Science, Medicine and Industry – Innovating for the Future

ASAIO

Science, Medicine and Industry

Innovating for the Future.

PROGRAM

ASAIO 61st Annual Conference – Chicago

"Success Through Synergy"

June 24 – 27, 2015

In Conjunction with the International Federation of Artificial Organs

The only blood pump proven to work longer than ours.

But we're getting closer...

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

HeartMate II® is the solution.

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

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

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

Find out more at ASAIO booth #1.

HeartMate II®
Left Ventricular Assist System

www.HeartMateHCP.com

References: 1. Data on file. January 2015. Pleasanton, CA. Thoratec Corp. **2.** Emani S, Brewer RJ, John R, et al. Patients with low compared with high body mass index gain more weight after implantation of a continuous-flow left ventricular assist device. *J Heart Lung Transplant.* 2013;32(1):31-35. **3.** Jorde UP, Kushwaha SS, Tatooles AJ, et al. Results of the destination therapy post-Food and Drug Administration approval study with a continuous flow left ventricular assist device: a prospective study using the INTERMACS registry (Interagency Registry for Mechanically Assisted Circulatory Support). *J Am Coll Cardiol.* 2014;63(17):1751-1757. **4.** Dean D, Ewald GA, Tatooles A, et al. Reduction in driveline infection rates: results from the HeartMate II multicenter Silicone-Skin-Interface (SSI) Registry. *J Heart and Lung Transplant.* 2014;32(4):S11-S12.

THORATEC® CORPORATION *for Life*

Thoratec Corporation, 6035 Stoneridge Drive, Pleasanton, CA 94588 1-925-847-8600 1-800-528-2577 www.thoratec.com

PROGRAM INDEX

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ASAIO EDUCATIONAL GRANT SPONSORS

Diamond Level

THORATEC® CORPORATION for Life

HeartWare®

Silver Level

Berlin Heart®

GeNO

Bronze Level

FRESENIUS MEDICAL CARE

Educational Grants

Jarvik HEART™

SynCardia SYSTEMS, INC.

ACCREDITATION

Physicians | Nurses

CME ACCREDITATION STATEMENT

This Activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the Joint Providership of The University of Massachusetts Medical School and ASAIO. The University of Massachusetts Medical School is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for Physicians.

DESIGNATION STATEMENT

The University of Massachusetts Medical School designates this educational activity for a maximum of *35.5 AMA PRA Category 1 Credits™*. Physicians should claim only credit commensurate with the extent of their participation in the activity.

NURSING

This activity meets the requirements for 42.6 contact hours as specified by the Massachusetts Board of Registration in Nursing (244-CMR 5.04). Each nurse should claim only those hours of credit that he/she actually spent in the educational activity.

CERTIFICATION

All those who complete a course evaluation will receive a certificate of credit from the University of Massachusetts Medical School Office of Continuing Education. Each person should claim only those hours of credit that he/she actually spent in the educational activity. The link to the online course evaluation is available at www.asaio.com under "Annual Conference".

CME Inquires

For all CME certificate inquiries, please contact the UMMS-OCME at (508) 856-1671 or (508) 856-6838.

COURSE OBJECTIVE

Gain knowledge regarding the design, development and clinical utility of medical devices.

ACCREDITATION FOR PERFUSIONISTS

The American Board of Cardiovascular Perfusion will allot Category 1 CEUs to those Perfusionists who attend the Conference with a Total Possible of 21.7.

Participants must sign in once daily to verify attendance. A photo ID is required for participants to obtain registration materials. On the first day, pick up a Session Evaluation Sheet. Keep this Evaluation sheet for the duration of the Conference and fill it in for every session you attend. Return your completed Session Evaluation Sheet to the ASAIO Registration Desk on the last day of your attendance.

ASAIO FELLOWSHIPS 2015

ASAIO Y Nose' International Fellowship

Sponsored by the Y Nose Fellowship Fund

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

ASAIO Fellowships

Sponsored by the Paul S Malchesky Fellowship Fund

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

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

ASAIO Fellowships

Sponsored by ASAIO

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

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

Francesca Condemi, PhD
Postdoc Cardiothoracic Surgery,
University of Kentucky, Lexington, KY
"CFD Analysis of a Paired Membrane Umbrella Double Lumen Cannula for Failing Fontan Support"

