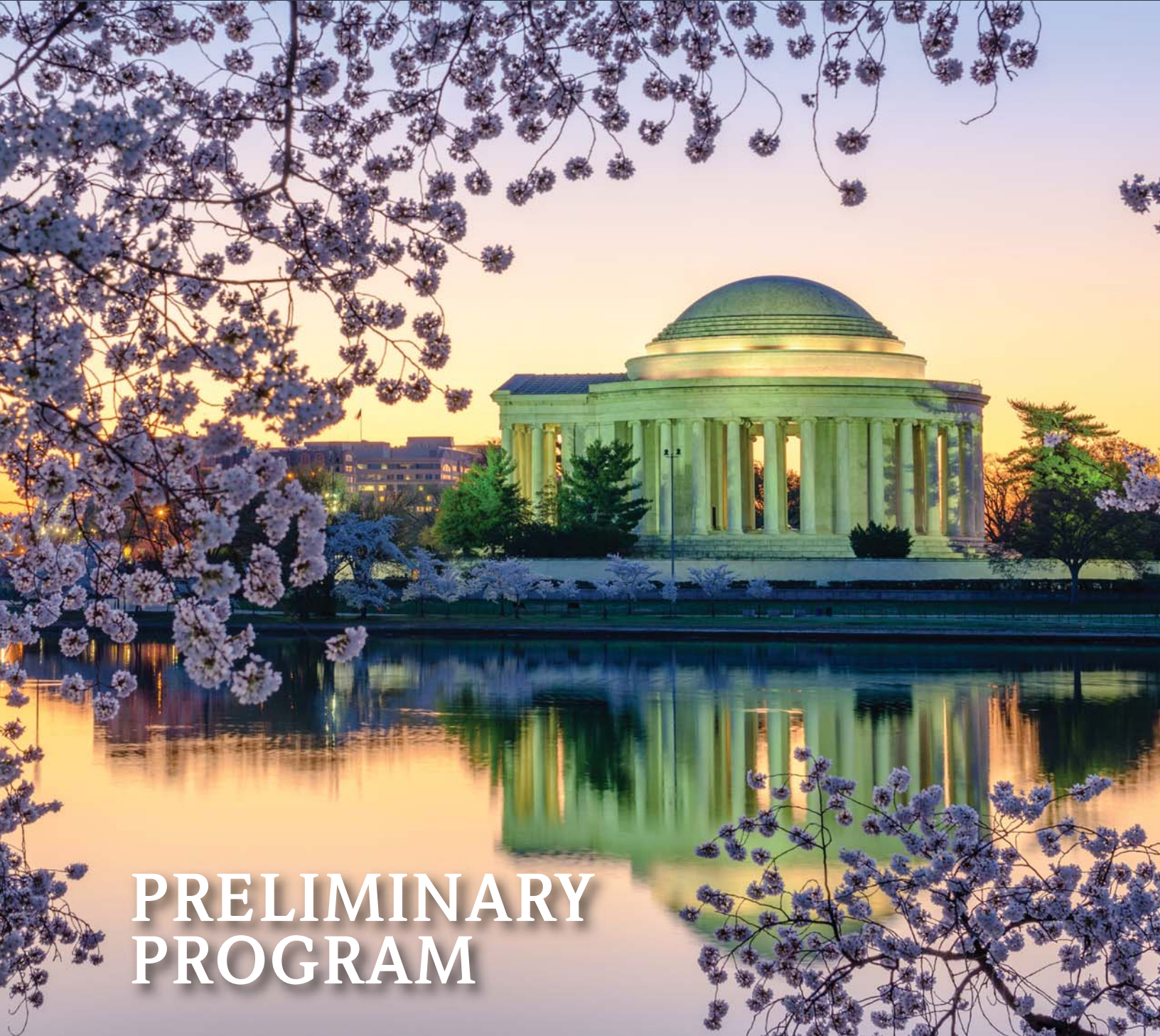


INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION

36th Annual Meeting and Scientific Sessions

APRIL 27-30, 2016



PRELIMINARY
PROGRAM

WASHINGTON DC, USA

MARRIOTT WARDMAN PARK

36th Annual Meeting and Scientific Sessions

APRIL 27-30, 2016

**CONVENING AT THE
MARRIOTT WARDMAN PARK HOTEL
WASHINGTON, DC, USA**

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION

**ISHLT Academy: Core Competencies Course in
Heart Failure and Cardiac Transplant Medicine
APRIL 26, 2016**

**ISHLT Academy: Master Class in
Pulmonary Transplantation
APRIL 26, 2016**

**ISHLT Academy: Core Competencies Course in
Mechanical Circulatory Support
APRIL 26, 2016**

**ISHLT Academy: Master Class in
Mechanical Circulatory Support
APRIL 30, 2016**



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Dear Colleague:

On behalf of Duane Davis, MD, MBA, President of the International Society for Heart and Lung Transplantation, the ISHLT Board of Directors, and the 2016 Scientific Program Committee, I have the honor of inviting you to attend the Society's 36th Annual Meeting and Scientific Sessions to be held April 27th-30th, 2016 in Washington, DC.

The meeting will be held at the Marriott Wardman Park located in a charming neighborhood in the heart of Washington, DC filled with amazing restaurants and quaint shops. Just a few steps away, you'll discover the funky stores and ethnic cuisine of Adams Morgan or the exciting night life of Dupont Circle. Head north to hear the sounds of animals coming from the National Zoo. Or venture into the hotel's natural surroundings to enjoy a quiet stroll or invigorating run through Rock Creek Park. With a Metro stop just outside the doors of the venue and area airports close by, it's a premier city destination just two Metro stops from everything DC has to offer.

We hope to build on the tremendous success of the 2015 Nice meeting, the best attended meeting in the Society's history. We plan a traditional meeting schedule, opening on Wednesday and closing on Saturday. The format of the Washington meeting will be similar to previous meetings, beginning with a day of pre-meeting symposia on Wednesday morning and closing mid-day Saturday.

Our Opening Plenary promises to be a memorable event with a reminder of why heart and lung transplantation still creates miracles everyday around the world. It will also feature a lecture by a true pioneer in the field of transplantation, Sir Roy Calne, sharing his achievements in the development of immunosuppressants. The theme of this year's Friday Plenary will be balancing innovation with risk and includes an excellent line up of talented speakers that will prove very thought provoking. Finally our Saturday plenary will showcase two new scientific technologies and how they can impact on our practice. A lifetime achievement award will also be bestowed on Jean Kantrowitz jointly with her late husband Adrian Kantrowitz who together made a huge contribution to the fields of heart transplantation and MCS. This session will conclude with the President's debate which will see two of the society's heavyweights battle over the value of regulatory monitoring of patient outcomes.

The majority of the meeting will be devoted to your submitted content. In anticipation of your contribution of high quality, novel scientific work, we plan to run concurrent oral sessions to showcase the highest scoring abstracts and mini-oral sessions and general poster sessions are planned to share your other excellent submitted work with our members.

I look forward to reviewing your abstract submissions and welcoming you to America's capital for the 36th ISHLT Annual Meeting and Scientific Sessions!

With best regards,



Andrew J. Fisher, FRCP, PhD
ISHLT 36th Annual Meeting Scientific Program Chair



ABOUT ISHLT

THE INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION (ISHLT) is a not-for-profit, multidisciplinary, professional organization dedicated to improving the care of patients with advanced heart or lung disease through transplantation, mechanical support and innovative therapies via research, education and advocacy.

