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Their superior project management ensures timeliness and accountability, all while proposing innovative solutions with an eye toward developing and enhancing a company’s IP.

Philip Vierling, CEO
Kalypto Medical
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ASAIO JOURNAL

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ASAIO JOURNAL MANUSCRIPTS
The ASAIO Journal Publisher, Wolters Kluwer Health - Lippincott Williams & Wilkins will be in Exhibit Booth #9. Manuscripts are to be submitted online to www.editorialmanager.com/asaio

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ACCREDITATION
Physicians | Nurses | Pefusionists

PHYSICIANS
CME 27.75 AMA PRA CATEGORY 1 CREDITS™

Sign In Daily At The Registration Counters & Complete Evaluation Forms For Every Session You Attend.

This live activity has been planned and implemented in accordance with the essential areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the University of Massachusetts Medical School Office of Continuing Medical Education (UMMS-OCME) and ASAIO. The UMMS-OCME is accredited by the ACCME to provide continuing medical education for physicians.

The University of Massachusetts Medical School designates this educational activity for a maximum of 27.75 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

WEDNESDAY, JUNE 13TH ....................... 6.5 CREDITS (PEDIATRIC SESSION)
WEDNESDAY, JUNE 13TH ....................... 2.75 CREDITS (VAD COORDINATOR SESSION)
THURSDAY, JUNE 14TH ......................... 6.75 CREDITS
FRIDAY, JUNE 15TH ............................... 6.5 CREDITS
SATURDAY, JUNE 16TH ....................... 5.25 CREDITS

NURSES | CEU 33.3 CREDITS

Sign In Daily At The Registration Counters & Complete Evaluation Forms For Every Session You Attend.

WEDNESDAY, JUNE 13TH ....................... 7.8 CREDITS (PEDIATRIC SESSION)
WEDNESDAY, JUNE 13TH ....................... 3.3 CREDITS (VAD COORDINATOR SESSION)
THURSDAY, JUNE 14TH ......................... 8.1 CREDITS
FRIDAY, JUNE 15TH ............................... 7.8 CREDITS
SATURDAY, JUNE 16TH ....................... 6.3 CREDITS

PERFUSIONIST | CCP 21.2 CATEGORY 1 CEU’S

Sign In Daily At The Registration Counters & Complete Evaluation Forms For Every Session You Attend. A photo ID is required for participation to obtain registration materials

The American Board of Cardiovascular Perfusion will allot the following Category 1 CEUs to those Perfusionists who attend the ASAIO Annual Conference as follows:

WEDNESDAY, JUNE 13TH ....................... 5.9 CEU’S (PEDIATRIC SESSION)
WEDNESDAY, JUNE 13TH ....................... 3.3 CEU’S (VAD COORDINATOR SESSION)
THURSDAY, JUNE 14TH ......................... 3.3 CEU’S
FRIDAY, JUNE 15TH ............................... 3.6 CEU’S
SATURDAY, JUNE 16TH ....................... 5.1 CEU’S
ASAIO AWARD & FELLOWSHIP RECIPIENTS 2012

WILLEM J KOLFF / DON B OLSEN AWARD
SPONSORED BY THE MEDFORTÉ FOUNDATION
Karen Trainor, DVM, MS – Research Assistant Professor, Veterinary Pathology, Texas A & M University
“Comparative Pathology of an Implantable Left Atrial Pressure Monitor”

ASAIO Y NOSÉ INTERNATIONAL FELLOWSHIP
SPONSORED BY THE Y NOSÉ FELLOWSHIP FUND
Mamoru Arakawa, MD - Research Staff, Artificial Organs, National Cerebral & Cardiovascular Center
“Alternation of LV Preload by Continuous-Flow LVAD with Native Heart Load Control System (NHLCS) in Chronic Heart”

ASAIOFY! – FOR YOUNG INNOVATORS FELLOWSHIP RECIPIENTS
SPONSORED BY THE PAUL S. MALCHESKY FELLOWSHIP FUND
Kyungsoo Lee, PhD - Researcher, Internal Medicine, University of Michigan Health System
“Development of a Multifunctional Detoxifying Unit for Liver Failure Patients”

Megan Jamioikowski – Bioengineering Graduate Student, University Of Pittsburgh
“A System for Real Time Visualization of Platelet Deposition onto Opaque Surfaces Using Hemoglobin Depleted Blood”

Kavitha Muthiah, MBchB - Cardiology Research Fellow, St. Vincent’s Hospital, Sydney
“Effect of Concomitant Speed Increase with Exercise on Invasively Measured Hemodynamics in Patients with Continuous Flow left Ventricular Assist Devices (LVADs)”

Mariko Kobayashi, MD – Professor, Thoracic Surgery, Cleveland Clinic
“Initial Biocompatibility Evaluation of the Continuous-Flow Total Artificial Heart in a Calf”

Sean McCandless – Bioengineering Research Associate, Intermountain Medical Center
“Temporary Ventricular Assist Devices as a Bridge to Long-Term Support: Are They Effective?”

Leonard Ebah, MD - Research Fellow, Renal Medicine, Manchester Royal Infirmary
“Design, Manufacture and Application of Hollow Polymer Microneedles for Sampling Interstitial Fluid in Kidney Disease”
ASAIO EXHIBITS, POSTERS, REFRESHMENTS & REGISTRATION

June 14-16, 2012
Grand Ballroom | Fairmont San Francisco

Booth 1  Thoratec Corporation
Booth 2  Fresenius Medical Care North America
Booth 3  SynCardia Systems Inc
Booth 4  International Center for Artificial Organs & Transplantation
Booth 5  Transonic
Booth 6  Berlin Heart Inc
Booth 7  Abiomed Inc
Booth 8  MAQUET Medical Systems
Booth 9  Wolters Kluwer Health–Lippincott Williams & Wilkins
Booth 10  HeartWare
**ABIOMED INC**
**BOOTH 7**
**DANVERS, MASSACHUSETTS**

Abiomed was founded in 1981 and is the leading provider of breakthrough heart support technologies. From the world’s first total replacement heart to the World’s Smallest Heart Pump that provides circulatory support with rapid and simple insertion, Abiomed is dedicated to finding ways to treat heart failure so that patients and physicians have the most advanced, successful and beneficial technology available to improve quality of life.

---

**Fresenius Medical Care**
**FRESENIUS MEDICAL CARE NORTH AMERICA**
**BOOTH 2**
**WALTHAM, MASSACHUSETTS**

DialiSorb Regenerative Sorbent Technology by Fresenius Medical Care.

DialiSorb Sorbent Technology is a dialysate purification and regeneration process that uses as little as 10 liters of potable tap water for a sorbent dialysis treatment. This innovative technology which is based on 35 years of renal experience will offer numerous benefits such as:

- Mobility with low water volume
- Freedom from complex water purification systems
- Treatment delivery in a wide range of environments

The promise of DialiSorb Sorbent Technology is true mobility and future wearability changing the dialysis landscape forever.

---

**BERLIN HEART INC**
**BOOTH 6**
**THE WOODLANDS, TEXAS**

Berlin Heart, the only company worldwide that manufactures and distributes implantable (INCOR®) and paracorporeal (EXCOR®) VADs for patients of every age and body size with cardiovascular disease. EXCOR® Pediatric is now FDA approved for use in the United States.

---

**HEARTWARE INC**
**BOOTH 10**
**FRAMINGHAM, MASS**

HeartWare, Inc. is developing a family of implantable mechanical circulatory support systems for the treatment of advanced heart failure. Through a cadence of progressively smaller devices implanted using less invasive techniques, HeartWare expects to treat an increasing proportion of heart failure patients and to access them at an earlier stage of their disease progression. HeartWare’s lead device, the HeartWare® Ventricular Assist System, incorporates state-of-the-art peripherals and features the only full-output pump designed to be implanted less invasively in the pericardial space. The HeartWare® System has CE-Mark approval and is currently the subject of a 150-patient US IDE clinical trial.

---

**SYNCARDIA SYSTEMS INC**
**BOOTH 3**
**TUCSON, ARIZONA**

The SynCardia temporary Total Artificial Heart (TAH-t) is the world’s only FDA, Health Canada and CE approved Total Artificial Heart. Originally used as a permanent replacement 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 is undergoing an IDE clinical study in the U.S. The Freedom driver is designed to provide mobility for stable TAH-t patients both inside and outside the hospital. Visit our booth for updates on the study, Companion 2 Driver System and the 50cc TAH-t.

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**THORATEC CORPORATION**
**BOOTH 1**
**PLEASANTON, CALIFORNIA**

Thoratec is a world leader in therapies to address advanced-stage heart failure. The company’s products include the HeartMate® LVAS (Left Ventricular Assist System) and Thoratec® VAD (Ventricular Assist Device) with more than 18,000 devices implanted in patients suffering from heart failure. Thoratec also manufactures and distributes the CentriMag® and PediMag®/PediVAS® product lines. For more information, visit the company’s website at http://www.thoratec.com.
MAQUET
GETINGE GROUP

MAQUET MEDICAL SYSTEMS, USA
BOOTH 8
WAYNE, NEW JERSEY

MAQUET Medical Systems, USA is a global market leader offering a comprehensive portfolio of products utilized in the Hybrid OR, ICU, Cath Lab including tables, lights and booms as well as Anesthesia, Ventilation and Cardiac support. Our products are designed to meet the needs of clinical professionals in the areas of: surgery, cardiac intervention, perfusion, anesthesia, and respiratory. MAQUET is focused on improving patient care and quality of life, providing clinicians with future-oriented technology that fits their daily practice and investing in the development of innovative technologies and solutions that will help further advance clinical practice and significantly improve patient outcomes.

TRANSONIC SYSTEMS INC
BOOTH 5
ITHACA, NEW YORK

Transonic Systems’ Flowmeter products, the recognized gold standard volume flow measurement apparatus for liquids in clinical and laboratory settings. Transonic Flowmeters are used worldwide in Cardiovascular Surgery, Vascular Access Angioplasty, Neurosurgery, Intensive and Critical Care, Product Testing, Laboratory Research, Hemodialysis Monitoring and as components in VAD, CPB and clinical devices. Transonic now also has a full line of pressure and pressure volume catheters for laboratory use. Transonic Systems display will feature:
• Transonic Flowmetering for intra-operative and implantable use
• EndoGear fully implantable systems
• Scisense pressure apparatus
• Clinical Transonic Inside OEM products and capabilities.

WOLTERS KLUWER HEALTH – LIPPINCOTT WILLIAMS & WILKINS
BOOTH 9
PHILADELPHIA, PENNSYLVANIA

Wolters Kluwer Health (Philadelphia, PA) is a leading global provider of information, business intelligence and point-of-care solutions for the healthcare industry and the proud publisher of the ASAIO Journal, A Peer Reviewed Journal of the American Society for Artificial Internal Organs. Major brands include traditional publishers of medical and drug reference tools, journals and textbooks, such as Lippincott Williams & Wilkins; and electronic information providers, such as Ovid®, UpToDate®, Medi-Span®, Facts & Comparisons®, Pharmacy OneSource® and ProVation® Medical.