ASAIO LEADERSHIP

Jonathan Haft, MD
Program Chairman 2015

Steven Koenig, PhD
Program Chairman 2016

William Weiss, PhD
President ASAIO June 2014-June 2015

Peter Wearden, MD, PhD
President - Elect ASAIO June 2015 - June 2016

Mark Slaughter, MD
ASAIO Journal Editor

Robert Kroslowitz
ASAIO Investment Director

Program Track Chairmen 2015

Pramod Bonde, MD
Cardiac

Robert Jaquiss, MD
Pediatric

Guruprasad Giridharan, PhD
Bioengineering

Matthew Bacchetta, MD
Pulmonary

Lenar Yessayan, MD
Renal

ASAIO 61st Annual Conference
The Chicago Hilton - Floor Plan

3RD FLOOR

JOLIET
- ASAIO Member Business Meeting

WILLIFORD C
- ECMO Course

2ND FLOOR

GRAND BALLROOM
- General Sessions 1& 2
- Cardiac Sessions 1 - 4

LOBBY LEVEL

CONTINENTAL BALLROOM
- Cardiac 5 & 6 - Saturday

LOWER LEVEL

SALON A

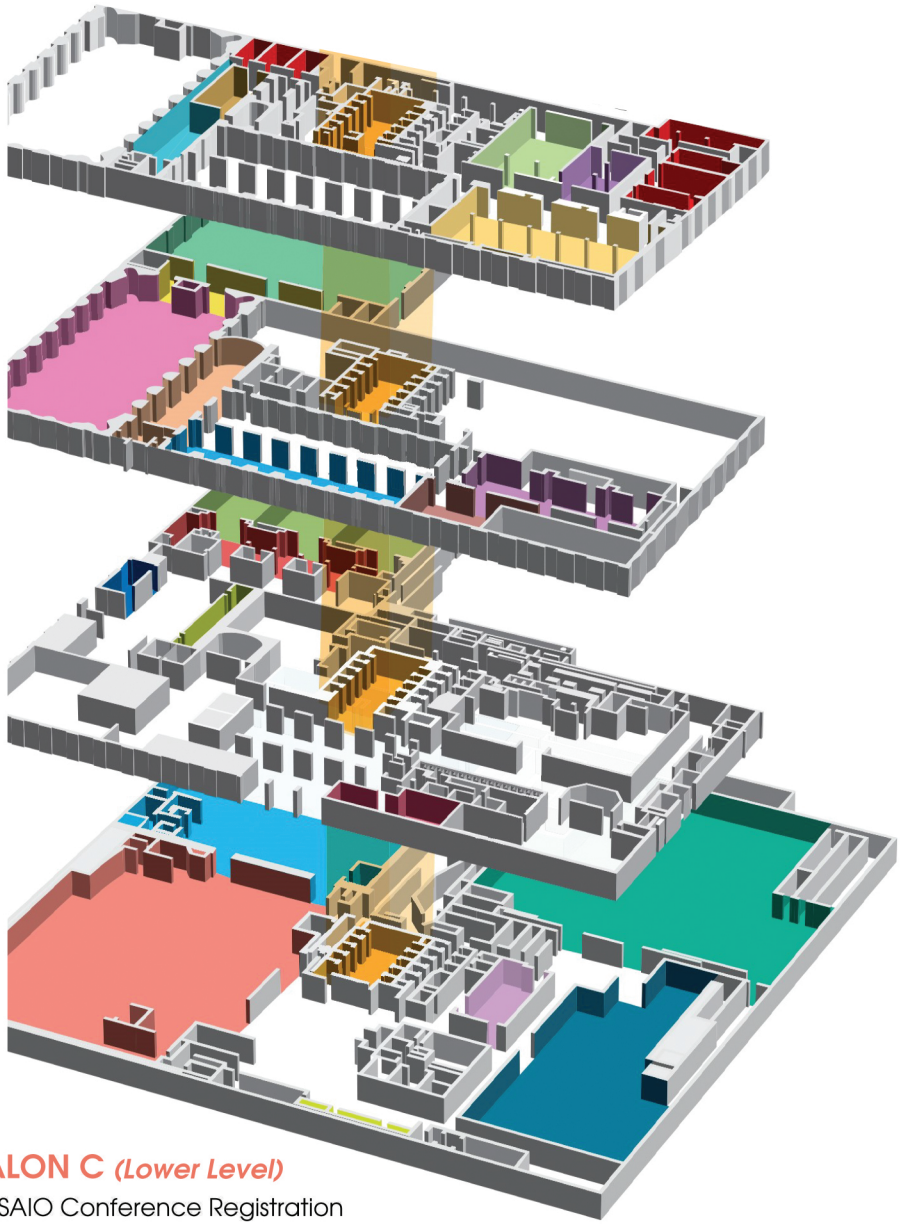
A-1
- Pediatric Medical Device Day - Wednesday
- Bioengineering Sessions 1 - 6

A-2
- VAD Proficiencies 2 - Wednesday
- Pulmonary 1 - 6

A-3
- VAD Simulations - Wednesday
- Renal Sessions 1 - 6

A-4
- VAD Sessions 1, 2 & 3

A-5
- VAD Proficiencies 1 - Wednesday
- Pediatric 1 - 4

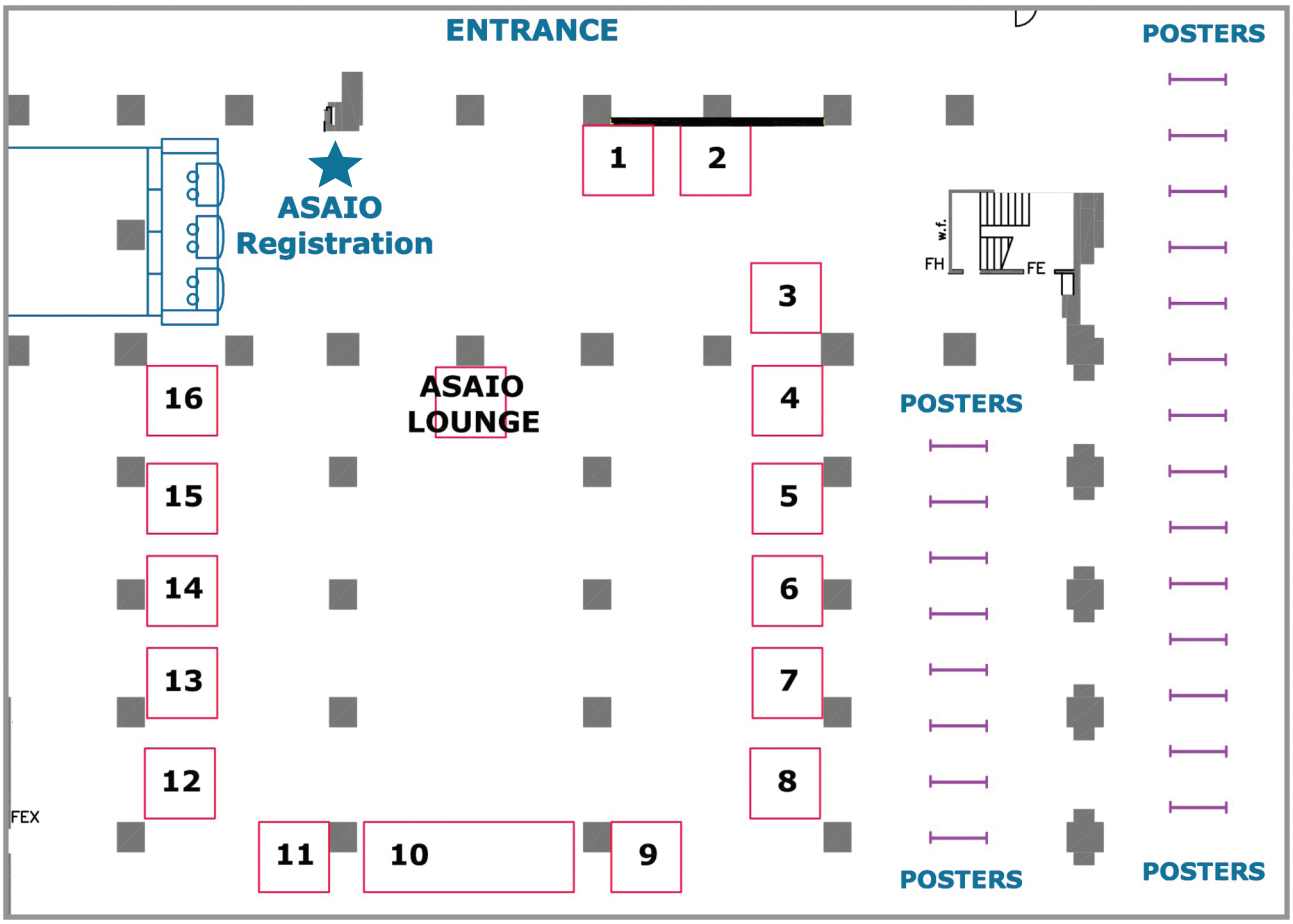


SALON C *(Lower Level)*
- ASAIO Conference Registration
- Exhibits
- Posters
- ASAIO Refreshment Breaks - Thursday - Saturday
- ASAIO Welcome Reception - Thursday

MOBLEY ROOM *(Lower Level)*
- ASAIO Speaker Ready Room

ASAIO 61st Annual Conference
The Chicago Hilton - Salon C

Exhibits | Posters | Registration



ASAIO Refreshment Breaks

Thursday	Friday	Saturday
9:45 - 10:30am	9:45 - 10:30am	10:00 - 10:45am
3:00 - 3:45pm	3:00 - 3:45pm	

ASAIO EXHIBITORS

ALEXION PHARMACEUTICALS INC
Cheshire, Connecticut
Booth 6

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

BERLIN HEART INC
The Woodlands, Texas
Booth 10

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

CONTINUUM SERVICES INC
Gainesville, Florida
Booth 2

Full Service Provider of HeartMate II ® LVAD Accessories and Driveline Stabilization Supplies.