ISHLT was created in 1981 at a small gathering of about 15 cardiologists and cardiac surgeons. Today we have over 3000 members from over 45 countries, representing over 15 different professional disciplines involved in the management and treatment of end-stage heart and lung disease. This multinational, multidisciplinary mix is one of the biggest strengths of the Society. It brings greater breadth and depth to our educational offerings and provides an exceptional environment for networking and exchanging information on an informal basis.

Our members include anesthesiologists, basic scientists, cardiologists, cardiothoracic surgeons, ethicists, immunologists, nurses, pathologists, perfusionists, pharmacists, pulmonologists, tissue engineers, transplant coordinators, and infectious disease specialists. Despite their differing specializations, all ISHLT members share a common dedication to the advancement of the science and treatment of end-stage heart and lung disease.

THE PURPOSES OF THE SOCIETY ARE:

- To associate persons interested in the fields of heart and lung transplantation, end-stage heart and lung disease and related sciences.
- To encourage and stimulate basic and clinical research in these disciplines and to promote new therapeutic strategies.
- To hold scientific meetings featuring presentations and discussions relevant to these disciplines.
- To sponsor a scientific journal for the publication of manuscripts related to these disciplines.
- To establish and maintain an international registry for heart and lung transplantation.
- To award research grants and establish endowments for the study of these disciplines.



ABOUT WASHINGTON, DC



WASHINGTON, DC is a living history book full of powerful moments and memorable experiences. It's the only city in the world where you can visit a 19-foot President Lincoln, read the real U.S. Constitution, see Dorothy's ruby-red slippers, immerse yourself in internationally acclaimed art and explore space travel – all in one day.

When you're not in sessions we hope that you will be able to explore America's capital for its educational and entertaining venues, world-class museums and monuments, unique neighborhoods, top-rated restaurants, gorgeous parks and gardens and endless performing arts choices.

To learn more about Washington, DC, please visit <http://washington.org/>



ANNUAL MEETING AND GENERAL INFORMATION



Registration

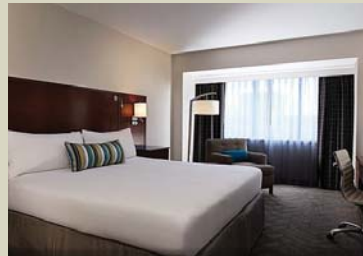
Registration for the meeting must be made via the ISHLT web site or via the Official ISHLT Registration Form. Online registration is strongly encouraged.

A \$350 discount off the on-site registration fee is offered to those who register on or before March 18, 2016, and a \$200 discount off the on-site registration fee is offered to those who register between March 19, 2016 and April 8, 2016. Individuals who have not registered by April 8, 2016 must register on-site at the meeting. A confirmation letter will be emailed to all individuals who register by April 8, 2016. An Official ISHLT Registration Form is included in this booklet and may be obtained from our web site www.isHLT.org.

The registration fee includes admission into the Pre-Meeting Symposia, Plenary Sessions, Concurrent Sessions, Mini Oral Sessions, Poster Sessions, and the Exhibit Hall. The registration fee also includes daily coffee breaks, Exhibit Hall receptions and one ticket to the President's Cocktail Reception.

Meeting Location

The ISHLT 36th Annual Meeting and Scientific Sessions will be held at the Marriott Wardman Park Hotel, 2660 Woodley Road NW, Washington, DC 20008



Hotel Reservations

Stay at the official ISHLT meeting hotel and be in the heart of all of the action! An exclusive ISHLT room rate has been negotiated with the Marriott Wardman Park Hotel in Washington, DC. The discounted rate is subject to availability and is guaranteed until March 14, 2016. After this date, all rooms will be released back to the hotel for public sale.

Hotel reservations can be made online <https://resweb.passkey.com/go/ihl2016>

GROUP RESERVATIONS: Any request of 10 or more rooms must be submitted in writing to Lisa Edwards, lisa.edwards@ishlt.org, and approved by ISHLT.



PRESIDENT'S COCKTAIL RECEPTION

The President's Cocktail Reception will be held Friday, April 29 at the Smithsonian National Museum of Natural History located at Constitution Avenue and 10th Street, NW, in Washington, DC. While there, you'll have the opportunity to see the beautiful Rotunda, designed in the Beaux-Arts style which also features "Henry," the Great African Bush Elephant as well as Ocean Hall, Mammals Hall and Hall of Human Origins.



Admittance to this event is included with your annual meeting registration. Guest registration for this reception as well as other activities may be made on the Registration Form. As always, you can look forward to plenty of food, drink, music and seeing friends.

CONTINUING EDUCATION INFORMATION



ACCME Accreditation Statement

The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

CME Credit Designation Statement

ISHLT designates this live activity for a maximum of 30 *AMA PRA Category 1 Credits*.™

Participants should claim only the credit commensurate with the extent of their participation in the activity.

ABTC Accreditation

Continuing Education Points for Transplant Certification (CEPTC) will be applied for.

ACPE Credit

This activity may be eligible for ACPE credit, see final CPE activity announcement for specific details.

Disclosure

Current guidelines state that participants in continuing medical and allied health profession education activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty, and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. These disclosures will be distributed at the meeting. Additionally, all speakers have been asked to verbally disclose at the start of their presentation any financial interest or affiliations and to indicate if a product they are discussing is not labeled for the use under discussion or is still investigational.

Educational Objectives

The International Society for Heart and Lung Transplantation is a leading organization providing education for medical professionals involved in heart and lung transplantation. Because of the rapid advances in medicine in general and transplantation medicine specifically, transplant professionals are in need of regular opportunities to update and maintain their knowledge of advances and changes in transplant medicine. This meeting is designed to address their needs.

Educational Goals

The educational goals of this activity are: to enable participants to learn about current practices, emerging technologies and medical advances related to heart and lung transplantation and end-stage heart and lung disease and to provide a forum for participants to engage in discussion, debate, and examination regarding the efficacy and applicability of these current practices, emerging technologies and medical advances.

Target Audience

The audience for this program includes physicians, surgeons, scientists, pharmacists, nurses, transplant coordinators and other allied health and social science professionals engaged in the practice of heart and lung transplantation, the management and treatment of heart and lung transplant recipients, the management and treatment of patients with end-stage heart or lung disease, basic science or clinical research related to these fields, or specialties which cause them to become involved in the treatment of transplant recipients or patients with end stage heart or lung disease.

Learning Objectives

1. At the conclusion of this meeting, participants will have improved competence and professional performance in the areas of understanding the latest information and approaches regarding transplant research, surgical techniques, medical therapies, donor management, and patient management for the treatment of patients suffering from end stage heart and lung disease
2. At the conclusion of this meeting, participants will have improved competence and professional performance in the areas of understanding the state-of-the-art treatment approaches, risk factors, risk management approaches, patient selection criteria, disease prevention strategies, outcome implications, and psychosocial management strategies for patients with end stage heart and lung failure.
3. At the conclusion of this meeting, participants will have improved competence and professional performance in the areas of understanding emerging technologies, medical advances, and the clinical applications of basic science models of end stage heart and lung disease management and prevention.