ICAOT – INTERNATIONAL CENTER FOR ARTIFICIAL ORGANS AND TRANSPLANTATION
BOOTH 4
PAINESVILLE, OHIO

The International Center for Artificial Organs and Transplantation is organized to maintain and operate an educational center. It supports the International Center for Medical Technologies’ Museum on artificial organ technologies, manages the publication of Artificial Organs and Therapeutic Apheresis and Dialysis, and disseminates information on the historical development, current state of the art and future development of artificial organs and organ transplantation.
### ASAIO PROGRAM OUTLINE

**THURSDAY, JUNE 14, 2012**

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<th>Time</th>
<th>Session</th>
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<tr>
<td>7:45 AM</td>
<td><strong>GENERAL SESSION 1 – GOLD ROOM/LOBBY</strong> International Issues In Artificial Organs Development</td>
</tr>
<tr>
<td></td>
<td>Common Challenges: Anticoagulation &amp; Thrombosis In Adults &amp; Pediatrics</td>
</tr>
<tr>
<td>9:30 AM</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS – ENJOY REFRESHMENTS – GRAND BALLROOM</strong></td>
</tr>
<tr>
<td>12:15 PM</td>
<td><strong>LUNCH BREAK ASAIOfy Luncheon for ASAIOfy Members Meet the Journal Editor &amp; Managing Editor</strong></td>
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<tr>
<td></td>
<td><strong>GARDEN ROOM LOBBY</strong> – <strong>TICKET REQUIRED</strong></td>
</tr>
<tr>
<td>1:30 PM</td>
<td><strong>CARDIAC 1</strong> Bleeding &amp; Anticoagulation VAD Patients – <strong>VENETIAN ROOM LOBBY</strong></td>
</tr>
<tr>
<td></td>
<td><strong>BIOENGINEERING 1</strong> Applied Biomaterials &amp; Nanomedicine – <strong>PAVILION ROOM LOBBY</strong></td>
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<tr>
<td></td>
<td><strong>PULMONARY 1</strong> Ambulatory ECMO / Artificial Lung – <strong>CRYSTAL ROOM LOBBY</strong></td>
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<tr>
<td></td>
<td><strong>RENAL 1</strong> Man &amp; Machine: Pt &amp; Technical Barriers In Home Hemodialysis – <strong>CALIFORNIA ROOM MEZZANINE</strong></td>
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<tr>
<td>3:00 PM</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS – ENJOY REFRESHMENTS – GRAND BALLROOM</strong></td>
</tr>
<tr>
<td>3:45 PM</td>
<td><strong>CARDIAC 2</strong> Pro - Con: VADs In Less Ill Cohort</td>
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<tr>
<td></td>
<td><strong>BIOENGINEERING 2</strong> Anti-Thrombogenic Surfaces – <strong>PAVILION ROOM LOBBY</strong></td>
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<td><strong>RENAL 2</strong> Novel Technologies Pt Monitoring – <strong>CALIFORNIA ROOM MEZZANINE</strong></td>
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<td><strong>PEDIATRIC 1</strong> Pediatric VAD Support – <strong>INTERNATIONAL ROOM MEZZANINE</strong></td>
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<tr>
<td>6:00 PM</td>
<td>**ASAIO WELCOME RECEPTION – CROWN ROOM 24TH FLOOR – <strong>TICKET REQUIRED</strong></td>
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**FRIDAY, JUNE 15, 2012**

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<th>Time</th>
<th>Session</th>
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<tr>
<td>8:00 AM</td>
<td><strong>GENERAL SESSION 2 – GOLD ROOM/LOBBY</strong> New Venture Forum - The First Annual &quot;Medical Device Entrepreneur’s Forum”</td>
</tr>
<tr>
<td></td>
<td>ASAIO Hastings Lecture</td>
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<tr>
<td>8:00 AM</td>
<td><strong>ASAIOfy FOR YOUNG INNOVATORS</strong> – Rapid Fire Presentations</td>
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<tr>
<td>10:00 AM</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS – ENJOY REFRESHMENTS – GRAND BALLROOM</strong></td>
</tr>
<tr>
<td>12:15 PM</td>
<td><strong>LUNCH BREAK ASAIOfy Luncheon for ASAIOfy Members – Career Development</strong></td>
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<tr>
<td></td>
<td><strong>GARDEN ROOM LOBBY</strong> – <strong>TICKET REQUIRED</strong></td>
</tr>
<tr>
<td>1:30 PM</td>
<td><strong>CARDIAC 3</strong> Physiologic Adaptation to VADs – <strong>VENETIAN ROOM LOBBY</strong></td>
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<tr>
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<td><strong>BIOENGINEERING 3</strong> Blood Damage &amp; Thrombosis Modeling – <strong>PAVILION ROOM LOBBY</strong></td>
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<td><strong>FOUNTAIN ROOM LOBBY</strong> Commercialization Symposium – <strong>FOUNTAIN ROOM LOBBY</strong></td>
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<td></td>
<td><strong>PEDIATRIC 2</strong> Pediatric ECMO / ECLS – <strong>INTERNATIONAL ROOM MEZZANINE</strong></td>
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<tr>
<td>3:15 PM</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS – ENJOY REFRESHMENTS – GRAND BALLROOM</strong></td>
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<tr>
<td>4:00 PM</td>
<td><strong>CARDIAC 4</strong> Are VAD's Economically Viable?</td>
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<tr>
<td></td>
<td><strong>BIOENGINEERING 4</strong> Computers &amp; Experiments: Prediction &amp; Validation – <strong>PAVILION ROOM LOBBY</strong></td>
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<td><strong>PULMONARY 2</strong> Chronic &amp; Acute Hypercapnic Failure – <strong>CRYSTAL ROOM LOBBY</strong></td>
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<td></td>
<td><strong>RENAL 3</strong> Innovative Approaches To Extracorporeal Renal Support With Immediate Applicability – <strong>CALIFORNIA ROOM MEZZANINE</strong></td>
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<tr>
<td>5:45 PM</td>
<td><strong>ASAIO MEMBER BUSINESS MEETING – HUNT ROOM/MEZZANINE</strong></td>
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**SATURDAY, JUNE 16, 2012**

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<th>Session</th>
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<tbody>
<tr>
<td>8:00 AM</td>
<td><strong>CARDIAC 5</strong> VAD Clinical Outcomes – <strong>VENETIAN ROOM LOBBY</strong></td>
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<td></td>
<td><strong>BIOENGINEERING 5</strong> Human Factors Engineering – <strong>PAVILION ROOM LOBBY</strong></td>
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<td><strong>PULMONARY 3</strong> New &amp; Novel Artificial Lung Technologies – <strong>CRYSTAL ROOM LOBBY</strong></td>
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<td><strong>CARDIAC 6</strong> VAD Hemodynamics – <strong>GOLD ROOM LOBBY</strong></td>
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<tr>
<td>9:30 AM</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS – ENJOY REFRESHMENTS – GRAND BALLROOM</strong></td>
</tr>
<tr>
<td>10:15 AM</td>
<td><strong>GENERAL SESSION 3 – GOLD ROOM/LOBBY</strong> Keynote Address Innovations: Past, Present And Future</td>
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<td>– Dean Kamen, PhD, President DEKA Research &amp; Development Corporation</td>
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<tr>
<td>10:45 AM</td>
<td><strong>CARDIAC 7</strong> Industry Speaks: Improvements In Device Technology – <strong>VENETIAN ROOM LOBBY</strong></td>
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<td></td>
<td><strong>BIOENGINEERING 6</strong> Oral Presentations – <strong>PAVILION ROOM LOBBY</strong></td>
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<td><strong>PULMONARY 4</strong> Oral Presentations – <strong>CRYSTAL ROOM LOBBY</strong></td>
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<td><strong>RENAL 4</strong> Technological Innovations In Dialysis Delivery – <strong>CALIFORNIA ROOM LOBBY</strong></td>
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<tr>
<td>12:00 PM</td>
<td><strong>LUNCH BREAK</strong></td>
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<tr>
<td>1:30 PM</td>
<td><strong>CARDIAC 8</strong> VAD Complications – <strong>VENETIAN ROOM LOBBY</strong></td>
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<td><strong>BIOENGINEERING 7</strong> Engineering Approaches In The Development Of Artificial Organs – <strong>PAVILION ROOM LOBBY</strong></td>
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<td></td>
<td><strong>PULMONARY 5</strong> Oral Presentations – <strong>CRYSTAL ROOM LOBBY</strong></td>
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<td><strong>CARDIAC 9</strong> Cardiopulmonary Bypass – <strong>FOUNTAIN ROOM LOBBY</strong></td>
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MEZZANINE LEVEL
6/14 – 6/16  •  Renal Sessions  •  California Room
6/14 – 6/15  •  Pediatric Sessions  •  International Room
6/15  •  ASAIOfyi Rapid Fire Presentations  •  California Room
6/15  •  ASAIO Member Business Meeting  •  Hunt Room

LOBBY LEVEL
6/13 – 6/16  •  Speaker Ready Room  •  French Room
6/13  •  ASAIO VAD Coordinator Sessions  •  Crystal Room
6/14 – 6/16  •  General Sessions  •  Gold Room
6/14 – 6/16  •  Cardiac Sessions  •  Venetian Room 1-5 & 7-8
6/16  •  Cardiac 6 Gold Room and Cardiac 9 Fountain Room
6/14 – 6/16  •  Bioengineering Sessions  •  Pavilion Room
6/14 – 6/16  •  Pulmonary Sessions  •  Crystal Room
6/15  •  Commercialization Session  •  Fountain Room

TERRACE LEVEL
6/13  •  ASAIO Pediatric Conference  •  Terrace Room

GRAND BALLROOM LEVEL
6/13 – 6/16  •  ASAIO Registration
6/14 – 6/16  •  Exhibits
6/14 – 6/16  •  Poster Presentations
6/14 – 6/16  •  Refreshment Breaks
**WednesDay, June 13**

ASAIO FIRST ANNUAL PEDIATRIC PROGRAM

8:30 AM - 4:30 PM  Terrace Room - Terrace Level  
Co-Sponsored by Berlin Heart Inc

**Introduction and Welcome**

8:30AM – 8:40AM  
Peter Wearden, MD, PhD, Associate Professor of Pediatric CT Surgery, Childrens Hospital of Pittsburgh

**PumpKIN Contractors**

8:40AM-8:55AM  
PediaFlow Pediatric Ventricular Assist Device  
Harvey S. Borovetz, PhD, Professor of Bioengineering, University of Pittsburgh

8:55AM-9:10AM  
Integrated Pediatric Cardiopulmonary Assist System  
Mark Gartner, PhD, President, Ension, Inc.