CARDIOVASCULAR PATHOLOGY LABORATORY AT THE TEXAS A & M UNIVERSITY
College Station, Texas
Booth 13

The Cardiovascular Pathology Laboratory at Texas A&M University is dedicated to providing high caliber, innovative, and objective pathology support to improve medical device technologies and subsequently, patients' lives. Additionally, we aim to create learning and leadership opportunities for students while being on the forefront of medical and engineering research. With a special emphasis on cardiovascular and medical device pathology, our lab provides GLP/GCP compliant pathology support to Texas A&M and outside investigators. This support includes services such as necropsy, gross evaluation, high-resolution imaging, paraffin and plastic histology, micro-CT, micro-X-ray, SEM and EDS.

EVAHEART INC
Houston, Texas
Booth 7

The EVAHEART Left Ventricular Assist System (LVAS)™ is a continuous-flow, hydraulically levitated centrifugal pump designed to support patients with end-stage heart failure as bridge-to-transplant therapy. The EVAHEART LVAS has been commercially available in Japan since 2010, and has successfully obtained CE marking approval. Evaheart, Inc. (EVI) is a medical device company based in the Texas Medical center of Houston. EVI was established to gain regulatory approval and commercialize the EVAHEART LVAS in North America and to start distribution in Europe. Under an FDA-approved IDE, a bridge-to-transplant (BTT) clinical trial of the EVAHEART LVAS is currently ongoing in the US.

HEARTWARE INC
Framingham, Massachusetts
Booth 16

HeartWare is dedicated to delivering safe, high-performing and transformative therapies that enable patients with heart failure to get back to life. The company's innovative technologies are creating advances in the miniaturization of Ventricular Assist Devices (VADs) leading to less invasive surgical procedures and increasing the patient population who may be suitable for VAD therapy. HeartWare's breakthrough innovations begin with the HVAD® Pump, designed to be implanted next to the heart in the pericardial space avoiding the more invasive surgical procedures required with older LVAD technologies. The HVAD Pump is commercially available around the world.

INTEGRATED SENSING SYSTEMS
Ypsilanti, Michigan
Booth 11

ISS medical product portfolio of wireless and battery free implantable pressure sensors is designed to greatly advance the trend toward home health monitoring and remote diagnostics. ISS sensors are being developed for both long-term management of chronic cardiac disease and for short-term post-operative care. These sensors can provide powerful hemodynamic measurements, unobtainable with current clinical devices. The core technology of the implantable micro sensor is the MEMS pressure transducer. Using electro-magnetic telemetry, the monitoring unit energizes the antenna to transmit power to the sensor that in response sends back a signal containing the sensed pressure information. Small size, optimized shape, and careful choice of components ensure the sensor's biocompatibility and non-thrombogenicity. Data collected by the sensor can be used by physicians to tailor patient treatment and for early detection of dangerous heart conditions.

ICAOT
Painesville, Ohio
Booth 12

The International Center for Artificial Organs & Transplantation is organized to maintain and operate an educational center. It supports the International Center for Medical Technologies Museum, manages the publication of Artificial Organs and Therapeutic Aphresis & Dialysis. It disseminates information on the historical development, current state of the art and future development of artificial organs.

MAQUET MEDICAL SYSTEMS USA
Wayne, New Jersey
Booth 9

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

MINNESTRONIX, INC
Saint Paul, Minnesota
Booth 15

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

NXSTAGE
Lawrence, Massachusetts
Booth 8

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

SYNCARDIA SYSTEMS INC
Tucson, Arizona
Booth 14

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

THORATEC CORPORATION
Pleasanton, California
Booth 1

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

TRANSONIC SYSTEMS INC
Ithaca, New York
Booth 4

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

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

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

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

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

WOLTERS KLUWER
Philadelphia, Pennsylvania
Booth 3

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

Wednesday, June 24, 2015

8:30am – 5:00pm	Pediatric Medical Device Day – "Innovation in Pediatric Devices" – Salon A-1 – Lower Level
8:30am – 5:00pm	Adult ECMO Course – Williford C – 3rd Floor
10:00am – 5:00pm	VAD Coordinator Sessions: VAD 1 Salon A-4 Lower Level - VAD Simulations Salon A-3 Lower Level - VAD Proficiencies Salon A-2 and A-5 Lower Level

Thursday, June 25, 2015 – Posters available from 8:00 am – 5:00 pm

7:45am – 12:00pm	General Session 1 - Grand Ballroom 2nd Floor ASAIO President's Address | ESAO Presentation | JSAO Presentations | International Abstract Presentations | Fellowship Presentations				
9:45am – 10:30am	Visit Exhibits & Posters ▪ Enjoy Refreshments - Salon C - Lower Level				
12:00pm – 1:15pm	Lunch Break				
1:30pm – 3:00pm	Cardiac 1 – Grand Ballroom 2nd Floor Tether Free VADs: Are We There Yet?	Bioengineering 1 – Salon A-1 Lower Level New Technologies and Novel Devices	Pulmonary 1 – Salon A-2 Lower Level Road to Artificial Lungs: …..	Renal 1 – Salon A-3 Lower Level Sensing Technologies and Clinical Use	
3:00pm – 3:45pm	Visit Exhibits & Posters ▪ Enjoy Refreshments - Salon C - Lower Level				
3:45pm – 5:00pm	Cardiac 2 – Grand Ballroom Debate: Can LVADs Compete	Bioengineering 2 – Salon A-1 Biological Approaches …	VAD 2 – Salon A-4 Resonant Leadership….	Pulmonary 2 – Salon A-2 ECMO Simulation …	Renal 2 – Salon A-3 Breakthroughs Required …	Pediatric1 – Salon A-5 Challenges in Pediatric MCS
6:00pm – 7:00pm	ASAIO Welcome Reception – Salon C – Lower Level				

Friday, June 26, 2015 – Posters available from 8:00 am – 5:00 pm

8:00am – 12:00pm	General Session 2 - Grand Ballroom 2nd Floor ASAIO Hastings Lecture | Medical Device Entrepreneur's Forum | Student Design Competition				
9:45am – 10:30 am	Visit Exhibits & Posters ▪ Enjoy Refreshments ▪ Salon C - Lower Level				
12:00pm – 1:15pm	Lunch Break				
1:30pm – 3:00pm	Cardiac 3 – Grand Ballroom Debate: Device Thrombosis	Bioengineering 3 Salon A-1 Biomaterials, Thrombosis …	VAD 3 – Salon A-4 Demonstrating Intentional …	Pulmonary 3 – Salon A-2 Advanced Concepts	Renal 3 – Salon A-3 Fistula Maturation: …	Pediatric 2 – Salon A-5 Challenges in Pediatric …
3:00pm – 3:45pm	Visit Exhibits & Posters ▪ Enjoy Refreshments – Salon C - Lower Level				
3:45pm – 5:00pm	Cardiac 4 – Grand Ballroom Debate: Acute MCS Support	Bioengineering 4 – Salon A-1 Bioengineering Challenges ….	Pulmonary 4 – Salon A-2 Pulmonary ECMO 2015 …	Renal 4 - Salon A-3 Vascular Access: Innovative …	Pediatric 3 – Salon A-5 Pediatric Abstracts
5:15 pm – 5:45 pm	ASAIO Member Business Meeting – Joliet Room 3rd Floor				

