The Jarvik 2000® Postauricular Connector Improves Quality of Life and Simplifies Long Term Care

- Zero implanted cable failures in 160 patient years of support
- Zero pump replacements for connector infection
- 175 patients implanted up to 7½ years
- 97% free of serious cable infection
- No exit site dressing is needed
- Patients shower normally

It simply works

One Month    Six Months

jarvikheart.com  2011
“I can breathe; I can walk; I can do almost anything now.
I can play with my grandkids.”

MCS Therapies for any Patient, any Time

For more than 30 years, Thoratec has been committed to developing advanced medical technologies to improve patient survival and quality of life.

Today, Thoratec offers the broadest range of mechanical circulatory support options available and has the experience and commitment required to support these proven therapies.

MCS Therapies for any Patient, any Time

For more than 30 years, Thoratec has been committed to developing advanced medical technologies to improve patient survival and quality of life.

Today, Thoratec offers the broadest range of mechanical circulatory support options available and has the experience and commitment required to support these proven therapies.
You Are Invited To The

ASAIO 58th Annual Conference

In San Francisco, California

June 14 – 16, 2012
The Jarvik 2000® Postauricular Connector Improves Quality of Life and Simplifies Long Term Care

- Zero implanted cable failures in 160 patient years of support
- Zero pump replacements for connector infection
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### PROGRAM INDEX

<table>
<thead>
<tr>
<th>Event</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accreditation CME / CNE / CCP</td>
<td>6</td>
</tr>
<tr>
<td>ASAIO Journal</td>
<td>3</td>
</tr>
<tr>
<td>ASAIO Willem J Kolff / Don B Olsen Award</td>
<td>5 &amp; 18</td>
</tr>
<tr>
<td>ASAIO Member Business Meeting</td>
<td>22</td>
</tr>
<tr>
<td>ASAIO Y Nosé International Fellowship</td>
<td>5 &amp; 18</td>
</tr>
<tr>
<td>Board Of Trustees 5/30/2010 – 6/12/2011</td>
<td>4</td>
</tr>
<tr>
<td>Exhibitor Information</td>
<td>6 – 8 &amp; 10</td>
</tr>
<tr>
<td>Fellowships &amp; Awards</td>
<td>5 &amp; 18</td>
</tr>
<tr>
<td>Floor Plan Washington Hilton</td>
<td>9 &amp; 10</td>
</tr>
<tr>
<td>Hastings Lecture</td>
<td>17</td>
</tr>
<tr>
<td>New Venture Forum</td>
<td>14</td>
</tr>
<tr>
<td>Program Committee</td>
<td>5</td>
</tr>
<tr>
<td>Program Outline</td>
<td>11 – 13</td>
</tr>
<tr>
<td>Floor Plan Columbia Hall</td>
<td>10</td>
</tr>
<tr>
<td>Welcome Reception</td>
<td>17</td>
</tr>
</tbody>
</table>

### ASAIO WEBSITE

**ASAIO.com**

- Home
- About Us
- Membership
- Fellowships
- For Young Innovators
- ASAIOfyi
- Forms
- Annual Conference
- Exhibits
- Journal
- Abstracts
- Career Connection
- Calendar Of Events
- Committees
- Dates & Deadlines
- Links
- Member Experts For Industry
- Project Bionics
- Government & Funding
- Research Reports
- Sponsorship Opportunities
- Photo Gallery
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### ASAIO MISSION STATEMENT

**ASAIO 58th Annual Conference**
San Francisco, California
June 14 – 16, 2012

**ASAIO MISSION STATEMENT**

To advance the research, development and medical application of bionic technologies.

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**marjory@kaufmanwills.com**

**ASAIO JOURNAL MANUSCRIPTS**
The ASAIO Journal publisher, Wolters Kluwer Health - Lippincott Williams will be in Exhibit Booth #107. Manuscripts are to be submitted online to www.editorialmanager.com/asaio
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Peter Wearden, MD, PhD

RENAI
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BIOENGINEERING
William Weiss, PhD  
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Amy Throckmorton, PhD  
Steven Koenig, PhD  
Conrad Zapanta, PhD  
Egemen Tuzun, MD

FELLOWSHIPS & AWARDS

ASAIOFY! – FOR YOUNG INNOVATORS

ASAIO FELLOWSHIP FINALISTS
Brian Gray, MD  – University of Michigan  
“Development of An Artificial Placenta: 24 Hour Veno-Venous Extracorporeal Life Support in Premature Lambs”  
Renee Merchel – Intermountain Medical Center  
“Novel Driveline Exit Site Dressing Technique for Left Ventricular ssist Devices Improves Infection”  
Richard Jeffries, BS  – University of Pittsburgh  
“Rotating Impeller Spacing Effects in Hollow Fiber Membrane (HFM) Respiratory Assist Devices”

Joshua Taylor, BS  – The Pennsylvania State University  
“Laser Doppler Velocimetry Study of the Flow Through the PSU-ABI Tesla Pump”  
Salim Olia, BS  – University of Pittsburgh  
“The Effect of Inlet Pressure on Gas Embolism & Hemolysis in Continuous-Flow Blood Pumps”  
Samuel Hund, PhD  – Carnegie Mellon University  
“Reduced Order Modeling for Rapid Simulation Without Significant Loss of Fidelity”

SPONSORED BY THE PAUL S MALCHESKY FELLOWSHIP FUND

ASAIO Y NOSÉ INTERNATIONAL FELLOWSHIP
Daniele Camboni, MD  – Univ Med Cntr of Regensburg  
“Veno-venous Extracorporeal Membrane Oxygenation (VV-ECMO) by Single Vessel Access in Adults”

SPONSORED BY THE Y NOSE FELLOWSHIP FUND

ASAIO WILLEM J KOLFF / DON B OLS AWARD
Pramod Bonde, MD  – University of Pittsburgh  
“Innovative Free-Range Resonant Electrical Energy Delivery System (Free-D System) for a Ventricular Assist Device Using Wireless Power”

SPONSORED BY THE MEDFORTE FOUNDATION

ASAIO FELLOWSHIPS
Michael Navitsky, BS  – The Pennsylvania State University  
“A Particle Image Velocimetry Study of the Penn State 50cc VAD during Varying Beat Rates”  
Akihide Umeki, MS  – Natl Cerebral and CV Ctr Research Inst  
“The Change of Coronary Flow by Controlling the Power of Continuous-Flow Left Ventricular Assist Device in Acute Heart Failure: Counterpulse Drive Mode Can Increase the Coronary Flow”  
Giovanni Biglino, PhD  – UCL Inst of CV Sciences  
“A Patient-Specific Pediatric Mock Circulatory System: Investigating the Circulation Following the Norwood Operation”

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This 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.

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FRIDAY, JUNE 10 .............. 4.5 CONTACT HOURS
SATURDAY, JUNE 11 ......... 10.25 CONTACT HOURS
SUNDAY, JUNE 12 ............ 2.5 CONTACT HOURS

20.7 CREDIT HOURS CEU’S

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Nurses will be eligible for 20.7 CEU continuing education hours from the University of Massachusetts Medical School.

FRIDAY, JUNE 10 .............. 5.4 CONTACT HOURS
SATURDAY, JUNE 11 ......... 12.3 CONTACT HOURS
SUNDAY, JUNE 12 ............ 3.0 CONTACT HOURS

CCP 18.0 CATEGORY 1 CEU’S

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

The American Board of Cardiovascular Perfusion will allot the following Category 1 CEU’s to those Perfusionists who attend the ASAIO 57th Annual Conference as follows:

FRIDAY, JUNE 10 .............. 6.6 CONTACT HOURS
SATURDAY, JUNE 11 ......... 7.2 CONTACT HOURS
SUNDAY, JUNE 12 ............ 4.2 CONTACT HOURS

EXHIBIT BOOTH NUMBERS & PRODUCT DESCRIPTIONS

BERLIN HEART INC
BOOTH 111
HOUSTON, TEXAS

Berlin Heart, the only company worldwide that manufactures and distributes implantable (INCOR®) and paracorporeal (EXCOR®) VAD’s for patients of every age and size with cardiovascular disease. EXCOR® Pediatric is approved for clinical investigation in the US.

DUALIS
SPACE FOR MEDICAL INNOVATION

DUALIS MEDTECH GMBH
BOOTH 113
WESSLING, GERMANY


The innovative power transmission system, MedBase® allows a wireless transfer of data and energy to implants. With this, there is no more wiring necessary through the abdominal wall. The patient can move freely.

The company DUALIS MedTech, in collaboration with DLR – German Space Agency, develops currently an innovative energy and telemetry system for implantable ventricular assist systems, which fulfills the highest requirements in terms of dependability, safety and performance. With this innovative system, DUALIS offers a technology that has the potential to set new standards in the medical field.
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.

Jarvik Heart, Inc is a privately held, New York based company that develops and manufactures miniaturized heart assist devices for the treatment of severe heart failure. The Jarvik 2000 is a battery-powered axial-flow left ventricular assist device (LVAD). It is the smallest implantable blood pump available for the long-term treatment of Heart Failure.

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Minntech Corp, a Cantel Medical Corp company, was founded in 1974 in Minneapolis. Minntech Corp is a leader in developing, manufacturing, and marketing medical devices, electronics, and sterilants. The Therapeutics Technologies Group is responsible for medical applications used for hemofiltration, hemoconcentration, immunomodulator removal, encapsulated cell technology, biopharmaceutical research, and bioartificial organs.

Mohawk Innovative Technology, Inc (MiTi) is an advanced R & D company specializing in oil-free, high speed, rotating machinery, such as gas turbine engines, turbochargers, compressors, cryogenic pumps and blood pumps. MiTiHeart Corporation, a MiTi subsidiary, has been established to further develop and market the magnetically suspended centrifugal blood pump, the MiTiHeart® LVAD. The MiTiHeart® LVAD is an implantable pump, designed for destination therapy, with extremely low hemolysis and power consumption attributed to its hybrid passive/active magnetic bearing system, which features single axis control. The pump’s efficiency also translates to a minimal temperature rise that helps reduce the risk of blood damage.
EXHIBIT PRODUCT DESCRIPTIONS CONTINUED

PRECLINICAL SURGICAL SERVICES
BOOTH 109
WINSTON SALEM, NORTH CAROLINA

As a full-service Contract Research Organization; Preclinical Surgical Services focuses on Proof-of-principle, method development, and efficacy testing in the preclinical medical technology research arena. We provide pre-surgical bench analysis, ex-vivo modeling, dynamic imaging and surgical model development in all specialties. Our staff expertise in the medical arena spans development to clinical practice; this enables us to launch your products from basic concept to clinical use. To ensure the quality of your research, PSS utilizes state-of-the-art surgical and animal housing facilities and a highly experienced research team trained to GLP Regulations. From concept to clinical applications, PSS is your innovation partner.

