. Alexion is evaluating other potential indications for its marketed drug and is developing four other highly innovative biotechnology product candidates, which are being investigated across additional severe and ultra-rare disorders.

Berlin Heart, the only company worldwide, that develops, manufactures and distributes VADs for patients of every age and body size. EXCOR® Pediatric provides medium to long-term circulatory support specifically for infants and children awaiting heart transplants. EXCOR Pediatric is approved for use in the USA under HDE regulations by FDA.

ISS medical product portfolio of wireless and battery free implantable pressure sensors is designed to greatly advance the trend toward home health monitoring and remote diagnostics. ISS sensors are being developed for both long-term management of chronic cardiac disease and for short-term post-operative care. These sensors can provide powerful hemodynamic measurements, unobtainable with current clinical devices. The core technology of the implantable micro sensor is the MEMS pressure transducer. Using electro-magnetic telemetry, the monitoring unit energizes the antenna to transmit power to the sensor that in response sends back a signal containing the sensed pressure information. Small size, optimized shape, and careful choice of components ensure the sensor’s biocompatibility and non-thrombogenicity. Data collected by the sensor can be used by physicians to tailor patient treatment and for early detection of dangerous heart conditions.
The International Center for Artificial Organs & Transplantation is organized to maintain and operate an educational center. It supports the International Center for Medical Technologies Museum, manages the publication of Artificial Organs and Therapeutic Apheresis & Dialysis. It disseminates information on the historical development, current state of the art and future development of artificial organs.

MAQUET
GETINGE GROUP
MAQUET MEDICAL SYSTEMS USA
Wayne, New Jersey
Booth 9

MAQUET Medical Systems, USA is a market leader offering a comprehensive portfolio of products utilized in the Hybrid and Traditional OR, ICU, Cath Lab and in patient transport. Our products are designed to meet the needs of clinical professionals in the areas of: advanced hemodynamic monitoring, cardiothoracic and vascular surgery, thoracic drainage, cardiac intervention, perfusion, anesthesia and ventilation. MAQUET is focused on improving patient care and quality of life, providing clinicians with sustainable technologies that fit their daily practice and investing in the development of innovative solutions that will help further advance clinical practice and significantly improve patient outcomes.

MINNETRONIX
THINKING MEDICAL SYSTEMS®

MINNETRONIX, INC
Saint Paul, Minnesota
Booth 15

Minnetronix provides award-winning product design, development, manufacturing, and proprietary innovations to the medical device and life science marketplaces. The company offers proprietary VAD power and control systems including the Magic™ PE and TE Controller technology, and Transcutaneous Energy Transmission Systems (TETS) designed for highly reliable, configurable power supply for both continuous and pulsatile support systems. Minnetronix has led over 200 design and manufacturing projects for 125 different medical device and life science firms, ranging in size from small start-ups to Fortune 100 companies. The company is FDA Registered, and ISO 13485 Certified.

NXSTAGE
Lawrence, Massachusetts
Booth 8

NxStage® is more than a company; we are leading the renal revolution. Our innovative products are helping to shape and transform renal care. Making it simpler, portable, and expanding treatment options, to enhance patient freedom and fulfillment.

SYNCARDIA SYSTEMS INC
Tucson, Arizona
Booth 14

The Syncardia temporary Total Artificial Heart (TAH-t) is the world’s only FDA, Health Canada and CE approved Total Artificial Heart. The TAH-t is currently approved as a bridge to transplant for patients dying from end-stage biventricular failure. The 13.5 lb Freedom® portable driver has received CE approval in Europe and FDA approval in the U.S. The Freedom driver is designed to provide mobility for stable TAH-t patients both inside and outside the hospital. Visit the booth for updates on our growing clinical experience, and the Destination Therapy and 50cc Adult/Pediatric TAH-t clinical studies.

THORATEC CORPORATION
Pleasanton, California
Booth 1

Thoratec is the world leader in mechanical circulatory support with the broadest product portfolio to treat the full range of clinical needs for patients suffering from advanced heart failure. The company’s products include the HeartMate LVAS and Thoratec VAD, with more than 20,000 devices implanted in patients suffering from heart failure. Thoratec also manufactures and distributes the CentriMag and PediMag / PediVAS product lines. Thoratec is headquartered in Pleasanton, California. For more information, visit www.thoratec.com.

TRANSICON SYSTEMS INC
Ithaca, New York
Booth 4

The Measure of Better Results from Bench to Bedside. Cutting Edge Clinical Systems for:
- Recirculation and Oxygenator Clotting Measurements during ECMO
- Cardiac Output and Blood Volumes in Infants
- Gold Standard Vascular Access Surveillance Tools for Hemodialysis
- Direct Flow Measurement for Anastomotic Patency

Gold Standard Life Science Research Solutions for:
- Perivascular & Tubing Flow Measurements for Every Application
- Pressure Volume Measurements with Admittance Technology
- Implantable Telemetry for Flow, Pressure & ECG

Transonic Inside OEM Products for:
- VADs
- Artificial Hearts
- Organ Preservation
- And so much more…

VENTRIFLO – DESIGN MENTOR, INC
Pelham, New Hampshire
Booth 5

Design Mentor introduces the Ventriflo™ True Pulse Pump designed to mimic physiological characteristics of the human heart in an easy to use, reliable, compact, and economical package for use in patients from pediatrics to adults. Research demonstrates physiologic flow improves systemic perfusion while reducing complication frequency and severity. This versatile system delivers a true physiologic pulse to patients where current short-term pumps cannot. With applications in extracorporeal support including CPB, the Ventriflo True Pulse Pump (in development, not cleared for clinical use) is poised to improve perfusion, reduce complications, shorten patient stays, and save hospitals money.

WOLTERS KLUWER
Philadelphia, Pennsylvania
Booth 3

Wolters Kluwer is a leading international publisher of medical, health and science publications, including ASAIO, official journal of the American Society for Artificial Internal Organs. We offer an extensive selection of medical books, journals and electronic media for physicians, nurses, specialized clinicians and students. Please visit our booth to browse our comprehensive product line.
### ASAIO Program Outline

**Wednesday, June 24, 2015**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30am - 5:00pm</td>
<td>Pediatric Medical Device Day – &quot;Innovation in Pediatric Devices&quot; – Salon A-1 – Lower Level</td>
</tr>
<tr>
<td>8:30am - 5:00pm</td>
<td>Adult ECMO Course – Willford C – 3rd Floor</td>
</tr>
<tr>
<td>10:00am - 5:00pm</td>
<td>VAD Coordinator Sessions: VAD 1 Salon A-4 Lower Level - VAD Simulations Salon A-3 Lower Level - VAD Proficiencies Salon A-2 and A-5 Lower Level</td>
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**Thursday, June 25, 2015 – Posters available from 8:00 am – 5:00 pm**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:45am - 12:00pm</td>
<td>General Session 1 - Grand Ballroom 2nd Floor</td>
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<tr>
<td></td>
<td>ASAIO President’s Address</td>
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<tr>
<td>9:45am - 10:30am</td>
<td>Visit Exhibits &amp; Posters + Enjoy Refreshments - Salon C - Lower Level</td>
</tr>
<tr>
<td>12:00pm - 1:15pm</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>1:30pm - 3:00pm</td>
<td>Cardiac 1 – Grand Ballroom 2nd Floor Tether Free VADs: Are We There Yet?</td>
</tr>
<tr>
<td>3:00pm - 3:45pm</td>
<td>Visit Exhibits &amp; Posters + Enjoy Refreshments - Salon C - Lower Level</td>
</tr>
<tr>
<td>3:45pm - 5:00pm</td>
<td>Cardiac 2 – Grand Ballroom Debate: Can LVADs Compete</td>
</tr>
<tr>
<td>6:00pm - 7:00pm</td>
<td>ASAIO Welcome Reception – Salon C – Lower Level</td>
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**Friday, June 26, 2015 – Posters available from 8:00 am – 5:00 pm**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00am - 12:00pm</td>
<td>General Session 2 – Grand Ballroom 2nd Floor</td>
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<tr>
<td></td>
<td>ASAIO Hastings Lecture</td>
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<tr>
<td>9:45am - 10:30am</td>
<td>Visit Exhibits &amp; Posters + Enjoy Refreshments - Salon C - Lower Level</td>
</tr>
<tr>
<td>12:00pm - 1:15pm</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>3:00pm - 3:45pm</td>
<td>Visit Exhibits &amp; Posters + Enjoy Refreshments – Salon C – Lower Level</td>
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<tr>
<td>5:15 pm – 5:45 pm</td>
<td>ASAIO Member Business Meeting – Jollie Room 3rd Floor</td>
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**Saturday, June 27, 2015**

<table>
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<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:30am - 10:00am</td>
<td>Cardiac 5 – Continental - Lobby Debate: VADs: Do We Need …</td>
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<tr>
<td>10:00am - 10:45am</td>
<td>Enjoy Refreshments - Salon C – Lower Level</td>
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<tr>
<td>10:45am – 12:00pm</td>
<td>Cardiac 6 – Continental - Lobby Striving for Device Reliability</td>
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ASAIO 4th ANNUAL PEDIATRIC MEDICAL DEVICE DAY

“INNOVATION IN PEDIATRIC DEVICES”

8:30am - 5:00pm - Salon A-1, Lower Level

Pediatric Day Co-Chairs:
Robert Jaquiss, MD
Jennifer Conway, MD

INTRODUCTION
8:30 - 8:40am

8:40 - 10:15am
PEDIATRIC MECHANICAL SUPPORT: CHALLENGES IN OBTAINING OUTCOMES
Co-Chairs:
Robert Jaquiss, MD, Duke University Medical Center, Durham, NC
Jennifer Conway, MD, Stollery Children’s Hospital, Alberta, Canada

8:40 - 9:00am
Challenges in Trouble Shooting During the Berlin Heart Trial
Robert Kroslowitz, Berlin Heart Inc, The Woodlands, TX

9:00 - 9:20am
Update for the PumpKIN Trial: Where We Stand
Timothy Baldwin, PhD, NHLBI / NIH, Bethesda, MD

9:20 - 9:40am
The 50cc Total Artificial Heart Trial
Angela Lorts, MD, Cincinnati Children’s Hospital, Cincinnati, OH

9:40 - 10:00am
PediMacs: What Have We Learned?
James Kirklin, MD, University of Alabama, Birmingham, AL

10:00 - 10:15am
Discussion and Questions

10:15 - 11:00am PEDIATRIC REFRESHMENT BREAK

10:30 - 11:40am
PEDIATRIC DEVICE CONSORTIA: STRATEGIES FOR SUCCESS (TOP DESIGNS)
Co-Chairs:
Peter Wearden, MD, PhD, Children’s Hospital of Pittsburgh UPMC, Pittsburgh, PA,
Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA

10:30 - 10:40am
Michigan Pediatric Device Consortium
James Geiger, MD, University of Michigan, Ann Arbor, MI

10:40 - 10:50am
Atlanta Pediatric Device Consortium
David Ku, MD, PhD, Georgia Institute of Technology, Atlanta, GA

10:50 - 11:00am
National Capital Consortium for Pediatric Device Innovation
Kolaleh Eskandanian, PhD, MBA, Children’s National Health System, Washington, DC

11:00 - 11:10am
Southern California Center for Technology and Innovation
Yaniv Bar-Cohen, MD, Children’s Hospital of Los Angeles, Los Angeles, CA

11:10 - 11:20am
Philadelphia Pediatric Medical Device Consortium
Kelsey Pagdon, BS, The Children’s Hospital of Philadelphia, Philadelphia, PA

11:20 - 11:30am
Boston Pediatric Device Consortium
Carla Small, MBA, Boston Children’s Hospital, Boston, MA

11:30 - 11:40am
Discussion and Questions

12:00 - 1:15pm PEDIATRIC LUNCHEON - Admission by Ticket
Salon A-2, Lower Level

Innovation in Mechanical Support Design

John Bartos
Cameron, Houston, TX

1:30 - 2:45pm
SUPPORT FOR OTHER ORGANS - THE HEART ISN’T EVERYTHING
Co-Chairs:
Angela Lorts, MD, Cincinnati Children’s Hospital Med Ctr, Cincinnati, OH
Martin Schweiger, MD, PhD, Children’s Hospital, Zurich, Switzerland