Saturday, June 27, 2015

8:30am – 10:00am	Cardiac 5 – Continental - Lobby Debate: VADs: Do We Need …	Bioengineering 5 – Salon A-1 Device Development and Testing	Pulmonary 5 – Salon A-2 Practical / Clinical Applications	Renal 5 – Salon A-3 AKI and Extracorporeal Support	Pediatric 4 – Salon A-5 Pediatric Abstracts
10:00am – 10:45am	Enjoy Refreshments - Salon C – Lower Level				
10:45am – 12:00pm	Cardiac 6 – Continental - Lobby Striving for Device Reliability	Bioengineering 6 – Salon A-1 Future of Artificial Organs	Pulmonary 6 - Salon A-2 ECLS Devices: From Bench to Bedside to RCT	Renal 6 – Salon A-3 Solute and Drug Monitoring	

WEDNESDAY, JUNE 24

ASAIO 4th ANNUAL PEDIATRIC MEDICAL DEVICE DAY

"INNOVATION IN PEDIATRIC DEVICES"

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

Pediatric Day Co-Chairs:

Robert Jaquiss, MD

Jennifer Conway, MD

INTRODUCTION

8:30 - 8:40am

8:40 - 10:15am

PEDIATRIC MECHANICAL SUPPORT: CHALLENGES IN OBTAINING OUTCOMES

Co-Chairs:

Robert Jaquiss, MD, Duke University Medical Center, Durham, NC

Jennifer Conway, MD, Stollery Children's Hospital, Alberta, Canada

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

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

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

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

10:00 - 10:15am
Discussion and Questions

10:15 - 10:30am PEDIATRIC REFRESHMENT BREAK

10:30 - 11:40am

PEDIATRIC DEVICE CONSORTIA: STRATEGIES FOR SUCCESS (TOP DESIGNS)

Co-Chairs:

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

Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA

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

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

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

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

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

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

11:30 - 11:40am
Discussion and Questions

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

Innovation in Mechanical Support Design

John Bartos
Cameron, Houston, TX

1:30 - 2:45pm

SUPPORT FOR OTHER ORGANS - THE HEART ISN'T EVERYTHING

Co-Chairs:

Angela Lorts, MD, Cincinnati Children's Hospital Med Ctr, Cincinnati, OH

Martin Schweiger, MD, PhD, Children's Hospital, Zurich, Switzerland

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

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

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

2:30 - 2:45pm
Panel Discussion

2:45 - 3:00pm PEDIATRIC REFRESHMENT BREAK

3:00 - 5:00pm

FACILITATING TRANSPLANT: ROLE OF EX-VIVO PERFUSION IN CHILDREN

Co-Chairs:

Asif Hasan, MD, Freeman Hospital, Newcastle Upon Tyne, England

Christina VanderPluym, MD, Boston Children's Hospital, Boston, MA

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

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

WEDNESDAY, JUNE 24 (continued)

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

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

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

4:40 - 4:55pm
Panel Discussion

4:55 - 5:00pm
Closing Comments

ADULT ECMO COURSE

8:30am - 5:00pm - ***Williford C- Third Floor***

Aly El Banayosy, MD
Adult ECMO Course Director

8:40 - 10:00am

SESSION I

Co-Chairs:
Mathias Loebe, MD, PhD, Miami Transplant Institute, Miami, FL
Walter Dembitsky, MD, Sharp Memorial Hospital, San Diego, CA

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

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

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

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

9:40 - 10:00am
Panel Discussion

10:00 - 10:15am ECMO REFRESHMENT BREAK

10:15 - 12:00pm

SESSION II

Co-Chairs:
Douglas Horstmanshof, MD, INTEGRIS Baptist Medical Center, Oklahoma City, OK
Marvin Slepian, MD, University of Arizona, Tucson, AZ

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

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

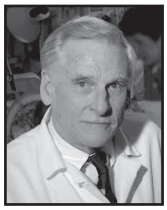
10:55 - 11:15am
Finanical Aspects
Karl Nelson, RN, MBA, INTEGRIS Baptist Medical Center, Oklahoma City, OK

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

11:35 - 12:00pm
Panel Discussion

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

Past, Present and Future of ECMO



Robert Bartlett, MD
University of Michigan, Ann Arbor, MI

1:10 - 2:45pm

SESSION III

Co-Chairs:
Jonathan Haft, MD, University of Michigan, Ann Arbor, MI
Pramod Bonde, MD, Yale University, New Haven, CT

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

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

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

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

2:30 - 2:45pm
Panel Discussion

2:45 - 3:00pm ECMO REFRESHMENT BREAK

3:00 - 5:00pm

SESSION IV

Co-Chairs:
Matthew Bacchetta, MD, Columbia University Medical Center New York, NY
Ashish Shah, MD, Johns Hopkins University, Baltimore, MD

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

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

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

WEDNESDAY, JUNE 24 (continued)

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

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

4:40 - 4:55pm
Panel Discussion

4:55 - 5:00pm
Closing Remarks

VAD COORDINATOR SESSIONS

10:00am - 5:00pm

Pamela Combs, PhD, RN
VAD Coordinator Sessions Chair

Co-Chairs:
Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX

Aimee Gardner, BS, CCP, Cincinnati Children's Hospital Med Ctr, Cincinnati, OH

Michael Petty, PhD, RN, CCNS, Univ of Minnesota Medical Center, Minneapolis, MN

10:00am - 12:00pm

VAD 1 - SCHOLARLY INVITED PRESENTATIONS FOR VAD COORDINATORS

Salon A-4, Lower Level

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

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

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

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

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

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

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

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

1:00 - 3:00pm

VAD SIMULATIONS

Salon A-3, Lower Level
Participate in a cutting edge educational experience through live simulations of MCS emergencies with high fidelity simulators.
Aimee Gardner, BS, CCP, Cincinnati Children's Hospital Medical Center, Cincinnati, OH

George Pantalos, PhD, University of Louisville, Louisville, KY

Michael Sobieski, RN, CCP, University of Louisville, Louisville, KY

3:00 - 5:00pm

VAD PROFICIENCIES - Thoratec HeartMate II

Salon A-5, Lower Level
Hands on learning and practice of this device in a controlled environment

Charles Hillock, RN, Thoratec Corporation, Chicago, IL

Melissa Barnes, RN, BSN, Thoratec Corporation, Plainfield, IL

3:00 - 5:00pm

VAD PROFICIENCIES - HeartWare HVAD®

Salon A-2, Lower Level
Hands on learning and practice of this device in a controlled environment

Dayna Murphy, RN, CCP, HeartWare Inc, Framingham, MA

THURSDAY, JUNE 25

7:45am - 12:00pm

GENERAL SESSION 1

Grand Ballroom, Second Floor

Co-Chairs:
William Weiss, PhD, Penn State College of Medicine, Hershey, PA

Jonathan Haft, MD, University of Michigan, Ann Arbor, MI

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

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

William Weiss, PhD
President, ASAIO

ASAIO: Success Through Synergy
William Weiss, PhD, Penn State College of Medicine, Hershey, PA

THURSDAY, JUNE 25 (continued)

8:30 - 9:00am

JSAO Presentation: Development of Perioperative Glycemic Control Using an Artificial Pancreas With Closed-Loop Glycemic System