PVA TePla
BOOTH 104
CORONA, CALIFORNIA

PVA TePla specializes in advanced RF, Microwave and Atmospheric Plasma Processing systems for surface modification of implantable medical devices. Applications include organic residue removal, decontamination low temperature sterilization, quartz or PTFE coatings or surface activation prior to adhesive bonding. Alternately plasma can be used to tailor surface chemistries with specific functional groups (carboxyl, amine, epoxy, hydroxyl etc) to act as a defined bio-molecule tie layer. The plasma applied functional group chemistries allow higher concentration, better adhesion and cohesion of bimolecular such as enzymes, peptides, nucleic acids, heparin, and lubricious coatings. In our lab in Corona CA we offer a free proof of process, contract and R+D. We manufacture a range of R+D, custom and production RF, Microwave and Atmospheric plasma equipment.

SYNCARDIA SYSTEMS INC
BOOTH 110
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 clinical study and more.

TRANSONIC SYSTEMS INC
BOOTH 101
ITHACA, NEW YORK

Transonic Systems’ flowmeters and sensors are 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 OEM components in VAD, CPB and numerous other controlled Flow Systems.

Featured in our booth will be Transonic laboratory research products – acute intra-operative, chronically implantable, extracorporeal, as well as telemetry systems plus the Transonic Inside OEM products and development capabilities.

WOLTERS KLUWER HEALTH – LIPPINCOTT WILLIAMS & WILKINS
BOOTH 107
PHILADELPHIA, PENNSYLVANIA

Lippincott Williams & Wilkins, a Wolters Kluwer Health company is a leading international publisher of medical books, journals, and electronic media. We proudly offer specialized publications and software for physicians, nurses, students and clinicians. Please visit our booth to browse our comprehensive product line.
THE WASHINGTON HILTON FLOOR PLAN

Lobby Level

Terrace Level

Concourse Level
### ASAIO PROGRAM OUTLINE

**FRIDAY, JUNE 10, 2011**  
**ROOM: COLUMBIA HALL 5, 6, 7 & 8**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:45 AM – 8:00 AM</td>
<td><strong>INTRODUCTION AND WELCOME</strong></td>
</tr>
</tbody>
</table>
| 8:00 AM – 9:30 AM | **NIH ROLE IN DEVELOPING BIOMEDICAL TECHNOLOGY**  
Scientific Programs & Funding Opportunities at the National Inst of Biomed Imaging & Bioengineering  
NIDDK research initiatives for Medical Device Innovation  
Upcoming Trials and Developing Cardiovascular Technologies  
Question & Answer Panel (10 Minutes)                                                                 |
| 9:30 AM – 10:00 AM | **KEYNOTE ADDRESS – Creating an Entrepreneurial Hotspot: How Northeast Ohio Has Grown Healthcare** (and Other) Entrepreneurship                  |
| 10:00 AM – 10:45 AM | **VISIT EXHIBITS & POSTERS – ENJOY REFRESHMENTS - Columbia Hall Foyer**                                                                       |
| 10:45 AM – 12:15 PM | **GENERAL SESSION**  
Room: Columbia Hall 5, 6, 7 & 8  
NEW VENTURE FORUM - UNITING SCIENTIFIC RESEARCH, CLINICAL PRACTICE, REGULATORY AFFAIRS & NEW BUSINESS DEVELOPMENT  
Paragonix Technologies - The Developer of Sherpa, an Oxygenating Organ Preservation Carrier  
LifeServe Innovations - SMART Technique for Definitive Emergency Percutaneous Airways  
Stroke Rehabilitation Device Triggered by Patient’s Own Brain Activity |
| 12:15 PM – 1:30 PM | **LUNCH BREAK**                                                                                                                                     |
| 1:30 PM – 3:15 PM | **CARDIAC 1**  
ADULT MECHANICAL ASSISTANCE  
Room: Columbia Hall 5, 6, 7 & 8  
Establishing an Acute Support Program Abstracts  
**PULMONARY 1**  
ECMO & ECLS  
Room: Columbia Hall 9 & 10  
Cesar Trial – ECMO for ARDS Abstracts  
**BIOENGINEERING 1**  
FDA SUPPORT OF PEDIATRIC DEVICES  
Room: Columbia Hall 11 & 12  
Intro to the FDA Pediatric Device Consortia Grant Program  
Michigan Experience with Pediatric Device Consortia Grant Prog  
The UCSF Experience in Advancing Pediatric Device Development  
Pediatric Cardiac Device Consortium  
MISTRAL Pediatric Consortia – Lessons Learned  
PMDI & Small Businesses for Product Development  
Don't Make It If You Can't Market It |
| 3:15 PM – 4:00 PM | **VISIT EXHIBITS & POSTERS – ENJOY REFRESHMENTS - Columbia Hall Foyer**                                                                       |
| 4:00 PM – 5:30 PM | **CARDIAC 2**  
PEDIATRIC MECHANICAL SUPPORT  
Room: Columbia Hall 5, 6, 7 & 8  
Trials and Tribulations in a Pediatric Ventricular Device IDE Study Abstracts  
**PULMONARY 2**  
LONG-TERM PULMONARY SUPPORT  
Room: Columbia Hall 9 & 10  
Abstracts  
**BIOENGINEERING 2 - NEURAL**  
Room: Columbia Hall 11 & 12  
Electrical Stimulation for the Treatment of Depression & OCD  
Detecting & Stopping Seizures w/Electrical Recordings & Stimulation  
Electrical Stimulation for Treating Stroke Abstracts |
| 6:00 PM – 7:00 PM | **ASAIO WELCOME RECEPTION – Admission by Ticket**  
Room: Columbia Hall Foyer                                                                                                                          |
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Room</th>
<th>Abstracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00AM – 8:45AM</td>
<td><strong>CARDIAC GENERAL SESSION</strong> Room: Columbia Hall 5, 6, 7 &amp; 8&lt;br&gt;INDUSTRY SPEAKS – The Role of Intermacs In Future Device Trials</td>
<td>Renal 1 - Organ Support and the Dialysis Circuit Room: Fairchild – Terrace</td>
<td></td>
</tr>
<tr>
<td>8:45AM – 9:45AM</td>
<td><strong>BIOENGINEERING GENERAL SESSION - SYSTEM BIOLOGY</strong> Room: Columbia Hall 5, 6 &amp; 8&lt;br&gt;System Biology Approach to Platelet Function and Cardiovascular Disease&lt;br&gt;Cardiac Electrophysiology &amp; Biomechanics</td>
<td>General Session&lt;br&gt;Room: Columbia Hall 5, 6, 7 &amp; 8</td>
<td></td>
</tr>
<tr>
<td>9:45AM – 10:15AM</td>
<td>Asaio Hastings Lecture – A Tribute To My Mentors: Lessons Learned From Past &amp; Present Leaders</td>
<td>General Session Room: Columbia Hall 5, 6, 7 &amp; 8</td>
<td></td>
</tr>
<tr>
<td>10:15AM – 11:00AM</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS – ENJOY REFRESHMENTS</strong> - Columbia Hall Foyer</td>
<td>Test Case for Outcomes for Pediatric Devices</td>
<td></td>
</tr>
<tr>
<td>11:15PM – 11:45AM</td>
<td>President’s Address – Working in the Golden Triangle</td>
<td>President’s Address – Working in the Golden Triangle</td>
<td></td>
</tr>
<tr>
<td>12:15PM – 1:30PM</td>
<td><strong>ASAIO Fellowships &amp; Awards</strong></td>
<td>Renal 2 - Pro / Con Session&lt;br&gt;Controversial Topics in Hemodialysis Access Room: Fairchild – Terrace&lt;br&gt;Vascular Biology&lt;br&gt;Stent Use in Vascular Access Stenosis&lt;br&gt;Renal Artery Stenosis</td>
<td></td>
</tr>
<tr>
<td>3:15PM – 4:00PM</td>
<td><strong>VISIT EXHIBITS &amp; POSTERS – ENJOY REFRESHMENTS</strong> - Columbia Hall Foyer</td>
<td>Renal 3 - Pro / Con Session&lt;br&gt;Controversial Topics in Hemodialysis Access Room: Fairchild – Terrace&lt;br&gt;Catheter Function</td>
<td></td>
</tr>
<tr>
<td>5:30PM – 6:30PM</td>
<td><strong>ASAIO MEMBER BUSINESS MEETING</strong> Room: Fairchild – Terrace</td>
<td>Renal 3 - Pro / Con Session&lt;br&gt;Controversial Topics in Hemodialysis Access Room: Fairchild – Terrace</td>
<td></td>
</tr>
</tbody>
</table>
# ASAIO PROGRAM OUTLINE
## SUNDAY, JUNE 12, 2011

## 8:00AM – 9:30AM
### PULMONARY GENERAL SESSION
- Room: Columbia Hall 5, 6, 7 & 8
  - ELSO Registry Update
  - Clinical Perspective of Current Pulmonary Support
  - Bench to Bedside: Engineering Challenges Facing Artificial Lung Transplantation
  - Regulatory Issues for Pulmonary Support

### JSAO, ESAO, IFAO SESSION
- Room: Columbia Hall 11 & 12
  - JS AO - Japanese Society for Artificial Organs
    - Current Activity of the JSAO
    - Current Therapy with VAD for Severe Heart Failure Patients in Japan
    - Artificial Organs in East Japan Earthquake
  - ESAO - European Society for Artificial Organs
    - To What Extent Is Perusive Flow Beneficial To Bioreactor Performance For Therapeutic Applications?
    - Does Flux Matter In Hemodialysis?
    - How Critical Is Cannula Flow For Cerebral Perfusion During Heart & Lung Support?
    - Flow Patterns of Cardiac Assist Devices: Abundant Information About The Ventricular Status