1:30 - 1:50pm
Pre-emptive Peritoneal Dialysis After Neonatal Heart Surgery is Associated With Improved Outcomes
David Cooper, MD, MPH, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

1:50 - 2:10pm
Artificial Kidneys: The Potential Role in Pediatrics
Shuvo Roy, PhD, University of California, San Francisco, CA

2:10 - 2:30pm
MARS in Pediatric Acute Liver Failure
Aicha Merouani, MD, CHU-Ste Justine, Montreal, Canada

2:30 - 2:45pm
Panel Discussion

2:45 - 3:00pm PEDIATRIC REFRESHMENT BREAK

3:00 - 5:00pm
FACILITATING TRANSPLANT: ROLE OF EX-VIVO PERFUSION IN CHILDREN
Co-Chairs:
Asif Hasan, MD, Freeman Hospital, Newcastle Upon Tyne, England
Christina VanderPluym, MD, Boston Children’s Hospital, Boston, MA

3:00 - 3:20pm
Organ Assessment and Repair Center - The Future of Transplantation
Bryan Whitson, MD, PhD, Ohio State University Wexner Med Ctr, Columbus, OH

3:20 - 3:40pm
Cardiac - Ex-Vivo in Pediatric Donor Hearts: Device in Development
Darren Freed, MD, PhD, University of Alberta, Edmonton, Canada
WEDNESDAY, JUNE 24 (continued)

3:40 - 4:00pm
“Resuscitation” of Marginal Liver Allografts for Transplantation
Paulo Fontes, MD, University of Pittsburgh Medical Center, Pittsburgh, PA

4:00 - 4:20pm
Ex-Vivo Perfusion for Pediatric Donor Lungs: Clinical Experience in Children
John Haney Jr., MD, Duke University School of Medicine, Durham, NC

4:20 - 4:40pm
Perfusing the Kidneys and Tissue Allografts Outside of the Body
Paulo Fontes, MD, University of Pittsburgh Medical Center, Pittsburgh, PA

4:40 - 4:55pm
Panel Discussion

4:55 - 5:00pm
Closing Comments

ADULT ECMO COURSE
8:30am - 5:00pm - Williford B- Third Floor

Aly El Banayosy, MD
Adult ECMO Course Director

8:40 - 10:00am
SESSION I
Co-Chairs:
Mathias Loebe, MD, PhD, Miami Transplant Institute, Miami, FL
Walter Dembitsky, MD, Sharp Memorial Hospital, San Diego, CA

8:30 - 8:40am
Welcome Address
Aly El Banayosy, MD, ECMO Course Director, INTEGRIS Baptist Medical Ctr, Oklahoma City, OK

8:40 - 9:00am
How to Build a Modern ECMO Program
Holly Roush, MSN, Penn State Hershey Medical Center, Hershey, PA

9:00 - 9:20am
Patient Selection for VA ECMO
Pramod Bonde, MD, Yale University, New Haven, CT

9:20 - 9:40am
Patient Selection for VV ECMO
William Lynch, MD, MS, University of Michigan, Ann Arbor, MI

9:40 - 10:00am
Panel Discussion

10:00 - 10:15am ECMO REFRESHMENT BREAK

10:15 - 12:00pm
SESSION II
Co-Chairs:
Douglas Horstmanshof, MD, INTEGRIS Baptist Medical Center, Oklahoma City, OK
Marvin Slepian, MD, University of Arizona, Tucson, AZ

10:15 - 10:35am
Cannulation Techniques
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI

10:35 - 10:55am
Anticoagulation Management
Michael Creer, MD, Penn State Hershey Medical Center, Hershey, PA

10:55 - 11:15am
Financial Aspects
Karl Nelson, RN, MBA, INTEGRIS Baptist Medical Center, Oklahoma City, OK

11:15 - 11:35am
Ethical Aspects and Exit Strategies
Ashish Shah, MD, Johns Hopkins University, Baltimore, MD

11:35 - 12:00pm
Panel Discussion

12:00 - 1:00pm ECMO LUNCHEON - Admission by Ticket Williford B- Third Floor

Past, Present and Future of ECMO
Robert Bartlett, MD
University of Michigan, Ann Arbor, MI

1:10 - 2:45pm
SESSION III
Co-Chairs:
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI
Pramod Bonde, MD, Yale University, New Haven, CT

1:10 - 1:30pm
How to Achieve Clinically Acceptable LV Unloading
Walter Dembitsky, MD, Sharp Memorial Hospital, San Diego, CA

1:30 - 1:50pm
Weaning Strategies of VA ECMO
Aly El Banayosy, MD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

1:50 - 2:10pm
Assessment of VA ECMO Patients for Long-Term VADs / TAH
Douglas Horstmanshof, MD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

2:10 - 2:30pm
Spiritual / Existential Distress and Interventions for Patient and Family
W. Gregory Larsh, PhD, BCC, Penn State Hershey Medical Center, Hershey, PA

2:30 - 2:45pm
Panel Discussion

2:45 - 3:00pm ECMO REFRESHMENT BREAK

3:00 - 5:00pm
SESSION IV
Co-Chairs:
Matthew Bacchetta, MD, Columbia University Medical Center New York, NY
Ashish Shah, MD, Johns Hopkins University, Baltimore, MD

3:00 - 3:20pm
VV ECMO Pre and Post Lung Transplantation
Matthias Loebe, MD, PhD, Methodist DeBakey Heart & Vascular Center, Houston, TX

3:20 - 3:40pm
MV Management on VV ECMO Patients
James Blum, MD, Emory University, Atlanta, GA

3:40 - 4:00pm
VV ECMO: DL Catheter Techniques and Management
Christoph Brehm, MD, Penn State Hershey Medical Center, Hershey, PA
WEDNESDAY, JUNE 24 (continued)

4:00 - 4:20pm
ECCO2R: What is New?
Christian Bermudez, MD, Hospital of the University of Pennsylvania, Philadelphia, PA

4:20 - 4:40pm
Weaning Strategies for VV ECMO
Matthew Bacchetta, MD, Columbia University Medical Center, New York, NY

4:40 - 4:55pm
Panel Discussion

4:55 - 5:00pm
Closing Remarks

VAD COORDINATOR SESSIONS

10:00am - 5:00pm

Pamela Combs, PhD, RN
VAD Coordinator Sessions Chair

Co-Chairs:
Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX
Aimee Gardner, BS, CCP, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
Michael Petty, PhD, RN, CCNS, Univ of Minnesota Medical Center, Minneapolis, MN

10:00am - 12:00pm
VAD 1 - SCHOLARLY INVITED PRESENTATIONS FOR VAD COORDINATORS

10:00 - 10:15am
Incorporating Outpatient INR Monitoring: The Eyes are Upon You
Lori Anderson, RN, MS, Tampa General Hospital, Tampa, FL

10:15 - 10:30am
Growing Your VAD Program From Novice to Expert: Adding the Needed Layers to the Program to Prevent Burnout
Linda Staley, RN, MSN, NP, Mayo Clinic, Phoenix, AZ

10:30 - 10:45am
The Implementation of Shared Care Sites: The Impact of the VAD Coordinator of the Implanting Facility
Krista Marz, RN, CCRN Ochsner Medical Center, New Orleans, LA

10:45 - 11:00am
The Experience of a New VAD Coordinator: You Talking to Me?
Rachel Warren, RN, BSN, Multicare Tacoma General Hospital, Tacoma, WA

11:00 - 11:15am
The Implementation of In-house Staff VAD Education
Heather Moody, APRN, ACNP, University of Louisville, Louisville, KY

11:15 - 11:30am
Self-Care
Dustin Szczech, RN, BSN, University of Minnesota, Minneapolis, MN

11:30 - 11:45am
The GI Bleed Experience of a Large VAD Program: The VAD Coordinator’s Experience
Jennifer Colarusso, RN, BSN, CCRN, University of Utah Hospital, Salt Lake City, UT

11:45am - 12:00pm
Half a Heart and a VAD: Multidisciplinary Support of the Univentricular Pediatric Patient
Jodie Lantz, MSN, RN, PCNS-BC, Children’s Health Children’s Medical Center, Dallas, TX - ASAIOfyi Member

1:00 - 3:00pm

VAD SIMULATIONS

Salon A-3, Lower Level
Participate in a cutting edge educational experience through live simulations of MCS emergencies with high fidelity simulators.
Aimee Gardner, BS, CCP, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH
George Pantalos, PhD, University of Louisville, Louisville, KY
Michael Sobieski, RN, CCP, University of Louisville, Louisville, KY

3:00 - 5:00pm

VAD PROFICIENCIES - Thoratec HeartMate II

Salon A-5, Lower Level
Hands on learning and practice of this device in a controlled environment
Charles Hillock, RN, Thoratec Corporation, Chicago, IL
Melissa Barnes, RN, BSN, Thoratec Corporation, Plainfield, IL

3:00 - 5:00pm

VAD PROFICIENCIES - HeartWare HVAD®

Salon A-2, Lower Level
Hands on learning and practice of this device in a controlled environment
Dayna Murphy, RN, CCP, HeartWare Inc, Framingham, MA

THURSDAY, JUNE 25

7:45am - 12:00pm

GENERAL SESSION 1

Grand Ballroom, Second Floor

Co-Chairs:
William Weiss, PhD, Penn State College of Medicine, Hershey, PA
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI

7:45 - 8:00am
Introduction and Welcome
Jonathan Haft, MD, ASAIO Program Chairman

8:00 - 8:30am
ASAIO President’s Address

William Weiss, PhD
President, ASAIO

ASAIO: Success Through Synergy
William Weiss, PhD, Penn State College of Medicine, Hershey, PA
8:30 - 9:00am
JSAO Presentation: Development of Perioperative Glycemic Control Using an Artificial Pancreas With Closed-Loop Glycemic System

Kuzuhiro Hanazaki, MD, PhD
Kochi University, Kochi, Japan

9:00 - 9:30am
ESAO Presentation: Minimally Invasive LVAD Implantation

Dominik Wiedemann, MD
Medical University Austria, Vienna, Austria

9:30 - 9:45am
ASAIO Fellowship Presentations

9:45am - 10:30am VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS - Salon C, Lower Level

10:30am - 12:00pm
GENERAL SESSION 1 Continued

TOP INTERNATIONAL ABSTRACT PRESENTATIONS
10:30 - 10:45am
Microfluidic Platforms to Assess VAD-Implanted Patient Thrombotic Risk
Annalisa Dimasi, MSc, Politecnico di Milano, Milan, Italy

10:45 - 11:00am
Aortic Valve Regurgitation and Outflow Graft Anastomosis Site Design After Left Ventricular Assist Device Implantation
Kei Iizuka, Tokyo Women’s Medical University, Tokyo, Japan

11:00 - 11:15am
Evaluation of Thrombus Distribution in an Oxygenator After Long Term ECMO
Nobumasa Katagiri, PhD, National Cerebral and CV Ctr Research Institute, Osaka, Japan

11:15 - 11:30am
A Micro-optofluidic Approach Towards Individualization of Dialysis by Continuous Electrolyte Monitoring
Arjan Frijns, PhD, Eindhoven University of Technology, Eindhoven, Netherlands

RAPID FIRE ABSTRACT PRESENTATIONS
11:30 - 11:35am
RF 1 Effects of Air and Negative Pressure on Blood Activation During Cardiopulmonary Bypass
Megan Coughlin, MD, University of Michigan ECMO Lab, Ann Arbor, MI

11:35 - 11:40am
Superior Cavopulmonary Assistance with a Paired Umbrella Double Lumen Cannula: A Simulation Study
Po-Lin Hsu, PhD, Soochow University, Soochow, China

11:40 - 11:45am
RF 2 Cavo-arterial pump (CAP): A Catheter-deliverable Right Ventricular Assist Device for Right Ventricular Dysfunction
John Valdovinos, PhD, Yale School of Medicine, New Haven, CT