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

9:00 - 9:30am

ESAO Presentation: Minimally Invasive LVAD Implantation

Dominik Wiedemann, MD
Medical University Austria, Vienna, Austria

9:30 - 9:45am

ASAIO Fellowship Presentations

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

10:30am - 12:00pm

GENERAL SESSION 1 Continued

TOP INTERNATIONAL ABSTRACT PRESENTATIONS

10:30 - 10:45am

Microfluidic Platforms to Assess VAD-Implanted Patient Thrombotic Risk
Annalisa Dimasi, MSc, Politecnico di Milano, Milan, Italy

10:45 - 11:00am

Aortic Valve Regurgitation and Outflow Graft Anastomosis Site Design After Left Ventricular Assist Device Implantation
Kei Iizuka, Tokyo Women's Medical University, Tokyo, Japan

11:00 - 11:15am

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

11:15 - 11:30am

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

RAPID FIRE ABSTRACT PRESENTATIONS

11:30 - 11:35am

RF 1 Effects of Air and Negative Pressure on Blood Activation During Cardiopulmonary Bypass
Megan Coughlin, MD, University of Michigan ECMO Lab, Ann Arbor, MI

11:35 - 11:40am

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

11:40 - 11:45am

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

11:45 - 11:50am

Prophylactic Intra-Aortic Balloon Pumping Support Before Ventricular Assist Device Implantation Improves Post-operative Clinical Course in Patients with INTERMACS Profile 2
Teruhiko Imamura, MD, PhD, University of Tokyo, Toyko, Japan
ASAIO Y Nose' International Fellowship Recipient

11:50 - 11:55am

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

11:55am - 12:00pm

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

12:00 - 1:15pm LUNCH BREAK

1:30-3:00pm

CARDIAC 1 | TETHER FREE VADS: ARE WE THERE YET?

Grand Ballroom, Second Floor
Co-Chairs:
Timothy Baldwin, PhD, NHLBI / NIH, Bethesda, MD
Pramod Bonde, MD, Yale University, New Haven, CT

1:30 - 1:50pm

Wired or Wireless LVAD Operation?
Mark Slaughter, MD, University of Louisville, Louisville, KY

ABSTRACT PRESENTATIONS

2:00 - 2:15am

Interaction of Mitral and Tricuspid Regurgitation Influences the Survival in Patients with Continuous-flow Left Ventricular Assist Devices
Vakhtang Tchantchaleishvili, MD, University of Rochester, Rochester, NY
ASAIO Fellowship Recipient

2:15 - 2:30pm

Comparing the Effectiveness of Axial and Centrifugal Left Ventricular Assist Devices in Ventricular Unloading
Kelly Koch, BS, University of Michigan, Ann Arbor, MI

2:30 - 2:45pm

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

2:45 - 3:00pm

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

1:30 - 3:00pm

BIOENGINEERING 1 | NEW TECHNOLOGIES AND NOVEL DEVICES

Salon A-1, Lower Level
Co-Chairs:
Richard Wampler, MD, Oregon Health Sciences University, Loomis, CA
Po-Lin Hsu, PhD, Soochow University, Suzhou, China

1:30 - 2:00pm

Innovation and Clinical Translation in Cardiac Surgery
Jorge Jimenez, PhD, Georgia Institute of Technology, Atlanta, GA

ABSTRACT PRESENTATIONS

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

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

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

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

1:30pm-3:00pm

PULMONARY 1 | ROAD TO ARTIFICIAL LUNGS: HIGHWAY TO HELL OR DESTINATION TO HOPE WITH A "PULMONARY ASSIST DEVICE"

Salon A-2, Lower Level
Co-Chairs:
Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY
William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA

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

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

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

ABSTRACT PRESENTATION

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

1:30pm-3:00pm

RENAL 1 - SENSING TECHNOLOGIES AND CLINICAL USE

Salon A-3, Lower Level
Co-Chairs:
Lenar Yessayan, MD, Henry Ford Hospital, Detroit, MI
Michael Heung, MD, University of Michigan, Ann Arbor, MI

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

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

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

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

2:50 - 3:00pm
Q&A

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

3:45 - 5:00pm

CARDIAC 2 | DEBATE: CAN LVADS COMPETE WITH HEART TRANSPLANTATION?

Grand Ballroom, Second Floor
Co-Chairs:
Hari Mallidi, MD, Baylor College of Medicine, Houston, TX
Guruprasad Giridharan, PhD, University of Louisville, Louisville, KY

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

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

4:15 - 4:20pm
Rebuttal #1

4:20 - 4:25pm
Rebuttal #2

ABSTRACT PRESENTATIONS

4:30 - 4:45pm
Influence of LVAD Inflow Cannula Placement Location on the Flow Stresses and Residence Time in the Left Ventricle
Patrick McGah, PhD, University of Washington, Seattle, WA

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

3:45pm - 5:00pm

BIOENGINEERING 2 | BIOLOGICAL APPROACHES TO ORGAN REPLACEMENT

Salon A-1, Lower Level
Co-Chairs:
Kevin Soucy, PhD, University of Louisville, Louisville, KY
Nandan Mondal, PhD, University of Louisville, Louisville, KY

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

ABSTRACT PRESENTATIONS

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

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

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

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

3:45pm - 5:00pm

VAD 2 - RESONANT LEADERSHIP AMONG VAD COORDINATORS

Salon A-4, Lower Level

Co-Chairs:

Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX

Aimee Gardner, BS, CCP, Cincinnati Children's Hospital Med Ctr, Cincinnati, OH

Michael Petty, PhD, RN, CCNS, Univ of Minnesota Medical Center, Minneapolis, MN

3:45 - 4:00pm
The VAD Patient and Social Media
Dawn Christensen, MS, FNP-BC, Innovative Program Solutions LLC, Pine Grove, PA

4:00 - 4:15pm
Discovery and Change: VAD Readmissions
Tiffany Buda, BSN, RN, Cleveland Clinic, Cleveland, OH

4:15 - 4:30pm
The Career Path of a VAD Coordinator
Marcia Stahovich, RN, CCRN, Sharp Memorial Hospital, San Diego, CA

4:30 - 4:45pm
How the VAD Coordinator Incorporates the Caregiver: The Catcher of the Team
Michael Petty, PhD, RN, CNS, University of Minnesota Medical Center, Minneapolis, MN

4:45 - 5:00pm
Is Platelet Mapping Heading South? Evolving Antiplatelet Management Strategies for Pediatric VADs
Jenna Murray, MSN, NP, Lucile Packard Children's Hospital, Palo Alto, CA

3:45pm - 5:00pm

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

Salon A-2, Lower Level

Co-Chairs:

Matthew Bacchetta, MD, Columbia University Medical Center, New York, NY

Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA

3:45 - 4:05pm
ECMO Simulation & Modeling
Marc Dickstein, MD, Columbia University, New York, NY

4:05 - 4:25pm
Understanding Right Heart Failure and Pulmonary Hypertension
Daniel Burkhoff, MD, PhD, Columbia University, New York, NY

ABSTRACT PRESENTATIONS

4:30 - 4:45pm
Novel Methods to Mitigate Serious Adverse Events Associated With Nitrogen Dioxide (NO2) During Inhaled Nitric Oxide (NO) Therapy
Priscilla Petit, MSME, GeNO LLC, Cocoa, FL