## 9:30AM – 10:00AM
### VISIT EXHIBITS & POSTERS – ENJOY REFRESHMENTS - Columbia Hall Foyer

## 10:00AM – 12:00PM
### CARDIAC 5
- Design and Testing of Circulatory Support Devices
- Room: Columbia Hall 5, 6, 7, & 8
- Abstracts

### PULMONARY 5
- Panel Discussion
- Room: Columbia Hall 9 & 10
- ECMO For Bridge to Lung Transplant: Maryland Experience
- ECMO For Respiratory Failure: A Pulmonologist’s Perspective Role and Future of ECMO for ARDS
- Abstracts

### BIOENGINEERING 5
- Fluid Dynamics and Shear Effects
- Room: Columbia Hall 11 & 12
- Abstracts
7:45am – 12:15pm
**GENERAL SESSION 1 – FRIDAY**
*Room: Columbia Hall 5, 6, 7 & 8 – Terrace*
*Chairmen: William Wagner, PhD & Mark Slaughter, MD*

7:45am – 8:00am
**INTRODUCTION AND WELCOME**

8:00am – 9:30am
**GENERAL SESSION 1 – FRIDAY**

**NIH Role in Developing Biomedical Technology**

Scientific Programs & Funding Opportunities at the National
Christine Kelley, PhD - Dir Bioeng, Sci & Tech NIH / NIBIB
Inst of Biomed Imaging & Bioengineering
NIDDK research initiatives for Medical Device Innovation
Guillermo Arreaza-Rubin, MD - Prog Dir
Glucose Sensing & Insulin Delivery Technologies NIDDK
Upcoming Trials and Developing Cardiovascular Technologies
Marissa Miller, DVM, MPH – Branch Chief AdvTech & Surgery, NIH / NHLBI

Question & Answer Panel (10 Minutes)

9:30am – 10:00am
**KEYNOTE ADDRESS**

Creating an Entrepreneurial Hotspot: How Northeast Ohio Has Grown Healthcare (and Other) Entrepreneurship
Ray Leach - CEO JumpStart Inc

10:00am – 10:45am
**VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS**
*Room: Columbia Hall Foyer*

10:45am – 12:15am
**NEW VENTURE FORUM**

*Moderators: Brian Duncan, MD, Jenny Son, Elyssa Campbell*
*Panelists – Eric Chen, MS, Edward Berger, PhD, Scott Merz, PhD*

Uniting Scientific Research, Clinical Practice, Regulatory Affairs & New Business Development
Paragonix Technologies - The Developer of Sherpa, an Oxygenating Organ Preservation Carrier
Lisa M. Maier, PhD – Pres & COO Paragonix Tech, Inc
LifeServe Innovations - SMART Technique for Definitive Emergency Percutaneous Airways
Zachary Bloom, BS - Project Manager LifeServe Innovations
Stroke Rehabilitation Device Triggered by Patient’s Own Brain Activity
Bill Checovich, PhD - University of Wisconsin

12:15pm – 1:30pm
**LUNCH BREAK**

1:30pm – 5:30pm
**CARDIAC TRACK**

1:30pm – 3:15pm
**CARDIAC 1 - Adult Mechanical Assistance**
*Room: Columbia Hall 5, 6, 7 & 8 - Terrace*
*Moderators: William Holman, MD & Jeffrey Morgan, MD*

1:30PM – 2:00PM

Establishing An Acute Support Program
Edwin McGee, MD - Surg Dir Heart Tx & Mech Assist, Northwestern Memorial Hosp

2:15PM
Prediction of Outcome after Left Ventricular Assist Device Implantation: Relevance of the Lietz Score for Continuous Flow Devices
Juliane Vierecke, MD, PhD - German Heart Inst Berlin

2:30PM
Predictors of Early Mortality in Recipients of the Jarvik 2000 Left Ventricular Assist Device
Sasa Borovic, MD - Texas Heart Institute

2:45PM
Pre-Implant Characteristics Predict Death in Post-Levitronix Centrimag Temporary Ventricular Assist Device (VAD)
Renee Merchel - Intermountain Medical Center

3:00PM
The Implantable Axial Flow Blood Pump for Temporary VAD in Postcardiotomy Cardiogenic Shock
Li Guo Rong, MD - Fu Wai Heart Hospital CV Inst

3:15pm – 4:00pm
**VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS**
*Room: Columbia Hall Foyer*

4:00pm – 5:30pm
**CARDIAC 2 - Pediatric Mechanical Support**
*Room: Columbia Hall 5, 6, 7 & 8 - Terrace*
*Moderators: Peter Wearden, MD, PhD & Christopher Almond, MD*

4:00PM – 4:30PM

Trials & Tribulations In A Pediatric Ventricular Assist Device IDE Study
Mary Beth Kepler, MBA - VP Regulatory Affairs Berlin Heart
Christopher Almond, MD - Cardiac, Children's Hosp Boston

4:30PM
Pilot Studies Using the Circulite Synergy Micro-Pump for Mechanical Support of Fontan Circulation
Vinod Sebastian, MD - Standford Univ

4:45PM
Computational Design of the Fourth PediaFlow [TM] Pediatric Ventricular Assist Device
James Antaki, PhD - Carnegie Mellon Univ

5:00PM
Acute Hemodynamic Evaluation of the Infant Jarvik Ventricular Assist Device in a Piglet Model
Xufeng Wei, MD, PhD - Univ of Maryland

5:15PM
Mechanical Circulatory Support of Systemic Ventricle in Adults with Prior Corrected Transposition of Great Arteries
Alexander Stepanenko, MD - Deutsches Herzzentrum
1. Extracorporeal Support Assisted Organ Donation in Donors after Cardiac Death: 10 Year Experience
   Alvaro Rojas-Pena, MD - At the University of Michigan

2. Advanced Heart Failure Managed with New Generation of Non-Pulsatile Ventricular Assist Device
   Jens Garbade, MD, PhD - Heart Center Leipzig

3. Surgical Repair of the Native Heart during Heartmate II Insertion
   Walter Dembitsky, MD, PhD - Sharp Memorial Hospital

4. Hemolysis Rate after Biventricular Centrifugal Ventricular Assist Device Implantation: Retrospective Comparison between Biventricular and Left Ventricular Assist Device Recipients
   Alexander Stepanenko, MD - Deutsches Herzzentrum Berlin

5. Preoperative Lower Left Ventricular Ejection Fraction and Implantation of Continuous Flow Pump
   Are Independent Risk Factors for Postoperative Onset of Aortic Insufficiency in Patients with Left Ventricular Assist Device
   Hatano Masaru, MD - Graduate School of Medicine

6. The Modified Ultrasound Is Associated with Inflammatory Modulation and Less Postoperative Blood Loss in Adults Undergoing Coronary Artery Bypass Grafting: A Randomized and Controlled Study
   Orlando Petrucci, MD, PhD - University of Campinas

7. The Change of Coronary Flow by Controlling the Power of Continuous-Flow Left Ventricular Assist Device in Acute Heart Failure: Counterpulse Drive Mode Can Increase the Coronary Flow
   Akihide Umeki - Natl Cerebral and CV Ctr Research Inst

8. Impact of Surgical Approach on Adverse Neurological Events: Single-Center Experience with HeartWare HVAD Implanted Via Left Lateral Thoracotomy
   Alexander Stepanenko, MD - Deutsches Herzzentrum Berlin

9. Aortic Valve Replacement in Left Ventricular Assist Device Recipients: Single-Center Experience
   Nikolay Dranishnikov, MD - Deutsches Herzzentrum Berlin

10. Clinical Outcomes with Early Right Ventricular Assist Device Placement after Left Ventricular Assist Device Insertion
    Jonathan Yang, MD - Columbia Univ

11. Single Center Clinical Outcomes of Heartmate II Continuous-Flow Left Ventricular Assist Device
    O.H. Frazier, MD - Texas Heart Institute

12. Non-Surgical Cardiac Surgery in Continuous Flow Left Ventricular Assist Device Patients
    Geetha Bhat, PhD, MD - Advocate Christ Medical Center

13. Quantification of TangoPlus FullCure®390 Compliant Printing Patient-Specific Vascular Models
    Giovanni Biglino, PhD - UCL Inst of CV Sciences

14. Design and Characterization of a Miniaturized Magnetically Suspended Centrifugal Blood Pump
    Chen Chen, PhD - China Heart Biomedical Inc

15. Long-Term Effect of Centrifugal-Continuous Flow LVAD Support to Aortic Valve
    Takuma Miyamoto, MD - Tokyo Women's Med Univ

16. Tricuspid Valve Repair in Patients Supported with Left Ventricular Assist Devices
    Martin Schweiger, MD - Deutsches Herzzentrum Berlin

17. Very Low Infection Rate after Implantation of the HeartMate II LVAD
    Ares K. Menon, MD - University Hospital RWTH

18. Finite Element Analysis of Transcatheter Aortic Valve Implantation in a Calcified Native Valve
    Dr Liang Ge - Univ of California at San Francisco

19. First Complete Replacement of a Failed Percutaneous Lead without LVAD Exchange
    Garrett Morgan, BSN - Integrus Baptist Medical Center

20. Left Ventricular Assist Device Replacement for Recurrent Bacteremia
    Antone Tatooles, MD - Advocate Christ Medical Center

21. Initial Clinical Experience with Oral Sildenafil in Patients with Elevated Pulmonary Artery Pressure after Implantation of Newer Left-Ventricular Assist Devices
    Surbhi Chamarla, MD - Henry Ford Hospital

22. Are Hospital Readmissions a Common Occurrence in the Current Era with Continuous Flow (CF) LVADs? Forum Kamdar, MD - University of Minnesota

23. The Effect of Inlet Pressure on Gas Embolism and Hemolysis in Continuous-Flow Blood Pumps
    Salim Olia, BS - University of Pittsburgh