11:45 - 11:50am
Prophylactic Intra-Aortic Balloon Pumping Support Before Ventricular Assist Device Implantation Improves Post-operative Clinical Course in Patients with INTERMACS Profile 2
Teruhiko Imamura, MD, PhD, University of Tokyo, Toyko, Japan

ASAIO Y Nose’ International Fellowship Recipient

11:50 - 11:55am
RF 3 Impact of Continuous-flow Left Ventricular Assist Device Support on Right Ventricular Geometry and Function
Antonio Lafort, MD, PhD, S. Orsola-Malpighi Hospital, Bologna, Italy

11:55am - 12:00pm
RF 4 A Method to Increase Radiopacity of PLA Backbone Scaffolds for Preclinical Micro-CT Imaging
Sara Lee, BS, Texas A & M University, College Station, TX

12:00 - 1:15pm LUNCH BREAK

1:30 - 3:00pm
CARDIAC 1 | TETHER FREE VADS: ARE WE THERE YET?
Grand Ballroom, Second Floor
Co-Chairs:
Timothy Baldwin, PhD, NHLBI / NIH, Bethesda, MD
Pramod Bonde, MD, Yale University, New Haven, CT

1:30 - 1:50pm
Interaction of Mitral and Tricuspid Regurgitation Influences the Survival in Patients with Continuous-flow Left Ventricular Assist Devices
Vakhtang Tchantchaleishvili, MD, University of Rochester, Rochester, NY

ASAIO Fellowship Recipient

2:00 - 2:15pm
Comparing the Effectiveness of Axial and Centrifugal Left Ventricular Assist Devices in Ventricular Unloading
Kelly Koch, BS, University of Michigan, Ann Arbor, MI

2:15 - 2:30pm
Costs and Outcomes in the Care of Bi-ventricular Support as a Bridge to Cardiac Transplant
Michael Swartz, PhD, University of Rochester, Rochester, NY

2:30 - 2:45pm
First Report of 90-Day Chronic In Vivo Support with Single-Piece Continuous-Flow Total Artificial Heart in Calves
Jamshid Karimov, MD, PhD, The Cleveland Clinic, Cleveland, OH

BIOENGINEERING 1 | NEW TECHNOLOGIES AND NOVEL DEVICES
Salon A-1, Lower Level
Co-Chairs:
Richard Wampler, MD, Oregon Health Sciences University, Loomis, CA
Po-Lin Hsu, PhD, Soochow University, Suzhou, China

1:30 - 2:00pm
Innovation and Clinical Translation in Cardiac Surgery
Jorge Jimenez, PhD, Georgia Institute of Technology, Atlanta, GA
ABSTRACT PRESENTATIONS

2:00 - 2:15pm
CFD Analysis of a Paired Membrane Umbrella Double Lumen Cannula for Failing Fontan Support
Francesca Condemi, University of Kentucky, Lexington, KY
ASAIO Fellowship Recipient

2:15 - 2:30pm
Heart Rate Variability, Respiratory Sinus Arrhythmia and Biofeedback in Left Ventricular Assist Device Patients - A Pilot Study
Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

2:30 - 2:45pm
Magnetic Apheresis Device for Filtration of Malaria-Infected Red Blood Cells
Andrea Martin, BS, Carnegie Mellon University, Pittsburgh, PA

2:45 - 3:00pm
A Biomimetic Antibacterial Coating for an Artificial Cornea Device
Mary Nora Dickson, MS, University of California, Irvine, CA

1:30pm-3:00pm
PULMONARY 1 | ROAD TO ARTIFICIAL LUNGS: HIGHWAY TO HELL OR DESTINATION TO HOPE WITH A “PULMONARY ASSIST DEVICE”
Salon A-2, Lower Level
Co-Chairs:
Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY
William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA

1:30 - 1:55pm
Surface Modification Strategies for Artificial Lungs
William Wagner, PhD, University of Pittsburgh, Pittsburgh, PA

1:55 - 2:20pm
Are Bioartificial Lungs in our Future?
Esther Novosel, PhD, Novalung, Heilbronn, Germany

2:20 - 2:45pm
The Future is Now: Destination Therapy with Artificial Lungs
Keith Cook, PhD, Carnegie Mellon University, Pittsburgh, PA

ABSTRACT PRESENTATION

2:45 - 3:00pm
Development of an Integrated High Efficiency Passive Exchange Paracorporeal Ambulatory Assist Lung (P-PAAL) Device
Shalv Madhani, BSBE, University of Pittsburgh, PA

1:30pm-3:00pm
RENA 1 - SENSING TECHNOLOGIES AND CLINICAL USE
Salon A-3, Lower Level
Co-Chairs:
Lenar Yessayan, MD, Henry Ford Hospital, Detroit, MI
Michael Heung, MD, University of Michigan, Ann Arbor, MI

1:30 - 1:50pm
Ion Selective Sensing
Fokko Pieter Wieringa, PhD, TNO Science & Industry, The Netherlands

1:50 - 2:10pm
Fiberoptic Ratiometric Fluorescence Analyzer update
Bruce Molitoris, MD, Indiana University School of Medicine, Indianapolis, IN

2:10 - 2:30pm
Internal Filtration in a High-Flux Dialyzer
Daniel Schmeditz, PhD, Medical University of Graz, Graz, Austria

2:30- 2:50pm
Point of Care Sensing Technologies for Early Identification of Sepsis
Rodney Daniels, MD, University of Michigan, Ann Arbor, MI

2:50 - 3:00pm
Q&A

3:00 - 3:45pm
VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS - Salon C, Lower Level

3:45 - 5:00pm
CARDIAC 2 | DEBATE: CAN LVADS COMPETE WITH HEART TRANSPLANTATION?
Grand Ballroom, Second Floor
Co-Chairs:
Hari Mallidi, MD, Baylor College of Medicine, Houston, TX
Guruprasad Girdharan, PhD, University of Louisville, Louisville, KY

3:45 - 4:00pm
Engineering Perspective
James Antaki, PhD, Carnegie Mellon University, Pittsburgh, PA

4:00 - 4:15pm
Physician Perspective
Emma Birks, MD, PhD, University of Louisville, Louisville, KY

4:15 - 4:20pm
Rebuttal #1

4:20 - 4:25pm
Rebuttal #2

ABSTRACT PRESENTATIONS

3:45 - 4:00pm
Influence of LVAD Inflow Cannula Placement Location on the Flow Stresses and Residence Time in the Left Ventricle
Patrick McGah, PhD, University of Washington, Seattle, WA

4:45 - 5:00pm
Towards a Prognostic Cost Model for Continuous Flow (CF) LVAD
James Antaki, PhD, Carnegie Mellon University, Pittsburgh, PA

3:45pm - 5:00pm
BIOENGINEERING 2 | BIOLOGICAL APPROACHES TO ORGAN REPLACEMENT
Salon A-1, Lower Level
Co-Chairs:
Kevin Soucy, PhD, University of Louisville, Louisville, KY
Nandan Mondal, PhD, University of Louisville, Louisville, KY

3:45 - 4:00pm
Bioartificial Kidney
H. David Humes, MD, University of Michigan, Ann Arbor, MI

4:00 - 4:15pm
In-body Tissue Engineered Heart Valve (Bivalve) Can Be Engrafted as Vital Tissues
Yoshiaki Takewa, MD, PhD, National Cerebral and Cardiovascular Center, Osaka, Japan

4:15 - 4:30pm
Regenerative Vascular Fistula for Hemodialysis Access: Design, Fabrication and Definition of an Animal Model for In Vivo Evaluation
Juan Carlos Briceño PhD, Universidad de los Andes, Bogota, Colombia

4:30 - 4:45pm
Design and Preclinical Evaluation of a Hemostatic Collagen Plug for Percutaneous Biopsy: 72% Less Bleeding and 100% Cessation
Diana Sanchez-Palencia, PhD, Universidad de los Andes, Bogota, Colombia

4:45 - 5:00pm
Endothelialization of Sintered Inflow Cannulas of Lvd With Allogeneic Mhc-silenced Endothelial Cells
Bettina Wiegmann, MD, Hannover Medical School, Hannover, Germany
3:45pm - 5:00pm

**VAD 2 - RESONANT LEADERSHIP AMONG VAD COORDINATORS**

**Salon A-4, Lower Level**

Co-Chairs:
- Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX
- Aimee Gardner, BS, CCP, Cincinnati Children's Hospital Medical Ctr, Cincinnati, OH
- Michael Petty, PhD, RN, CCNS, Univ of Minnesota Medical Center, Minneapolis, MN

3:45 - 4:00pm

**The VAD Patient and Social Media**

Dawn Christensen, MS, FNP-BC, Innovative Program Solutions LLC, Pine Grove, PA

4:00 - 4:15pm

**Discovery and Change: VAD Readmissions**

Tiffany Buda, BSN, RN, Cleveland Clinic, Cleveland, OH

4:15 - 4:30pm

**The Career Path of a VAD Coordinator**

Marcia Stahovich, RN, CCRN, Sharp Memorial Hospital, San Diego, CA

4:30 - 4:45pm

**How the VAD Coordinator Incorporates the Caregiver: The Catcher of the Team**

Michael Petty, PhD, RN, CNS, University of Minnesota Medical Center, Minneapolis, MN

4:45 - 5:00pm

**Is Platelet Mapping Heading South? Evolving Antiplatelet Management Strategies for Pediatric VADs**

Jenna Murray, MSN, NP, Lucile Packard Children’s Hospital, Palo Alto, CA

3:45pm - 5:00pm

**PULMONARY 2 | ECMO SIMULATION & PHYSIOLOGIC MODELING PULMONARY AND RIGHT HEART FAILURE**

**Salon A-2, Lower Level**

Co-Chairs:
- Matthew Bacchetta, MD, Columbia University Medical Center, New York, NY
- Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA

3:45 - 4:05pm

**ECMO Simulation & Modeling**

Marc Dickstein, MD, Columbia University, New York, NY

4:05 - 4:25pm

**Understanding Right Heart Failure and Pulmonary Hypertension**

Daniel Burkhoff, MD, PhD, Columbia University, New York, NY

3:45pm - 5:00pm

**ABSTRACT PRESENTATIONS**

4:30 - 4:45pm

**Novel Methods to Mitigate Serious Adverse Events Associated With Nitrogen Dioxide (NO2) During Inhaled Nitric Oxide (NO) Therapy**

Priscilla Petit, MSME, GeNO LLC, Cocoa, FL

4:45 - 5:00pm

**During Inhaled Nitric Oxide (NO) Therapy**

Sanaz Hatami, MD, University of Alberta, Edmonton, Alberta

3:45pm - 5:00pm

**RENAL 2 | BREAKTHROUGHS REQUIRED FOR WIDESPREAD CITRATE USE**

**Salon A-3, Lower Level**

Co-Chairs:
- Balazs Szamosfalvi, MD, Henry Ford Hospital, Detroit, MI
- Lenar Yessayan, MD, Henry Ford Hospital, Detroit, MI

3:45 - 4:00pm

**Citrate Accumulation: Incidence, Diagnosis and Clinical Considerations**

Michael Heung, MD, University of Michigan, Ann Arbor, MI

4:00 - 4:15pm

**Regulatory Challenges for Regional Citrate Anticoagulation Use**

Gema Gonzalez, MS, Food and Drug Administration, Silver Spring, MD

4:15 - 4:30pm

**Automating RCA for Safe Widespread Use and Regulatory Approval**

Balazs Szamosfalvi, MD, Henry Ford Hospital, Detroit, MI

4:30 - 4:45pm

**Automated RCA and Dialysis Engineering Requirements**

Fokko Pieter Wieringa, PhD, TNO Science & Industry, The Netherlands

**ABSTRACT PRESENTATION**

4:45 - 5:00pm

**Heparin-albumin Priming in a Clinical Setting for HD Patients at Risk for Bleeding**

Bernd Stegnayr, MD, PhD, Umea University, Umea, Sweden

3:45pm - 5:00pm

**PEDIATRIC 1 | CHALLENGES IN PEDIATRIC MECHANICAL CIRCULATORY SUPPORT**

**Salon A-5, Lower Level**

Co-Chairs:
- David Morales, MD, Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- Aamir Jeewa, MD, Baylor College of Medicine, Houston, TX