4:45 - 5:00pm
During Inhaled Nitric Oxide (NO) Therapy
Sanaz Hatami, MD, University of Alberta, Edmonton, Alberta

3:45pm - 5:00pm

RENAL 2 | BREAKTHROUGHS REQUIRED FOR WIDESPREAD CITRATE USE

Salon A-3, Lower Level

Co-Chairs:

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

Lenar Yessayan, MD, Henry Ford Hospital, Detroit, MI

3:45 - 4:00pm
Citrate Accumulation: Incidence, Diagnosis and Clinical Considerations
Michael Heung, MD, University of Michigan, Ann Arbor, MI

4:00 - 4:15pm
Regulatory Challenges for Regional Citrate Anticoagulation Use
Gema Gonzalez, MS, Food and Drug Administration, Silver Spring, MD

4:15 - 4:30pm
Automating RCA for Safe Widespread Use and Regulatory Approval
Balazs Szamosfalvi, MD, Henry Ford Hospital, Detroit, MI

4:30 - 4:45pm
Automated RCA and Dialysis Engineering Requirements
Fokko Pieter Wieringa, PhD, TNO Science & Industry, The Netherlands

ABSTRACT PRESENTATION

4:45 - 5:00pm
Heparin-albumin Priming in a Clinical Setting for Hd Patients at Risk for Bleeding
Bernd Stegmayr, MD, PhD, Umea University, Umea, Sweden

3:45pm - 5:00pm

PEDIATRIC 1 | CHALLENGES IN PEDIATRIC MECHANICAL CIRCULATORY SUPPORT

Salon A-5, Lower Level

Co-Chairs:

David Morales, MD, Cincinnati Children's Hospital Med Ctr, Cincinnati, OH

Aamir Jeewa, MD, Baylor College of Medicine, Houston, TX

3:45 - 4:00pm
Single Ventricles - Whom to Support, How to Support, and When to Support
Ronald Woods, MD, PhD, Children's Hospital of Wisconsin, Milwaukee, WI

4:00 - 4:15pm
Making Adult Devices "Fit"
Iki Adachi, MD, Texas Children's Hospital, Houston, TX

4:15 - 4:30pm
Stroke and Pediatric VADs - Can We Prevent It?
Parthak Prodhan, MD, Arkansas Children's Hospital, Little Rock, AR

4:30 - 4:45pm
Pediatric MCS in 2020 - What Will (Should) it Look Like?
Peter Wearden, MD, PhD, Children's Hospital of Pittsburgh UPMC, Pittsburgh, PA

4:45 - 5:00pm
Discussion

6:00pm - 7:00pm

ASAIO WELCOME RECEPTION - *Salon C, Lower Level*

8:00am - 5:00pm

ABSTRACT POSTER PRESENTATIONS - *Salon C, Lower level*

CARDIAC POSTERS

101 Impact of an Outpatient Anticoagulation Protocol on Thrombotic and Bleeding Complications of LVAD Therapy
Mary Bradbury PharmD, Inova Fairfax Hospital, Falls Church, VA

102 Efficacy of a Bivalirudin-based Treatment Regimen for Suspected LVAD Thrombosis Compared to Eptifibatide
Mary Bradbury PharmD, Inova Fairfax Hospital, Falls Church, VA

103 Cellular Microparticles as Predictive Markers for Thrombosis and Other Clinical Events in Patients with Implanted LVADs
Bryan Menapace, Loyola University Medical Center, Maywood, IL

104 Preservation of High Molecular Weight vWF and Low Hemolysis With the Low Shear TORVAD Ventricular Assist Device
Jeffrey Gohean, MS, Windmill Cardiovascular Systems, Inc, Austin, TX

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BIOENGINEERING POSTERS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PEDIATRIC POSTERS

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

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

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

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

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

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

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

PULMONARY POSTERS

173 Current Oxygenator Research
Andreas Kaesler Dipl.-Ing, University Hospital RWTH Aachen, Aachen, Germany

THURSDAY, JUNE 25 (continued)

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

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

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

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

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

FRIDAY, JUNE 26

8:00am - 12:00pm

GENERAL SESSION 2

Grand Ballroom, Second Floor

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

Timothy Baldwin, PhD
NHLBI / NIH, Bethesda, MD

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

H. David Humes, MD
Chairman

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

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

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

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

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

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

10:30am - 12:00pm

GENERAL SESSION 2 - Continued

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

Salim Olia, BSE
University of Pittsburgh, Pittsburgh, PA

William Federspiel, PhD
University of Pittsburgh, Pittsburgh, PA

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

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

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

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

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

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

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

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

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

12:00 - 1:15pm LUNCH BREAK

1:30pm - 3:00pm

CARDIAC 3 | DEBATE: DEVICE THROMBOSIS

Grand Ballroom, Second Floor

Co-Chairs:

Kaushik Mandal, MD, MPH, Johns Hopkins Univ School of Medicine, Baltimore, MD

James Antaki, PhD, Carnegie Mellon University, Pittsburgh, PA

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

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

2:00 - 2:05pm
Rebuttal #1

2:05 - 2:10pm
Rebuttal #2

ABSTRACT PRESENTATIONS

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

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

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

1:30pm - 3:00pm

BIOENGINEERING 3 | BIOMATERIALS, THROMBOSIS, AND SURFACE INTERACTIONS

Salon A-1, Lower Level

Co-Chairs:

Marina Kameneva, PhD, University of Pittsburgh, Pittsburgh, PA

Zhongjun Wu, MD, University of Maryland, Baltimore, MD

ABSTRACT PRESENTATIONS

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

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

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

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

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

2:45 - 300pm
Real-time Analysis of Flow-induced Thrombus Formation Within a Defined Crevice
Megan Jamiolkowski, BBE, University of Pittsburgh, PA

1:30pm - 3:00pm

VAD 3 | DEMONSTRATING INTENTIONAL THINKING

Salon A-4, Lower Level

Co-Chairs:

Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX

Michael Petty, PhD, RN, CCNS, Univ of Minnesota Medical Center, Minneapolis, MN

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

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

Pamela Combs, PhD, RN, Seton Medical Center, Austin, TX

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

2:10 - 3:00pm
Surgeon, Cardiologist and VAD Coordinator Tag Team
Mark Slaughter, MD, University of Louisville, Louisville, KY

Jeffrey Teuteberg, MD, University of Pittsburgh Med Center, Pittsburgh, PA

Tonya Elliot, RN, MSN, MedStar Washington Hospital Center, Washington, DC

1:30pm - 3:00pm

PULMONARY 3 | ADVANCED CONCEPTS IN PULMONARY ENGINEERING

Salon A-2, Lower Level

Co-Chairs:

William Federspiel, PhD, University of Pittsburgh, Pittsburgh, PA

Keith Cook, PhD, University of Pittsburgh, Pittsburgh, PA

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

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

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

ABSTRACT PRESENTATION

2:45 - 3:00pm
Organ Care Systems Promotes a Tissue Protective and Anti-inflammatory Response Within Lung Transplantation
Bettina Wiegmann, MD, Hannover Medical School, Hannover, Germany