24. CFD-Based Shape Optimization of the PediaFlow VAD
    Jeongha Kim, MS - Carnegie Mellon University

25. Evaluation of Contributing Factors to Nonsurgical Bleeding in Continuous-Flow Left Ventricular Assist Device (CF-LVAD) Recipients
    Jieping Hu, PhD - University of Maryland

26. Contractility and Compliance of Left Ventricle by Continuous Flow Pump
    Choon-Sik Jhun, PhD - The Penn State College of Med

27. Do Pulmonary Function Tests Improve after Left Ventricular Assist Device Placement?
    Geetha Bhat, PhD, MD - Advocate Christ Medical Ctr

28. In Vitro Experience with Impella Pumps as Cavopulmonary Assist for Failing Fontans
    Christopher Haggerty, BS - Georgia Inst of Technology

29. Is High-Dose Vasopressor (HDV) Use Associated with Increased Risk of Renal Failure (RF) after Left Ventricular Assist Device (LVAD) Implant?
    Renee Merchel - Intermountain Medical Center

    Tomonori Tsukiya, PhD - Natl Cerebral and CV Ctr

31. Comparison of a Valveless Pulsatilie Assist Device with Continuous Flow in a Computational Model of the Cardiovascular System
    Jeffrey Gohean, MSME - Windmill CV Systems Inc

32. Mock Circulatory - Based Numerical Simulation for Ventricular Assist Devices
    Choon-Sik Jhun, PhD - The Penn State College of Med

33. Transcutaneous Energy Transfer System (TET) with Novel External Carrier System
    Thomas Schmid, PhD - German Aerospace Centre (DLR)

34. A Quantitative Method To Assess the Wrinkling Effect of the Bioprosthetic Heart Valve's Leaflets
    Ahmad Falahatpisheh - University of California Irvine
1:30pm – 5:30pm

PULMONARY TRACK

1:30am – 3:15pm

PULMONARY 1 - ECMO AND ECLS

Room: Columbia Hall 9 & 10 - Terrace
Moderators: Joseph Zwischenberger, MD & Zhongjun Wu, PhD

1:30pm – 1:45pm

CFAR TRIAL - ECMO FOR ARDS
Joseph Zwischenberger, MD - Chair Surgery, Univ of Kentucky

1:45PM
ECMO in Lung Transplantation: Bridging to Transplant, Replacing Cardiopulmonary Bypass during Implantation, and Supporting to Recovery for Graft Failure Following Transplantation
Hartmut Bittner, MD, PhD - Hrt Ctr of Univ of Leipzig

2:00PM
Cardiopulmonary Bypass Surgery Aided by a Selective Cytopheretic Inhibitory Device
Christopher Pino, PhD - Innovative BioTherapies

2:15PM
Percutaneous Pulmonary Support Using Veno-venous Type Emergency Bypass System: Single Center Experience of 15 Cases
Il Park, MD - Seoul National Univ Bundang Hospital

2:30PM
Inflammation and Hemolysis after Cardiopulmonary Bypass Compared between Roller and Gyro Pumps
Kehara Hiromu - Shinshu Univ School of Medicine

2:45PM
Ju Zhao, MD - Fuwai Cardiovascular Hospital

3:00PM
ECMO Ambulance and Interdisciplinary Emergency Medical Care
David Macku, MD, MSc - Czech Technical Univ

3:15PM – 4:00PM

VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
Room: Columbia Hall Foyer

4:00PM – 5:30PM

PULMONARY 2 - Long-Term Pulmonary Support

Room: Columbia Hall 9 & 10 - Terrace
Moderators: Aly El-Banayosy, MD & William Federspiel, PhD

4:00PM
Developing a Biohybrid Lung - Comparative Endothelialization of Different Gas Exchange Membranes
Bettina Wiegmann, MD - Hannover Medical School

4:15PM
Ambulatory Venovenous Extracorporeal Respiratory Support as a Bridge for Cystic Fibrosis Patients to Emergent Lung Transplantation
Don Hayes, Jr, MD – Univ of Kentucky Medical Center

4:30PM
Unaffected Gas Transfer of Poly-4-Methyl-1-Pentene Gas Exchange Membranes by Endothelialization
Bettina Wiegmann, MD - Hannover Medical School

4:45PM
Primary Evaluation of Heparinized Hollow Fiber Membrane Sample Surfaces
Narayana Garmella, PhD – University of Maryland

5:00PM
Long Term Ambulatory Respiratory Support Platform Utilizing a Double Lumen Cannula
Xiaqin Zhou, MD - Univ of Kentucky

5:15PM
Development of a New True Membrane Hollow Fiber for a Long Term Artificial Lung
Dongfeng Wang, MD - University of Kentucky

1:30am – 3:15pm

BIOENGINEERING TRACK

1:30am – 3:15pm

BIOENGINEERING 1 - FDA Support of Pediatric Devices

Room: Columbia Hall 11 & 12 - Terrace
Moderators: Eric Chen, MS & Francesca Joseph, MD

1:30PM
Introduction to the FDA Pediatric Device Consortia Grant Program
Linda Ulrich, MD - CAPT US Public Health Service, FDA

1:45PM
The Michigan Experience with the Pediatric Device Consortia Grant Program
James Geiger, MD - Prof Pediatric Surg Mott Children’s Hospital

2:00PM
The UCSF Experience in Advancing Pediatric Device Development
Shuvo Roy, PhD - Lab Dir & Principal Investigator Univ of California

2:15PM
Pediatric Cardiac Device Consortium: Cardiovascular Device Development & Clinical Trials
Ajit Yoganathan, PhD - Assoc Chair Res Biomed Eng, Georgia Inst Technology

2:30PM
MISTRAL Pediatric Consortia – Lessons Learned
Pablo Garcia, MSME - Principal Engineer, SRI Int’l

2:45PM
PMDI & Small Businesses for Product Development
Andre Muellenen, MD - Assoc. Professor of Pediatrics, Virginia Tech Carilion School of Medicine

3:00PM
Don’t Make It If You Can’t Market It
Ross Trimby, COO - Inst for Pediatric Innovation

3:15PM – 4:00pm

VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
Room: Columbia Hall Foyer

4:00pm – 5:30pm

BIOENGINEERING 2 – Neural

Room: Columbia Hall 11 & 12 - Terrace
Moderator: Nicholas Hatsopoulos, PhD

4:00PM
Electrical Stimulation for the Treatment of Depression and OCD
Peter Warnke, MD - Assoc. Prof of Surgery
Univ of Chicago

4:30PM
Detecting and Stopping Seizures Using Electrical Recordings and Stimulation
Sydney Cash, MD, PhD - Asst Neurology, MA Gen Hosp

5:00PM
Electrical Stimulation for Treating Stroke
Randolph Nudo, PhD - Dir Landon Ctr Aging, Univ of Kansas
**BIOENGINEERING POSTER SESSION 1**

| 35 | In Vitro Hemocompatibility Assessment of Silicon-Based Substrates for Miniaturized Renal Replacement Applications  
Shuvo Roy - UCSF |
| 36 | Validation of Computational Fluid Dynamic Techniques Used To Evaluate Medical Devices: Interlaboratory Study #2 - FDA Benchmark Blood Pump Model  
Richard Malinauskas, PhD - FDA |
| 37 | Novel Driveline Exit Site Dressing Technique for Left Ventricular Assist Devices Improves Infection Rates  
Rene Merchel - Intermountain Medical Center |
| 38 | The FDA Office of Orphan Product Development's Pediatric Device Consortia Grant Program  
Linda Ulrich, MD - FDA |
| 39 | Transient Fluid Analysis of a Magnetically Levitated Pediatric Ventricular Assist Device: Rotational Interfaces and Time-Varying Boundary Conditions  
Amy Throckmorton, PhD - Virginia Commonwealth Univ |
| 40 | A Nonthrombogenic Surface Based on Nitric Oxide (NO) Generation from Circulating Nitrosothiols (RSNO)  
Terry Major, MS - Univ of Michigan |
| 41 | Analysis of Cell Behavior on Fibrous Scaffolds Coated with Amorphous Hydrogenated Carbon (a-C:H) Film  
Kazuhiro Nonaka, PhD - Tokyo Denki Univ |
| 42 | Pneumatic Drive Requirements for Direct Mechanical Ventricular Actuation  
Mark Anstadt, MD - Wright State Univ |
| 43 | A Simple Mock Circulatory System for Testing DMVA  
Mark Anstadt, MD - Wright State Univ |
| 44 | Automatically Analyzing Shunt Murmurs Using Wavelet Transform as a New Method for Evaluating Vascular Access Function  
Yuka Motohashi, MD - Toin Univ of Yokohama |
| 45 | A Study on Blood Recirculation of Double-Lumen Catheters Using Computational Fluid Dynamics  
Yoichi Marushita, MD, MAS - Toin Univ of Yokohama |
| 46 | Hemoadsorption of High-Mobility Group Box 1 in Swine Acute Liver Failure Model  
Ryo Nishiyama, MD - Keio University |
| 47 | New Roles & Functions for Biomaterials: Mimicking ECM  
Birgit Glasmacher, PhD - Leibniz Universitaet Hannover |
| 48 | Detection of Suction for Rotary Blood Pumps Using Support Vector Machines  
Yu Wang - Univ of Central Florida |
| 49 | Modeling and Simulation of a Hydraulic Mock Circulatory System  
Huang Feng - Zhejiang University |
| 50 | Transcutaneous Energy Transmission System with Optimized Efficiency for the Artificial Heart  
Yang Fu - Zhejiang University |
| 51 | Infection Safe Percutaneous Lead with an Active Exit Site  
Klaus Affeld, PhD - Charite |
| 52 | Study of the Structures on Perfluorocarbon Emulsions Used as Oxygen Carriers (PFCOCs)  
Camila Castro, MSc - Universidad de los Andes |
| 53 | A Conscious Swine Model of Extreme Normovolemic Hemodilution  
Juan David Perez Coronado, MD - Univ de los Andes |
| 54 | Modifications of Sinusoids Area in the Progression of Liver Disease  
Vincenzo Morabito, MD - Sapienza University of Rome |
| 55 | Renovascular Engineering Improving the Koff-Designed Baxter/Travenol Twin Coil Dialysis Device  
Connie Hall, PhD - The College of New Jersey |