3:45 - 4:00pm

**Single Ventricles - Whom to Support, How to Support, and When to Support**

Ronald Woods, MD, PhD, Children's Hospital of Wisconsin, Milwaukee, WI

4:00 - 4:15pm

**Making Adult Devices “Fit”**

Iki Adachi, MD, Texas Children’s Hospital, Houston, TX

4:15 - 4:30pm

**Stroke and Pediatric VADs - Can We Prevent It?**

Parthak Prodhan, MD, Arkansas Children's Hospital, Little Rock, AR

4:30 - 4:45pm

**Pediatric MCS in 2020 - What Will (Should) it Look Like?**

Peter Wearden, MD, PhD, Children's Hospital of Pittsburgh UPMC, Pittsburgh, PA

4:45 - 5:00pm

**Discussion**

6:00pm - 7:00pm

**ASAIO WELCOME RECEPTION - Salon C, Lower Level**

8:00am - 5:00pm

**ABSTRACT POSTER PRESENTATIONS - Salon C, Lower Level**

**CARDIAC POSTERS**

101 Impact of an Outpatient Anticoagulation Protocol on Thrombotic and Bleeding Complications of LVAD Therapy

Mary Bradbury PharmD, Inova Fairfax Hospital, Falls Church, VA

102 Efficacy of a Bivalirudin-based Treatment Regimen for Suspected LVAD Thrombosis Compared to Eptifibatide

Mary Bradbury PharmD, Inova Fairfax Hospital, Falls Church, VA

103 Cellular Microparticles as Predictive Markers for Thrombosis and Other Clinical Events in Patients with Implanted LVADs

Bryan Menapace, Loyola University Medical Center, Maywood, IL
104 Preservation of High Molecular Weight vWF and Low Hemolysis With the Low Shear TORVAD Ventricular Assist Device
Jeffrey Gohean, MS, Windmill Cardiovascular Systems, Inc, Austin, TX

105 Usefulness of the Preoperative Six Minute Walk Test to Predict Outcomes After Left Ventricular Assist Device Implantation
Laura Coyle, MSN, NP-BC, Advocate Christ Medical Center, Oak Lawn, IL

106 iOS Based App for Control and Communication of a Wireless LVAD
Daniel Giebisch, Yale University, New Haven, CT

107 Assessment of Preload-Recruitable Stroke Work During Biventricular Ex Vivo Heart Perfusion: A Novel Approach Eliminating The Pressure-Volume Loop Catheter
Darren Freed, MD, PhD, University of Alberta, Edmonton, Canada

108 Pathophysiology of the Long-term Survived Goats with the Helical Flow Total Artificial Heart and Physiological Control
Yusuke Abe, MD, PhD, University of Tokyo, Tokyo, Japan

109 User Studies and the Design of a Completely Implantable VAD System
Lori Lucke, PhD, Minnetronix, Saint Paul, MN

110 Analysis of Percent Time in Therapeutic INR Range in Left Ventricular Assist Device Patients
Alexis Johnson, BS, Intermountain Medical Center, Murray, UT

111 Off-Pump Implantation of the HeartWare Left Ventricular Assist Device
Igor Gregorcic, MD, University of Texas Health Sciences Center, Houston, TX

112 Extending the TETS System for Improved Patient Comfort
Kellie Ryan, BMEE, Minnetronix, Saint Paul, MN

113 Simulation of Thrombus Growth in HeartMate II
Fang Yang, PhD, Carnegie Mellon University, Pittsburgh, PA

114 Does Indication of Continuous Flow Left Ventricular Assist Device Implantation Influence Hospital Readmission Rate?
John Stulak, MD, Mayo Clinic, Rochester, MN

115 Inotrope Therapy Prior to Left Ventricular Assist Device Implantation: Analysis of Indications and Impact on Outcomes
Alduz Inri Cabasa, MD, Mayo Clinic, Rochester, MN

116 Precision Sensorless Flow Rate Estimation with On-line Viscosity Compensation in a Magnetically Levitated Centrifugal Blood Pump
Wataru Hijkata, Dr Eng, Tokyo Institute of Technology, Tokyo, Japan

117 Efficacy of Oral Antimicrobial Management of LVAD Driveline Infections
Takeshi Katsume, MD, Tokyo Women’s Medical University, Tokyo, Japan

118 Less Influence on Coagulation Factors Under Long-term Circulatory Support With Centrifugal Pump Continuous-flow LVAD
Ian Hollis, Pharm D, University of North Carolina, Chapel Hill, NC

119 Effects of Apical Torsion Angle on Global Hemodynamics during Heart Failure
Elaine Soohoo, MS, BME, Carnegie Mellon University, Pittsburgh, PA

120 Computational Optimization of LVAD Outflow Graft Configuration
Patrick McGah, PhD, University of Washington, Seattle, WA

121 Visualization of Thrombus Growth in a Hollow Fiber Membrane Oxygenator Using CT
Felix Hesselmann, Dipl.-Ing, Institute of Applied Medical Engineering, Aachen, Germany

122 Multimodal Anatomical Fitting of an Artificial Heart by Adaptation of Vascular Prostheses
Felix Hesselmann, Dipl.-Ing, RWTH Aachen University, Aachen, Germany

123 Exercise Capacity in Full and Partial VAD Support
Libera Fresiello, PhD, KU Leuven, Leuven, Belgium

124 Preoperative Tricuspid Valve Regurgitation in LVAD Patients: Impact on Outcomes
Marija Petrovic, MD, University of Texas Health Sciences Center, Houston, TX

125 Alarms From the Total Artificial Heart Discharge Driver Requiring Changeout
Christina Cheyne, RN, MS, University of Rochester, Rochester, NY

126 Temporal Increase in Pre-Discharge Thrombelastogram Maximum Amplitude in HeartMate II Recipients
Trevor Snyder, PhD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

127 The Opening of Native Aortic Valve during Exercise is a Key to Prevent Aortic Insufficiency Among Those with Closed Aortic Valve at Rest During Ventricular Assist Device Treatment
Teruhiko Imamura, MD, PhD, University of Tokyo, Tokyo, Japan

128 The Effect of Blood Contact Surface Area Reduction During Extracorporeal Circulation In A Rat Cardiopulmonary Bypass Model
Yutaka Fuji, PhD, National Cerebral & CV Ctr Research Institute, Osaka, Japan

129 In Vitro Evaluation of a Minimally Invasive Mechanical Circulatory Support Device for Assisting Renal Blood Circulation
Hirohito Sumikura, PhD, National Cerebral & CV Ctr Research Inst, Osaka, Japan

130 Development and Chronic in vivo Testing of a Fully Implantable Extra-Aortic Counterpulsation Device
Martin Cook, PhD, Sunshine Heart, Eden Prairie, MN

131 Pre-Operative Serum Sodium and Atrial Fibrillation Predict Improvement in Cognitive Function Following Left Ventricular Assist Device Implantation
Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

132 Sodium Paradox: Serum Sodium as a Predictor of Survival in Patients with Mechanical Circulatory Support
Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

133 Differential Lactate Dehydrogenase Levels in HeartMate II and HeartWare Left Ventricular Assist Devices
Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

134 Hospital Readmissions after Continuous-Flow Left Ventricular Assist Device Implantation: An Analysis by Device Type
Vakhtang Tchantchaleishvill, MD, University of Rochester, Rochester, NY

135 Can We Predict a Complicated Intensive Care Unit stay after Left Ventricular Assist Device Implantation?
Vakhtang Tchantchaleishvill, MD, University of Rochester, Rochester, NY - ASAIOfyi Member

136 Risk Factors Associated with Delirium in Patients After Left Ventricular Assist Device Placement
Vakhtang Tchantchaleishvill, MD, University of Rochester, Rochester, NY

137 Magnesium Handling in Patients with Impaired Renal Function Supported with a Continuous Flow Left Ventricular Assist Device
Michael Rogers, MS, University of Louisville, Louisville, KY
THURSDAY, JUNE 25 (continued)

138 Optimally Pulsed Control of a Continuous Flow Left Ventricular Assist Device Results in more Biomimetic Operation
James Bouwmeester, PhD, Yale University, New Haven, CT

139 Short-term Outcome of Left Ventricular Assist Device Therapy in Patients With End-stage Hypertrophic Cardiomyopathy
Masatoshi Akiyama, MD, PhD, Tohoku University Hospital, Sendai, Japan

BIOENGINEERING POSTERS

140 The Effects of Left Ventricular Assist Device Implantation: Computational Comparison of the Ascending and Descending Aorta Sites
Gionata Fragomeni, PhD, Magna Graecia University, Italy

141 Roller Pump Circulation System For Preventing Filter Clogging During Cell-free and Concentrated Ascites Reinfusion Therapy (cart)
Tadahiko Nkakagawa, University of Tokushima, Tokushima, Japan

142 Total Artificial Heart and Mock Circulation System: A Simulation Tool for Comparative Analysis of Mechanical Circulatory Support Devices
Marvin Slepijan, MD, University of Arizona, Tucson, AZ

143 Improving Biocompatibility of Centrifugal Pump with MHD Bearings
Tao Zhang, PhD, Thoratec Corporation, Ann Arbor, MI

144 Modeling a Dialysis Catheter and the Superior Vena Cava for Treatment of Infection by Heating
Ian Richardson, MD, University of Michigan, Ann Arbor, MI

145 Direct Measurement of LV-Aortic Differential Pressure Using the TORVAD Ventricular Assist Device
Raul Longoria, PhD, PE, University of Texas, Austin, TX

146 Aggregation and Breakup Model for Platelets in CFD
Randolf Hellmuth, MSc Eng, National Univ of Ireland, Galway, Ireland

147 CFD-Based Design of Pump Integrated Gas Exchanger
Francisca Condelmi, PhD, University of Kentucky, Lexington, KY

148 The Influence of Non-Newtonian Effects on Inferior Vena Cava Hemodynamics
Kenneth Aycock, BS, Pennsylvania State University, University Park, PA

149 An Experimental and Computational Study of the Inferior Vena Cava Hemodynamics during Respiration
Kenneth Aycock, BS, Pennsylvania State University, University Park, PA

150 Validation of a Noninvasive Device to Monitor Pulmonary Fluid Accumulation Using Changes in Bioimpedance
Anand Ganapathy, BS, Baylor College of Medicine, Houston, TX

151 Control Strategy for an Implantable Rotary Blood Pump Based on Identification of Pumping States
Dmitry Petukhov, MD, National Research Univ Electronic Tech, Moscow, Russia

152 Suction Recognition for the Cleveland Clinic Continuous-Flow Total Artificial Heart
Barry Kuban, BSEE, Cleveland Clinic, Cleveland, OH

153 A Low-Cost Digital Particle Image Velocimetry (DPIV) System
Harrison Smith, BS, Texas A&M University, College Station, TX

154 In Vitro Benchmarking Study of VADs in Current Clinical Use
Graham Foster, PhD, Calon Cardio Technology Ltd

155 Exogenous Nitric Oxide Supplementation to Enhance The Outcome of Fluid Resuscitation From Hemorrhagic Shock
Juan Carlos Briceno, PhD, Universidad de los Andes, Bogota, Colombia

156 Development of Rotational Automatic Control Method to an Implantable Centrifugal Blood Pump
Tarcízio Leão, Institute Dante Pozzanaese of Cardiology, São Paulo, Brazil

157 Improved Canine Surgical Model for an Implantable Hemofilter
Joseph Groszek, BS, Vanderbilt University Medical Center, Nashville, TN

158 Applicability of Reynolds, Total, Viscous and Wall Shear Stresses in Different Power Law Models
Kyle Burke, BS, University of Oklahoma, Norman, OK

159 Effects of Hemodynamic Factors on Hemolysis in Shear Flows
Kyle Burke, BS, University of Oklahoma, Norman, OK

160 Assessment of Outlet Flow From the HeartMate II Continuous Flow Ventricular Assist Device Under Physiological Pulsatile Conditions Using Laser Doppler Velocimetry
Grant Rowlands, Pennsylvania State University, University Park, PA