1:30pm - 3:00pm

RENAL 3 | FISTULA MATURATION: BIOLOGICAL OBSTACLES, ECONOMIC CONSIDERATIONS & MATURATION SYSTEMS

Salon A-3, Lower Level

Co-Chairs:

Nicholas Franano, MD, Metactive Medical Inc, Olathe, KS

Stephen Ash, MD, HemoCleanse Inc, Lafayette, IN

1:30 - 1:45pm
Biological Obstacles for Fistula Maturation
Alfred Cheung, MD, University of Utah, Salt Lake City, UT

1:45 - 2:00pm
Clinical and Economic Considerations of AVF Failure
Charmaine Lok, MD, University of Toronto, Canada

2:00 - 2:15pm
AFE System
Howard Loree, PhD, Flow Forward Medical Inc, Lowell, MA

2:15 - 2:30pm
Wall Shear and Wall Strain; Can Ultrasound Offer More Than Anatomic Information?
William Weitzel, MD, VA Medical Ctr and Univ of Michigan, Ann Arbor, MI

2:30 - 2:45pm
Q&A

ABSTRACT PRESENTATION

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

1:30 - 3:00pm

PEDIATRIC 2 | CHALLENGES IN PEDIATRIC PERFUSION AND ECMO

Salon A-5, Lower Level

Co-Chairs:

Richard Walczak, BS, Duke University, Durham, NC

David Cooper, MD, Cincinnati Children's Hospital Med Ctr, Cincinnati, OH

1:30 - 1:45pm
Interhospital Transport of Patients on ECMO
Michiaki Imamura, MD, PhD, Arkansas Children's Hospital, Little Rock, AR

1:45 - 2:00pm
Ambulatory ECMO - Crazy or Long Overdue?
Desiree Bonadonna, MPS, CCP, LP, Duke University Hospital, Durham, NC

2:00 - 2:15pm
Bloodless Heart Surgery - What are the Limits?
Vincent Olshove, CCP, FPP, Cedars-Sinai Medical Center, Los Angeles, CA

2:15 - 2:30pm
Pediatric ECMO - What We Still Don't Know
Michael Hines, MD, University of Texas Health Medical Center, Houston, TX

2:30 - 3:00pm
Discussion

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

3:45pm - 5:00pm

CARDIAC 4 | DEBATE: ACUTE MCS SUPPORT

Grand Ballroom, Second Floor

Co-Chairs:

Jonathan Haft, MD, University of Michigan, Ann Arbor, MI
Aly El Banayosy, MD, INTEGRIS Baptist Medical Center, Oklahoma City, OK

3:45 - 4:00pm
Percutaneous Approach is the Best
Andrew Civitello, MD, Baylor College of Medicine, Houston, TX

4:00 - 4:15pm
Surgical MCS is the Best
William Holman, MD, University of Alabama, Birmingham, AL

4:15 - 4:20pm
Rebuttal #1

4:20 - 4:25pm
Rebuttal #2

ABSTRACT PRESENTATIONS

4:30 - 4:45pm
Body Mass Index Does Not Affect Survival and Is a Reliable Independent Risk Factor of Ventricular Assist Device (VAD) Thrombosis
Renganaden Sooppan, MD, University of Pennsylvania, Philadelphia, PA

4:45 - 5:00pm
Psychosocial Evaluation in Patients Undergoing Left Ventricular Assist Device Implantation Using the Transplant Evaluation Risk Scale
Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Oak Lawn, IL

3:45pm - 5:00pm

BIOENGINEERING 4 | BIOENGINEERING CHALLENGES FOR ARTIFICIAL ORGANS

Salon A-1, Lower Level

Co-Chairs:

Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY

Pramod Bonde, MD, Yale University, New Haven, CT

PANEL DISCUSSION

3:45 - 4:00pm
Circulatory Support
Richard Wampler, MD, Oregon Health Sciences University, Loomis, CA

4:00 - 4:15pm
Pulmonary Support
Joseph Zwischenberger, MD, University of Kentucky, Lexington, KY

4:15 - 4:30pm
Renal Support
Daniel Schneditz, PhD, Medical University of Graz, Graz, Austria

4:30 - 4:45pm
TETS
David Farrar, PhD, Thoratec Corporation, Pleasanton, CA

4:45 - 5:00pm
Q & A

3:45 - 5:00pm

PULMONARY 4 | PULMONARY ECMO 2015 - WHAT PROBLEMS DO WE STILL FACE?

Salon A-2, Lower Level

Co-Chairs:

Darryl Abrams, MD, Columbia University Medical Center, New York, NY

Scott Morley, BSE, MBA, ALung Technologies Inc, Pittsburgh, PA

3:45 - 4:05pm
ECMO Anticoagulation: It's Still the Biggest Challenge!
Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA

4:05 - 4:25pm
Long-Term Support for BTR & BTT
Christian Bermudez, MD, Hospital of the University of Pennsylvania, Philadelphia, PA

4:25 - 4:45pm
ECMO Transport Civilian & Military Challenges
Mauer Biscotti, MD, Columbia University Medical Center, New York, NY

FRIDAY, JUNE 26 (continued)

ABSTRACT PRESENTATION

4:45 - 5:00pm

Experimental Measurements of the Anisotropic Darcy Permeability for the Blood-Side Flow In Oxygenators
Felix Hesselmann, Dipl.-Ing, Institute of Applied Medical Engineering, Aachen, Germany

3:45pm - 5:00pm

RENAL 4 | VASCULAR ACCESS: INNOVATIVE THERAPEUTICS / DEVICES

Salon A-3, Lower Level

Co-Chairs:
Nicholas Franano, MD, Metactive Medical Inc, Olathe, KS
Howard Loree, PhD, Flow Forward Medical Inc, Lowell, MA

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

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

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

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

ABSTRACT PRESENTATION

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

3:45 - 5:00pm

PEDIATRIC 3 | PEDIATRIC ABSTRACTS

Salon A-5, Lower Level

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

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

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

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

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

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

5:15 - 5:45pm

ASAIO MEMBER BUSINESS MEETING ***Joliet Room, Third Floor***

8:00am - 5:00pm

ABSTRACT POSTER PRESENTATIONS ***Salon C - Lower level***

CARDIAC POSTERS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

193 **Extracorporeal Cardiopulmonary Resuscitation: Development of a Prolonged Cardiac Arrest Animal Model**
Nicole Werner, MD, MS, University of Michigan, Ann Arbor, MI

194 **The Role of a Microaxial Left Ventricular Assist Device Placed via Axillary Cutdown in the Management of Cardiogenic Shock**
Wade Fischer, MD, Medical College of Wisconsin, Milwaukee, WI

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

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

197 **Blood Species Differences in Mechanical Hemolysis Testing**
Luke Herbertson, PhD, US Food and Drug Administration, Silver Spring, MD

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BIOENGINEERING POSTERS

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

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

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

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

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

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

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

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

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

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

228 **Frequency Spectrum Analysis of Rotary Blood Pump Vibration**
J. Ryan Stanfield, MS, University of Utah, Salt Lake City, UT

229 **Porcine Animal Model for Biocompatibility Testing of Vascular Prosthesis in Descending Thoracic Aorta**
Dong Jin Kim, MD, Sejong General Hospital, Gyeongg-do, Republic of Korea

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

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

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

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

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

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

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

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

238 **Disc and Disc Holders of Polish Mechanical Heart Valve Modifications Supported byNumerical Methods**
Agnieszka Szuber-Dynia, MSc, Prof Zbigniew Religa Foundation Cardiac Surg Development, Poland

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

240 **In Vitro Pulsatile Performance Evaluation of the HeartMate Percutaneous Heart Pump (PHP)**
Onur Dur, PhD, Thoratec Corporation, Pleasonton, CA

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

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

PEDIATRIC POSTERS

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

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

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

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

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

RENAL POSTERS

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

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

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

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

252 **A Lifelong Forearm Worn Artificial Kidney**
Arnold Lande, MD, Northport Navigatable Waters Institution, Northport, MI

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

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

SATURDAY, JUNE 27

8:30am - 10:00am

CARDIAC 5 | DEBATE - VADS: DO WE NEED PULSED OPERATION?