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6:00am ~ 7:00pm

**ASAIO WELCOME RECEPTION**  
**Room:** Columbia Hall Foyer

8:00am ~ 8:45am

**CARDIAC GENERAL SESSION**  
**Saturday**  
**Room:** Columbia Hall 5, 6, 7 & 8 – Terrace  
**Chairman:** Mark Slaughter, MD

**SYMPOSIUM – INDUSTRY SPEAKS**  
The Role of Intermacs In Future Device Trials  
David Hathaway, MD - Chief Medical Officer, HeartWare Inc  
David Farrar, MD - VP Scientific Affairs, Thoratec Corp  
William Holman, MD - Professor of CT Surg, Univ of Alabama-Birmingham

8:45am ~ 9:45am

**BIOENGINEERING GENERAL SESSION**  
**Systems Biology**  
**Room:** Columbia Hall 5, 6, 7 & 8 – Terrace  
**Chairmen:** William Weiss, PhD & Trevor Snyder, PhD

8:45AM ~ 9:15AM

**Symposium**  
**Systems Biology Approach to Platelet Function and Cardiovascular Disease**  
Scott Diamond, PhD - Arthur E Humphrey Chair Chem & Biomolecular Eng, Univ of Pennsylvania

9:15AM ~ 9:45AM

**Posters & Exhibits**  
**Room:** Columbia Hall Foyer  
**Chairman:** William Wagner, PhD & William Holman, MD

9:45am ~ 12:15pm

**GENERAL SESSION**  
**Room:** Columbia Hall 5, 6, 7 & 8 – Terrace  
**Chairmen:** William Wagner, PhD & William Holman, MD

**ASAIO HASTINGS LECTURE**  
**Introduction:** William Holman, MD

A Tribute To My Mentors: Lessons Learned From Past & Present Leaders  
Kurt Dasse, PhD - President & CEO, Levitronix

10:15am ~ 11:00am

**VISIT EXHIBITS & POSTERS – ENJOY REFRESHMENTS.**  
**Room:** Columbia Hall Foyer

11:00AM ~ 11:15AM

**Test Case for Outcomes for Pediatric Devices**  
Peter Wearden, MD - Ped CT Surg, Children's Hosp Pittsburgh

11:15am ~ 11:45am

**PRESIDENT’S ADDRESS**  
**Introduction:** Harvey Borovetz, PhD

Working in the Golden Triangle  
William Wagner, PhD - President ASAIO

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ASAIO 2011: Aspen – August 30 - September 3  
ASAIO 2012: Atlanta – August 9-10
11:45am – 12:15pm  
**ASAIO FELLOWSHIPS & AWARDS**

**ASAIO WILLEM J KOLFF / DON B OLSEN AWARD**  
Pramod Bonde, MD – University of Pittsburgh  
Sponsored by the Medford Foundation

**BARNEY CLARK AWARD**  
Sponsored by the Medford Foundation

**ASAIO Y NOSÉ FELLOWSHIP**  
Daniele Camboni, MD - Univ Med Cntr of Regensburg  
Sponsored by the Y Nosé Fellowship Fund

**ASAIOFY1 - FOR YOUNG INNOVATORS FELLOWSHIP FINALISTS**  

Brian Gray, MD - University of Michigan  
Rene Merchel - Intermountain Medical Center  
Richard Jeffries, BS - University of Pittsburgh  
Joshua Taylor, BS - The Pennsylvania State University  
Salim Olia, BS - University of Pittsburgh  
Samuel Hund, PhD - Carnegie Mellon University  
Sponsored by the Paul S Maichesky Fellowship Fund

**ASAIO YOUNG RESEARCHER FELLOWSHIPS**  
Sponsored by Levitronix

12:15pm – 1:30pm  
LUNCH BREAK

1:30pm – 5:30pm  
**CARDIAC TRACK**

1:30pm – 3:15pm  
**CARDIAC 3 - Complications Associated with Circulatory Support**  
*Room: Columbia Hall 5, 6, 7 & 8 - Terrace*  
*Moderators: Edwin McGee, MD & Christopher Mascia, MD*

1:30PM  
HeartMate II Left Ventricular Assist Device Implantation in Patients with Hepatic Dysfunction  
Zumrut Demirozu, MD - Texas Heart Inst

1:45PM  
Gastrointestinal Bleeding with the HeartMate II Left Ventricular Assist Device/Predonation  
Jeffrey Morgan, MD - Henry Ford Hosp

2:00PM  
Postoperative Course and Changes in Mid-Term Follow-Up of Von Willebrand Factor in Heartware HVAD Recipients  
Nikolay Dranishnikov, MD - Deutsches Herzzentrum Berlin

2:15PM  
Challenges in Predicting Right Ventricular Failure in LVAD Patients: An Analysis of 484 Heartmate II Patients  
Kartik Sundareswaran, PhD - Thoratec Corp

2:30PM  
Adverse Neurological Events after Implantation of a Heartmate II LVAD  
Jeffrey Morgan, MD - Henry Ford Hospital

2:45PM  
Risk Factors for Device-Related Infection in Patients with Continuous-Flow Left Ventricular Assist Devices  
Sasa Borovic - Texas Heart Institute

3:00PM  
Comparison of Gastrointestinal Bleeding in Patients Receiving Axial vs Centrifugal Continuous Flow (CF) Left Ventricular Assist Devices  
Forum Kamdar - University of Minnesota

3:15pm – 4:00pm  
**VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS**  
*Room: Columbia Hall Foyer*

4:00pm – 5:30pm  
**CARDIAC 4 - Circulatory Support Devices Under Development**  
*Room: Columbia Hall 5, 6, 7 & 8 - Terrace*  
*Moderators: Walter Dembitsky, MD & Steven Koenig, PhD*

4:00PM  
New Technology: Let the Spinning Continue  
Mark Slaughter, MD  
Prof Chief Thoracic & CV Surgery, Univ of Louisville

4:15PM  
Miniaturation of Wide-Bladed Blood Pump Technology  
Dan Tamez - HeartWare, Inc.

4:30PM  
Results of the European Clinical Trial of Arrow CorAide®LVAS  
Diyar Saeed, MD - Heinrich-Heine University Dusseldorf

4:45PM  
Completely Implantable Biventricular Assist Device for Destination Therapy  
Thomas Schmid, PhD - German Aerospace Centre (DLR)

5:00PM  
In Vivo Evaluation of a Percutaneous VAD for Treatment of Acute Right Heart Failure  
Scott Corbett - ABIOMED, Inc

5:15PM  
Development and in Vivo Test of a new VAD System with Hydrodynamically-Levitated Axial Flow Turbo Pump  
Toshihide Mizuno, DVM, PhD - Natl Cerebral & CV Ctr Research Institute

Posters Available All Day in Columbia Hall Foyer

**CARDIAC POSTER SESSION 2**

56  
The MVAD Impeller: Design Elements  
Fernando Casas, PhD - HeartWare Inc.

57  
Thromboelastography (TEG): An Evaluation of Its Correlation with Activated Partial Thromboplastin Time (APTT) in Patients Implanted with a Total Artificial Heart (TAH)  
Pere Ventura, MS - Intermountain Medical Center

58  
Implantable Cooling Device for the Control of the Atrial Fibrillation  
Tomoyuki Yambe, MD, PhD - Tohoku University

59  
Preoperative Risk Analysis for Requirement of Biventricular Assist Device in Japanese Patients with Left Ventricular Assist Device Implantation  
Taro Shiga, MD, PhD - The Tokyo University Hospital

60  
Feedback Controlled Induction of Axial-Flow LVAD Pulsatility to Maximize Instantaneous Perfusion under Normal or Failing Physiologies in a Coupled Ventriculoarterial Model  
Alper Aksu, BS - Bosphereship University

61  
Overcoming Right Ventricular Afterload: A New Concept To Assist the Failing Right Ventricle - An Experimental Study  
Marcus Haushofer, MD - University Hospital RWTH Aachen

62  
Single Center VentAssist LVAD Experience  
Tadashi Motomura, MD, PhD - Baylor College of Medicine

63  
Single Center Experience with the E-VITA® Hybrid prosthesis in 29 Patients with Acute Type A Aortic Dissection and Thoracic Aneurysms  
Jan Wilhelm Spillner, MD - RWTH Aachen

64  
Biochemical and Functional Changes in Donor Blood during Storage  
Jan Simoni, DVM, PhD - Texas Tech Univ Health Sciences Ctr

65  
A Hybrid Self-Regenerative Tissue Approach as a Proper Alternative for Prosthetic Heart Valves  
Hamed Alavi, MSc - University of California
66 Comparison between Estimated Cardiac Function during Left Ventricular Assistance and during No Support
Telma Sugai - Tohoku University

67 Evaluation of Sub-Lethal Trauma to Erythrocytes Using Mathematical Modeling
Samuel Hund, PhD - Carnegie Mellon University

68 Evaluation of an Aortic Annulopasty Ring in a Bovine Model
William Cohn - Texas Heart Institute

69 Retrograde Cerebral, Aortic, and Myocardial Flow during IABP Support
Steven Koenig, PhD - University of Louisville

70 Adrenal Insufficiency and Implanted LVADS
Rohaid Ali - Integris Baptist Medical Center

71 Experience with HeartMate II Left Ventricular Assist Devices in Elderly Patients
Zumrut Demiroz, MD - Texas Heart Institute

72 Emergent Versus Non-Emergent Heartmate II Left Ventricular Assist Device Implantation
Igor Gregoric, MD - Texas Heart Institute

73 Unusual Presentation of a Known Complication in Heartmate II Left Ventricular Assist Devices (LVADS)
Renée Merchel - Intermountain Medical Center

74 Safety of Irradiating a Heartmate II during Cancer Treatment
Trevor Snyder, PhD - INTEGRIS Baptist Med Ctr

75 A Simplified Self-Expanding Cannula for Central Venous Cannulation
Saad Abdel-Sayed, PhD - Univ Hospital CHUV

76 Does Preoperative Heparin Infusion Affect Anticoagulation during Cardiopulmonary Bypass?
Masakazu Sagawa, MD, PhD - Saiseikai Niigata Second Hospital