161 Hemodynamics Associated with a Pediatric Ventricular Assist Device Using a Viscoelastic Blood Model
Bryan Good, Pennsylvania State University, University Park, PA

162 Bioartificial Liver On A Chip: A Microfluidic Device For Assist Therapy
Jing Liu, BS, University of Science and Technology of China, Hefei, China

163 Over-The-Wire Endovascular Device for Immediate and Complete Peripheral Artery Occlusion
Nicholas Franano, MD, Metactive Medical Inc, Olathe, KS

164 Electrical and Histological Evaluation of Titanium Mesh as Electrode for Transcutaneous Communication System of Implantable Artificial Hearts
Eiji Okamoto, PhD, Tokai University, Sapporo, Japan

165 Hydraulic Development of Miniature Axial Flow Blood Pump
Peter Smith, Texas Heart Institute, Houston, TX

PEDIATRIC POSTERS

166 Development of an Implantable Pulsatile Pediatric Ventricular Assist Device
Erik Larson, PhD, Windmill Cardiovascular Systems, Austin, TX

167 Single Ventricle Model for Clinical Simulation Training
George Pantalos, PhD, University Louisville, Louisville, KY

168 Impella Use for Left Ventricle Decompression in a 6-Year-Old on ECMO Support: The Youngest Pediatric Patient Reported
Jordana Goldman, MD, Baylor College of Medicine, Houston, TX

169 Exploitation of a HeartWare Ventricular Assist Device with a Titanium Plug: The First US Experience
Iki Adachi, MD, Baylor College of Medicine, Houston, TX

170 Physical Recovery in Children Undergoing Long-term Ventricular Support With a Miniaturized Implantable Device
Iki Adachi, MD, Texas Children’s Hospital, Houston, TX

171 Development of a Pediatric Lung Assist Device for Cystic Fibrosis Patients
Linn Zhang, McGown Institute for Regenerative Medicine, Pittsburgh, PA

172 Full Liquid Ventilation in a Pediatric ECMO Patient
Gwenneth Fischer, MD, University of Minnesota, Minneapolis, MN

PULMONARY POSTERS

173 Current OxygenatorResearch
Andreas Kaesler Dipl.-Ing, University Hospital RWTH Aachen, Aachen, Germany
ASAIO PROGRAM 2015

THURSDAY, JUNE 25 (continued)

174 Oxygenator Test Circuit with Double-Reservoir for Continuous Testing
Andreas Kaesler Dipl.-Ing, University Hospital RWTH Aachen, Aachen, Germany

175 Snaring the Guide Wire in Avalon Cannula Placement in VV ECMO
Saiprasad Narsingam, MD, University of Missouri, Kansas City, MO

176 The Requirements That We Should Be Careful for Effective Single-cannulation in Venovenous Extracorporeal Membrane Oxygenation
Konomi Togo, MS, National Cerebral & Cardiovascular Center Research Institute, Suita, Japan

177 Prolonged Veno-Venous ECMO in Acute Respiratory Distress Syndrome
Bindu Akkanti, MD, University of Texas Health Science Center, Houston, TX

178 Correlation Between End Tidal CO2 and PaCO2 in Alcohol Withdrawal Patients
Tariq Yousuf, MD, Advocate Christ Medical Center, Oak Lawn, IL

8:00am - 12:00pm
GENERAL SESSION 2
Grand Ballroom, Second Floor

8:00 - 8:30am
ASAIO Hastings Lectureship: “Profiles in Synergy”

Timothy Baldwin, PhD
NHLBI / NIH, Bethesda, MD

8:30 - 9:45am
ASAIO 4th Annual Medical Device Entrepreneur’s Forum

H. David Humes, MD
Chairman

Panelists:
Edward Berger, PhD, Larchmont Strategic Advisors, Chestnut Hill, MA
Eric Chen, MS, Food & Drug Administration, Silver Spring, MD
Omar Amirana, MD, Allied Minds Inc, Boston, MA

The MDEF is for medical technologies at the concept and seed funding stages of commercialization. These Three Proposals will be presented before a Panel with expertise in regulatory, reimbursement, intellectual property and venture capital.

MDEF 1 Development of a Pre-Clinical Implantable Mechanical Device for Intestinal Lengthening in Children with Short Bowel Syndrome
C.S. Mott Children’s Hospital, Ann Arbor, MI - Farokh Demehri, MD

MDEF 2 Apical Torsion Device for Cardiac Support
Left Field Cardiac Inc, Pittsburgh, PA - Dennis Trumble, PhD

MDEF 3 GemView-LM: A Modified Laryngeal Mask for Tracheostomies
Crescentium LLC, New Orleans, LA - Christopher Cover

9:45am - 10:30am VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS - Salon C, Lower Level

10:30am - 12:00pm
GENERAL SESSION 2 - Continued

10:30am-12:00pm
ASAIO 3rd Annual Student Design Competition
Co-Chairs:

Salim Olia, BSE
University of Pittsburgh, Pittsburgh, PA

William Federspiel, PhD
University of Pittsburgh, Pittsburgh, PA

The Competition is restricted to current undergraduate students and is targeted to Senior year engineering students performing their capstone design project on a medical technology.

SDC 1 MedTek DynoAlarm
Allyson Garcia, Vanderbilt University, Nashville, TN

SDC 2 ECMO Cannula Stabilization (ECS) Device for Venovenous Extracorporeal Membrane Oxygenation
Brandon D’Aloiso, University of Pittsburgh, Pittsburgh, PA

SDC 3 PexyPro: A Gastropexy Assisting Device
Ashlyn Young, University of North Carolina, Chapel Hill, NC

SDC 4 DeltaDose: A Novel Intranasal Drug Delivery Device
Kevin Simpson, University of North Carolina, Chapel Hill, NC

SDC 5 The HurrySlurry
Kelsey Leonard, University of North Carolina, Chapel Hill, NC

Decreasing the Incidence of Cerebrospinal Fluid Leaks in Revision Spinal Surgeries
Esteban Urias, Johns Hopkins University, Baltimore, MD

Patient Specific Knee Implants
Melissa Boswell, The University of Akron, Akron, OH

The Line Lock
Hannah Voorhees, University of Pittsburgh, Pittsburgh, PA

12:00 - 1:15pm LUNCH BREAK

FRIDAY, JUNE 26

8:00am - 12:00pm
GENERAL SESSION 2
Grand Ballroom, Second Floor

8:00 - 8:30am
ASAIO Hastings Lectureship: “Profiles in Synergy”

Timothy Baldwin, PhD
NHLBI / NIH, Bethesda, MD

8:30 - 9:45am
ASAIO 4th Annual Medical Device Entrepreneur’s Forum

H. David Humes, MD
Chairman

Panelists:
Edward Berger, PhD, Larchmont Strategic Advisors, Chestnut Hill, MA
Eric Chen, MS, Food & Drug Administration, Silver Spring, MD
Omar Amirana, MD, Allied Minds Inc, Boston, MA

The MDEF is for medical technologies at the concept and seed funding stages of commercialization. These Three Proposals will be presented before a Panel with expertise in regulatory, reimbursement, intellectual property and venture capital.

MDEF 1 Development of a Pre-Clinical Implantable Mechanical Device for Intestinal Lengthening in Children with Short Bowel Syndrome
C.S. Mott Children’s Hospital, Ann Arbor, MI - Farokh Demehri, MD

MDEF 2 Apical Torsion Device for Cardiac Support
Left Field Cardiac Inc, Pittsburgh, PA - Dennis Trumble, PhD

MDEF 3 GemView-LM: A Modified Laryngeal Mask for Tracheostomies
Crescentium LLC, New Orleans, LA - Christopher Cover

9:45am - 10:30am VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS - Salon C, Lower Level

10:30am - 12:00pm
GENERAL SESSION 2 - Continued

10:30am-12:00pm
ASAIO 3rd Annual Student Design Competition
Co-Chairs:

Salim Olia, BSE
University of Pittsburgh, Pittsburgh, PA

William Federspiel, PhD
University of Pittsburgh, Pittsburgh, PA

The Competition is restricted to current undergraduate students and is targeted to Senior year engineering students performing their capstone design project on a medical technology.

SDC 1 MedTek DynoAlarm
Allyson Garcia, Vanderbilt University, Nashville, TN

SDC 2 ECMO Cannula Stabilization (ECS) Device for Venovenous Extracorporeal Membrane Oxygenation
Brandon D’Aloiso, University of Pittsburgh, Pittsburgh, PA

SDC 3 PexyPro: A Gastropexy Assisting Device
Ashlyn Young, University of North Carolina, Chapel Hill, NC

SDC 4 DeltaDose: A Novel Intranasal Drug Delivery Device
Kevin Simpson, University of North Carolina, Chapel Hill, NC

SDC 5 The HurrySlurry
Kelsey Leonard, University of North Carolina, Chapel Hill, NC

Decreasing the Incidence of Cerebrospinal Fluid Leaks in Revision Spinal Surgeries
Esteban Urias, Johns Hopkins University, Baltimore, MD

Patient Specific Knee Implants
Melissa Boswell, The University of Akron, Akron, OH

The Line Lock
Hannah Voorhees, University of Pittsburgh, Pittsburgh, PA

12:00 - 1:15pm LUNCH BREAK
1:30pm - 3:00pm

CARDIAC 3 | DEBATE: DEVICE THROMBOSIS

Grand Ballroom, Second Floor
Co-Chairs:
Kaushik Mandal, MD, MPH, Johns Hopkins Univ School of Medicine, Baltimore, MD
James Antaki, PhD, Carnegie Mellon University, Pittsburgh, PA

1:30 - 1:45pm
Biology to Blame?
Daniel Timms, PhD, BiVACOR Inc, Houston, TX

1:45 - 2:00pm
Engineering Design to Blame?
Nader Moazami, MD, Cleveland Clinic, Cleveland, OH

2:00 - 2:05pm
Rebuttal #1

2:05 - 2:10pm
Rebuttal #2

ABSTRACT PRESENTATIONS

2:15 - 2:30pm
Challenging Heart Transplantation After Total Artificial Heart Support: Is it Worth it?
Thomas Senage, MD, Institut de Thorax, Coueron, France

2:30 - 2:45pm
Antibody Production is Not Increased in Total Artificial Heart Patients Despite Multiple Blood Transfusions
Gina Jamero, MSN, Cedars Sinai Medical Center, Los Angeles, CA

2:45 - 3:00pm
Effect of Pulsed Operation of a Continuous Flow Left Ventricular Device on the Right Ventricle during Increased Afterload and Preload Conditions
James Bouwmeester, PhD, Yale University, New Haven, CT

1:30pm - 3:00pm

BIOENGINEERING 3 | BIOMATERIALS, THROMBOSIS, AND SURFACE INTERACTIONS

Salon A-1, Lower Level
Co-Chairs:
Marina Kameneva, PhD, University of Pittsburgh, Pittsburgh, PA
Zhongjun Wu, MD, University of Maryland, Baltimore, MD

ABSTRACT PRESENTATIONS

1:30 - 1:45pm
Test Method to Quantify the VWF Compatibility of Rotary Blood Pumps
Trevor Snyder, PhD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

1:45 - 2:00pm
Shear-induced Platelet Dysfunction by Non-physiological High Shear Stress With Short Exposure Time: Activation and Receptor Shedding
Zengsheng Chen, PhD, Univ of Louisville School of Medicine, Louisville, KY
ASAIO Fellowship Recipient

2:00 - 2:15pm
Blood Damage Assessment: Erythrocyte Microparticle Formation During Sub-hemolytic Mechanical Trauma Using Flow Cytometry
Kyle Burke, BS, University of Oklahoma, Oklahoma, OK

2:15 - 2:30pm
Novel Bovine Pericardial Patch Used Comprehensive Anti-calciﬁcation Procedure Has an Appropriate Bioprosthetic Properties in Early Surgical Results in a Swine Model
Choi Jae-Woong, MD, Seoul National University Hospital, Seoul, Republic of Korea

2:30 - 2:45pm
Analyzing Interactions of Ventricular Assist Devices and Thromboemboli - An In Vitro Model
Staci Jessen, BS, Texas A & M University, College Station, TX