9:10AM-9:25AM  
Pediatric Pump Lung  
Bartley Griffith, MD, Professor of Cardiac Surgery, University of Maryland Medical Center

9:25AM-9:40AM  
Infant and Child Size Jarvik 2000 Hearts  
Antonio Amodeo, MD, Bambino Gesu Children's Hospital, Rome (for Dr Jarvik)

9:40AM-9:55AM  
Panel Discussion

9:55AM-10:15AM  
Overview Of The PumpKIN Clinical Protocol  
Ellen Rosenberg, RN, Clinical Trials Specialist, CV Sciences, NIH/NHLBI

10:15AM-10:55AM  
Plans For The Multicenter Clinical Trial Management  
Timothy Baldwin, PhD, Program Director, DCVS-BETR-ATSB, National Institutes of Health

**Refreshment Break**

10:55AM-11:20AM

**Anticoagulation and Thrombosis**

11:20AM-11:45AM  
Anticoagulation Challenges In Pediatric Mechanical Circulatory Support  
Patricia Massicotte, MD, MS, Professor Pediatrics, University of Alberta

11:45AM-12:10PM  
Developmental Changes In Platelet Biology  
Alan Michelson, MD, Professor Pediatrics & Medicine, Childrens Hospital Boston

Lunch Break

12:10PM-1:10PM

**Outcomes Measurement**

1:10PM-1:35PM  
Challenges In Assessment Of Quality of Life In Pediatrics  
Elizabeth Blume, MD, Associate Prof & Medical Dir, Heart Failure /Transplant, Childrens Hospital Boston

1:35PM-2:00PM  
Monitoring Neurologic Outcomes In Pediatric MCS  
Rebecca Ichord, MD, Associate Prof Neurology/Pediatrics, Childrens Hospital Philadelphia

2:00PM-2:25PM  
Considerations And Challenges For Discharge Or Destination Therapy In Pediatrics  
Stephen Winowich, ChE, President Artificial Heart Program, University of Pittsburgh Medical Center

**Refreshment Break**

2:25PM-2:50PM

**Challenges For The Future**

2:50PM-3:15PM  
Do We Need BiVADs And Pulsatile Pumps?  
David Morales, MD, Associate Congenital Heart Surgeon, Baylor College of Medicine

3:15PM-3:40PM  
Considerations For Cardiac Recovery In Pediatric VADs  
Justin Yeh, MD, Clinical Assistant Prof of Pediatric Cardiology

3:40PM-4:05PM  
What Is The Role Of ECMO In A Pediatric VAD Program?  
Robert Jaquiss, MD, Chief Pediatric Heart Surgery, Duke Childrens Hospital

Closing

4:05PM-4:30PM  
Closing Comments

ASAIO VAD COORDINATOR SESSION

6:00 PM - 9:00 PM  Crystal Room - Lobby Level

6:00-6:15PM  
Welcome  
Moderator: Anne Cannon, RN, BSN, Program Manager Mech Circ Support, Univ Colorado Hospital

6:15-6:45PM  
Multidisciplinary Functional Mobility Program for LVAD Patients  
Raquel Bunge, RN, BSN, Senior Clinical Nurse, CV Surgery, Methodist Hospital

6:45-7:30PM  
What Do We Do With The Information We Send To waveforms.com?  
Alicia Baumberger, PhD, Project Manager, Thoratec  
Jay Pinette, BS, MBA, Senior Manager of Technical Support & Field Services, Thoratec

7:30-8:15PM  
What Do Those Waveforms Mean?  
Lisa Colton, RN, Heartware Inc.

8:15-8:45PM  
Patient Management -Tales From An Experienced Center  
Marcia Stahovich, RN, CCRN, Advanced Clinician Mech Circ Support, Sharp Memorial Hospital

Panel Discussion

8:45-9:00PM
THURSDAY, JUNE 14

GENERAL SESSION 1
7:45AM-12:15PM  Gold Room - Lobby Level

INTRODUCTION & WELCOME
7:45AM-8:00AM
William Weiss, PhD, ASAIO Program Chairman, Howard E Morgan
Professor of Surgery & Bioengineering, Penn State College of Medicine
H. David Humes, MD, ASAIO President, Professor of Internal Medicine, University Michigan

INTERNATIONAL ISSUES IN ARTIFICIAL ORGANS DEVELOPMENT
8:00AM - 9:30AM
U.S. FDA Global Regulatory Affairs
Carole Carey, BSEE, Director, International Staff
FDA / CDRH
Artificial Organs And Organ Transplantation From A European Perspective
Joerg Vienken, PhD, VP Biosciences, Fresenius Medical Care Deutschland GmbH

Visit Exhibits & Posters - Enjoy Refreshments
9:30AM-10:15AM  Grand Ballroom

COMMON CHALLENGES: ANTICOAGULATION AND THROMBOSIS IN ADULTS AND PEDIATRICS
10:15AM-12:15PM
If I Only Had A Heart: Pathophysiology and Pharmacotherapy Management in MCS.
Paul Nolan, PhD, Professor of Pharmacy Practice & Science, University of Arizona College of Pharmacy
Acquired Von Willebrand Syndrome in VAD Recipients: Updates & Future Directions
Sheri Crow, MD, Assistant Prof Pediatric Critical Care, Mayo Clinic
AntiPlatelet Therapy
Alan Michelson, MD Director Ctr for Platelet Research Studies, Childrens Hospital Boston
Anticoagulation In Hemodialysis: Automated Regional Citrate Anticoagulation Vs. Other Methods
Balazs Szamosfalvi, MD, Staff Physician, Henry Ford Hospital

LUNCH BREAK
12:15PM-1:30PM

ASAIOFYI LUNCHEON - ASAIOFYI MEMBERS
Meet the Journal Editor & Managing Editor
Admission by Ticket Only
12:15PM-1:15PM  Garden Room - Lobby Level
ASAIO Journal Editor in Chief: Joseph Zwischenberger, MD, Surgery Chairman, University of Kentucky
ASAIO Journal Managing Editor: Marjory Spraycar, KWF Editorial Services, LLC

CARDIAC TRACK
1:30PM-3:00PM  Venetian Room - Lobby Level

CARDIAC 1: BLEEDING AND ANTICOAGULATION IN VAD PATIENTS
Co-Chairs: Jonathan Haft, MD, Assistant Professor Surgery, University of Michigan
Sanjeev Aggarwal, MD, Director Mechanical Circulatory Support, Mid America Heart Institute

1:30PM  GI Bleeding
Sanjeev Aggarwal, MD, Director, Mechanical Circulatory Support, Mid America Heart Institute

1:45PM-2:00PM  Results with an Anticoagulation Protocol in 99 Total Artificial Heart Recipients
Jack Copeland, MD - University of California San Diego

2:00PM-2:15PM  Mitochondrial Damage: Potential Mechanism of Platelet Dysfunction Leading to Bleeding Complications in Continuous-Flow Left Ventricular Assist Device (CF-LVAD) Patients
Jingping Hu, PhD - University of Maryland

2:15PM-2:30PM  Can Thromboelastography (TEG) Predict Gastrointestinal Bleeding in Patients with Continuous Flow Pumps?
Homam Ibrahim, MD - The Methodist Hospital

2:30PM-2:45PM  Out with the Old and in with the New: A New Algorithm for Treatment of GI Bleeding in VAD Patients
Konrad Sarosiek, MD - Thomas Jefferson University - ASAIOFYi

2:45PM-3:00PM  New Insights into Non-Surgical Bleeding Risk in VAD Patients: Beyond VWF Multimers
Trevor Snyder, PhD - INTEGRIS Baptist Medical Ctr

CARDIAC POSTER SESSION 1 - POSTERS AVAILABLE ALL DAY IN THE GRAND BALLROOM
POSTER BOARD #

1  Caval Collapse during Venous Drainage during CPB
   Saad Fify Abdel-Sayed, Ph.D. - University Hospital, Switzerland

2  Left Ventricular Stroke Work Control Using a Pulsatile Ventricular Assist Device
   Stijn Vandenberghhe, PhD - University of Bern

3  In-Vivo Performance Study of a Durable Cardiopulmonary Support System Consisting of a Hydrodynamically Levitated Centrifugal Pump
   Tomonori Tsukiya, Deng - Nat’l Cerebral & Cardiovasc Ctr

4  A Single Center Experience with TPA Administration for LVAD Thrombus
   Edwin McGee, Jr., MD - Northwestern Memorial Hospital/ Northwestern University School of Medicine

5  Clinical Outcomes in Older Patients with Continuous Flow Left Ventricular Assist Devices
   Geetha Bhat, MD, PhD, Advocate Christ Medical Center

6  Outcomes for Heart Mate II Continuous-Flow Left Ventricular Assist Device Patients Stratified by Severity of Clinical Status
   Jens Garbade, MD, PhD - University of Leipzig
Elastance-Driven Mock Circuit Controlled with Variable Arterial Capacitance and Resistance
E G Eken, BS - Bahcesehir University

Pulsatile Cardiopulmonary Bypass Augments Hemodynamic Energy Comparable to That of the Native Circulation
Ricardo A Bello, MD, PhD - Montefiore Medical Center

Effects of Hemodilution with Crystalloids and Colloids on RBC Vasodilatory Signaling and Oxygen Affinity
Jan Simoni, DVM, PhD - Texas Tech University Health Sciences Center

Pump Flow Estimation from Pressure Head and Power Uptake for the HeartAssist 5, the HeartMate II and the HeartWare VADS
Kim Penning, MSc - Academic Medical Centre

A New Transcutaneous Communication System Using Human Body as Transmission Medium for Monitoring Implanted Artificial Heart
Eiji Okamoto, PhD - Tokai University

Comparison of Implant Site Effect on Extra-Vascular Counterpulsation Efficacy
Pong-Jeu Lu, PhD - National Cheng Kung University

Circadian Variation of Motor Current Could Be Observed in Fixed Rotation Speed Centrifugal-Continuous Flow LVAD Support
Kenji Suzuki, MD - Tokyo Women's Medical University

Hydrodynamic Bearing for the Helical Flow Total Artificial Heart
Kohei Ishii - The University of Tokyo - ASAIOfyi

Simulation of Cardiovascular Conditions and Critical Events in a Fully Automated Mock Circulatory Loop.
Charles E Taylor, PhD - Virginia Commonwealth University - ASAIOfyi

Right Heart Failure after Continuous Flow LVAD Implant: Intraoperative Management Techniques for Prevention
Tadashi Motomura, MD, PhD - The Methodist Hospital

Weighted Method To Predict Damage in Medical Devices
Samuel J Hund, PhD - Carnegie Mellon University

Predictive Valve of the Model for End Stage Liver Disease (MELD) Score in Patients Undergoing Left Ventricular Assist Device (LVAD) Implantation
Sail V Deo, MS, MCH - Mayo Clinic

Ventricular Assist Device (VAD) Paracorporeal and Totally Implantable Insertion Technique
Danilo R Galantini - Dante Pazzanese

Investigation of Left Right Flow Balancing Approaches of the Reinvest Total Artificial Heart
Marco Laumen, Dipl.-Ing. - RWTH Aachen - University

First-Time Flow Visualization of Transcatheter Aortic Valve-in-Valve
Ahmad Falahatpisheh - University of California, Irvine - ASAIOfyi

Agent Based Modeling of the LVAD Population: Predicting Outcomes
Nathanael O Mason, MBA - Presentation Cancelled

Use of impella® as an Adjunct for Left Ventricular Unloading during ECMO support and as a Bridge to HeartMate II Left Ventricular Assist Device in Acute Cardiogenic Shock
Allen Cheng, MD - University of Rochester

Single Center Experience with Ring Thrombus Formation on Inlet Bearing with Axial Flow Left Ventricular Assist Device
Mark Slaughter, MD - University of Louisville - Jewish Hospital

Factors Contributing to Insufficient Therapeutic Response to Clopidogrel Antiplatelet Therapy in PCI Patients
Jan Simoni, DVM, PhD - Texas Tech University Health Sciences Center

Aortic Occlusion during Extracorporeal Assisted Organ Perfusion in Donors after Cardiac Prevents Cerebral Perfusion
David S Demos, MD - University of Michigan - ASAIOfyi

Importance of Linguistic Details in Messages for the Safety of VADs
Heinrich Schima, PhD - Med. Univ. Vienna Austria

Non-Cardiac Surgery (NCS) in Patients with a Ventricular Assist Device
Juliane Viereck - Deutsches Herzzentrum Berlin

**BIOENGINEERING TRACK**

1:30PM – 3:00PM Pavilion Room - Lobby Level

**BIOENGINEERING 1: APPLIED BIOMATERIALS AND NANOMEDICINE**

Co-Chairs: Thomas Webster, PhD, Associate Professor Engineering, Orthopedics, Brown University

1:30PM Nano: Nano-Micro And Micro Based Structures For Renenerative Engineering
Cato Laurencin, MD, PhD, Director Institute Regenerative Eng. Univ Conn

2:00PM Nanotechnology: Small Materials Meeting Big Medical Challenges
Thomas Webster, PhD, Associate Professor Engineering, Orthopedics, Brown University

2:30PM-2:45PM

Bioengineering the Vasculature of Renal Allografts To Prevent Immune Activation: “Immunocloaking”
Lauren Brasile, PhD - BREVONICS, Inc.