ANNUAL MEETING SCIENTIFIC PROGRAM COMMITTEE

COMMITTEES

- SYMPOSIUM PLANNING
- ABSTRACT SELECTION

- ■ Andrew J. Fisher, FRCP, PhD,
Newcastle upon Tyne, UK,
2016 Program Chair
- ■ Duane Davis, MD, MBA,
Orlando, FL, USA, *ISHLT President*
- ■ Andreas O. Zuckermann, MD,
Vienna, Austria,
2015 Program Chair
- ■ Jeffrey J. Teuteberg, MD,
Pittsburgh, PA, USA
2017 Program Chair
- ■ David A. Baran, MD,
Newark, NJ, USA
- Christian Benden, MD,
Zurich, Switzerland

- Andrew J. Boyle, MD,
Atlanta, GA, USA
- Stephen C. Clark, FRCS,
Newcastle upon Tyne, UK
- ■ Hannah Copeland, MD,
Indianapolis, IN, USA
- ■ Lara Danziger-Isakov, MD, MPH,
Cincinnati, OH, USA
- ■ Sabina M. De Geest, RN, PhD,
Basel, Switzerland
- Goran Dellgren, MD, PhD,
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- Kumud K. Dhital, MD, PhD,
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- ■ Stephan Ensminger, MD, DPhil,
Bad Oeynhausen, Germany
- Christopher R. Ensor, PharmD,
BCPS-CV, Pittsburgh, PA, USA
- Benjamin H. Freed, MD,
Chicago, IL, USA
- ■ Andrew E. Gelman, PhD,
St. Louis, MO, USA
- ■ Patricia Ging, PharmD,
Dublin, Ireland
- Christopher S. Hayward, MD,
Sydney, Australia
- ■ Peter M. Hopkins, FRACP,
Brisbane, Australia

ACRONYMS

To help you navigate your way through the meeting content and find those sessions most likely to be of interest to you, we have coded each session according to the primary professional audience it was designed for. These codes are explained as follows:

| | |
|----------------|---|
| (BSI) | BASIC SCIENCE |
| (EEP) | ECONOMICS, ETHICS, PUBLIC POLICY |
| (HF) | HEART FAILURE – ADULT |
| (HTX) | HEART TRANSPLANTATION – ADULT |
| (ID) | INFECTIOUS DISEASES |
| (LF) | LUNG FAILURE – ADULT |
| (LTX) | LUNG TRANSPLANTATION – ADULT |
| (MCS) | MECHANICAL CIRCULATORY SUPPORT – ADULT |
| (NNSAH) | NURSING, HEALTH SCIENCE AND ALLIED HEALTH |
| (PATH) | PATHOLOGY |
| (PEDI) | PEDIATRICS |
| (PHARM) | PHARMACY AND PHARMACOLOGY |
| (PH) | PULMONARY HYPERTENSION |
| (CASE) | JUNIOR FACULTY CLINICAL CASE REPORTS |
| (LBCS) | LATE BREAKING CLINICAL SCIENCE |

- Jonathan N. Johnson, MD, Rochester, MN, USA
- Annemarie Kaan, MCN, RN, Vancouver, Canada
- Mary E. Keebler, MD, Nashville, TN, USA
- Kiran K. Khush, MD, Stanford, CA, USA
- Richard Kirk, FRCP, FRCPC, Newcastle upon Tyne, UK
- Bronwyn J. Levvey, RN, Grad Dip Clin Ep, Melbourne, Australia
- Haifa Lyster, MSc, Harefield, UK
- Tereza Martinu, MD, Toronto, Canada
- Mandeep R. Mehra, MD, MBBS, FACC, FACP, Boston, MA, USA
- Hirsch S. Mehta, MD, San Diego, CA, USA
- Anna L. Meyer, MD, Leipzig, Germany
- Carmelo A. Milano, MD, Durham, NC, USA
- Dylan V. Miller, MD, Murray, UT, USA
- Martha L. Mooney, MD, FACP, Norfolk, VA, USA
- Orla Morrissey, MD, Melbourne, Australia
- Desley Neil, FRCPath, Birmingham, UK
- Joseph G. Rogers, MD, Durham, NC, USA
- Eulalia Roig, MD, Barcelona, Spain
- Antonio B. Roman, MD, PhD, Barcelona, Spain
- Joanna M. Schaenman, MD, PhD, Los Angeles, CA, USA
- Jan Schmitto, MD, PhD, MBA, Hannover, Germany
- Oksana A. Shlobin, MD, Falls Church, VA, USA
- Laurie D. Snyder, MD, Durham, NC, USA
- Ryan J. Tedford, MD, Baltimore, MD, USA
- Mitesh V. Thakrar, MD, Calgary, Canada
- Vincent G. Valentine, MD, Galveston, TX, USA
- Robin Vos, MD, PhD, Leuven, Belgium
- Gregor Warnecke, MD, Hannover, Germany
- Christopher H. Wigfield, MD, FRCS(C/Th), Chicago, IL, USA
- Neil W. Wrightson, RN, Newcastle upon Tyne, UK
- Tahir Yagdi, MD, PhD, Izmir, Turkey



HIGHLIGHTS of the 2016 ANNUAL MEETING







2016 HIGHLIGHTS

Basic Science and Translational Research

The 2016 ISHLT Annual Meeting will include a range of sessions covering basic science and translational research topics in heart and lung failure and transplantation. These carefully crafted symposia will feature internationally recognized leaders in the field. The aim of each session will be to bring together in one room basic scientists as well as clinicians and clinical researchers who wish to explore the given topics. The pre-meeting symposium entitled “**Big Data to Answer Big Questions: Biobanking to “Omics” to Personalized Medicine in Thoracic Organ Transplantation**” will include talks given by experts in biobanking, omics data analysis, big data modeling, and multi-center study design. Speakers will also explore the potential clinical applications of the resulting datasets. “**Back to the Future: Cell Therapy for Thoracic Organ Failure and Transplant?**” will be an exciting state-of-the-art set of lectures by world-renowned pioneers in tissue engineering, cell therapy, and tolerance induction presented in the context of heart and lung failure and transplantation. A sunrise symposium will offer a more basic coverage of transplant immunology and biology: “**Back to Basics: What the Thoracic Transplant Clinician Needs to Know About Immunobiology.**” This will be an opportunity for all ISHLT members

to brush up on their basic science knowledge and also review the clinical relevance of underlying mechanisms of allograft rejection and injury. In addition to these three core symposia, other talks focused on basic and translational research have been incorporated into other sessions in order to create a well-rounded high-quality program for the ISHLT conference attendees.

Heart Failure and Transplantation

The ISHLT 2016 in Washington DC will bring dynamic and thought provoking symposia in heart failure and transplantation for clinicians, surgeons and allied health professionals. **Timing Support in Cardiogenic Shock: When to Move Forward** will confront us with the difficult question of when is the best time to intervene in an emergent situation? Then we will challenge our current paradigm with **Rethinking Valvular Heart Disease in Heart Failure** from percutaneous intervention to surgical interventions. We will also explore how to select the best donor and optimize the current donor shortage with the session, **Donor Selection: Strategies to Improve Organ Utilization.** A comprehensive discussion on how to diagnose and manage right heart failure will be included in **When Right Is Wrong: Management of the Dying Right Ventricle.** We will look at post-trans-

plant surgical challenges with a session on **Making It Work: Heart Transplant Challenges from the Surgeon’s Perspective** that will discuss topics such as technical considerations in adult congenital heart transplantation, surgical management of primary graft dysfunction and surgical options for late graft failure. We will tackle post heart transplant – Immunology with a **Focused Update on AMR in Cardiac Transplantation: Immunologic Diagnostics and the Treatment of Refractory AMR** from the most update diagnoses to the best treatments. We will continue with immunology to immunosuppression with **Controversies in Heart Transplantation: How Low Can You Go? – Tailoring Immunosuppression.**