2:45 - 3:00pm
Real-time Analysis of Flow-induced Thrombus Formation Within a Defined Crevice
Megan Jamiloikowski, BBE, University of Pittsburgh, PA

1:30pm - 3:00pm

VAD 3 | DEMONSTRATING INTENTIONAL THINKING

Salon A-4, Lower Level
Co-Chairs:
Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX
Michael Petty, PhD, RN, CCNS, Univ of Minnesota Medical Center, Minneapolis, MN

1:30 - 1:40pm
The VAD Patient: Back to School
Mary Mehegan, RN, BSN, CCRN, St. Louis Children’s Hospital, St. Louis, MO

1:40 - 1:50pm
Switch Hitters Rotation: Small Program vs. Large Program's Experiences
Karl Nelson, RN, MBA, INTEGRIS Baptist Medical Center, Oklahoma City, OK
Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX

1:50 - 2:10pm
VAD Coordinator and Surgeon Relationship
Antone Tatooles, MD, Cardiothoracic & Vascular Surgical Associates, Oak Lawn, IL

2:10 - 3:00pm
Surgeon, Cardiologist and VAD Coordinator Tag Team
Mark Slaughter, MD, University of Louisville, Louisville, KY
Jeffrey Teuteberg, MD, University of Pittsburgh Med Center, Pittsburgh, PA
Tonya Elliot, RN, MSN, MedStar Washington Hospital Center, Washington, DC

1:30pm - 3:00pm

PULMONARY 3 | ADVANCED CONCEPTS IN PULMONARY ENGINEERING

Salon A-2, Lower Level
Co-Chairs:
William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA
Keith Cook, PhD, University of Pittsburgh, Pittsburgh, PA

1:30 - 1:55pm
Bioreactors for Building Bioengineered Lungs
Harald Ott, MD, Harvard Medical School, Cambridge, MA

1:55 - 2:20pm
Novel Techniques for Enhancing Gas Exchange Efficiency
William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA

2:20 - 2:45pm
Lung Perfusion Systems for Preservation and Improvement of Donor Lungs
Pablo Sanchez, MD, PhD, University of Maryland, Baltimore, MD

ABSTRACT PRESENTATIONS

2:45 - 3:00pm
Organ Care Systems Promotes a Tissue Protective and Anti-inﬂammatory Response Within Lung Transplantation
Bettina Wiegmann, MD, Hannover Medical School, Hannover, Germany
1:30pm - 3:00pm
RENAL 3 | Fistula Maturation: Biological Obstacles, Economic Considerations & Maturation Systems
Salon A-3, Lower Level
Co-Chairs:
Nicholas Frano, MD, Metactive Medical Inc, Olathe, KS
Stephen Ash, MD, HemoCleanse Inc, Lafayette, IN
1:30 - 1:45pm
Biological Obstacles for Fistula Maturation
Alfred Cheung, MD, University of Utah, Salt Lake City, UT
1:45 - 2:00pm
Clinical and Economic Considerations of AVF Failure
Charmaine Lok, MD, University of Toronto, Canada
2:00 - 2:15pm
AFE System
Howard Loree, PhD, Flow Forward Medical Inc, Lowell, MA
2:15 - 2:30pm
Wall Shear and Wall Strain; Can Ultrasound Offer More Than Anatomic Information?
William Weitzel, MD, VA Medical Ctr and Univ of Michigan, Ann Arbor, MI
2:30 - 2:45pm
Q&A

ABSTRACT PRESENTATION
2:45 - 3:00pm
Acoustic and Ultrasonografic Measurements in Newly Performed Hemodialysis Arteriovenous Fistulas
Helmut Meyer-Hofmann, PhD, Aalborg University Hospital, Aalborg, Denmark

1:30 - 3:00pm
PEDIATRIC 2 | Challenges in Pediatric Perfusion and ECMO
Salon A-5, Lower Level
Co-Chairs:
Richard Walczak, BS, Duke University, Durham, NC
David Cooper, MD, Cincinnati Children's Hospital Med Ctr, Cincinnati, OH
1:30 - 1:45pm
Interhospital Transport of Patients on ECMO
Michiaki Imamura, MD, PhD, Arkansas Children's Hospital, Little Rock, AR
1:45 - 2:00pm
Ambulatory ECMO - Crazy or Long Overdue?
Desiree Bonadonna, MPS, CCP, LP, Duke University Hospital, Durham, NC
2:00 - 2:15pm
Bloodless Heart Surgery - What are the Limits?
Vincent Olshove, CCP, FPP, Cedars-Sinai Medical Center, Los Angeles, CA
2:15 - 2:30pm
Pediatric ECMO - What We Still Don’t Know
Michael Hines, MD, University of Texas Health Medical Center, Houston, TX
2:30 - 3:00pm
Discussion

3:00 - 3:45pm
VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS - Salon C, Lower Level

3:45 - 5:00pm
CARDIAC 4 | Debate: Acute MCS Support
Grand Ballroom, Second Floor
Co-Chairs:
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI
Aly El Banayosy, MD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

3:45 - 4:00pm
Percutaneous Approach is the Best
Andrew Civitello, MD, Baylor College of Medicine, Houston, TX
4:00 - 4:15pm
Surgical MCS is the Best
William Holman, MD, University of Alabama, Birmingham, AL
4:15 - 4:20pm
Rebuttal #1
4:20 - 4:25pm
Rebuttal #2

ABSTRACT PRESENTATION
4:30 - 4:45pm
Body Mass Index Does Not Affect Survival and is a Reliable Independent Risk Factor of Ventricular Assist Device (VAD) Thrombosis
Renganaden Sooppan, MD, University of Pennsylvania, Philadelphia, PA
4:45 - 5:00pm
Psychosocial Evaluation in Patients Undergoing Left Ventricular Assist Device Implantation Using the Transplant Evaluation Risk Scale
Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

3:45pm - 5:00pm
BIOENGINEERING 4 | Bioengineering Challenges for Artificial Organs
Salon A-1, Lower Level
Co-Chairs:
Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY
Pramod Bonde, MD, Yale University, New Haven, CT

PANEL DISCUSSION
3:45 - 4:00pm
Circulatory Support
Richard Wampler, MD, Oregon Health Sciences University, Loomis, CA
4:00 - 4:15pm
Pulmonary Support
Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY
4:15 - 4:30pm
Renal Support
Daniel Schneditz, PhD, Medical University of Graz, Graz, Austria
4:30 - 4:45pm
TETS
David Farrar, PhD, Thoratec Corporation, Pleasanton, CA
4:45 - 5:00pm
Q & A

3:45 - 5:00pm
PULMONARY 4 | Pulmonary ECMO 2015 - What Problems Do We Still Face?
Salon A-2, Lower Level
Co-Chairs:
Darryl Abrams, MD, Columbia University Medical Center, New York, NY
Scott Morley, BSE, MBA, ALung Technologies Inc, Pittsburgh, PA

3:45 - 4:05pm
ECMO Anticoagulation: It’s Still the Biggest Challenge!
Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA
4:05 - 4:25pm
Long-Term Support for BTR & BTT
Christian Bermudez, MD, Hospital of the University of Pennsylvania, Philadelphia, PA
4:25 - 4:45pm
ECMO Transport Civilian & Military Challenges
Mauer Biscotti, MD, Columbia University Medical Center, New York, NY
FRIDAY, JUNE 26 (continued)

ABSTRACT PRESENTATION

4:45 - 5:00pm
Experimental Measurements of the Anisotropic Darcy Permeability for the Blood-Side Flow in Oxygenators
Felix Hesselmann, Dipl.-Ing, Institute of Applied Medical Engineering, Aachen, Germany

3:45pm - 5:00pm
RENAL 4 | VASCULAR ACCESS: INNOVATIVE THERAPEUTICS / DEVICES

Salon A-3, Lower Level
Co-Chairs:
Nicolas Franano, MD, Metactive Medical Inc, Olathe, KS
Howard Loree, PhD, Flow Forward Medical Inc, Lowell, MA

3:45 - 4:00pm
Tissue Engineering of Small-Diameter Vascular Grafts
Joris Rotmans, MD, PhD, Leiden University Medical Center, The Netherlands

4:00 - 4:15pm
Heat as a Therapy for Catheter Associated Infections
John Younger, MD, University of Michigan, Ann Arbor, MI

4:15 - 4:30pm
The Venous Window Needle Guide, A Hemodialysis Cannulation Device for Salvage of Uncannulatable Arteriovenous Fistulas
Nathaniel Young, MS, Vital Access Corporation, Salt Lake City, UT

4:30 - 4:45pm
The EndoFistula: a NEAT Idea!
Charmaine Lok, MD, University of Toronto, Toronto, Canada

ABSTRACT PRESENTATION

4:45 - 5:00pm
Convective Leakage Renders Heparin Lock of Central Venous Catheters Ineffective Within Seconds
Patrick McGah, PhD, University of Washington, Seattle, WA
ASAIO Fellowship Recipient

3:45 - 5:00pm
PEDIATRIC 3 | PEDIATRIC ABSTRACTS

Salon A-5, Lower Level
Co-Chairs:
Michiaki Imamura, MD, PhD, Arkansas Childrens Hospital, Little Rock, AR
Trevor Snyder, PhD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

3:45 - 4:00pm
Can Small Children Be Safely Supported to Transplant on Adult Continuous-flow Ventricular Assist Devices?
Chet Villa, MD, Cincinnati Children's Hospital, Cincinnati, OH

4:00 - 4:15pm
Thrombosis in Pediatric ECMO: Comparison Centrifugal and Roller Pumps
Susan Hastings, MS, BME, Georgia Institute of Technology, Atlanta, GA
ASAIO Fellowship Recipient

4:15 - 4:30pm
Outpatient Management of Heartware Ventricular Assist Device System in Children: A Multi-center Experience
Martin Schweiger, MD, PhD, Children's Hospital, Zurich, Switzerland

4:30 - 4:45pm
HeartWare HVAD for biventricular support in children and adolescents: The Stanford Experience
Mary Lyn Stein, MD, Stanford Hospitals and Clinics, Stanford, CA

4:45 - 5:00pm
Evolution and Impact of Ventricular Assist Device Program on Pediatric Heart Transplant Waiting List
Iki Adachi, MD, Texas Children's Hospital, Houston, TX

CARDIAC POSTERS

179 Prolonged Normothermic Ex-Situ Heart Perfusion with Live Animal Paracorporeal Support
John Trahanas, MD, University of Michigan, Ann Arbor, MI

180 Incidence of Right Ventricular Failure: Single Center Experience
Aditya Bansal, MD, Ochsner Clinic Foundation, New Orleans, LA

181 Indications and Outcomes of Adult Congenital Patients Requiring Durable Mechanical Circulatory Support as Bridge to Transplantation
Muhammad Masood, MD, Washington University in St. Louis, St. Louis, MO

182 Can Cardiac Resynchronization Therapy be a Rescue Therapy for Inotrope-Dependent Patients with Advanced Heart Failure or not?
Teruhiko Imamura, MD, PhD, University of Tokyo, Tokyo, Japan

183 New Dual Lumen Self-expanding Catheter Design
Saad Abdel-Sayed, PhD, University Hospital, Lausanne, Switzerland

184 First Successful Salvage Impella Support in Failing Fontan Patients - A Novel Approach
Claudius Mahr, DO, University of Washington, Seattle, WA

185 The Role of Acid Suppression Therapy to Reduce GI Bleeding Events in LVAD Patients
Ryan Connolly, MD, Georgetown University, Washington, DC

186 Role of TEG Platelet Mapping (PM) and INR in Defining Normocoagulability” During Anticoagulation for Mechanical Circulatory Support (MCS) Devices”
Oxana Tcherniantchouk, MD, Cedar Sinai Medical Center, Los Angeles, CA

187 Impact of Left Ventricular Assist Device Support on Regional Cerebral Oxygen Saturation
Jiapeng Huang, PhD, University of Louisville, Louisville, KY

188 Ventilation Time Predicts Length of Stay after Surgical Implantation of Left Ventricular Assist Device
Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