2:45PM-3:00PM

Fibrinogen Activity and Platelet Adhesion on Biomaterial Surfaces
Christopher A Siedlecki - Penn State College of Medicine

**BIOENGINEERING POSTER SESSION 1**

Posters Available All Day in the Grand Ballroom

**POSTER BOARD #**

24 Initial Biocompatibility Evaluation of the Continuous-Flow Total Artificial Heart in a Calf
Mariko Kobayashi, MD - Lerner Research Institute, Cleveland Clinic - ASAIOfyi Fellowship Recipient

25 Immdiazole Cysteodextrin as an Antidote for Acute Cyanide Poisoning
Akira T Kawaguchi, MD, PhD - Tokai University School of Medicine

26 Single Center Experience with Ring Thrombus Formation on Inlet Bearing with Axial Flow Left Ventricular Assist Device
Mark Slaughter, MD - University of Louisville - Jewish Hospital

27 Factors Contributing to Insufficient Therapeutic Response to Clopidogrel Antiplatelet Therapy in PCI Patients
Jan Simoni, DVM, PhD - Texas Tech University Health Sciences Center

28 Aortic Occlusion during Extracorporeal Assisted Organ Perfusion in Donors after Cardiac Prevents Cerebral Perfusion
David S Demos, MD - University of Michigan - ASAIOfyi

29 Importance of Linguistic Details in Messages for the Safety of VADs
Heinrich Schima, PhD - Med. Univ. Vienna Austria

30 Non-Cardiac Surgery (NCS) in Patients with a Ventricular Assist Device
Juliane Viereck - Deutsches Herzzentrum Berlin
### PULMONARY TRACK

**1:30PM - 3:00PM Crystal Room - Lobby Level**

### PULMONARY 1: AMBULATORY ECMO / ARTIFICIAL LUNG

**Chairman:** Charles Hoopes, MD, Director Thoracic Transplant Program, University of Kentucky

- ECMO As Bridge to Transplant: The University Of Pittsburgh Experience
  - Christian Bermudez, MD, Assistant Professor CT Surg, University of Pittsburgh

- Evolution Of Bridging Strategies For Pulmonary Transplantation: The UCSF Experience
  - Jasleen Kukreja, MD, Asst Prof in Residence, Univ of California San Francisco

- Rethinking ECMO in Pulmonary Transplantation and ALI
  - Edward Hoopes, MD, Director Thoracic Transplant Program, University of Kentucky

### RENAL TRACK

**1:30PM-3:00PM California Room - Mezzanine Level**

### RENAL 1: MAN AND MACHINE: PATIENT AND TECHNICAL BARRIERS IN HOME HEMODIALYSIS

**Chairman:** Paul Brakeman, MD, Assistant Professor Pediatrics, University of California San Francisco

- Patient Barriers To Home Dialysis
  - Christopher Chan, MD, Deputy Director Nephrology, University Health Network

- The Patient And Technical Requirements For Home Dialysis
  - Robert Lindsay, MD, Professor of Medicine, University Western Ontario

- The U.S. Experience In Home Hemodialysis
  - Brigitte Schiller, MD, Chief Medical Officer, Satellite Healthcare

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### VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS

**3:00PM-3:45PM Grand Ballroom**

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### CARDIAC TRACK

**3:45PM-5:30PM**

### CARDIAC 2: PRO - CON DEBATE: VADS IN LESS ILL COHORT

**3:45PM-4:25PM Venetian Room - Lobby Level**

**Co-Chairs:**
- **Pro:** Edwin McGee, MD, Surgical Director Heart Tx & Mech Assistance, Northwestern Memorial Hospital
- **Con:** Keith Aaronson, MD, Medical Director Internal Medicine, University of Michigan

- Jennifer Cowger, MD, Assistant Professor, University of Michigan
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THURSDAY, JUNE 14 (CONTINUED)

CARDIAC 2: SYMPOSIUM - SURGICAL TECHNIQUES OF VAD IMPLANTATION

4:25PM-5:30PM
Tricuspid Repair: Is It Necessary?
Aly El Banayosy, MD, Medical Director of MCS Prog, Penn State Hershey College of Med
Aortic Valve insufficiency: When To Do It And How
Walter Dembitsky, MD, Director Cardiac & Mech Circ Support, Sharp Memorial Hospital
Off Pump Implant, How Often Should It Be Done And Is It Worth It?
Benjamin Sun, MD, Chair CT Surgery, Minneapolis Heart Institute

BIOENGINEERING TRACK

3:45PM-5:30PM Pavilion Room - Lobby Level

BIOENGINEERING 2: ANTI-THROMBOGENIC SURFACES

Co-Chairs: Christopher Siedlecki, PhD, Associate Professor Bioengineering & Surgery, Penn State University
Michael Navitsky, BS, Research Assistant Bioeng, Pennsylvania State University
3:45PM Non-Elutable And Elutable Therapeutic Agents To Develop Thromboreistant Stents
Vipul Dave, PhD, Engineering Fellow, Johnson & Johnson
4:15PM Load Capacity And Durability Of DLC Coated LVAD Bearings
Said Johammar, PhD, CEO, MiTiHeart Corporation
4:45PM-5:00PM
A System for Real Time Visualization of Platelet Deposition onto Opaque Surfaces Using Hemoglobin Depleted Blood
Megan A Jamiolekowski, BBE - University of Pittsburgh - ASAIOfyi Fellowship Recipient
5:00PM-5:15PM
An Improved Method To Attenuate Thrombosis by Nitric Oxide Secreting Polymers
Hitesh Handa - University of Michigan - ASAIOfyi
5:15PM-5:30PM
Visualizing Distributions of Platelets and Fibrin on Retrieved LVAS Blood Sacs
Christopher Siedlecki - Penn State College of Medicine

PEDIATRIC TRACK

3:45PM-5:30PM International Room - Mezzanine Level

PEDIATRIC 1: PEDIATRIC VAD SUPPORT

Co-Chairs: Keefe Manning, PhD, Associate Professor Bioengineering, Pennsylvania State University
David Morales, MD, Executive Co-Director, The Heart Institute
3:45PM-4:00PM
Bivalirudin and Epoprostenol Infusions as an Alternative Anticoagulation Strategy in Pediatric Patients on Long-Term Berlin Heart EXCOR Ventricular Assist Device Support
Jennifer Rutledge, MD - University of Alberta
4:00PM-4:15PM
Biocompatibility Testing of the Frozen Design PediaFlow® Pediatric VAD
Salim E Olla, BS - University of Pittsburgh - ASAIOfyi

4:15PM-4:30PM
Acute In-Vivo Evaluation of CircuLite Child Cannula Concepts
Arielle Drummond, PhD - CircuLite, Inc. - ASAIOfyi

4:30PM-4:45PM
Impella Pediatric Design Optimization and In Vivo Results
Caitlyn J Hastie, MS - Abiomed, Inc. - ASAIOfyi

4:45PM-5:00PM
Mechanical Support of the Failing Fontan Circulation with a Continuous Axial-Flow Pump in a Piglet Model
Xufeng Wei, MD, PhD - ASAIOfyi - University of Maryland

5:00PM-5:15PM
Intravascular Mechanical Cavopulmonary Assistance of 3-D Patient-Specific Fontan Configurations
Emily Downs, BS, Va. Commonwealth University

5:15PM-5:30PM
A Chronic Peristaltic Cavopulmonary Support Device for Univentricular Fontan Circulation
Guruprasad A Giridhahan, PhD - University of Louisville

RENAI L TRACK

3:45PM-5:30PM California Room - Mezzanine Level

RENAI L 2: NOVEL TECHNOLOGIES FOR PATIENT MONITORING

Chairman: Balazs Szamosfalvi, MD, Staff Physician, Henry Ford Hospital
Online Citrate-And Calcium Sensing During Regional Citrate Anticoagulation
Balazs Szamosfalvi, MD, Staff Physician, Henry Ford Hospital
The Nano Clinical Analyzer: Nanosensors For Continuous Physiological Monitoring
Heather Clark, PhD, Associate Professor Pharmaceutical Science, Northeastern University
Inline And Implantable Optical Sensors For Biochemical Monitoring
Mike McShane, PhD, Associate Professor Biomedical Engineering, Texas A & M University
Smart Sensor Systems For Human Breath Monitoring
Gary Hunter, PhD, Sr Electronics Engineer, NASA Glenn Research Center

ASAIO WELCOME RECEPTION

6:00PM-7:00PM Crown Room - 24th Floor Admission by Ticket

FRIDAY, JUNE 15

ASAIOFYI FOR YOUNG INNOVATORS

8:00AM - 10:00AM California Room - Mezzanine Level
Co-Chairs: Amy Throckmorton, PhD, Qimonda Asst Prof MechEng, VA Commonwealth University
Scott Corbett, PhD, Director Systems Engineering, Abiomed Inc
ASAIOfyi Rapid Fire Presentations - These Presentations will be Available As Posters on the Grand Ballroom Level

POSTER BOARD #

47
8:00AM-8:06AM
Ventricular Septum Shift by Continuous-Flow LVAD Pumping and Its Correction by Beat to Beat Rotational Speed Control
Mamoru Arakawa, MD - National Cerebral and Cardiovascular Center
FRIDAY, JUNE 15 (CONTINUED)

POSTER BOARD #

8:06AM-8:12AM  
48  Prevention of Aortic Insufficiency in a Continuous-flow LVAD by Changing Rotation Speed in Synchronization with the Cardiac Beat  
Yuichiro Kishimoto, MD - National Cerebral and Cardiovascular Center Research Institute - ASAIOfyi

8:12AM-8:18AM  
49  In Vitro Evaluation of a Novel Autologous Aortic Valve (BIOVALVE) with a Special Pulsatile Circulation Circuit  
Hirohito Sumikura, PhD - National Cerebral and Cardiovascular Center Research Institute

8:18AM-8:24AM  
50  The Effects of Air Exposure & Negative Pressure on Human Blood Inflammatory Response & Platelet Activation  
Ahmed M El-Sabbagh, MD - University of Michigan

8:24AM-8:30AM  
51  3D Anatomic Modeling of LVAD Inflow Cannula Orientation  
Thang V Truong - Integris Baptist Medical Center

8:30AM-8:36AM  
52  A Case Series Evaluation of the Impella 5.0 Peripheral Left Ventricular Assist Device  
Daniel Rinewalt, MD - Northwestern University, Feinberg School of Medicine, Bluhm

8:36AM-8:42AM  
53  Safe Dose Study of the Intravascular Infusion of a Perfluorocarbon Based Oxygen Carrier in a Swine Model  
Daniel Ortiz, Bsc - Biomedical engineering, Universidad de los Andes - ASAIOfyi

8:42AM-8:48AM  
54  Wave travel in the Thoraco-Abdominal Aorta with ECG Synchronized Thoratec PVAD  
Stijn Vandenberghhe, PhD - Bern University

8:48AM-8:54AM  
55  Continuous Monitoring of Heart Rate and Its Variability in Rotary Blood Pump Recipients  
Francesco Moscato, PhD - Medical University of Vienna - ASAIOfyi