77 Virtual Dor-Procedure Using the Finite Element Virtual Suture Method
Liang Ge - Univ of California San Francisco

78 Small Adult Patients with Heart Failure Need Ventricular Assist Device Newly Designed for Them
Takeshi Komoda, MD, PhD - Deutsches Herzzentrum Berlin

79 Temporary Elastic Support in Ischemic Cardiomyopathy: Effect of Patch Degradation Time on Functional Outcomes
Ryotaro Hashizume - University of Pittsburgh

2:30PM Study on Development of an Aqueous Two-Phase Oxygenator Using PFC
Seiya Azumaya, BS - Tokyo Denki University

2:45PM A Percutaneous OxyRVAD for Lung and Right Heart Support
Dongfang Wang, MD, PhD - University of Kentucky

3:00PM Ex-Vivo Lung Perfusion Improves Organ Quality after Cardiac Death. Swine Model of Warm Ischemia Injury
Pablo Sanchez, MD, PhD - University of Maryland

3:15pm ~ 4:00pm VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS.
Room: Columbia Hall Foyer

4:00pm ~ 5:30pm PULMONARY 4 – Pediatric Pulmonary Support
Room: Columbia Hall 9 & 10 - Terrace
Moderators: Kurt Dasse, PhD & Guruprasad Giridharan, PhD

4:00PM Development of an Artificial Placenta: 24 Hour Veno-Venous Extracorporeal Life Support in Premature Lambs
Brian Gray, MD - University of Michigan

4:15PM Axillary Artery Cannulation for VA ECMO
Jeffrey Javidfar, MD - Columbia Univ Medical Center

4:30PM Performance Evaluation of the Enson Pediatric Cardio pulmonary Assist System with Dual-Lumen Cannulae
George Pantalos, PhD - University of Louisville

4:45PM In-Vitro Performance Testing of a Pediatric Oxygenator with Integrated Pulsatile Pump
Ralf Borchardt, Dipl.-Ing. - RWTH Aachen University

5:00PM Pre-Clinical Program of the Integrated Pediatric Pump-Lung (PediPL) for Kids, Infants and Neonates
Zhongjun Wu, PhD - University of Maryland

1:30pm ~ 5:30pm PULMONARY TRACK

1:30pm ~ 3:15pm PULMONARY 3
New Technologies: Integrated Pump / Lung Systems
Room: Columbia Hall 9 & 10 - Terrace
Moderators: George Pantalos, PhD & Keith Cook, PhD

1:30PM Veno-Venous Extracorporeal Membrane Oxygenation (VV-ECMO) by Single Vessel Access in Adults
Daniele Camboni, MD - Univ Med Center Regensburg

1:45PM Rotating Impeller Spacing Effects in Hollow Fiber Membrane (HFM) Respiratory Assist Devices
Richard Jeffries - University of Pittsburgh

2:00PM Biocompatibility Assessment of the Levitronix® Centrimag® Adult ECMO Circuit in a Model of Pulmonary Hypertension
Venkat Shankaranraman, PhD - University of Pittsburgh

2:15PM Immobilized Carbonic Anhydrase on Hollow Fibers Accelerates CO2 Removal from Blood
David Arazawa, BS - University of Pittsburgh

1:30pm ~ 3:15pm BIOENGINEERING 3
Biological Approaches to Organ Replacement
Room: Columbia Hall 11 & 12 - Terrace
Moderators: Amy Throckmorton, PhD & Steven Chopski, PhD

1:30PM The Leicester Experience with an Ex-vivo Autologous Perfused Porcine Liver Model: Past Achievements and Potential Future Applications
Gianpiero Gravante, MD, PhD - Specialist Registrar, Univ Hosp of Leicester

2:00PM Development of an Implantable Small Camera for Angiogenesis
Yusuke Inoue - The University of Tokyo

2:15PM Neovascularization and Remodeling in Patients Injected with Autologous Bone Marrow Cells
Brian Bruckner, MD - The Methodist Hospital
2:30PM  In Vivo Evaluation of an In-Body Tissue-Engineered and Completely Autologous Aortic Valved Conduit (Biovalve) in a Goats Model
Yoshiaki Takewa, MD, PhD - Natl Cerebral & CV Center

2:45PM  Three Dimensional Polycaprolactone/Chitosan Scaffolds for Growth of Chondrocytes
Ying Wan, PhD - Huazhong Univ of Science & Tech

3:00PM  Liposome-Encapsulated Hemoglobin Reduced Cerebral Infarct Volume in Rodent Transient Focal Ischemia
Akira Kawaguchi, MD, PhD - Tokai Univ School of Med

3:15pm – 4:00pm
VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
Room: Columbia Hall Foyer

4:00pm – 5:30pm
BIOENGINEERING 4 - FYI Bioengineering Rapid Fire Session
Room: Columbia Hall 11 & 12 - Terrace
Moderators: Scott Corbett, PhD & Trevor Snyder, PhD

These presentations are also available as Posters

4:00PM  Introduction - Trevor Snyder, PhD

4:05PM  Evaluating Soft Tissue Leaflet Stresses in Non-Circularly Deployed Heart Valves
Nandini Duraswamy, PhD - FDA

4:10PM  Self-Sensing Magnetic Bearings for Maglev Blood Pumps
Shanbao Cheng, PhD - Rochester Inst of Technology

4:15PM  BIC MAC (Bioincompatible Material Apheresis for Cancer) Therapy
Junji Takaba, PhD - Baylor College of Medicine

4:20PM  Development of User-Centered and Work-Flow Adapative Decision Guidance System for Personalized Mechanical Circulatory Assistance
Yojuan Wang, MS - Carnegie Mellon University

4:25PM  Pulsatile Control of Rotary Blood Pumps: Does the Modulation Waveform Matter?
Tohid Pirbodagh, MSc - Bern University

4:30PM  An Animal Model of Small-Diameter SIS Vein Grafts: It Didn't Work
Lina M Quijano, MSc - Universidad de los Andes

4:35PM  A Pressure-Volume System for Measuring Mechanical Properties of Small Diameter Vessels
Diana Sanchez-Palencia, MSc - Univ de los Andes

4:40PM  Analysis of Pre and Post Implant Sleep-Disordered Breathing (SDB) in Patients with the Heart Mate II (HMII) Left Ventricular Assist Device (LVAD)
Renee Merchel - Intermountain Medical Center

4:45PM  A Particle Image Velocimetry Study of the Penn State 50cc VAD during Varying Beat Rates
Michael Navitsky, BS - The Pennsylvania State Univ

4:50PM  Study of Shear-Induced Blood Damage in Different Species
Tao Zhang, PhD - University of Maryland

4:55PM  High Shear-Short Exposure Time Induced Platelets Activation in Different Species
Shuqiong Niu, MD - University of Maryland

5:00PM  Exogenous Nitric Oxide Prevents Cardiovascular Collapse during Hemorrhagic Shock
Pedro Cabrales, PhD - University of California - CANCELLED

5:05PM  Small Volume Resuscitation from Hemorrhagic Shock Utilizing High Molecular Weight Tense-State Polymerized Hemoglobin
Pedro Cabrales, PhD - University of California - CANCELLED

5:10PM  Transcutaneous Energy Transmission System with External Water-Cooling Apparatus When Primary Coil Is Located Away from the Body
Shumpel Taguchi - Tokyo University of Science

5:15PM  Novel Mock Circulatory Loop for Testing and Evaluating Implanted HeartMate II (HMII) Left Ventricular Assist Device (LVAD)
Pere Ventura, MS - Intermountain Medical Center

5:20PM  In Vitro Evaluation of a Novel Short-Term Extracorporeal Ventricular Assist Device
David Spurlock, MD - University of Michigan Hospital

5:25PM  Numerical and Experimental Hydraulic and Hemolytic Evaluation of Axial Propellar Pumps
Mihai Miclea-Bleiziffer – Univ of Erlangen-Nuremberg

Posters Available All Day in Columbia Hall Foyer

BIOENGINEERING POSTER SESSION 2

80  Development of a New Stronger Tissue Adhesive Material Using Ion Beam Irradiated EPTFE
Yoichi Sugita, MD, PhD - Baylor College of Medicine

81  Usefulness of Hemocor HPH Hemoconcentrator in the Manufacturing of Hemoglobin (Hb)-Based Oxygen Carriers
Jan Simoni, DVM, PhD - Texas Tech Univ Health SciencesCtr

82  An Elastomeric Micro-Fibrous Sheet Made from a Blend of Biodegradable Polyurethane and Extracellular Matrix Digest for Soft Tissue Reconstruction
Keisuke Takanari, MD, PhD - University of Pittsburgh

83  HeartMate II (HMII) Left Ventricular Assist Device (LVAD) Hyperbaric Chamber Performance
Pere Ventura, MS - Intermountain Medical Center

84  Behavior of Human Blood under Exposure of UV-A Light
Joerg Vienken, Dr. Eng. - Fresenius Medical Care

85  R & D of Foils, Wires and Mini-Tubes of Novel Biomedical Ti Alloy TLM Used in Artificial Organs
Zhentao Yu, PhD - NW Inst for Nonferrous Metal Research

86  Fluid Flow Analysis (FFA) of Common Inflow Graft Warping Problem in HeartMate II (HMII) Left Ventricular Assist Device (LVAD)
Pere Ventura, MS - Intermountain Medical Center

87  Investigation of the Relation between Cell Migration Direction and Cell Concentration using PIV Analysis for Tissue Formation Process
Hiroo Noguchi, BS - Tokyo Denki University

88  Pulsatile Flow or Continuous Flow: Effects on the Simulation of Flow through Native Aorta with a LVAD
Zhe Lin - Zhejiang University - CANCELLED

89  A Coupled 3D-0D Model To Study Blood Flow in Aortic Arch during Use of Intra-Aortic Balloon Pump
Gionna Fragomeni, PhD - Magna Græcia University