189 Mimicking Native Flow During Heart Surgery: A Novel Cannula Design
Tim Kaufmann, PhD, RWTH Aachen University, Aachen, Germany

190 In Vivo Evaluation of Newly Developed Hemocompatible Surface-coating Material for ECMO Devise
Toshihide Mizuno, DVM, PhD, National Cerebral and Cardiovascular Ctr Institute, Suita, Japan

191 Ischemia/reperfusion of the Lower Body Insults Glycemic Variability During Aortic Arch Surgery: Evaluation Using the Artificial Endocrine Pancreas
Nikkiko Stg-55
Hirota Sato, MD, Jichi Medical University, Tochigi, Japan

192 Centering Forces Applied to VAD-Cannulas Placed Across Aortic Valves
Heinrich Schima, PhD, Medical University Vienna, Vienna, Austria

193 Extracorporeal Cardiopulmonary Resuscitation: Development of a Prolonged Cardiac Arrest Animal Model
Nicole Werner, MD, MS, University of Michigan, Ann Arbor, MI
194 The Role of a Microaxial Left Ventricular Assist Device Placed via Axillary Cutdown in the Management of Cardiogenic Shock
Wade Fischer, MD, Medical College of Wisconsin, Milwaukee, WI

195 Control of Mitrail Regurgitation by a Continuous-flow Left Ventricular Assist Device With a Native Heart Load Control System
Noritsugu Naito, MD, National Cerebral and CV Center Research Institute, Osaka, Japan

196 Durability Testing of Volumetric Motor Pumps in the Carmat Total Artificial Heart
Marc Grimm, MSE, Carmat SA, Velizy, France

197 Blood Species Differences in Mechanical Hemolysis Testing
Xueyi Liu, MD, National Cerebral and Cardiovascular Ctr Research Inst, Osaka, Japan

198 In Vitro and In Vivo Evaluation of the Hydrodynamically Levitated Axial Flow Pump for a Left Ventricular Assist Device
Tomonori Tsuikiya, PhD, National Cerebral and Cardiovascular Ctr Research Inst, Osaka, Japan

199 Red Cell Distribution and Its Impact on Produced Hemolysis in Rotary Pumps as a Model Study
Ali Poorkhalil, MSc, RWTH Aachen University, Aachen, Germany

200 Preoperative Creatinine is the Strongest Predictor of Early Renal Dysfunction after Continuous-Flow LVAD Implantation
John Stulak, MD, Mayo Clinic, Rochester, MN

201 Preoperative Bronchoscopic Visualization of Left Ventricular Assist Device Thrombus
Geetha Ghat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

202 E-health Based Management of Patients With Left Ventricular Assist Device in Their Home Environment
Jens Garbade, MD, PhD, Heart Center Leipzig, Leipzig, Germany

203 Factors Influencing Simulation Results and Hemolysis Estimates for the FDA CPI CFD/Blood Damage Project
Margaret Heck, University of Oklahoma, Norman, OK

204 Mechanical Behavior of Porcine Aortic Valve Leaflet under Cantilever Bending Fatigue Test
Paolo Sanchez, MSBE, Universidad de los Andes, Bogota, Colombia

205 Integration of Electronic Controllers into a Miniaturized Centrifugal Blood Pump with Total Magnetic Suspension
Chen Chen, PhD, CH Biomedical Inc, Suzhou, China

206 Preoperative Intravascular Volume Is a Predictive Factor for Early Mortality After Extracorporeal Pulsatile Ventricular Assist Device Implantation
Daisuke Nitta, University of Tokyo, Tokyo, Japan

207 Polyethylene Barrier Layers to Reduce Water Transmission Through Dynamically Loaded Membranes in a Total Artificial Heart
Felix Hesselmann, Dipl.-Ing, RWTH Aachen University, Aachen, Germany

208 Improvement of Flow Measurements in an Oxygenator Model with Particle Tracking
Felix Hesselmann, Dipl.-Ing, RWTH Aachen University, Aachen, Germany

209 Development of an Anti-Interference Control System for a Miniaturized Maglev Blood Pump
Chengke Yin, PhD, Soochow University, Soochow, China

210 Hemodynamic Effect of Timing Control for an Intra-aortic VAD: A Mock Loop Study
Yaxin Wang, MS, Cambridge University, Cambridge, United Kingdom

211 Numerical Analysis of Newtonian and Non-Newtonian Blood Models in Flow of Spiral Groove Bearings
Zhe Gou, The State Key Laboratory of Fluid Power Transmission and Control, Zhejiang, China

212 In-vitro Evaluation of an Autonomous Control Algorithm Using Stochastic Method for a Ventricular Assist Device
Kentaro Ohnuma, PhD, National Cerebral and Cardiovascular Ctr Research Inst, Osaka, Japan

213 Post-Expant Visualization of Continuous-Flow Total Artificial Heart and Outflow Grafts Using a Miniaturized Camera
Jamshid Karimov, MD, PhD, The Cleveland Clinic, Cleveland, OH

214 Direct Left Atrial Pressure Monitoring in Patient With Total Artificial Heart
Marija Petrovic, MD, University of Texas Health Sciences Center, Houston, TX

215 Feasibility Study of Non-Invasive Ultrasound Assessment in LVAD and TAH for Endothelial Function
Mohammed Kashem, Temple University School of Medicine, Philadelphia, PA

216 The Potential Role Of Hemoperfusion With Polymyxin B Adsorption Filter For Immunomodulatory Effect In Canine Sepsis Model
In Seok Jeong, MD, Chonnam National University Hospital, Republic of Korea

217 Endothelial Abnormalities Following Exposure to Cell-Free Plasma Hemoglobin
Jan-Stanley Simoni, DVM, PhD, Texas Tech University Health Science Center, Lubbock, TX

BIOENGINEERING POSTERS

218 Why the Long-Expected Hb-Based Blood Substitute Has Not yet Become Reality
Jan-Stanley Simoni, DVM, PhD, Texas Tech University Health Science Center, Lubbock, TX

219 Preparation and Characterization of Small Intestine Submucosa-Chitosan Sponges for Use in Deep Wound Repair
Mateo Pineda Quintero, BMBE, Universidad de los Andes, Bogota, Colombia

220 Low Cost Control System for Reproducing In Vivo Pressure and Flowrate at the Benchtop
Joseph Groszek, BS, Vanderbilt University, Nashville, TN

221 Albumin Retention by an Implanted Silicon Nanopore Hemofilter
Joseph Groszek, BS, Vanderbilt University, Nashville, TN

222 Development of a Computational Model for Predictions of Thrombosis in Regions of Flow Separation
Joshua Taylor, BS, Pennsylvania State University, University Park, PA

223 Assessment of Potential Hemolysis and Platelet Activation in the Hinge Region of a Bileaflet Mechanical Heart Valve Using Laser Doppler Velocimetry
Joshua Taylor, BS, Pennsylvania State University, University Park, PA

224 Effects of Fluid Shear Stress on the Functional Radius of VWF-Coated Beads in an Optical Trap
Xavier Candela, BS, Pennsylvania State University, University Park, PA

225 Computational Analysis of the 12cc Penn State Pediatric Ventricular Assist Device
Bryan Good, Pennsylvania State University, University Park, PA

226 Effect of Reynolds Stresses on Hemolysis
Kyle Burke, BS, University of Oklahoma, Norman, OK

227 Development of a Low-Cost Audiogram and Proof of Concept for an Affordable Integrated Audiogram and Hearing Aid
Mukund Venkatakrishnan, duPont Manual High School, Louisville, KY

228 Frequency Spectrum Analysis of Rotary Blood Pump Vibration
J. Ryan Stanfield, MS, University of Utah, Salt Lake City, UT
Porcine Animal Model for Biocompatibility Testing of Vascular Prosthesis in Descending Thoracic Aorta
Dong Jin Kim, MD, Sejong General Hospital, Gyeongg-do, Republic of Korea

Development of Small-caliber Decellularized Vascular Graft Modified with Bioactive Peptides for Neointima-inducing Activity
Atsushi Mahara, PhD, Minnetronix, Saint Paul, MN

Heat Generation During In Vitro Operation of the HeartMate II Left Ventricular Assist Device
Gardner Yost, BS, Advocate Christ Medical Center, Oak Lawn, IL

PFGB Emulsion Stability Study Under Different Preparation Processes
Sandra Navarrete, Universidad de los Andes, Bogota, Colombia

On Replacement of Sickle Hemoglobin (HbS) in RBCs of SCD Patients with Healthy Donor Hb
Luke Ziegler, University of Pittsburgh, Pittsburgh, PA

Control System for Diagnostic and Failure Treatment Applied to a Ventricular Assist Device
Andre Cavlheiro, PhD, Fundacao Santo Andre, Santo Andre, Brazil

Development of a Novel Centrifugal Pump for Compact Heart-Lung Equipment
Shinataro Hara, MS, University of Tokyo, Tokyo, Japan

Importance of a Hybrid Cardiovascular Simulator during the development of an Automatic Rotational Speed Control of an Implantable Centrifugal Blood Pump
Jeison Fonseca, PhD, Institute Dante Pazzanese of Cardiology, Sao Paulo, Brazil

Development of an Extracorporeal Neutrophil Reprogramming Device for the Treatment of Acute Inflammatory Disorders
Alexander Malkin, University of Pittsburgh, Pittsburgh, PA

Disc and Disc Holders of Polish Mechanical Heart Valve Modifications Supported by Numerical Methods
Agieszka Szuber-Dynia, MSc, Prof Zbigniew Religa Foundation Cardiac Surg Development, Poland

CFD Optimized Reservoir for In-Vitro Testing of Intraventricular Rotary Blood Pumps
Salim Olia, BSE, University of Pittsburgh, Pittsburgh, PA

In Vitro Pulsatile Performance Evaluation of the HeartMate Percutaneous Heart Pump (PHP)
Onur Durr, PhD, Thoratec Corporation, Pleasanton, CA

Affordable Prosthetic Hand
Laura Seidel, University North Carolina, Chapel Hill, NC

Concept of the Table Estimation Method of Blood Viscosity Adjusted Pressure and Pump Flow
Yurimoto Terumi, BS, University of Tokyo, Tokyo, Japan

Thromboelastography/Platelet Mapping in Children Supported with the Berlin Heart EXCOR Pediatric: When Might It Not Work and What Are the Alternatives?
Jenna Murray, CPNP-AC, Lucile Packard Children’s Hospital, Palo Alto, CA

Pediatric Heart Transplantation on Impella LVAD Support
Sarah Burki, MD, Texas Children’s Hospital, Houston, TX

Venoarterial ECMO Use as a Bridge to Recovery in Beta Blocker Overdose
Christopher Jenks, BS, Texas A & M University, Dallas, TX

Outpatient Management of Ventricular Assist Device in a Child With Unrepaired Single Ventricle
Iki Adachi, MD, Baylor College of Medicine, Houston, TX

Characterizing Magnetically Levitated Pediatric VAD and Further Miniaturization of Magnetic System
Masahiro Osa, Dr Eng, Ibaraki University, Hitachi, Japan

An Innovative Methodology for Developing a Wearable Artificial Kidney
Qimei Gu, Widener University, Philadelphia, PA

Relative Blood Volume Monitoring for Intradialytic Glucose Tolerance Test
Daniel Schneditz, PhD, Medical University Graz, Graz, Austria

Single-shot In Vitro Phenotypic Characterization of Kidney Cells for Cell Therapy
William Fissell, MD, Vanderbilt University Medical Center, Nashville, TN

A Lifelong Forearm Worn Artificial Pancreas
Arnold Lande, MD, Northport Navigatable Waters Institution, Northport, MI

Renal Artery Embolization for Minimally Invasive Induction of Renal Failure
Willieford Moses, MD, University of California, San Francisco, CA

Immunobarrier Characterization of Slit-Shaped Nanotopography for an Implantable Bioartificial Kidney
Shuvo Roy, PhD, University of California, San Francisco, CA

8:30am - 10:00am
CARDIAC 5 | DEBATE - VADS: DO WE NEED PULSED OPERATION?
Continental Ballroom, Lobby Level
Co-Chairs:
Mark Slaughter, MD, University of Louisville, Louisville, KY
Steven Koenig, PhD, University of Louisville, Louisville, KY