8:54AM-9:00AM  
56  Serial Right Ventricular Evaluation after LVAD Implantation. Implications for Candidate Selection and Left Ventricular Recovery  
Dan De Le, MD - University Of Alabama at Birmingham Presentation Cancelled

9:00AM-9:06AM  
57  Temporary Ventricular Assist Devices as a Bridge to Long-Term Support: Are They Effective?  
Sean P McCandless - Intermountain Medical Center - ASAIOfyi Fellowship Recipient

9:06AM-9:12AM  
58  Cardiac Ablation Procedures Supported by Temporary Ventricular Assist Devices (VAD)  
Annika Carter, Bioeng Research Associate, Intermountain Medical Center - ASAIOfyi

9:12AM-9:18AM  
59  Comparison of Fluid Dynamic Numerical Models and Experimental Validation for a Clinical Ventricular Assist Device  
Jiafeng Zhang, PhD - University of Maryland School of Medicine - ASAIOfyi

9:18AM-9:24AM  
60  Combined Use of TandemHeart (TH) Percutaneous Ventricular Assist Device (PVAD) and Stereotaxis Magnetic Navigation (SMN) During Ablation Procedure  
Annika Carter, Bioeng Research Associate, Intermountain Medical Center - ASAIOfyi

9:24AM-9:30AM  
61  Hepatic Input Impedances as a Measure of Liver Graft Perfusion Properties  
Charlotte Debbaut, PhD student - Ghent University - ASAIOfyi

9:30AM-9:36AM  
62  Platelet Adhesion to a Polyurethane Urea Surface under Altered Shear Exposure  
Michael A Navitsky - The Pennsylvania State University - ASAIOfyi

9:36AM-9:42AM  
63  An Alternative Membrane To Improve Extracorporeal Gas Exchange and Biocompatibility  
Matthew LaVelle - Columbia University

9:42AM-9:48AM  
64  Design, Manufacture and Application of Hollow Polymer Microneedles for Sampling Interstitial Fluid in Kidney Disease  
Leonard M Ebah, MD - Manchester Royal Infirmary - ASAIOfyi Fellowship Recipient

9:48AM-9:54AM  
65  Circulating Plasma Microvesicles (MVs) in Sepsis Are Potential Biomarkers and Mediators of Tissue Injury and Are Not Efficiently Removed by Standard Convective Techniques  
Vincenzo Cantaluppi, MD - University of Turin

9:54AM-10:00AM  
66  Pediatric VAD Therapy in Failing Univentricular Hearts: Single Center Experience  
Christopher S Almond, MD, MPH - Children's Hospital Boston

GENERAL SESSION 2

8:00AM - 12:15PM Gold Room - Lobby Level  
Co-Sponsored By Kurt A Dasse, PhD and Johnson & Johnson  
Co-Chairs:  H. David Humes, MD, ASAIO President, Professor Internal Medicine, University of Michigan  
Kurt Dasse, PhD, Executive VP, GeNO LLC & COO Pharos LLC

NEW VENTURE FORUM - THE FIRST ANNUAL “MEDICAL DEVICE ENTREPRENEUR’S FORUM”.

8:00AM - 10:00AM  
This Session Is Designed To Allow Award Winning Entrepreneurs to Present Innovative Medical Device Technologies.  

NFV FINALISTS  
James Antaki, PhD, Professor of Biomedical Engineering, Carnegie Mellon University  
“mParesisTM Blood Purification Device For Severe Malaria”  
Nicholas Franano, MD, Novita Therapeutics, LLC  
“New Medical Device to Improve Eligibility And Reduce Maturation Failure Of Arteriovenous Fistula Vascular Access Sites For Hemodialysis”  
Pedram Mohseni, PhD, Director Bio Micro Systems Lab, Case Western Reserve University  
“Neural Prosthetic Microdevice And Associated Methods For Brain Repair”
VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
10:00AM - 10:45AM Grand Ballroom

GENERAL SESSION 2 CONTINUED

10:45AM - 11:15AM
ASAIO Hastings Lecture - Are We There Yet?
Gerson Rosenberg, PhD, Professor Surgery & Bioengineering, Penn State College of Medicine

11:15AM - 11:45AM
President's Address - ASAIO: Maturation, Apoptosis, and Social Network
H. David Humes, MD, ASAIO President, Professor Internal Medicine, University of Michigan

11:45AM - 12:15PM
ASAIO Fellowship Recipients recognized

LUNCH BREAK
12:15PM - 1:30PM

ASAIOFYI LUNCHEON FOR ASAIOFYI MEMBERS - CAREER DEVELOPMENT

Admission by Ticket Only
12:15PM - 1:15PM Garden Room - Lobby Level
Academia: Keefe Manning, PhD, Associate Prof Bioengineering, Pennsylvania State University
Government: Carole Carey, FDA
Industry: Kevin Bourque, MSMM EP, Director Research & Development, Thoratec Corporation
Clinical: Jonathan Haft, MD, Assistant Professor Surgery, University of Michigan

CARDIAC TRACK

1:30PM - 3:15PM
Venetian Room - Lobby Level

CARDIAC 3: PHYSIOLOGIC ADAPTATION TO VADS
Co-Chairs: Francesco Moscato, PhD, Postdoctoral Fellow, Medical University Of Vienna
Georg Wiesethaler, MD, Professor Clinical Surgery, University Of California San Francisco

1:30PM
Pulsatile Control Of Continuous Flow Pumps
Steven R. Koenig, PhD, Professor Bioengineering & Surgery, University Of Louisville

1:45PM
Intrinsic Physiologic Control Mechanisms
Francesco Moscato, PhD, Postdoctoral Fellow Med Physics & Biomed Engineering, Medical University Of Vienna

2:00PM
Inter - Pump Control Of Dual Continuous Flow Total Artificial Heart
Steven Parnis, BS, Assistant Director Tech Development, Texas Heart Institute

2:15PM
Reverse Remodeling With VAD Therapy: Is It The Drugs Or Is It The Pump?
Eduardo Rame, MD, Medical Dir Mechanical Circ Support, Univ of Pennsylvania

2:30PM - 2:45PM
Optimizing Heartmate II (HMII) Speed at Post-Implant Discharge: How Important Is It?
Renee A. Merchel - Intermountain Medical Center - ASAIOFYI

2:45PM - 3:00PM
Effect of Rotary Blood Pump Pulse Characteristics on Cardiac Workload
Tohid Pirbodaghi - Bern University

3:00PM - 3:15PM
Is There a Difference in Structural Remodeling between Ischemic & Non-Ischemic Patients Who Undergo LVAD Implantation?
Ana M Segura, MD - St. Luke's Episcopal Hospital

BIOENGINEERING TRACK

1:30PM - 3:15PM
Pavilion Room - Lobby Level

BIOENGINEERING 3: BLOOD DAMAGE AND THROMBOSIS MODELING
Co-Chairs: Kenneth Solen, PhD, Professor of Chemical Engineering, Brigham Young University
Katherine Fraser, PhD, Marie Curie Fellow, Imperial College, London

1:30PM
Optimizing The Thrombogenic Performance Of Mechanical Circulatory Support Devices
Daniel Bluestein, PhD, Professor Biomedical Eng, SUNY Stony Brook

1:55PM
Blood Damage
Zhongjun Niu, MD, Assoc Prof Surg, Univ Maryland School of Medicine

2:20PM
A Model Of Thrombosis And Thromboembolism
Kenneth Solen, PhD, Professor of Chemical Eng, Brigham Young Univ

2:45PM - 3:00PM
Shear Induced Platelet Activation and Signal Transduction
Shuiqiong Niu, MD - University of Maryland School of Medicine - ASAIOFYI

3:00PM - 3:15PM
The Effect of Turbulent Viscous Shear Stress on Red Blood Cell Hemolysis
Jen-Hong Yen, MS - Tamkang University, Taiwan - ASAIOFYI

PEDIATRIC TRACK

1:30PM - 3:15PM
International Room - Mezzanine Level

PEDIATRIC 2: PEDIATRIC ECMO / ECLS
Chairman: Timothy Maul, PhD, Research Asst Prof CV Surgery, University of Pittsburgh

1:30PM - 1:45PM
Neonatox: A Pumpless Extracorporeal Lung Support for Premature Infants
Jutta Arens - RWTH Aachen University
FRIDAY, JUNE 15 (CONTINUED)

1:45PM-2:00PM
In-Vivo Hemocompatibility of Heparinized Hollow Fiber Membranes of the Pediatric Pump-Lung (PEDIPL) Device
Narayana Garimella, PhD - University of Maryland Baltimore - ASAIOfyi

2:00PM-2:15PM
Platelet-Derived Microparticle Generation of ECMO Systems at Simulated Flow Rates for Neonates
Andrew D.J. Meyer, MD, MS - UT Health Science Center - ASAIOfyi

2:15PM-2:30PM
Design and Development of ECMO (Extra-Corporeal Membrane Oxygenation) for Newborn Respiratory Failure
Tomoya Shibata, BS - Tokyo Denki University

2:30PM-2:45PM
Development of a Pediatric Oxygenator with Integrated Pulsatile Pump and Heat Exchanger
Ralf Borchardt, Dipl.-Ing. - RWTH Aachen - ASAIOfyi

2:45PM-3:00PM
Development of Artificial Placenta VI: Cerebral Perfusion Is Maintained in Veno-Venous Extracorporeal Life Support Circuit
Ahmed M El-Sabbagh, MD - University of Michigan

3:00PM-3:15PM
In Vitro Drug Adsorption of Anti-Arrhythmic Agents in a Neonatal Extracorporeal Life Support Circuit
Andrew D. Meyer, MD, MS - University of Texas Health Science Center at San Antonio - ASAIOfyi

PEDIATRIC POSTER SESSION
Posters Available All Day in the Grand Ballroom

POSTER BOARD #

67 In-Vivo Animal Studies in an Ovine Model Using the Circulite Child System
Robert Farnan - Circulite Inc.

68 Predicting Exercise Tolerance in Patients with Bidirectional Glenn: A Coupled Lumped Parameter-Oxygenation Model
Carolina Vallecilla, PhD - Universidad de los Andes

69 Pediatric Intra-Operative Fit Study Using the Circulite Child System
Arielle Drummond, PhD - Circulite, Inc. - ASAIOfyi

70 Animal Models for Evaluation of the Pediatric Ventricular Assist Devices
Xufeng Wei, MD, PhD - University of Maryland - ASAIOfyi

71 Twisted Cardiovascular Cages for Intravascular Axial Flow Blood Pumps To Support the Fontan Physiology
Amy L Throckmorton, PhD - Virginia Commonwealth University - ASAIOfyi

72 Analysis of Hydraulic and Hemolytic Performance of an Axial Blood Pump
Fangqun Wang, doctor - Jiangsu University Presentation Cancelled

73 Progress on the Development of a Pediatric Ventricular Assist Device in Brazil
Idagene A Cestari, PhD - Heart Institute (InCor)

74 Administration of Antithrombin Concentrate in Infants and Children on ECLS Improves Anticoagulation Efficacy
Patricia Massicotte, MD, MS, Professor Pediatrics, University of Alberta

COMMERCIALIZATION

1:30PM-3:15PM Fountain Room - Lobby Level
Co-Chairs: Pratap Khanwilkar, PhD, MBA, Director Coulter Program, University Of Pittsburgh
Brian Duncan, MD, MBA, Venture Partner, Arboritem Ventures

Entrepreneur/Developer/University Perspective
Pratap Khanwilkar, PhD, MBA, Director Coulter Program, University Of Pittsburgh

VC Funding & Clinician/Clinical System Perspective
Brian Duncan, MD, MBA, Venture Partner, Arboritem Ventures

Reimbursement Perspective
Edward Berger, PhD, Principal, Larchmont Strategic Advisors

VC Funding Perspective
Tracy Warren, MBA, General Partner, Battelle Ventures LP

VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS

3:15PM-4:00PM Grand Ballroom

CARDIAC TRACK

4:00PM-5:45PM
CARDIAC 4: PRO - CON DEBATE: ARE VAD'S ECONOMICALLY Viable?