Infectious Diseases

ISHLT 2016 will offer wide-ranging insight into topics of vital importance to infection in thoracic organ transplantation and MCS/D, with symposia of interest both to the diehard Transplant Infectious Diseases provider as well as to other clinicians and scientists with interest in Infectious Diseases. We lead off with **The Future is Here: Emerging Issues in Infectious Disease**, a whirlwind tour of challenging topics including Mycobacterium abscessus, RSV, Scedosporium and other emerging fungi, Clostridium difficile, and those troublesome resistant Gram-negative organisms. Next up is a comprehensive look at



2016 HIGHLIGHTS

CMV in It's All in the Translation: CMV from Bedside to Bench and Back, which will examine the impact of CMV on the heart and lung allograft, the anti-CMV immune response and review our current antiviral armamentarium and preview new tools on the horizon. We end the day with a not-to-be-missed session entitled **Hanging in the Balance: Minimizing Risk and Maximizing Benefit with Donor Derived Infections** with an update on UNOS data on donor derived infections and a review of the European perspective, a look at the donor with possible encephalitis, nucleic acid based testing for HIV, Hepatitis C and Hepatitis B, and new opportunities ahead for HIV-positive organs. Grab some coffee for our Sunrise Symposium on **The Fly in the Ointment: Nosocomial Infections**, a novel look at antimicrobial stewardship, infection prevention, and outbreaks in the transplant center, with a special look at patients with open chest or ECMO. But that's not all – our colleagues in MCS are presenting **Achilles Heel: Infectious Complications in MCS**, our friends in Pharmacy will review the lifecycle of Hepatitis C patient with heart failure, specialists from the Pediatrics community will discuss **Child's Play: Infectious Risk After Transplant During Everyday Life**, and from Lung Transplantation, a session on infection in the elderly lung transplant recipient.

Lung Failure And Transplantation

This year there will be numerous stimulating sessions with four Pre-meeting Symposia and two Sunrise Symposia dedicated to lung transplantation. **Current Innovations and Future of EVLP** will explore the future of EVLP with respect to lung repair using cell or gene based therapies and drug or molecular interventions. Advanced techniques of ex-vivo perfusion using portable systems and dual artery cannulation techniques will be discussed. EVLP as a platform to reduce infection and possible alloresponsiveness will be summarized. **Multiorgan Transplantation for Lung Recipients: When is Two Better than One?** will summarize key recommendations pertaining to heart-lung, lung-liver and lung-kidney transplantation. Furthermore, the ethics and equity debate of multi organ transplantation shall be outlined as well as issues of possible immunological allograft protection. **The Biology of Aging and Lung Transplantation** will cover issues of immunosenescence, impact of telomerase mutations, measures of frailty and other challenges in the elderly recipient including infection and immunosuppressive regimens. Our persistent nemesis CLAD will be reviewed in **Endotypes of CLAD and Novel Treatment Strategies**. The symposium will include a presentation on the historical basis for CLAD

phenotypes and review of current clinical, radiological and pathological criteria. Contemporary medical and surgical treatment practices for patients as directed by phenotype will be outlined, along with future perspectives with regards to CLAD prevention. **Thoracic Organ Transplantation and Malignancy**, will review key issues including relevance to lung transplant candidate selection and overview of current cancer screening guidelines. **Lung Transplant Benefit is More Than Just Survival** will question the outcome of survival as the only relevant measure of success with lung transplantation. The session will assess contemporary assessment tools of health related quality of life, functioning and disability and their relevance to measuring important patient outcomes, as well as the impact of neuro cognitive changes post lung transplant.

Mechanical Circulatory Support

We are looking forward to the 2016 Annual Meeting and expect the MCS content will stimulate the broad interests of the MCS community and actively represent the variety of subspecialties which contribute to the advancement of the field. The challenges of managing anticoagulation and antiplatelet therapy, the use of platelet functional assays, and the approach to high-risk patients will



2016 HIGHLIGHTS

be addressed in **Anticoagulation and MCS: Can We Do Better?** The ISHLT is very pleased to introduce the first joint ISHLT/ICCAC symposium, **Joined at the Heart – International Perspectives on MCS Issues**, which has leaders from both societies exploring the factors which allow multidisciplinary teams to achieve excellent results across a wide array of practice environments. **Achilles Heel: Infectious Complications in MCS** will have representatives from both MCS and infectious disease review the diagnosis, therapy, prevention and long-term consequences of infections in patients with MCS. We will tackle several controversial issues such as transplantation versus DT in the elderly, mechanical support in less sick patients, and the use of minimally invasive implant techniques in **Great Debates in MCS**. The debates will be case-based and will provide both an informative and entertaining review of these contentious topics. The MCS community recognizes the importance of patient selection and management on outcomes and the incidence of adverse events, but device engineering also plays a critical role. In **MCS Challenges and Engineering Solutions**, we will review the role of shear stress, the impact of pump miniaturization, the use of physiologic controls and available engineering options to improve outcomes and reduce adverse events. These engineering principles will be presented in the context of their clinical

applications and in a manner that is accessible to the practicing MCS care provider. **Clear as Mud: Assessing the Right Ventricle** will address the always challenging issues of pre-operative assessment of RV function, intraoperative treatment strategies and the approach to treatment of chronic RV failure.

Nursing, Health Science, Allied Health

This year, we are showcasing how art and evidence can inspire innovation in several areas of clinical care. An attractive program has been created through the collaboration of several different specialties including three diverse symposia in the areas of genomics, selection of marginal donors and ECMO. **Genomics: What do I Have to Know and How Will It Affect My Practice?** will provide all attendees with the basics of this new field and provides examples of how genomics will impact clinical transplant care in the future. The ethical reflection on this field and a discussion of nursing competencies will complete this session. In **Between a Rock and a Hard Place: Debating Treatment Decisions for Marginal Psychosocial Candidates**, treatment decisions for marginal transplant and mechanical support candidates will be tackled in three debates developed around difficult issues that clinicians face every day. Should we, or should we not list this patient? What is the

evidence base? Which ethical reflections influence our decisions? An interactive response system and a panel discussion will maximize the involvement of the audience. **Ambulatory ECMO in Adults: We Like to Move It, Move It** addresses the issue at the forefront of critical care practice: ambulation in adult ECMO patients. What are the risks and benefits? What is required to implement such a practice in your program? Which team members should be involved? In addition, there will be nursing, health sciences, and allied health content being presented in other symposia. This “cross-pollination” will serve to make this year’s ISHLT conference richer and more relevant.

Pathology

This year’s pathology satellite symposium takes aim at “chronic rejection” in the heart. Controversy and confusion surrounding this topic stem from varying definitions of what “chronic” means as well as whether the observed changes in the allograft are truly rejection. Speakers in this session will address the myocardial alterations (beyond CAV) seen after years of repetitive rejection episodes, novel mechanisms of CAV development, the role of complement and other mechanisms in potentiating late graft damage, a morphologic comparison to analogues of chronic rejection in other organs, and a review of animal models of late graft loss.



2016 HIGHLIGHTS

Pediatrics

We all recognize that there are major variations in pediatric heart failure and transplant management, and so this year's pediatric symposia will spotlight major controversies in these fields. **VADs in Patients with Congenital Heart Disease** will focus on the big questions in this difficult group of patients, both pediatric and adult. **Child's Play after Pediatric Thoracic Transplant** will examine the prevailing dogma after heart and lung transplantation in children, addressing whether isolation is necessary, which pets are allowed, what limits can be placed on travel, which water and food sources are safe, and current vaccination practices for endemic diseases. **Controversies in Pediatric Heart Failure** will focus squarely on the heart failure community, engaging the audience with discussions of novel pharmaceutical agents in pediatric heart failure, and how to prevent sudden death in the pediatric heart failure patient. We will continue the important discussion from last year's meeting on making palliative care part of the plan for every patient, and conclude with a presentation on the new ISHLT pediatric heart failure registry – will it result in useable data, or just make more work?