8:30 - 8:45am
Engineering Perspective
Egemen Tuzun, MD, PhD, Texas A&M University, College Station, TX

8:45 - 9:00am
Physician Perspective
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI

9:00 - 9:05am
Rebuttal #1

9:05 - 9:10am
Rebuttal #2

Feasibility Of Daily Smartphone Assessments Of Quality Of Life And Functional Capacity In Left Ventricular Assist Device Patients
Jonathan Rich, MD, Northwestern University, Chicago, IL

Renal Function Recovery with Total Artificial Heart Support
Adam Goodreau, MS, Virginia Commonwealth University, Richmond, VA
9:45 - 10:00am
Design Approach and Pre-Clinical Evaluation of the HeartMate III LVAS for Hemocompatibility
Kevin Bourque, MSME, Thoratec Corporation, Burlington, MA

8:30am - 10:00am
BIOENGINEERING 5 | DEVICE DEVELOPMENT AND TESTING
Salon A-1, Lower Level
Co-Chairs:
Ulrich Steinseifer, PhD, RWTH Aachen University, Aachen, Germany
Heinrich Schima, PhD, Medical University Vienna, Vienna, Austria

8:30 - 8:45am
Improving Computational Modeling: From Colorful Fluid Dynamics to Clinically Relevant Fluid Dynamics
Greg Burgreen, PhD, Mississippi State University, Starkville, MS

8:45 - 9:00am
Clinically Relevant Testing for Artificial Organs
Ulrich Steinseifer, PhD, RWTH Aachen University, Aachen, Germany

ABSTRACT PRESENTATIONS
9:00 - 9:15am
Working With FDA’s Center for Devices to Advance Regulatory Science and Medical Device Innovation
Richard Malinauskas, PhD, Food and Drug Administration, Silver Spring, MD

9:15 - 9:30am
Improved PIV Method to Visualize Blood-Sided Flow Inside a Hollow-Fiber Membrane Oxynogenator
Andreas Keesler, Dipl.-Ing, RWTH University, Aachen, Germany

9:30 - 9:45am
Comparison and Evaluation of Vascular Hemodynamic Effects for Mechanical Circulatory Support Devices
Yu Wang, PhD, University of Louisville, Louisville, KY

9:45 - 10:00am
Acoustic Detection of Left Ventricular Assist Device Thrombosis
Gardner Yost, BS, Advocate Christ Medical Center, Oak Lawn, IL

8:30am - 10:00am
PULMONARY 5 - PRACTICAL / CLINICAL APPLICATIONS OF ECCO2R & ECMO
Salon A-2, Lower Level
Co-Chairs:
Matthew Bacchetta, MD, Columbia University Medical Center, New York NY
Scott Morley, BSE, MBA, Alung Technologies Inc, Pittsburgh, PA

8:30 - 8:50am
Strategies to Prevent Ventilator Induced Lung Injury (VILI)
Darryl Abrams, MD, Columbia University Medical Center, New York, NY

8:50 - 9:10am
ECCO2R for Hypercapnia and ARDS
Jeremy Kimmel, PhD, Alung Technologies Inc, Pittsburgh, PA

9:10 - 9:30am
Awake and Extubated on ECMO
Darryl Abrams, MD, Columbia University Medical Center, New York, NY

ABSTRACT PRESENTATIONS
9:30 - 9:45am
Veno-Venous Versus Veno-Arterial Extracorporeal Membrane Oxygenation for Patients with Acute Respiratory Distress Syndrome Requiring Pre-cannulation Hemodynamic Support: A Review of the ELSO Registry
Zachary Kon, MD, University of Maryland School of Medicine, Baltimore, MD

9:45 - 10:00am
A Pulsatile Pump Integrated Gas Exchange Device
Dongfang Wang, MD, PhD, University of Kentucky College of Medicine, Louisville, KY

8:30am - 10:00am
RENAL 5 | AKI AND EXTRACORPOREAL SUPPORT
Salon A-3, Lower Level
Co-Chairs:
Lenar Yessayan, MD, Henry Ford Hospital, Detroit, MI
Michael Heung, MD, University of Michigan, Ann Arbor, MI

8:30 - 8:45am
oXiris Membrane for CRRT With High Volume CVVH and RCA
Patrick Honore, MD, PhD, VUB University, Brussels, Belgium

8:45 - 9:00am
Integrating a CRRT Circuit With CPFA
Balazs Szamosfalvi, MD, Henry Ford Hospital, Detroit, MI

9:00 - 9:15am
Integrating a CRRT Circuit With ECMO, LVAD
Rob Wonnacott, MSN, RN, CCRN, University of Michigan, Ann Arbor, MI

9:15 - 9:30am
Mixed Matrix Membranes, Combining Membrane Filtration With Adsorption
Dimitrios Stamatialis, PhD, University of Twente, The Netherlands

ABSTRACT PRESENTATIONS
9:30 - 9:45am
Protective Effect of Coupled Plasma-Filtration Adsorption (CPFA) on Bile-associated Cast Nephropathy and Acute Kidney Injury through Direct Adsorption of Bilirubin and Liver-type Fatty Acid Binding Protein
Vincenzo Cantaluppi, MD, University of Torino, Italy

9:45 - 10:00am
Outside-In Hemofiltration For Prolonged Operation Without Clogging - Hydrodynamics, Filter Designs and Challenges
Mohamed Labib, PhD, Novaflux Technologies, Princeton, NJ

8:30am - 10:00am
PEDIATRIC 4 | PEDIATRIC ABSTRACTS
Salon A-5, Lower Level
Co-Chairs:
Iki Adachi, MD, Texas Children’s Hospital, Houston, TX
Janet Scheel, MD, Children’s National Medical Center, Washington, DC

8:30 - 8:45am
Supporting Children with Congenital Heart Disease with the HeartWare HVAD
Aamir Jeewa, MD, Baylor College of Medicine, Houston, TX

8:45 - 9:00am
Pulmonary Artery Band Reduces Left Atrial Pressure in Dilated Cardiomyopathy
Travis Vesel, MD, Texas Children’s Hospital, Houston, TX

9:00 - 9:15am
Family of New Polish Moll Type Tilting Disc Valves for Application in Pediatric Pneumatic VAD - Functional and Performance In-vitro and In-vivo Studies
Maciej Glowachi, BS, Prof Zbigniew Religa Foundation of Cardiac Surg Development, Poland
9:15 - 9:30am  
In vivo testing of the Penn State Infant VAD with Progressive Reductions in Anticoagulation  
William Weiss, PhD, Penn State College of Medicine, Hershey, PA

9:30 - 9:45am  
Weaning of a Continuous Flow Left Ventricular Assist Device: Decision to Exclude the Device  
Melissa Jones, MSN, APRN, CPNP-AC, Children's National Health System, Washington, DC

9:45 - 10:00am  
Q & A

10:00 - 10:45am  
ENJOY REFRESHMENTS - Salon C, Lower Level

10:45am - 12:00pm  
CARDIAC 6 | STRIVING FOR DEVICE RELIABILITY  
Continental Ballroom, Lobby Level  
Co-Chairs:  
Hari Mallidi, MD, Baylor College of Medicine, Houston, TX  
Marvin Slepian, MD, University of Arizona, Tucson, AZ

ABSTRACT PRESENTATIONS

10:45 - 11:00am  
INTERMACS 1 Patients: Can They Be Rescued with Left Ventricular Assist Devices or Are They Beyond Salvageable  
Ann Gaffey, MD, University of Pennsylvania Hospital, Philadelphia, PA

11:00 - 11:15am  
Hospital Survival and Financial Metrics in Adults Requiring Veno-Arterial Extra-Corporeal Membrane Oxygenation  
Ron Angona, MS, CCP, University of Rochester Medical Center, Rochester, NY

11:15 - 11:30am  
Changes in Valve Function with LVAD: Comparison of HeartWare (HW) and Heartmate II (HM)  
Asad Rauf, BS, Intermountain Medical Center, Murray, UT

11:30 - 11:45am  
Accuracy of Detecting the Presence of Left Ventricular Thrombus With Pre- and Intraoperative Echocardiogram in Patients Undergoing Left Ventricular Assist Device Implantation  
Heidi Schubmehl, MD, Univ of Rochester Medical Center, Rochester, NY

11:45am - 12:00pm  
Mechanistic Insight of Platelet Apoptosis Leading to Non-Surgical Bleeding Among Heart Failure Patients Supported by Continuous-Flow Left Ventricular Assist Devices  
Nandan Mondal, PhD, University of Louisville, Louisville, KY

10:45am - 12:00pm  
BIOENGINEERING 6 | FUTURE OF ARTIFICIAL ORGANS  
Salon A-1, Lower Level  
Co-Chairs:  
Mark Slaughter, MD, University of Louisville, Louisville, KY  
Kartik Sundareswaran, PhD, Thoratec Corporation, Pleasanton, CA

10:45 - 11:20am  
Debate - Biological Approaches Will Supersede Devices Within 20 Years  
Pro:  
David Feldman, MD, University of Cincinnati Medical Center, Cincinnati, OH  
Con:  
Ranjit John, MD, University of Minnesota, Minneapolis, MN

11:20 -11:55am  
Debate - Future of Device Therapy for Advanced Biventricular Failure  
Total Artificial Heart:  
Jack Copeland, MD, Redlands, CA  
Ventricular Assist Device:  
Walter Dembitsky, MD, Sharp Memorial Hospital, San Diego, CA

10:45am-12:00pm  
PULMONARY 6 | ECLS DEVICES: FROM BENCH TO BEDSIDE TO RCT  
Salon A-2, Lower Level  
Co-Chairs:  
Scott Morley, BSE, MBA, ALung Technologies Inc, Pittsburgh, PA  
Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA

11:05 - 11:25am  
ECMOnet: Coordinating Care for ECLS  
Niranjan Agerstranda, MD, Columbia University Medical Center, New York, NY

ABSTRACT PRESENTATIONS

11:30 - 11:45am  
Inolivent: An Advanced Liquid Ventilator Prototype for Preclinical Research in Total Liquid Ventilation  
Raymond Robert, PhD, Universite de Sherbrooke, Sherbrooke, Canada

11:45am - 12:00pm  
A Novel OxyRVAD Circuit Using the SYNERGY Micropump as Right Heart Support in a Swine Model of Pulmonary Hypertension  
Nicholas Shea, BA, Columbia University, New York, NY

10:45am - 12:00pm  
RENEAL 6 | SOLUTE AND DRUG MONITORING  
Salon A-3, Lower Level  
Co-Chairs:  
Balazs Szamosfalvi, MD, Henry Ford Hospital, Detroit, MI  
Michael Heung, MD, University of Michigan, Ann Arbor, MI

10:45 - 11:00am  
Effluent-Based Drug Monitoring  
William Fissell, MD, Vanderbilt University Medical Center, Nashville, TN

11:00 - 11:15am  
Drug Clearances With Emerging Technologies (Such as ECMO, MARS, SLED/CRRT)  
Bruce Mueller, PharmD, University of Michigan, Ann Arbor, MI

11:15 - 11:30am  
Infrared Spectroscopy in Hemodialysis  
Werner Maentele, PhD, Goethe University, Frankfurt, Germany

11:30 - 11:45am  
Volatile Organic Compound Measurement by Breath Analysis  
Sevag Demirjian, MD, Cleveland Clinic, Cleveland, OH
WARNING: Serious and life-threatening adverse events, including stroke, have been associated with use of this device. A user must fully consider the risks of this device with that of other treatment modalities before deciding to proceed with device implantation.

In the USA the HVAD system is intended for use as a bridge to cardiac transplantation in patients who are at risk of death from refractory end-stage left ventricular heart failure.

CAUTION: Federal law (USA) restricts this device to sale by or on the order of a physician. Refer to the “Instructions for Use” for complete indications for Use, Contraindications, Warnings, Precautions, Adverse Events and Instructions prior to using this device. The IFU can be found at www.heartware.com/clinicians/instructions-use.

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