4:00PM-4:40PM Venetian Room - Lobby Level
Co-Chairs: Jonathan Haft, MD, Assistant Professor Surgery, University of Michigan
Mark Slaughter, MD, Chief Thoracic & CV Surgery, University of Louisville

Pro - Robin Bostic, BS,VP Health Policy & Govt Affairs, Thoratec Corporation
Con - Mark Slaughter, MD, Chief Thoracic & CV Surgery, University of Louisville

CARDIAC 4: SYMPOSIUM: TEMPORARY CIRCULATORY SUPPORT

4:40PM-5:45PM

TandemHeart
Biswaik Kar, MD, Interventional Cardiologist, Texas Heart Institute

Impella
Anson Cheung, MD, Surgical Dir of Cardiac Surgery & Mech Circulatory Support, Univ Britsh Columbia

ECMO
Jonathan Haft, MD, Asst Professor or Surgery, University of Michigan

BIOENGINEERING TRACK

4:00PM-5:45PM Pavilion Room - Lobby Level

BIOENGINEERING 4: COMPUTERS AND EXPERIMENTS: PREDICTION AND VALIDATION

Co-Chairs: Steven Chopski, MS, Research Assistant, VA Commonwealth University
Steven Koenig, PhD, Professor of Bioengineering, University of Louisville

4:00PM-4:15PM
Computational Analysis of Blood Flow and Emboli To Understand Retinal Artery Occlusion
Tim A. S. Kaufmann, Dipl Phys - Institute of Applied Medical Engineering - ASAIOfyi
FRIDAY, JUNE 15 (CONTINUED)

4:15PM-4:30PM
Numerical Study of the Effect of Flow Pulsation on the Hemolysis in Centrifugal Blood Pumps
Huan Li - The State Key Laboratory of Fluid Power Transmission and Control

4:30PM-4:45PM
Comparison of CFD Predicted and PIV Measured Flow Dynamics of MVAD® Pump
M. Ertan Taskin, PhD - HeartWare Inc.

4:45PM-5:00PM
Accuracy of Flow in a Stenotic Nozzle Using Grid Convergence Index and Robust Simulation
Samuel J Hund, PhD - Carnegie Mellon University

5:00PM-5:15PM
Feasibility of Fluid Structure Interaction Simulations as a Design Tool of a Pulsatile Total Artificial Heart
Simon J Sonntag, Dipl. Math. - RWTH Aachen - ASAIOfyi

5:15PM-5:30PM
Flow Weighted Residence Time: A Useful Indicator of Hemolysis
Katharine H Fraser, PhD - Imperial College London - ASAIOfyi

5:30PM-5:45PM
Thrombus Deposition within a Penn State 50cc Left Ventricular Assist Device: Comparing Experimental Fluid Mechanics, CFD and In Vivo Experiments
Stephen Topper - The Pennsylvania State University - ASAIOfyi

PULMONARY TRACK

4:00PM-5:45PM Crystal Room - Lobby Level

PULMONARY 2: CHRONIC AND ACUTE HYPERCAPNIC FAILURE - MANAGEMENT WITH LOW FLOW CO2 DEVICES
Co-Sponsored By ALung Technologies
Chairman: Daniel Brodie, MD, Assistant Professor Clinical Medicine, Columbia University
Clinical Applications And Goals of Care
Andriy Batchinsky, MD, Senior Research Scientist, US Army Institute Surgical Research
Device Availability
Marco Ranieri, MD, Chairman Anesthesia & Intensive Care, Giovanni Battista Molinette Hospital, Turin
ECCO2R For Preventing Intubation In Patients with Exacerbated COPD: Results Of The Hemolung Pilot Study
Werner Schmidt, MD, PhD, Physician Anesthesiology, University of Heidelberg, Germany

PULMONARY POSTER SESSION
Posters Available All Day in the Grand Ballroom

POSTER BOARD #

75 In-Parallel Attachment of a Low Resistance Compliant Thoracic Artificial Lung under Rest and Simulated Exercise
Christopher Scipione, MD - University of Michigan

76 Design and In Vitro Assessment of an Improved, Low-Resistance, Compliant Thoracic Artificial Lung
David Skoog - University of Michigan

POSTER BOARD #

77 Outcomes of Venovenous Extracorporeal Membrane Oxygenation in Patients with Respiratory Failure
Tae-Hun Kim, MD - Seoul National University Bundang Hospital, South Korea

78 Use of Both Bi-Caval DLC Lumens for Drainage To Convert VV ECMO to VA ECMO
Qiang Hu, MD - University of Kentucky College of Medicine

79 Transport ECMO and Bridge to Transplantation with the Cardiohelp System
Julissa E Jurado, MD - Columbia University Medical Center - New York Presbyterian

80 Management of ECMO Patients with Aortic Root Thrombus
Chadrick Cross, MD - Cardiothoracic &Vascular Surgery Assoc, S.C.

81 Three Embodiments for an Aqueous Lung Machine
Mohamed W Elnacheñ, MD - SIOF Institute

RENAI R TRACK

4:00PM-5:45PM California Room - Mezzanine Level

RENAI R 3: INNOVATIVE APPROACHES TO EXTRACORPOREAL RENAL SUPPORT WITH IMMEDIATE CLINICAL APPLICABILITY
Chairman: Balazs Szamosfalvi, MD, Staff Physician, Henry Ford Hospital

4:00PM
Online Blood Volume, Hemoglobin And Oxygen Saturation Sensing During CRRT
Lenar Yessayan, MD, Staff Physician, Henry Ford Hospital

4:30PM
Novel Acid And Bicarbonate Concentrations For A Large Dialysis Program With Regional Citrate Anticoagulation
Balazs Szamosfalvi, MD, Staff Physician, Henry Ford Hospital

5:00PM-5:15PM
High Cut-Off (HCO) Hemodialyzers Efficiently Remove Immunoglobulin Free Light Chains (FLC) and Reduce Tubular Epithelial Cell (TEC) Injury Induced by Plasma of Patients with Multiple Myeloma (MM)
Vincenzo Cantaluppi, MD - University of Turin

5:15PM-5:30PM
Development of a Multifunctional Detoxifying Unit for Liver Failure Patients
Kyungsoo Lee, Ph.D. - ASAIOfyi Fellowship Recipient

5:30PM-5:45PM
In Vitro Feasibility Assessment of a Mobile System To Initiate Acute Cardio/Pulmonary/Renal Assistance
George M Pantalos, PhD - University of Louisville

RENAI R POSTER SESSION
Posters Available All Day in the Grand Ballroom

POSTER BOARD #

82 Preliminary Assessment of a Parallel-Plate Hemofiltration Cartridge for Implantable Renal Replacement Therapy
Shuvo Roy, PhD - University of California, San Francisco

83 Evaluation of the Usability of Dialysis Machines by Measuring Eye Movement
Takayuki Abe - Tokyo Women's Medical University
FRIDAY, JUNE 15 (CONTINUED)

POSTER BOARD 

84 Development of an Automated Perfusion System for Organ Resuscitation and Procurement
David S Demos, MD - University of Michigan - ASAIO/Oy

85 In Vivo Study of a Rotary Blood Pump System To Enhance Arteriovenous Fistula Eligibility
Howard M Loree, PhD - Flow Forward Medical LLC

86 A Regional Blood Flow (RBF) Model for Glucose-Insulin Kinetics during Hemodialysis (HD)
Daniel Schnedlitz, PhD, Medical University Graz

87 Prolonged Ex-Vivo Warm Perfusion of Kidneys Using a Blood-Derived Perfusion
Brian W Gray, MD - University of Michigan - ASAIO/Oy

88 How To Explain Inflammatory Reactions Observed in Peritoneal Dialysis?
Jörg Vienken, Prof. dr. - Fresenius Medical Care

89 Acetate-Free Biofiltration (AFB) Can Improve Inflammatory Status in ESRD Patients Independently from Nutritional Status
Masatoshi Hayashida - Nagasaki Kidney Center

90 A Wearable Blood Pump System To Enable Arteriovenous Fistulae
Howard M Loree, PhD - Flow Forward Medical LLC

91 Characterization of the Diffusive Properties of Silicon Nanoporous Membranes for a Renal Epithelial Cell Bioreactor
Peter Soler - University of California, Berkeley - ASAIO/Oy

92 In Vitro Modeling of Vein Wall Shear Stress Levels after AVF and AFE System Placement
Elyse G Bailey, BS - Flow Forward Medical LLC

93 Evaluation of Telomerase-Immortalized Human Proximal Tubule Cells for Use in a Bioartificial Kidney Paul Brakeman, MD PhD - University of California, San Francisco

94 Many Uremic Solutes Are Removed Less Effectively Than Urea by Hemodialysis
Tammy L Sirich, MD - Stanford University

ASAIO MEMBER BUSINESS MEETING
5:45PM Hunt Room - Mezzanine Level

SATURDAY, JUNE 16

CARDIAC TRACK

8:00AM-9:30AM Venetian Room - Lobby Level

CARDIAC 5: VAD CLINICAL OUTCOMES
Chairman: Aly El Banayosy, MD, Medical Director of MCS Prog, Penn State Hershey College of Medicine

8:00AM Thrombotic Events
Mark Slaughter, MD, Chief CT & CV Surgery, Univ of Louisville

8:15AM-8:30AM
Mortality within the First Year of Support with a Heartmate II Left Ventricular Assist Device
Chadrick Cross, MD - Cardiothoracic & Vascular Surg Assoc, S.C

8:30AM-8:45AM
A Novel Risk Scoring System with Preoperative Objective Parameters Gives an Excellent Prediction of 1-Year Mortality in the Patients with Left Ventricular Assist Devices (LVADs)
Teruhiko Imamura, MD - University of Tokyo

8:45AM-9:00AM
John F Lazar, MD, University of Rochester - ASAIO/Oy

9:00AM-9:15AM
Prediction of Left Ventricular Assist Device (LVAD) Patient Outcomes through Percent Carbon Dioxide Diffusing Capacity (%DLCO)
Annicka K Carter - Intermountain Medical Center - ASAIO/Oy

9:15AM-9:30AM
An Aggressive Policy of Pump Exchange Salvages Most Patients with Pump Malfunction
Edwin McGee, Jr, MD - Northwestern Memorial Hospital/ Northwestern University School of Medicine

CARDIAC POSTER SESSION 2
Posters Available All Day in the Grand Ballroom

POSTER BOARD 

95 Pulmonary TNFα Concentration and Wall Thickness after On - Versus Off Pump Cardiac Surgery
Sven Lehmann, PhD - Heartcenter Leipzig

96 The Helical Flow Total Artificial Heart: Design Concept and Initial Development
Yusuke Abe - The University of Tokyo

97 Predictors of Short and Long term Mortality in Destination Therapy Patients over Age 60 Undergoing HMII LVAD Placement
Tadashi Motomura, MD, PhD - The Methodist Hospital

98 Induction of Neointimal Tissue to Left Ventricular Apex with Titanium-Mesh
Takuma Miyamoto - TokyoWomen's Medical University - ASAIO/Oy