Pharmacy And Pharmacology

The 2016 ISHLT Annual Meeting will showcase clinical care and research initiatives through a diverse program of informative sessions. Two Pharmacy and Pharmacology sessions, which focus on drug therapy, lend applicability across all disciplines represented by the ISHLT membership. Join us in the return of the ever-popular lifecycle journey series, with a look at a **Lifecycle Journey of Hepatitis C Heart Failure Patient in 2016**. An enduring case will be presented, interspersed with a best practice based discussion at pre-defined, key "journey intervals." In this session, we focus on how the new hepatitis treatments have altered management at all stages of this lifecycle; pay particular consideration to the controversial areas of listing these patients for transplant; evaluate the tricky issue of immunosuppression; malignancy post-transplantation; and finally when to consider palliation? This is certain to be a lively session giving challenging insights into this developing area of practice, definitely not to be missed! The sunrise symposium on Saturday, **Precision Medicine in Transplantation: Drug Levels and Beyond**, involve a bench-to-bedside exploration of pharmacogenetics and the impact on drug metabolism and predicting adverse effects. We

then approach the problem from the other angle as we consider therapeutic gene modulation, learning from the field of cystic fibrosis.

Pulmonary Hypertension

Pulmonary hypertension is truly at the forefront of the 2016 ISHLT Scientific Sessions with a total of seven provocative symposia! Areas covered will include pulmonary hypertension related to chronic thromboembolic disease, parenchymal lung disease, left heart disease and congenital heart disease. Sessions will also detail important issues in lung transplantation related to pulmonary hypertension, the use of combination therapy in pulmonary artery hypertension, and a translational symposium on emerging biology of pulmonary hypertension and the right heart. The two joint sessions with the European Society of Cardiology (ESC) and the Pulmonary Vascular Research Institute (PVRI) in particular are not to be missed.

PRELIMINARY PROGRAM 2016

SCHEDULE AT A GLANCE



All meetings and activities will take place at the Marriott Wardman Park Hotel unless otherwise specified. All papers will be presented in English. Please check the ISHLT website [www.isHLT.org] for updates. The ISHLT 2016 mobile app, which will be available approximately 2 weeks prior to the Annual Meeting, and the Final Program, which is distributed on site, will reflect the very latest session schedule and room assignments.



MONDAY April 25

8:00 AM – 11:00 PM

Exhibit Hall Build *(Exhibit Hall A)*

9:00 AM – 5:00 PM

ISHLT Strategic Planning Meeting
(Delaware Suite)

6:00 PM – 9:00 PM

Academy Registration Open
(Thurgood Marshall Foyer)

Speaker Ready Room Open *(Madison)*

TUESDAY April 26

7:00 AM – 3:00 PM

Academy Registration Open
(Thurgood Marshall Foyer)

7:00 AM – 7:00 PM

Speaker Ready Room Open *(Madison)*

8:00 AM – 2:00 PM

ISHLT Board of Directors Meeting *(Harding)*

8:00 AM – 6:00 PM

**ISHLT Academy: Core Competencies
in Heart Failure and Cardiac Transplant
Medicine** *(Thurgood Marshall North)*

**ISHLT Academy: Masters Course
in Pulmonary Transplantation**
(Thurgood Marshall South and West)

**ISHLT Academy: Core Competencies
in Mechanical Circulatory Support**
(Thurgood Marshall East)

2:00 PM – 6:00 PM

**ISHLT Board/Committee/Council
Leadership Orientation** *(Harding)*

2:00 PM – 7:00 PM

Registration Open *(Convention Registration)*

5:00 PM – 7:00 PM

Press Office Open *(Park Tower 8219)*

6:00 PM – 8:00 PM

I2C2 Committee Meeting *(Balcony A)*

Education Committee Meeting *(Balcony B)*

Grants and Awards Committee Meeting
(Park Tower 8212)

**International Transplant Registry
Committee Meeting** *(Park Tower 8217)*

**Standards and Guidelines Committee
Meeting** *(Park Tower 8216)*

WEDNESDAY April 27

7:00 AM – 7:00 PM

Registration Open *(Convention Registration)*

Speaker Ready Room Open *(Madison)*

7:00 AM – 10:00 AM

Exhibitor Set-Up *(Exhibit Hall A)*

Poster Session 1 Mount *(Exhibit Hall B & C)*

8:00 AM – 10:00 AM

Pre-Meeting Symposium 01: Anticoagulation and MCS: Can We Do Better? *(Salons 2-3)*

(MCS, HF, PHARM)

Pre-Meeting Symposium 02: Controversies in Heart Transplantation: Past, Present and Future *(Thurgood Marshall)*

(HTX, HF, ID, NHSAH, PATH, PEDS, PHARM)

Pre-Meeting Symposium 03: Current Innovations and Future of EVLP *(Salon 1)*

(LTX, LF, MCS)

Pre-Meeting Symposium 04: Under Pressure: Pulmonary Hypertension in Parenchymal Lung Disease *(Maryland Suite)*

(PH, HF, LF, LTX)

Pre-Meeting Symposium 05: Making It Work: Heart Transplant Challenges from the Surgeon's Perspective *(Virginia Suite)*

(HTX, HF, MCS, NHSAH, PEDS)

Pre-Meeting Symposium 06: Back to the Future: Cell Therapy for Thoracic Organ Failure and Transplant? *(Delaware Suite)*

(ALL)

Pre-Meeting Symposium 07: The Future is Here: Emerging Issues in Infectious Disease *(Washington 2)*

(ID, HTX, LF, LTX, MCS, NHSAH, PEDS, PHARM)

9:00 AM – 7:00 PM

Press Office Open *(Park Tower 8219)*

10:00 AM – 10:15 AM

Coffee Break *(Exhibit Hall A)*

View Posters *(Exhibit Hall B & C)*

10:15 AM – 12:15 PM

Pre-Meeting Symposium 08: Joint ISHLT-ICCAC MCS Symposium: Joined at the Heart – International Perspectives on MCS Issues *(Salons 2-3)*

(MCS, HF, HTX, NHSAH)

Pre-Meeting Symposium 09: Donor Heart Selection: Strategies to Improve Organ Utilization *(Thurgood Marshall)*

(HTX, LTX, MCS, NHSAH, PEDS)

Pre-Meeting Symposium 10: Joint ISHLT/ESC Symposium: Left, Right and Together: The Facts and Future of Pulmonary Hypertension in Left Heart Disease

in collaboration with the ISHLT Scientific Council on Pulmonary Hypertension and the ESC RV/Pulmonary Circulation Working Group *(Salon 1)*

(PH, ALL)

Pre-Meeting Symposium 11: Multiorgan Transplantation for Lung Recipients: When is Two Better than One?