90  In Vitro Antithrombogenic Testing as a Pre-Evaluation for Ex Vivo Testing for a Disposable Centrifugal Blood Pump with Hydrodynamic Bearing
Osamu Maruyama, PhD - Natl Inst of Adv Ind Sci & Tech (AIST)
Mathematical Model's Analysis To Improve Albumin Dialysis MARS Treatment
Vincenzo Morabito, MD - Sapienza University of Rome

Introductory Tests to In Vivo Evaluation: Prototypes Assembly and Anatomical Position
Eduardo Bock, Eng - IDPC/IFSP

Physical Cardiovascular Simulator (PCS) System Including the Baroreceptor Effect: The LVAD Assessment
Jeison Fonseca, MSc - Inst Dante Pazzanese of Cardiology

Quantification of Oxygen Capacity in an Emulsion of Perfluorooctilbromide by D-Glucose Oxidation
Diana Marcela Vasquez Gutierrez - Universidad of Los Andes

Decision Guidance System for Mechanical Circulatory Assistance
Antonio Ferreira, PhD - Carnegie Mellon University

Double Stator Maglev Artificial Heart for Infant Patients
Masahiro Osa, BS - Ibaraki University

Analysis and Tests of Supervisory Control Systems Applied to a Ventricle Assist Device
Andre Cavalheiro, MD - Escola Politecnica of USP

A Continuum Mechanics Modeling of Two-Component Blood Flow
Jeongho Kim, MS - Carnegie Mellon University

A Mathematical Model for Studying the Effect in Oxygen Extraction Ratio (OER) with the Increment in Pulmonary Vascular Resistance in Patients with Bidirectional Glenn Shunt
Carolina Vallecilla, MSc - Universidad de los Andes

Making Microsieves Work in Blood
Edward Leonard, PhD - Columbia University

Hemolysis in a Shearing Flow: The Role of Extensive Stresses
Linden Down - University of Oklahoma

Computational Fluid Dynamics Modeling of an Offset Volute Design for the Cleveland Clinic DexAide Right Ventricular Assist Device
Mark Goodin - SimuTech Group – Central

8:00AM – 4:30PM

RENAL TRACK

8:00AM – 10:00AM

RENAL 1 – Organ Support and the Dialysis Circuit
Room: Fairchild – Terrace
Moderator: William Fissell, MD

Extracorporeal Liver Support
Kevin Finkel, MD - Professor of Medicine, University of Texas

Immune Modulation with Plasmapheresis
Andre Kaplan, MD - Professor of Medicine, Univ of Connecticut

Volume Control in Heart Failure Patients with Extracorporeal Fluid Removal
Maria Rosa Costanzo, MD - Medical Director Midwest Heart Specialists

Extracorporeal and Implantable Lung Support
Robert Bartlett, MD – Prof Emeritus Surgery, Univ of Michigan

An Immumodulating Device to treat MultiOrgan Failure in the ICU
H David Humes, MD - Prof of Internal Medicine
Univ of Michigan

10:00am – 10:45am
VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
Room: Columbia Hall Foyer

1:30pm – 3:15pm
RENAL 2 – PRO / CON SESSION
Controversial Topics in Hemodialysis Access

VASCULAR BIOLOGY

Neointimal Hyperplasia is the Result of Vascular Shear Stress Due to Abnormal Flow
Pro – Prabir Roy-Chaudhury, MD, PhD - Assoc Prof Med, Univ of Cincinnati

Neointimal Hyperplasia is the Result of Inflammation
Con – Timmy Lee, MD, MSPH - Asst Prof Clinical Med, Univ of Cincinnati

2:00pm – 2:30pm
STENT USE IN VASCULAR ACCESS STENOSIS

Stents Should Be Used as the Primary Intervention at the AVG Anastomotic Lesions
Pro – Shahriar Moossavi, MD, PhD - Assoc Prof of Nephrology, Wake Forest University

Stents Should Not Be Used as the Primary Intervention at the AVG Anastomotic Lesions
Con – Loay Salman, MD - Asst Prof of Clin Med, Univ of Miami

3:15pm – 4:00pm
VISIT EXHIBITS & POSTERS - ENJOY REFRESHMENTS
Room: Columbia Hall Foyer

2:30pm – 3:15pm
RENAL ARTERY STENOSIS

There is Evidence that we Should Abandon Renal Artery Intervention as a Common Therapeutic Modality in CKD & HTN
Pro – Anil Agarwal, MD - Prof Internal Med, Ohio State Univ

We Should Continue to Perform Renal Artery Intervention for CKD & HTN
Con – Alexander Yevzlin, MD - Asst Prof Neph, Univ of Wisconsin

3:30pm – 4:00pm
RENAL 3 – PRO / CON SESSION
Controversial Topics in Hemodialysis Access
Room: Fairchild – Terrace
Moderator: Alexander Yevzlin, MD
### CATHETER FUNCTION

**Catheter Coatings and Tip Design Matter**
- **Pro** – Arif Asif, MD - Prof of Medicine, University of Miami

All Catheters Are Created Equal Regardless of Design
- **Con** – Vandana Niyyar, MD - Asst Prof Medicine, Emory Univ

**Question and Answer**

Posters Available All Day in Columbia Hall Foyer

### RENAL POSTER SESSION

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Authors/Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>103</td>
<td>Perfluorocarbon (PFC) Protects Kidney Tubular Epithelial Cells (TEC) by Septic Plasma-Induced Apoptosis And Promotes CD133+ Stem Cell Differentiation: Relevance for Bioartifical Renal Assist Devices (RAD)</td>
<td>Vincenzo Cantaluppi, MD - Univ of Turin</td>
</tr>
<tr>
<td>104</td>
<td>Pretransplant Ex Vivo Repair of Denuded Tubule Epithelium in an Uncontrolled Porcine DCD Kidney Model</td>
<td>Lauren Brasile, PhD - BREONCS Inc – CANCELLED</td>
</tr>
<tr>
<td>105</td>
<td>Near-Automated Regional Citrate Anticoagulation (RCA) during Dialysis: Building a Safe System and a Low Cost Clinical Program for New Extracorporeal Therapies</td>
<td>Balazs Szamosfalvi, MD - Henry Ford Hospital</td>
</tr>
<tr>
<td>106</td>
<td>CRARA (Cryo-Reactive Albumin Removal Apheresis) Therapy for the Prevention of Diabetic Complications</td>
<td>Junji Takaba, MD - Baylor College of Medicine</td>
</tr>
<tr>
<td>107</td>
<td>A Double-Filtration Approach to Dialysate-Free Renal Replacement</td>
<td>Shuvo Roy, PhD - UCSF</td>
</tr>
<tr>
<td>108</td>
<td>Tidal Peritoneal Dialysis (TPD) Using Low Tidal (TV) and Reserve (RV) Volumes: Influence of Dialysate (D) Flow Rate (FR) on Clearance (C) and Ultrafiltration (UF)</td>
<td>Martin Roberts, PhD - Sepulveda VA Medical Center</td>
</tr>
<tr>
<td>109</td>
<td>Tailoring Adsorbents for the Treatment of Renal Disease</td>
<td>Susan Sandeman, PhD - University of Brighton</td>
</tr>
<tr>
<td>110</td>
<td>Influence of High Dialysate Glucose Concentration on Insulin to Glucose Relationship during Hemodialysis</td>
<td>Daniel Schneditz, PhD - Medical University of Graz</td>
</tr>
<tr>
<td>111</td>
<td>Possible Role of Red Blood Cell-Derived ATP in Dialysis-Induced Hypotension (DIH)</td>
<td>Jan Simoni, DVM, PhD - Texas Tech Univ Health Sciences Ctr</td>
</tr>
<tr>
<td>112</td>
<td>Therapeutic Plasma Exchange in Elderly</td>
<td>John Hayes, MBBS - UVA Health Systems</td>
</tr>
<tr>
<td>113</td>
<td>Microbubbles May Occur in the Organs in Hemodialysis Patients. A Case Report</td>
<td>Bernd Stegmayr, MD, PhD - Univ Hosp of North Sweden</td>
</tr>
<tr>
<td>114</td>
<td>Extracorporeal Support and Thrombolytics: A Strategy for Uncontrolled-DOD Organ Donation</td>
<td>David Spurlock, MD - Univ of Michigan Hosp</td>
</tr>
</tbody>
</table>

### JSAO, ESAO, IFAO SESSION

- **Room**: Columbia Hall 11 & 12 – Terrace
- **Chairman**: Stephen Ash, MD

**JSAO - JAPANESE SOCIETY FOR ARTIFICIAL ORGANS**

Current Activity of the JSAO
- Toru Masuzawa, PhD - Prof of Mechanical Eng
  - Ibaraki Univ

Current Therapy with VAD for Severe Heart Failure Patients in Japan
- Takashi Nishimura, MD - University of Tokyo

Artificial Organs in East Japan Earthquake
- Prof Tomoyuki Yambe - Tohoku Univ

**ESA0 - EUROPEAN SOCIETY FOR ARTIFICIAL ORGANS**

To What Extent Is Perfusive Flow Beneficial To Bioreactor Performance For Therapeutic Applications?
- Prof Dr Gerardo Catapano
  - University of Calabria, Rende, Italy

How Critical Is Cannula Flow For Cerebral Perfusion During Heart & Lung Support?
- Prof Dr Ulrich Steinsiefer - RWTH Aachen Univ, Germany

Flow Patterns of Cardiac Assist Devices: Abundant Information About The Ventricular Statistics
- Prof Dr Heinrich Schima - Medical University, Vienna
10:00am – 12:00pm

PULMONARY 5 - Panel Discussion
Room: Columbia Hall 9 & 10 - Terrace
Moderators: Dongfang Wang, MD, PhD & Matthew Bacchetta, MD

10:00AM – 10:20AM
ECMO Bridge to Lung Transplant: Maryland Experience
Jose P. Garcia, MD - Transplant Surgeon, Univ of Maryland

10:20AM – 10:40AM
ECMO for Respiratory Failure: A Pulmonologist’s Perspective
Daniel Brodie, MD - Asst Prof Clinical Medicine, Columbia Univ

10:40AM – 11:00AM
Role and Future of ECMO for ARDS
William Lynch, MD - Director Adult ECMO Services, Univ of Iowa