99 In Vivo Evaluation of an Implantable Magnetic Suspending Ventricular Assist Device
Changyan Lin, Ph.D - Capital Medical University, Beijing Anzhen Hospital - Presentation Cancelled

100 Combinatory Evaluation of Preoperative Risk Indices Well Predicts the Requirement of Biventricular Assist Device
Taro Shiga, MD, PhD - The University of Tokyo Hospital

101 Intra-Cardiac Cycle Optimization of Power Transfer Efficiency in a Novel Intra-Aortic Circulatory Support Device
Jason J Heuring, Dphil - Procyrion

102 Outcomes for Patients Supported by a HeartMate XVE LVAD That Required Exchange for a HeartMate II LVAD
Rajko Radovancevic, MD - Texas Heart Institute at St. Luke's Episcopal Hospital

103 Feedback Control of a Left-Ventricular Assist Device
Erol Sezer, PhD - Bahcesehir University

104 The Addition of Suction Augments Flow in a Novel Cardiac Support Device
Nicholas R Teman, MD - University of Michigan Health System - ASAIO/Oy

105 Tricuspid Valve Surgery during Implant of a Left Ventricular Assist Device: Our Experience
Salil V Deo, MS MCH - Mayo Clinic

106 In Vitro Blood Damage Testing of a Pulsatile Total Artificial Heart with a Newly Designed Mock Loop
Ralf Borchardt, Dipl.-Ing - Inst Applied Med Eng, RWTH Aachen Univ
107  Integration Of Formal Methods And Human Factors For Artificial Organs  
Ellen Bass, PhD, Associate Professor Systems & Info Eng, University of Virginia

108  Usability Assessment For Cardiac Assist Systems: From Mock Tests To Multicenter Studies  
Heinrich Schima, PhD, Professor of Physics & Biomedical Engineering, Medical University Vienna

111  Power and Telemetry for a Novel Partial Circulatory Support Device through Transcutaneous Energy Transfer  
Jason J Heuring, Dphil - Procyrion

**BIOENGINEERING POSTER SESSION 2**  
Posters Available All Day in the Grand Ballroom

121  Physiological Response to a Simplified Venovenous Perfusion-Induced Systemic Hyperthermia System  
Cherry Ballard-Croft, PhD - University of Kentucky

122  Effects of Liposome-Encapsulated Hemoglobin on Low-Grade Cardiopulmonary Exercise in the Rat  
Akira T Kawaguchi, MD, PhD - Tokai University School of Medicine

123  Liposome-Encapsulated Hemoglobin Is Protective Immediately Prior to Reperfusion in 2-Hour Cerebral Ischemia Model in the Rat  
Akira T Kawaguchi, MD, PhD - Tokai University School of Medicine

124  Development of the Circulatory System Simulator for Medical Education  
Takashi Ichinose - Graduate School of Tokyo Denki University

125  Potential of Tissue Engineering an Allograft into a Functional Autograft  
Lauren Brasile, PhD - BREONICS, Inc.

126  Plasma Expander Viscosity Effects on Red Cell-Free Layer Thickness after Moderate Hemodilution  
Pedro Cabreras, PhD - University of California, San Diego - ASAIOfyi

127  A Scalable, Micropore, Platelet Rich Plasma Extraction Device  
Mary Nora Dickson, MS - Columbia University

128  Theoretical Investigation of Recirculation with Double-Lumen Balloon Catheters  
Yoichi Marushita, M.Eng. - Toin University of Yokohama

129  Functional Assessment of Vascular Access by Shunt Murmurs at Arterial Vascular Anastomosis  
Yuka Motohashi, M.Eng. - Toin University of Yokohama

130  Method of Risk Analysis for DAVs  
Andre Cavalheiro, MD - Fundacao Santo Andre

131  PLGA-Gelatin Supercmacroporous Matrix for Lung Tissue Engineering  
Sung Soo Han, PhD - Yeungnam University

132  Effects of a Perfluorocarbon Emulsion on the Physicochemical Properties of Blood in the Presence of Hydroxyethyl Starch (HES) in a Normovolemic Hemodilution (In Vitro)  
Diana M M Vásquez - Universidad de los Andes

**BIOENGINEERING TRACK**  
8:00AM-9:30AM  
Pavilion Room - Lobby Level

**BIOENGINEERING 5: HUMAN FACTORS ENGINEERING**

Co-Chairs:  
Kurt Dasse, PhD, Executive VP, GeNO LLC & COO Pharos LLC  
Heinrich Schima, PhD, Professor of Physics & Biomedical Engineering, Medical University Vienna
133 Musculoskeletal Regeneration Via Osteoinductive Polymer/Ceramic Composite Scaffolds  
Bret D Ulery, PhD - University of Connecticut Health Center - ASAIOfyi

134 A Particle Image Velocimetry Study of Two Penn State Pulsatile 50cc LVAD Designs: Thrombus Susceptibility Comparisons  
Michael A Navitsky - The Pennsylvania State University - ASAIOfyi

135 Haemolysis Evaluation of Centrifugal BiVAD Using Computational Fluid Dynamics Analysis  
Andy Chit Tan, PhD - Queensland University of Technology

136 Computational Fluid Dynamic Investigation in the Inlet Port of a New Model of Centrifugal Blood Pump for Cardiopulmonary Bypass and Circulatory Support with Different Impeller Angles  
Aron Andrade, PhD - Institute Dante Pazzanese of Cardiology

137 Study on the Changes in Mechanical Properties of Implanted Collagen Vascular Grafts  
Javier Navarro - Universidad de Los Andes

PULMONARY TRACK
8:00AM-9:30AM Crystal Room - Lobby Level

PULMONARY 3: NEW AND NOVEL ARTIFICIAL LUNG TECHNOLOGIES
Co-Chairs: William Federspiel, PhD, William Kepler Whiteford Prof, University of Pittsburgh  
Zhongjun Wu, PhD, Associate Professor, University of Maryland Sch of Med  
Design And Optimization Of An Integrated Artificial Pump-Lung For Respiratory Support  
Zhongjun Wu, PhD, Associate Professor Surgery, University Maryland School of Medicine  
From Premature Infants To Adults: Modular Systems For Personalized Lung Support  
Ulrich Steinselser, PhD, Director of CV Engineering, Helmholtz Institute, RWTH Aachen University  
Accelerating Co2 Removal Using Biocatalysis  
Jeremy Kimmel, PhD, Postdoctoral Scholar, University of Pittsburgh  
Scaling Of Microfluidic Artificial Lung Devices For Clinical Applications  
Alla Epshteyn, Chemical Engineer, Draper Laboratory Inc

CARDIAC TRACK
8:00AM-9:30AM Gold Room - Lobby Level

CARDIAC 6: VAD HEMODYNAMICS
Chairman: Charles Hoopes, MD, Director Thoracic Transplant Program, University of Kentucky

8:00AM-8:15AM  
Comparative Pathology of an Implantable Left Atrial Pressure Monitor  
Karen Trainor, DVM, MS - Texas A&M University - ASAIOfyi  
ASAIO Willem J Kolff - Don B Olsen Award Recipient

8:15AM-8:30AM  
Alternation of LV Preload by Continuous-Flow LVAD with Native Heart Load Control System (NHLCS) in Chronic Heart Failure Model  
Mamoru Arakawa, MD - National Cerebral & CV Crt, Japan - ASAIOfyi, ASAIO Y Nose International Fellowship Recipient

8:30AM-8:45AM  
Effect of Concomitant Speed Increase with Exercise on Invasively Measured Haemodynamics in Patients with Continuous Flow Left Ventricular Assist Devices (LVADs)  
Kavitha Muthiah, MBchB - St. Vincent’s Hospital, Australia - ASAIOfyi Fellowship Recipient

8:45AM-9:00AM  
Preclinical and Clinical Testing of a Novel, Ultrapure Nitric Oxide Delivery System as a Treatment for Pulmonary Hypertension  
Robert F. Roscigno, PhD - GeNO, LLC

9:00AM-9:15AM  
Relationship Between Heart Rate and Pump Flow in Patients Implanted with Continuous Flow Left Ventricular Assist Devices (LVAD)  
Kavitha Muthiah, MBchB - St. Vincent’s Hospital, Australia - ASAIOfyi Fellowship Recipient

9:15AM-9:30AM  
The Effects of Systemic and Pulmonary Continuous Blood Flow Physiology on Microvascular Gene Expression  
Egemen Tuzun, MD - Texas A&M University Institute for Preclinical Studies

VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
9:30AM-10:15AM Grand Ballroom

GENERAL SESSION 3
10:15AM-10:45AM Gold Room - Lobby Level

KEYNOTE ADDRESS:
Co-Chairs: Kurt Dasse, PhD, Executive VP GeNO LLC & COO Pharos LLC  
William Fissell, MD, Associate Staff Nephrology & Hypertension, Cleveland Clinic  
Innovations: Past, Present And Future  
Dean Kamen, PhD, President, DEKA Research & Development Corp, Manchester
SATURDAY, JUNE 16 (CONTINUED)

CARDIAC TRACK

10:45AM-12:00PM  Venetian Room - Lobby Level

CARDIAC 7: INDUSTRY SPEAKS: IMPROVEMENTS IN DEVICE TECHNOLOGY

Co-Chairs:  Lyle Joyce, MD, PhD, Cardiovascular Surgeon, Mayo Clinic  
            Keith Aaronson, MD, Medical Director Internal Medicine, University of Michigan  
            Transcutaneous Energy Transfer: Benefits, Challenges & Opportunities  
            Laxmi Peri, VP Technology & Product Development, Thoratec  
            Building off Platform Technologies  
            Scott Corbett, PhD, Director Systems Engineering, Abiomed  
            Issues Relevant To Pediatric Support  
            Robert Kroslovitz, President & CEO, Berlin Heart Inc  
            Future Of Miniturization  
            Jeffrey LaRose, MSME, Executive VP, HeartWare Inc  
            Status of Implantable Maglev And Durahart 2  
            Alexander Medvedev, PhD, VP Research & Development, Terumo Heart Inc

RENAL TRACK

10:45AM-12:00PM  California Room - Mezzanine Level

RENAL 4: TECHNOLOGICAL INNOVATIONS IN DIALYSIS DELIVERY

Chairman:  Balazs Szamosfalvi, MD, Staff Physician, Henry Ford Hospital  
            The Kidney Project: Progress Towards Implantable Total Renal Replacement Therapy  
            Shuvo Roy, PhD, Associate Professor Bioengineering University of California San Francisco  
            Automated Regional Citrate Anticoagulation (RCA) 1: Scientific Principles  
            Balazs Szamosfalvi, MD, Staff Physician, Henry Ford Hospital  
            Automated RCA 2: Inexpensive Labview-Based System For Rapid, Multicenter Research Adoption  
            Stanley Frinak, MSEE, Research Engineer, Henry Ford Hospital  
            Automated RCA 3: Web-Server Based Prescribing Module, System Telemetry And Data archival  
            Gerard Zasuwa, Lead Systems Analyst, Henry Ford Hospital

BIOENGINEERING TRACK

10:45AM-12:00PM  Pavilion Room - Lobby Level

BIOENGINEERING 6: ORAL PRESENTATIONS

Co-Chairs:  Marina Kameneva, PhD, Dir Hemorheology, Hemodynamics and Artificial Lung blood Research Lab, Univ of Pittsburgh  
            Pedro Cabrales, PhD, Asst Prof Bioeng, University of California San Diego