Continental Ballroom, Lobby Level

Co-Chairs:

Mark Slaughter, MD, University of Louisville, Louisville, KY

Steven Koenig, PhD, University of Louisville, Louisville, KY

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

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

9:00 - 9:05am
Rebuttal #1

9:05 - 9:10am
Rebuttal #2

ABSTRACT PRESENTATIONS

9:15 - 9:30am
Feasibility Of Daily Smartphone Assessments Of Quality Of Life And Functional Capacity In Left Ventricular Assist Device Patients
Jonathan Rich, MD, Northwestern University, Chicago, IL

9:30 - 9:45am
Renal Function Recovery with Total Artificial Heart Support
Adam Goodreau, MS, Virginia Commonwealth University, Richmond, VA

9:45 - 10:00am
Design Approach and Pre-Clinical Evaluation of the HeartMate III LVAS for Hemocompatibility
Kevin Bourque, MSME, Thoratec Corporation, Burlington, MA

8:30am - 10:00am

BIOENGINEERING 5 | DEVICE DEVELOPMENT AND TESTING

Salon A-1, Lower Level

Co-Chairs:
Ulrich Steinseifer, PhD, RWTH Aachen University, Aachen, Germany
Heinrich Schima, PhD, Medical University Vienna, Vienna, Austria

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

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

ABSTRACT PRESENTATIONS

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

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

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

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

8:30am - 10:00am

PULMONARY 5 - PRACTICAL / CLINICAL APPLICATIONS OF ECCO2R & ECMO

Salon A-2, Lower Level

Co-Chairs:
Matthew Bacchetta, MD, Columbia University Medical Center, New York NY
Scott Morley, BSE, MBA, Alung Technologies Inc, Pittsburgh, PA

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

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

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

ABSTRACT PRESENTATIONS

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

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

8:30am - 10:00am

RENAL 5 | AKI AND EXTRACORPOREAL SUPPORT

Salon A-3, Lower Level

Co-Chairs:
Lenar Yessayan, MD, Henry Ford Hospital, Detroit, MI
Michael Heung, MD, University of Michigan, Ann Arbor, MI

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

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

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

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

ABSTRACT PRESENTATIONS

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

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

8:30am - 10:00am

PEDIATRIC 4 | PEDIATRIC ABSTRACTS

Salon A-5, Lower Level

Co-Chairs:
Iki Adachi, MD, Texas Children's Hosptial, Houston, TX
Janet Scheel, MD, Children's National Medical Center, Washington, DC

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

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

9:00 - 9:15am
Family of New Polish Moll Type Tilting Disc Valves for Application in Pediatric Pneumatic VAD - Functional and Performance In-vitro and In-vivo Studies
Maciej Glowachi, BS, Prof Zbigniew Religa Foundation of Cardiac Surg Development, Poland

9:15 - 9:30am
In vivo testing of the Penn State Infant VAD with Progressive Reductions in Anticoagulation
William Weiss, PhD, Penn State College of Medicine, Hershey, PA

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

9:45 - 10:00am
Q & A

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

10:45am - 12:00pm

CARDIAC 6 | STRIVING FOR DEVICE RELIABILITY

Continental Ballroom, Lobby Level
Co-Chairs:
Hari Mallidi, MD, Baylor College of Medicine, Houston, TX
Marvin Slepian, MD, University of Arizona, Tucscon, AZ

ABSTRACT PRESENTATIONS

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

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

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

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

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

10:45am - 12:00pm

BIOENGINEERING 6 | FUTURE OF ARTIFICIAL ORGANS

Salon A-1, Lower Level
Co-Chairs:
Mark Slaughter, MD, University of Louisville, Louisville, KY
Kartik Sundareswaran, PhD, Thoratec Corporation, Pleasanton, CA

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

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

10:45am-12:00pm

PULMONARY 6 | ECLS DEVICES: FROM BENCH TO BEDSIDE TO RCT

Salon A-2, Lower Level
Co-Chairs:
Scott Morley, BSE, MBA, ALung Technologies Inc, Pittsburgh, PA
Tim Maul, CCP, PhD, University of Pittsburgh, Pittsburgh, PA

10:45 - 11:05am
From Bench to Bedside: The Challenge of ECLS Device Commercialization
Scott Morley, BSE, MBA, ALung Technologies Inc, Pittsburgh, PA

11:05 - 11:25am
ECMONet: Coordinating Care for ECLS
Cara Agerstrand, MD, Columbia University Medical Center, New York, NY

ABSTRACT PRESENTATIONS

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

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

10:45am - 12:00pm

RENAL 6 | SOLUTE AND DRUG MONITORING

Salon A-3, Lower Level
Co-Chairs:
Balazs Szamosfalvi, MD, Henry Ford Hospital, Detroit, MI
Michael Heung, MD, University of Michigan, Ann Arbor, MI

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

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

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

11:30 - 11:45am
Volatile Organic Compound Measurement by Breath Analysis
Sevag Demirjian, MD, Cleveland Clinic, Cleveland, OH

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WARNING: Serious and life-threatening adverse events, including stroke, have been associated with use of this device. A user must fully consider the risks of this device with that of other treatment modalities before deciding to proceed with device implantation.

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

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

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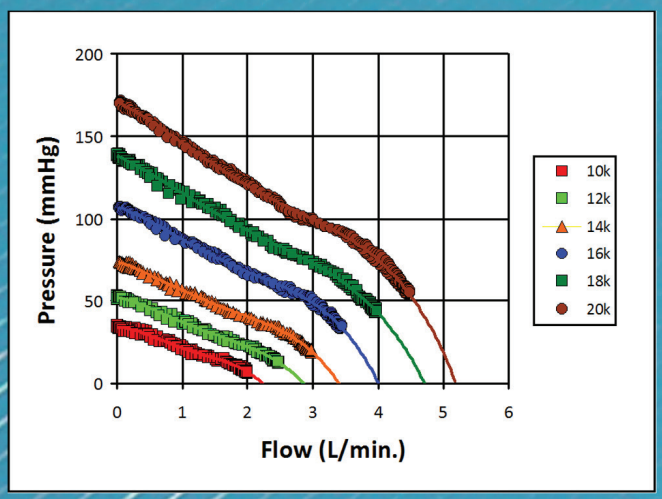

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