11:00AM – 12:00pm
New Technology and Methodology

11:00AM
Using Biplane Angiography To Validate Computational Fluid Dynamic Models of Blood Flow in Artificial Lungs
Cameron Jones, BE - University of Kentucky

11:15AM
Negative Pressure Generation in Three Kinds of Oxy generators - An In-Vitro Study
Yoshiyuki Endo - Saiseikai Nigata Second Hospital

11:30AM
Cardiopulmonary Bypass Techniques and Clinical Outcomes in Beijing Fuwai Hospital: A Brief Clinical Review
Ju Zaho, MD - University of Kentucky

11:45AM
Nitric Oxide in Sweep Gas for Platelet Inhibition in the Artificial Lung
Kagya Amoako, MS - University of Michigan

11:30AM
Analysis of Induced Internal Electric Field in Biological Tissues Surrounding Energy Transmission Transformer for an Artificial Heart
Shiba Kenji, PhD - Tokyo University of Science

11:45AM
Anticoagulation of Blood from Different Species for Potential Use in In Vitro Thrombosis Tests of Medical Devices
Qijin Lu, PhD – FDA

Posters Available All Day in Columbia Hall Foyer

CARDIAC POSTER SESSION 3

115
C-Pulse Extra-Aortic Counterpulsation Device - Amplifying Physiology in Chronic Heart Failure
Martin Cook, PhD - Sunshine Heart Company

116
Hemodynamic Effects of Timing on IABP Performance in Patients
Stephanie Schampaert, MSc - Eindhoven Univ of Technology

117
Development of a Novel Skin-Button for Preventing the Driveline Infection of an Implantable VAD System
Toshiohide Mizuno, DVM, PhD - Natl Cerebral & CV Ctr Inst

118
Development of a Percutaneous Double Lumen Cannula for Ambulatory Right Heart Support
Dongfang Wang, MD, PhD - Univ of Kentucky

119
Safety and Feasibility of Mapping and Delivery of Stem Cells in Sheep with an Implanted LVAD
Kimberly Moody - Texas Heart Inst at St Luke’s Episcopal Hosp

120
Effect of Secondary Flow on Hydrodynamic Bearings in Rotary Blood Pump
Qing Han - Zhejiang University – CANCELLED

121
Model-Based Control Design for the Excor Pediatric VAD
Andreas Arndt, PhD - Berlin Heart GmbH

122
The Continuous-Flow LVAD with Native Heart Load Control System (NHLCS) for Bridge to Recovery Could Control Myocardial Consumption of Oxygen in Acute Heart Failure Model
Takashi Nishimura - The University of Tokyo

123
A Patient-Specific Pediatric Mock Circulatory System: Investigating the Circulation Following the Norwood Operation
Giovanni Biglino, PhD - UCL Inst of CV Sciences

124
Validation of a New Ultrasonic Flow Probe with Ultrasonic Liner for Continuous Cardiac Output Measurements
Santos Cabrera, MBA - Columbia University

125
Prognostic Factors in Patients Receiving Left Ventricular Assist Device (LVAD)
Andrews Arndt, PhD - Berlin Heart GmbH

126
Nitric Oxide in Sweep Gas for Platelet Inhibition in the Artificial Lung
Kagya Amoako, MS - University of Michigan

127
Effects of Pulsatile Flow and Continuous Flow Ventricular Assist Device Failure on Hemodynamics and End-Organ Blood Flow
Guruprasad Giridharan, PhD - Univ of Louisville

128
Determination of the Optimal LVAD Pump Speed Range in Bridge to Recovery Treatment
George Faragallah, MS/EE - Univ of Central Florida

129
Does Mitral Valve Repair Benefit Patients with Severe Mitral Regurgitation Who Undergo Left Ventricular Assist Device Implantation?
Mohemt Akay - Texas Heart Inst – CANCELLED
Cardiac Systolic Function Recovery after Hemorrhage Determines Survivability during Shock
Pedro Cabrera, PhD - University of California - CANCELLED

Implementation of Cerebral Autoregulation into Computational Fluid Dynamics
Tim Kaufmann - RWTH Aachen University

Development of a Numerical Model Using Fluid-Structural Interaction for the Connection of Outflow Cannula of LVAD to the Aorta
Jean Bonnemain - CMCS

Test and Simulation of a Mock Circulatory System with Starling Response for Evaluation of Ventricular Assist Devices
Andrew Hunsberger, MS - Mohawk Innovative Tech Inc

Very Late Thrombosis and Fracture of Cypher Stent with Acute Coronary Syndrome Three Years after PCI
Shigeki Ito, MD, PhD

- Nishitokyo Central General Hospital - CANCELLED

Assessment of the Aortic Valve Opening during Rotary Blood Pump Support
Marcus Granegger, MSc - Medical University of Vienna

Evaluation of a New Control Device for Stabilizing Venous Reservoir Level
Asako Tokumine, PhD - Kindai University

Flow Rate Monitoring for a Pneumatic VAD Using the Driveline Air Mass Flow
Kentaro Ohnuma, PhD - Natl Cerebral & CV Ctr

Validation of Para-Aortic Blood Pump Efficacy Using Acute Porcine Heart Failure Model
Pong-Jeu Lu, PhD - National Cheng Kung Univ

Assessment of Counterpulsation Support on Human Arterial Circulation: A Thorough Analysis Using Dis tributed Arterial Tree Model
Chun-Hao Hung - National Cheng Kung University

Echocardiography and Myocardial Doppler Indices in the Anaesthetized Calf - A Closed and Open Chest Study
Laila Hubbert, MD, PhD - Linkoping Heart Center

Durability and Hemocompatibility of MERA Monopivot Centrifugal Pump
Takashi Yamane, PhD

- Natl Inst of Adv Industrial Sci & Tech

Analysis of Gyro Pump as Long-Term Use of PCPS
Takamitsu Terasaki, MD

- Shinshu Univ School of Medicine

Flow Estimation Based on Static LVAD Characteristics Alone Is Not Accurate in Patients
Marcel Rutten, PhD - Eindhoven Univ of Technology

Failure Analysis and Fault Tolerance of a Mag-Lev Blood Pump
Steven Day, PhD - Rochester Institute of Technology

Pre-Clinical GLP Study of Impella 2.5 (Abiomed, Dan vers, MA) for 5-Days Left Ventricular (LV) Support
Mark Slaughter, MD - University of Louisville

A Mock Circulatory System To Assess the Performance of Continuous Flow Left-Ventricular Assist Devices: Does Axial Flow Unload Better Than Centrifugal LVAD?
Jean Christian Roussel, MD, PhD - Thorax Inst

Comparison of the Potential for Thrombus Formation between a Blunt Tipped Cannula and a Novel Cannula Design
Samuel Hund, PhD - Carnegie Mellon University

Fluidic Performance Via Intrinsic Parameters of a Mphsically Levitated Axial Flow VAD
Steven Day, PhD - Rochester Institute of Technology

Computer Simulation and Mock Circulation Models of Fontan Circuit for Testing Ventricular and Capovul monary Assist Devices
Guruprasad Giridharan, PhD - University of Louisville

Implantable Heart Compression/Assist Devices and Systems - A Review
Mohsen Shahinpoor, PhD - University of Maine

Development and Evaluation of a Novel Endurance Test Circuit for Ventricular Assist Devices
Hirohito Sumikuro, PhD

- Natl Cerebral & Cardiovascular Ctr

Atrial Kick for the Herical Flow Rotary Blood Pump
Total Artificial Heart Circulation
Tomoyuki Yambe, MD, PhD - Tohoku University

Non Working Beating Heart - A Novel Method of Myocardial Protection during Heart Transplantation
Jarbos Dinkhuyzen, MD, PhD

- Inst Dante Pazzanese de Cardiologia

Rapid Prototyping Process of an Implantable Centrifugal Blood Pump for In Vitro Tests
Beatriz Uebelhart

- Institute Dante Pazzanese of Cardiology

Mock Loop Evaluation of Posture Effect on Para-Aortic Counterpulsation
Pong-Jeu Lu, PhD - National Cheng Kung Univ

Rotary Blood Pump Use in Heart Failure Patients with Normal Ejection Fraction: A Computer Simulation Study
Francesco Moscato, PhD - Medical University of Vienna

In Vivo Experiments Report from Auxiliary Total Artificial Heart (ATAH) Configured as Left Ventricle Assist Device
Aron Andrade, PhD - Inst Dante Pazzanese of Cardiology

Durability Test with a Mock Circulation for a Non-Pulsatile Ventricular Assist Device under Pulsatile Flow Condition
Masahiro Nishida, PhD

- Natl Inst of Adv Ind Sci & Tech (AIST)

Room: Columbia Hall 11 & 12 - Terrace
Moderators: James Antaki, PhD & Keefe Manning, PhD

10:00AM VWF Multimer Distributions and Platelet Activation in VAD and TAH Recipients
Trevor Snyder, PhD - INTEGRIS Baptist Medical Center

10:15AM Laser Doppler Velocimetry Study of the Flow through the PSU-ABI Tesla Pump
Joshua Taylor, BS - The Pennsylvania State University

10:30AM Reduced Order Modeling for Rapid Simulation without Significant Loss of Fidelity
Samuel Hund, PhD - Carnegie Mellon University

10:45AM Interlaboratory Study of Flow-Induced Hemolysis Using the FDA Benchmark Nozzle Model
Luke Herbertson, PhD - FDA

11:00AM Larger Shear Stresses in Axial VADs Account for Their Increased Hemolysis Risk Compared with Centrifugal VADs
Katharine Fraser, PhD - University of Maryland

11:15AM Modeling of Microparticle Trajectories in Recirculation Zones
Connie Hall, PhD - The College of New Jersey

11:30AM Red Blood Cell Mechanical Fragility in the Prediction of Blood Trauma in Blood-Contacting Devices
Amanda Daly, BS - University of Pittsburgh

11:45AM Uniquely Shaped Cardiovascular Stents Enhance Pressure Generation of Minimally-Invasive Intravascular Blood Pumps
Amy Throckmorton, PhD - VA Commonwealth Univ
"I can breathe; I can walk; I can do almost anything now. I can play with my grandkids."

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HeartMate II® recipient
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24 Months post-implant: NYHA Class I

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