(Maryland Suite)

(LTX, HTX)

Pre-Meeting Symposium 12: It's All in the Translation: CMV from Bedside to Bench and Back Again *(Virginia Suite)*

(ALL)

Pre-Meeting Symposium 13: Child's Play: Infectious Risk After Transplant During Everyday Life *(Delaware Suite)*

(PEDS, HTX, ID, LTX, NHSAH, PHARM)

Pre-Meeting Symposium 14: Genomics: What do I Have to Know and How Will It Affect My Practice? *(Washington 2)*

(NHSAH, BSTR, HF, HTX, LTX)

12:15 PM – 1:45 PM

Lunch Break

Junior Faculty and Mentor Lunch Meeting *(Wilson)*

IMACS Registry Committee Meeting *(Taft)*

Nursing, Health Science and Allied Health Scientific Council Meeting *(Washington 2)*

Pharmacy and Pharmacology Scientific Council Meeting *(Harding)*

Basic Science and Translational Research Scientific Council Meeting *(Hoover)*

DCD Registry Committee Meeting *(Taylor)*

1:45 PM – 3:45 PM

Pre-Meeting Symposium 15: Achilles Heel: Infectious Complications in MCS *(Salons 2-3)*

(MCS, HTX, ID, NHSAH, PHARM)

Pre-Meeting Symposium 16: When Right is Wrong! Management of the Dying Right Ventricle *(Thurgood Marshall)*

(HF, ALL)

Pre-Meeting Symposium 17: The Biology of Aging and Lung Transplantation *(Salon 1)*
(LTX, ID, LF, MCS, NHSAH, PH)

Pre-Meeting Symposium 18: Proximal, Distal, Balloons, and Scalpels: Current Issues in CTEPH *(Maryland Suite)*
(PH, HF, LF, PEDS)

Pre-Meeting Symposium 19: Between a Rock and a Hard Place: Debating Treatment Decisions for Marginal Psychosocial Candidates *(Virginia Suite)*
(NHSAH, HF, HTX, LTX, MCS)

Pre-Meeting Symposium 20: Big Data to Answer Big Questions: Biobanking to "Omics" to Personalized Medicine in Thoracic Organ Transplantation *(Delaware Suite)*
(ALL)

Pre-Meeting Symposium 21: Unraveling "Chronic Rejection" in the Heart *(Washington 2)*
(PATH, BSI, HF, HTX, LTX, PED)

3:45 PM – 4:00 PM
Coffee Break *(Exhibit Hall A)*

4:00 PM – 6:00 PM
Pre-Meeting Symposium 22: Great Debates in MCS *(Salons 2-3)*
(MCS, HF, HTX, NHSAH)

Pre-Meeting Symposium 23: A 2016 Focused Update on AMR in Cardiac Transplantation: Immunologic Diagnostics and the Treatment of Refractory AMR *(Thurgood Marshall)*
(HTX, BSI, HF, NHSAH, PATH, PEDS, PHARM)

Pre-Meeting Symposium 24: Endotypes of CLAD and Novel Treatment Strategies *(Salon 1)*
(LTX, BSI, PATH, PEDS)

Pre-Meeting Symposium 25: Inflammation and Altered Metabolism in Pulmonary Hypertension *(Maryland Suite)*
(PH, ALL)

Pre-Meeting Symposium 26: Hanging in the Balance: Minimizing Risk and Maximizing Benefit with Donor Derived Infection *(Virginia Suite)*
(ALL)

Pre-Meeting Symposium 27: VAD in Patients with Congenital Heart Disease *(Delaware Suite)*
(PEDS, HF, HTX, MCS, NHSAH)

Pre-Meeting Symposium 28: Lifecycle Journey of Hepatitis C Heart Failure Patient in 2016 *(Washington 2)*
(PHARM, HF, ID, MCS, NHSAH)

6:00 PM – 7:00 PM
EXHIBIT HALL GRAND OPENING RECEPTION *(Exhibit Hall A)*

Moderated Poster Session 1 *(Exhibit Hall B & C)*

7:00 PM – 10:00 PM
ICCAC Annual Meeting *(Virginia Suite)*

7:00 PM – 7:30 PM
Poster Session 1 Removal *(Exhibit Hall B & C)*

THURSDAY April 28

7:00 AM – 7:00 PM
Registration Open *(Convention Registration)*
Speaker Ready Room Open *(Madison)*

7:00 AM – 10:00 AM
Poster Session 2 Mount *(Exhibit Hall B & C)*

7:00 AM – 8:00 AM
Junior Faculty and Trainees Council Meeting *(Harding)*

8:00 AM - 10:00 AM
Opening Plenary Session *(Salons 1-3)*
(ALL)

9:00 AM – 7:00 PM
Press Office Open *(Park Tower 8219)*

10:00 AM – 10:30 AM
Coffee Break *(Exhibit Hall A)*

10:00 AM – 7:00 PM
Exhibit Hall Open *(Exhibit Hall A)*
Poster Hall Open *(Exhibit Hall B & C)*

10:30 AM – 12:00 PM
Concurrent Abstract Sessions



12:00 PM – 1:00 PM

IPLTC Meeting *(Park Tower 8212)*

IPHFR Meeting *(Capitol Boardroom)*

12:00 PM – 2:00 PM

Lunch Break

JHLT Editorial Board Lunch Meeting
(Wilson)

**Mechanical Circulatory Support
Scientific Council Meeting** *(Delaware Suite)*

**Pulmonary Transplantation Scientific
Council Meeting** *(Washington 2)*

**Pulmonary Hypertension Scientific
Council Meeting** *(Washington 1)*

Pathology Scientific Council Meeting
(Harding)

2:00 PM – 3:30 PM

Concurrent Abstract Sessions

**Symposium 29: ISHLT/PVRI Joint
Symposium: Exploring Combination
Therapy in PAH** *(Washington 1)*

(PH, BSI, LF, LTX, NNSAH, PHARM)

3:30 PM – 4:00 PM

Coffee Break *(Exhibit Hall A)*

View Posters *(Exhibit Hall B & C)*

3:30 PM – 4:00 PM

**2017 Symposium Planning Committee
Meeting** *(Harding)*

4:00 PM – 5:30 PM

Concurrent Abstract Sessions

5:30 PM – 6:00 PM

Coffee Break *(Exhibit Hall A)*

6:00 PM – 7:00 PM

Mini Oral Abstract Sessions

Wine and Cheese Reception
(Exhibit Hall A)

Moderated Poster Session 2

(Exhibit Hall B & C)

Past Presidents Committee Meeting
(Harding)

7:00 PM – 7:30 PM

Poster Session 2 Removal
(Exhibit Hall B & C)

FRIDAY April 29

7:00 AM – 7:00 PM

Registration Open *(Convention Registration)*

Speaker Ready Room Open *(Madison)*

7:00 AM – 10:00 AM

Poster Session 3 Mount *(Exhibit Hall B & C)*

7:00 AM - 8:00 AM

Sunrise Symposium 01: MCS Challenges and Engineering Solutions *(Thurgood Marshall)*
(MCS, HF, HTX, NNSAH)

Sunrise Symposium 02: Timing Support in Cardiogenic Shock: When to Move Forward *(Salon 1)*
(ALL)

Sunrise Symposium 03: Thoracic Organ Transplantation and Malignancy *(Maryland Suite)*
(LTX, HF, HTX, LF, NNSAH, PEDS, PHARM)

Sunrise Symposium 04: Let's Come to Some Closure on the Issue of Pulmonary Hypertension in Congenital Heart Disease *(Virginia Suite)*
(PH, LTX, NNSAH, PEDS)

Sunrise Symposium 05: Back to Basics: What the Thoracic Transplant Clinician Needs to Know About Immunobiology *(Delaware Suite)*
(ALL)

Sunrise Symposium 06: The Fly in the Ointment: Nosocomial Infections *(Washington 2)*
(ID, ALL)