10:45AM-11:00AM  
            Liposome-Encapsulated Hemoglobin Enhances Chemotherapy To Suppress Tumor Growth and Metastasis in Mice  
            Akira T Kawaguchi, MD, PhD - Tokai University School of Medicine

11:00AM-11:15AM  
            Hypervolemic Infusion of Poly(ethylene glycol) Surface Conjugated Vesicles Encapsulating Hemoglobin Attenuates the Intrinsic Vasoactivity of Cell-Free Hemoglobin  
            Pedro Cabrales, PhD - University of California, San Diego - ASAIOfyi

11:15AM-11:30AM  
            Measurement of Plasma Proteins for Monitoring In Vivo the Host Response to Small Intestinal Submucosa Vascular Grafts  
            Diana Sanchez-Palenca, PhD Candidate - Universidad de los Andes - ASAIOfyi

11:30AM-11:45AM  
            ATP-Adenosine-Reduced Glutathione Cross-Linked Hemoglobin as Oxygen Carrier with Wide Array of Therapeutic Applications  
            Jan Simoni, DVM, PhD - Texas Tech University Health Sciences Center

11:45AM-12:00PM  
            Relationships Between Platelet Activation, Platelet Counts and Agonist Concentrations for Circulatory Support Device Devlopment  
            Denise A. Medvid, BS, MT, (ASCP) - Penn State College of Medicine

PULMONARY TRACK

10:45AM-12:00PM  Crystal Room - Lobby Level

PULMONARY 4: ORAL PRESENTATIONS

Chairman:  William Federspiel, PhD, Prof of Bioengineering, University of Pittsburgh

10:45AM-11:00AM  
            Developing a Biohybrid Lung – Endothelialization with Allogeneic MHC-Silenced Endothelial Cells To Prevent Transplant Rejection  
            Bettina Wiegmann, Dr. med. - Hannover Medical School

11:00AM-11:15AM  
            The Use of a Low Resistance Compliant Thoracic Artificial Lung in the Pulmonary Artery to Pulmonary Artery Configuration  
            Christopher N Scipione, MD - University of Michigan

11:15AM-11:30AM  
            Development of a Polydimethylsiloxane and Silicon Asymmetric Membrane Oxygenator  
            Torin Yeager - University of California San Francisco - ASAIOfyi

11:30AM-11:45AM  
            Fluid Dynamics in Oxygenators under and Post Utilization Evaluated by Ultrasound, Angiography and CAT-Scan  
            Daniele Camboni, MD - University Medical Center Regensburg - ASAIOfyi

11:45AM-12:00PM  
            Pulsatile Blood Flow Augments Gas Exchanger Performance  
            Ju Zhao, MD - University of Kentucky Medical College

LUNCH BREAK

12:00PM-1:15PM
1:30PM-3:30PM Venetian Room - Lobby Level

CARDIAC 8: VAD COMPLICATIONS

Chairman: Benjamin Sun, MD, Chair CT Surgery, Minneapolis Heart Institute

1:30PM Aortic Insufficiency
Jennifer Cowger, MD, Assistant Professor Internal Medicine, University of Michigan

1:45PM-2:00PM
Aortic Valve Pathology and Left Ventricular Assist Device Implantation
Nikolay Dranishnikov, MD - German Heart Institute Berlin

2:00PM-2:15PM
Incidence and Prognostic Significance of Mitral Regurgitation in Continuous Flow Left Ventricular Assist Devices
Geetha Bhat, MD, PhD, Advocate Christ Medical Center

2:15PM Pump Infections
Georg Wieselthaler, MD, Professor Clinical Surgery, Univ of California SF

2:30PM-2:45PM
Comprehensive Engineering Support in Long-Term Continuous Flow LVAD Management: Contribution of Driveline Maintenance and Repair
Tadashi Motamura, MD, PhD - The Methodist Hospital DeBakey Heart & Vascular Center

2:45PM-3:00PM
Development and Animal Test of a Novel Infection-Resistant Skin-Button for Long-Term VAD Support
Toshihide Mizuno, DVM, PhD - National cerebral and cardiovascular research center institute

3:00PM-3:15PM
Drive Line Infections in Left Ventricular Assist Device: Implications for Destination Therapy
Vikas Sharma - Mayo Clinic

3:15PM-3:30PM
Left Ventricular Assist Driveline Failure after 1 Year of Support: Incidence, Operative Technique and Clinical Outcomes. Single-Center Experience
Alexander Stepanenko, MD - Deutsches Herzzentrum Berlin

1:30PM-3:30PM Pavilion Room - Lobby Level

BIOENGINEERING 7: ENGINEERING APPROACHES IN THE DEVELOPMENT OF ARTIFICIAL ORGANS

Co-Chairs: Tim Kaufmann, PhD, Research Associate CV Engineering, RWTH Aachen University
Ralph Borchardt, Dipl.-Ing., Cardiovascular Engineer, Inst Applied Med Eng, RWTH Aachen Univ

1:30PM-1:45PM
In Vivo Evaluation of a Novel Autologous Valve with a Stent (Biovalve Stent) for Transcatheter Aortic Valve Implantation (TAVI)
Yoshiaki Takewa, MD, PhD - National Cerebral and Cardiovascular Center Research Institute

1:45PM-2:00PM
On the Mechanisms of Flow-Induced Blood Trauma: Blood Viscosity vs. Cell-Cell Interactions
Amanda Daly, BS - University of Pittsburgh - ASAIOfyi

2:00PM-2:15PM
Basal Study on Three-Dimensional Hybrid Artificial Organ with Fibrous Scaffolds and Cells
Masahiro Murali, BS - Tokyo Denki University

2:15PM-2:30PM
Toward Development of Self-Regenerating Heart Valve Leaflet
S. Hamed Alavi, M.Sc - University of California Irvine

2:30PM-2:45PM
Scaffold Structure and Mechanics in Differently Obtained Small Intestinal Submucosa Scaffolds
Diana Sanchez-Palencia, MSc - Universidad de los Andes - ASAIOfyi

2:45PM-3:00PM
Controlled Pitch-Adjustment of Impeller Blades for an Intravascular Blood Pump
Amy L Throckmorton, PhD - Virginia Commonwealth University - ASAIOfyi

3:00PM-3:15PM
A Mathematical Model of Blood Flow in Intracranial Aneurysms with Endovascular Devices
Carolina Vallecilla, PhD - Centre National de la Recherche Scientifique

3:15PM-3:30PM
The MVAD® Pump: HALT and Shock Testing
Fernando Casas, PhD - HeartWare Inc.

1:30PM-3:30PM Crystal Room - Lobby Level

PULMONARY 5: ORAL PRESENTATIONS

Chairman: Matthew Bacchetta, MD, Assistant Professor of Surgery, Columbia University Medical Center

1:30PM-1:45PM
Five Day Sheep Preclinical Studies Using a New Venovenous Perfusion-Induced Systemic Hyperthermia Circuit
Cherry Ballard-Croft, PhD - University of Kentucky

1:45PM-2:00PM
Peripheral Extracorporeal Membrane Oxygenation System as Salvage Treatment of Patients with Refractory Cardiogenic Shock
Antonio Loforte, MD - S Camillo Hospital - ASAIOfyi

2:00PM-2:15PM
Organ Care System® – Initial Experience within Lung Transplantation
Bettina Wiegmann, MD - Hannover Medical School

2:15PM-2:30PM
Hybrid ECMO for Circulatory Support Guarantees Adequate Heart/Brain Oxygen Supply
Ju Zhao, MD - University of Kentucky College of Medicine

2:30PM-2:45PM
The Physiological Effects of the Artificial Pump-Lung Device in an Ovine Model
Xufeng Wei - University Of Maryland - ASAIOfyi
2:45PM-3:00PM  
Adverse Effects of Cardiopulmonary Bypass in Lung Transplantation and Their Prevention  
Koichi Sato, MD, PhD - Niigata Univ. Hsp/Deutsches Herzzentrum Berlin

3:00PM-3:15PM  
Extracorporeal Membrane Oxygenation Support in Acardia  
Sotirios Marinakis, MD - CHUV - ASAIOfyi

3:15PM-3:30PM  
Markers of Lung Injury in ECMO with Low Tidal Volume Ventilation for Severe ARDS  
Gopal Singh, MD - Columbia University Medical Center - ASAIOfyi

CARDIAC TRACK
1:30PM-3:30PM  Fountain Room - Lobby Level

CARDIAC 9: CARDIOPULMONARY BYPASS
Chairman: Jonathan Haft, MD, Assistant Professor Surgery, University of Michigan

1:30PM-1:45PM  
Gene Expression Profiling in Patients Undergoing Coronary Artery Bypass Surgery with Mini-Extracorporeal Circuit or Conventional One: Implication for Inflammatory Cytokine Balance  
Kyoaki Takaba, MD, PhD - Kinki University Faculty of Medicine

1:45PM-2:00PM  
Circulatory Inflammatory Response in Relation to On- Versus Off Pump Cardiac Surgery  
Sven Lehmann, PhD - Heartcenter Leipzig

2:00PM-2:15PM  
A Novel Miniature CPB Model Using Rat for Pathophysiological Examination  
Yutaka Fujii, ME - National Cerebral and Cardiovascular Center Research Institute

CARDIAC 9: NEW DEVICES

2:15PM-2:30PM  
Hemodynamic Effects of a Catheter-Deployed Intra-Aortic Micro-Axial Entrainment Pump in a Porcine HF Model  
Michael Cuchiara, PhD - Procyrion

2:30PM-2:45PM  
Seven-Year Experience with a Continuous-Flow Total Artificial Heart in Calves  
Steven M Parnis, BS - Texas Heart Institute

2:45PM-3:00PM  
Development and Evaluation of a Compact Wearable Pneumatic Drive Unit for a Ventricular Assist Device  
Kentaro Ohnuma, PhD - National Cerebral and Cardiovascular Center, Japan

3:00PM-3:15PM  
The MVAD® Pump: Feature Comparison with the HVAD® Pump  
Fernando Casas, PhD - HeartWare Inc.

3:15PM-3:30PM  
Preliminary Evaluation of Implantability and Biocompatibility of a Miniaturized Magnetically Suspended Centrifugal Blood Pump  
Chen Chen, PhD - CH Biomedical Inc
Thoratec PVAD™: 30 years at the heart of BiVAD support.

Thoratec PVAD
Proven technology with home discharge approval for RVAD, LVAD, or BiVAD support.*

Visit www.thoratec.com for the PVAD Instructions for Use about indications, contraindications, warnings, and precautions. Individual experiences, symptoms, situations, and circumstances may vary.

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Thoratec PVAD
Thirty years since the first PVAD implant. Countless moments of laughter, love, and life experienced by our patients.

We at Thoratec are privileged and honored to help physicians deliver life-saving technologies that transform patients' lives.

PVAD, 30 years of proven and trusted BiVAD support.
The RELIVE Trial
(Randomized Evaluation of Longterm Intraventricular VAD Effectiveness)

Compares the JARVIK 2000® and the HeartMate II for DT

Primary Endpoint:
(evaluated for non-inferiority)

Two-year survival free of device replacement or major disability from stroke.

Additional Endpoint:
(evaluated for superiority)

Three-year survival free of major infection.

All Jarvik 2000 devices will use cone bearings and post-auricular power connectors.

The study will enroll up to 350 patients at 50 Centers.

- Jarvik Heart recently completed enrollment of its BTT trial and followup of the primary cohort to outcome (150 pts).

- Results show a significant improvement in success of the primary endpoint for the new cone bearing device compared to the earlier pin bearing model.

It Simply Works

www.jarvikheart.com 2012