8:00 AM – 10:00 AM

Plenary Session: Where is the Future for Innovation? *(Salons 2-3)*
(ALL)

9:00 AM – 7:00 PM

Press Office Open *(Park Tower 8219)*

10:00 AM – 10:30 AM

Annual Business Meeting *(Salons 2-3)*

Coffee Break *(Exhibit Hall A)*

10:00 AM – 4:00 PM

Exhibit Hall Open *(Exhibit Hall A)*

10:00 AM – 7:00 PM

Poster Hall Open *(Exhibit Hall B & C)*

10:30 AM – 12:00 PM

Concurrent Abstract Sessions

Symposium 30: JHLT at ISHLT: The Year in a Capsule *(Maryland Suite)*
(ALL)

12:00 PM – 2:00 PM

Lunch Break

Heart Failure and Transplantation Scientific Council Meeting *(Delaware Suite)*

Pediatric Thoracic Transplantation and Heart Failure Scientific Council Meeting *(Washington 2)*

Infectious Diseases Scientific Council Meeting *(Hoover)*

IMACS Users Group Meeting *(Harding)*

AST/ISHLT Lung Transplant Benefit Meeting *(Wilson)*

Registries and Databases Committee Meeting *(Taft)*

12:15 PM – 1:15 PM

Lung Quality of Life Workforce Committee Meeting *(Jefferson)*

EUROMACS Meeting *(Johnson)*

2:00 PM – 3:30 PM

Concurrent Abstract Sessions

Symposium 31: Performing Under Pressure: Lung Transplantation in PH and PAH *(Washington 1)*
(PH, ALL)

3:30 PM – 4:00 PM

Coffee Break *(Exhibit Hall A)*

View Posters *(Exhibit Hall B & C)*

4:00 PM – 5:30 PM

Concurrent Abstract Sessions

5:30 PM – 6:00 PM

Coffee Break

6:00 PM – 7:00 PM
Mini Oral Abstract Sessions

Wine and Cheese Reception *(Exhibit Hall A)*

Moderated Poster Session 3
(Exhibit Hall B & C)

7:00 PM – 7:30 PM
Poster Session 3 Removal *(Exhibit Hall B & C)*

8:00 PM – 9:30 PM
PRESIDENT'S COCKTAIL RECEPTION
(Smithsonian National Museum of Natural History)

SATURDAY April 30

7:00 AM – 12:00 PM
Registration Open *(Convention Registration)*

7:00 AM – 5:00 PM
Speaker Ready Room Open *(Madison)*

7:00 AM – 8:00 AM
**Sunrise Symposium 07: Clear as Mud:
Assessing the Right Ventricle**
(Thurgood Marshall)
(MCS, ALL)

**Sunrise Symposium 08: Rethinking Valvular
Disease in Heart Failure** *(Maryland Suite)*
(HF, HTX, MCS, NNSAH, PEDS, PH)

**Sunrise Symposium 09: Lung Transplant
Benefit is More Than Just Survival**
(Virginia Suite)
(LTX, ALL)

**Sunrise Symposium 10: Ambulatory ECMO
in Adults: We Like to Move It, Move It**
(Delaware Suite)
(NNSAH, HF, HTX, LTX, MCS)

**Sunrise Symposium 11: Controversies in
Pediatric Heart Failure** *(Washington 2)*
(PEDS, HF, NNSAH, PHARM)

**Sunrise Symposium 12: Precision Medicine
in Transplantation: Drug Levels and Beyond**
(Washington 1)
(ALL)

8:00 AM – 9:30 AM
Concurrent Abstract Sessions

9:30 AM – 9:45 AM
Coffee Break

9:45 AM – 11:45 AM
**Plenary Session: Pushing New Scientific
Frontiers: It's in Our Heritage**
(Thurgood Marshall)
(ALL)

10:00 AM – 12:00 PM
**Council and Committee Reports
to the Board and Membership** *(Harding)*

11:45 AM – 12:00 PM
Coffee Break

12:00 PM – 1:30 PM
Concurrent Abstract Sessions

12:00 PM – 6:00 PM
ISHLT Board of Directors Meeting *(Harding)*

12:00 PM – 3:00 PM
Academy Registration Open
(Convention Registration)

1:45 PM – 6:30 PM
**ISHLT Academy: Masters Course in
Mechanical Circulatory Support**
(Washington 1 & 2)

**THIRTY-SIXTH ANNUAL MEETING
PRELIMINARY PROGRAM**

TIME TABLE SCHEDULE

SCIENTIFIC SESSIONS • ISHLT ACADEMIES



DAILY TIME TABLE

| TUESDAY April 26 | | | | | | | |
|------------------|--|---|---|---|------------------------|--------------------------|-------------------------------------|
| LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | LOBBY LEVEL |
| ROOM | Thurgood Marshall North | Thurgood Marshall East | Thurgd. Marshall South & West | Harding | Balcony A | Balcony B | Park Tower 8212 |
| TIME | | | | | | | |
| 7:00 AM | | | | | | | |
| 8:00 AM | ISHLT ACADEMY: Core Competencies in Heart Failure and Cardiac Transplant Medicine | ISHLT ACADEMY: Core Competencies in Mechanical Circulatory Support | ISHLT ACADEMY: Masters Course in Pulmonary Transplantation | ISHLT Board of Directors Meeting 8 am - 2 pm | | | |
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| 2:00 PM | | | | ISHLT Leadership Orientation 2 pm - 6 pm | | | |
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| 6:00 PM | | | | | I2C2 Committee Meeting | Education Committee Mtg. | Grants and Awards Committee Meeting |
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| 8:00 PM | | | | | | | |
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THE NATIONAL CHERRY BLOSSOM FESTIVAL

EVERY APRIL, THE NATIONAL CHERRY BLOSSOM FESTIVAL commemorates the 1912 gift of 3,000 cherry trees from Mayor Yukio Ozaki of Tokyo to the city of Washington, DC. The gift and annual celebration honor the lasting friendship between the United States and Japan and the continued close relationship between the two countries.

| TUESDAY April 26 | | |
|-------------------------|--|--|
| LEVEL | LOBBY LEVEL | LOBBY LEVEL |
| ROOM | Park Tower 8217 | Park Tower 8216 |
| TIME | | |
| 7:00 AM | | |
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| 2:00 PM | | |
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| 6:00 PM | International Transplant Registry Committee Mtg. | Standards and Guidelines Committee Meeting |
| 8:00 PM | | |
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DAILY TIME TABLE

| WEDNESDAY April 27 | | | | | | | |
|--------------------|---|--|---|---|---|---|--|
| LEVEL | LOBBY LEVEL | MEZZANINE LEVEL | LOBBY LEVEL | LOBBY LEVEL | LOBBY LEVEL | LOBBY LEVEL | EXHIBITION LEVEL |
| ROOM | Salons 2-3 | Thurgood Marshall | Salon 1 | Maryland Suite | Virginia Suite | Delaware Suite | Washington 2 |
| TIME | | | | | | | |
| 7:00 AM | | | | | | | |
| 8:00 AM | SYMPOSIUM 1 Anticoagulation and MCS (MCS, HF, PHARM) | SYMPOSIUM 2 Controversies in Heart Tx (HTX, HF, ID, NHSAH, PATH, PEDS, PHARM) | SYMPOSIUM 3 Current Innovations and Future of EVLP (LTX, LF, MCS) | SYMPOSIUM 4 Under Pressure: PH ILD (PH, HF, LF, LTX) | SYMPOSIUM 5 Making It Work: Heart Tx Challenges Surgical (HTX, HF, MCS, NHSAH PEDS) | SYMPOSIUM 6 Back to the Future: Cell Therapy (ALL) | SYMPOSIUM 7 Future is Here: Emerging Issues in ID (ID, HTX, LF, LTX, MCS, NHSAH, PEDS, PHARM) |
| 10:00 AM | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK |
| 10:15 AM | SYMPOSIUM 8 Joint ISHLT/ICCAC MCS Symposium (MCS, HF, HTX, NHSAH) | SYMPOSIUM 9 Donor Heart Selection: Strategies to Improve (HTX, LTX, MCS, NHSAH, PEDS) | SYMPOSIUM 10 Joint ISHLT/ESC PH Symposium (PH, ALL) | SYMPOSIUM 11 Multi-Organ Tx for Lung Recipients (LTX, HTX) | SYMPOSIUM 12 CMV from Bench to Bedside (ALL) | SYMPOSIUM 13 Child's Play: Infectious Risk After (PEDS, HTX, ID, LTX NHSAH, PHARM) | SYMPOSIUM 14 Genomics (NHSAH, BSTR, HF, HTX, LTX) |
| 12:15 PM | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | NHSAH Council Meeting |
| 1:45 PM | SYMPOSIUM 15 Achilles Heel: Infectious Complications in MCS (MCS, HTX, ID, NHSAH, PHARM) | SYMPOSIUM 16 When Right is Wrong! Mgt. of Dying RV (HF, ALL) | SYMPOSIUM 17 Biology of Aging and Lung Tx (LTX, ID, LF, MCS, NHSAH, PH) | SYMPOSIUM 18 Current Issues in CTEPH (PH, HF, LF, PEDS) | SYMPOSIUM 19 Debating Treatment Decisions for Psychosocial Candidates (NHSAH, HF, HTX, LTX, MCS) | SYMPOSIUM 20 Biobanking to "Omics" to Personalized Medicine in Thoracic Organ Tx (ALL) | SYMPOSIUM 21 Unraveling "Chronic Rejection" in Heart Tx (PATH, BSI, HF, HTX, LTX, PED) |
| 3:45 PM | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK |
| 4:00 PM | SYMPOSIUM 22 Great Debates in MCS (MCS, HF, HTX, NHSAH) | SYMPOSIUM 23 Update on AMR in Cardiac Tx (HTX, BSI, HF, NHSAH, PATH, PEDS, PHARM) | SYMPOSIUM 24 Endotypes of FLAD and Novel Treatment Strategies (LTX, BSI, PATH, PEDS) | SYMPOSIUM 25 Inflammation and Altered Metabolism in PH (PH, ALL) | SYMPOSIUM 26 Minimizing Risk Maximizing Benefit with Donor Derived Infection (ALL) | SYMPOSIUM 27 VAD in Patients with Congenital Heart Disease (PEDS, HF, HTX, MCS, NHSAH) | SYMPOSIUM 28 Journey of Hep C Heart Failure Patient (PHARM, HF, ID, MCS NHSAH) |
| 6:00 PM | | | | | | | |
| 7:00 PM | | | | | ICCAC Annual Meeting 7 pm - 10 pm | | |
| 8:00 PM | | | | | | | |
| 9:00 PM | | | | | | | |
| 10:00 PM | | | | | | | |

WEDNESDAY April 27

| LEVEL | EXHIBITION LEVEL | EXHIBITION LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | | |
|----------|-----------------------------------|----------------------------------|-----------------|-----------------|-----------------------|-------------------------|----------------------|------------------------|----------------------|
| ROOM | Exhibit Hall A | Exhibit Hall B & C | Harding | Wilson | Hoover | Taft | Taylor | | |
| TIME | | | | | | | | | |
| 7:00 AM | Exhibitor Set-Up 7 am – 10 am | Poster Mount 7 am – 10 am | | | | | | | |
| 8:00 AM | | | | | | | | | |
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| 10:00 AM | Exhibit Hall Open 10 am – 7 pm | Poster Hall Open 10 am – 7 pm | | | | | | | |
| 10:15 AM | | | | | | | | | |
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| 12:15 PM | | | | | PHARM Council Meeting | Jr Faculty Mentor Lunch | BSTR Council Meeting | IMACS Reg Comm Meeting | DCD Reg Comm Meeting |
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| 1:45 PM | | | | | | | | | |
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| 3:45 PM | | | | | | | | | |
| 4:00 PM | | | | | | | | | |
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| 6:00 PM | Grand Opening Reception | Moderated Poster Session 1 | | | | | | | |
| 7:00 PM | | Poster Renumber | | | | | | | |
| 8:00 PM | | | | | | | | | |
| 9:00 PM | | | | | | | | | |
| 10:00 PM | | | | | | | | | |

DAILY TIME TABLE

| THURSDAY April 28 | | | | | | | |
|-------------------|-------------------------------|-------------------|---------------|----------------|----------------|---------------------|----------------------------|
| LEVEL | LOBBY LEVEL | MEZZANINE LEVEL | LOBBY LEVEL | LOBBY LEVEL | LOBBY LEVEL | LOBBY LEVEL | EXHIBITION LEVEL |
| ROOM | Salons 1-3 | Thurgood Marshall | Salon 1 | Maryland Suite | Virginia Suite | Delaware Suite | Washington 2 |
| TIME | | | | | | | |
| 7:00 AM | | | | | | | |
| 8:00 AM | OPENING PLENARY | | | | | | |
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| 10:00 AM | BREAK | | | | | | |
| 10:30 AM | CONCURRENT 1 | CONCURRENT 2 | | CONCURRENT 3 | CONCURRENT 4 | CONCURRENT 5 | CONCURRENT 6 |
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| 12:00 PM | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | MCS Council Meeting | Pulm Tx Council Meeting |
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| 2:00 PM | CONCURRENT 7 (Salons 2-3) | CONCURRENT 8 | CONCURRENT 9 | CONCURRENT 10 | CONCURRENT 11 | CONCURRENT 12 | CONCURRENT 13 CAVES |
| | | | | | | | |
| 3:30 PM | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK |
| 4:00 PM | CONCURRENT 14 (Salons 2-3) | CONCURRENT 15 | CONCURRENT 16 | CONCURRENT 17 | CONCURRENT 18 | CONCURRENT 19 | CONCURRENT 20 |
| | | | | | | | |
| 5:30 PM | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK |
| 6:00 PM | | MINI ORALS 1 | MINI ORALS 2 | MINI ORALS 3 | MINI ORALS 4 | MINI ORALS 5 | MINI ORALS 6 |
| 7:00 PM | | | | | | | |
| 8:00 PM | | | | | | | |
| 9:00 PM | | | | | | | |
| 10:00 PM | | | | | | | |
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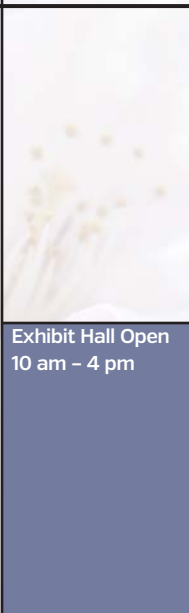
THURSDAY April 28

| LEVEL | EXHIBITION LEVEL | EXHIBITION LEVEL | EXHIBITION LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL |
|----------|---|-----------------------------------|----------------------------------|-----------------------------------|---------------------|
| ROOM | Washington 1 | Exhibit Hall A | Exhibit Hall B & C | Harding | Wilson |
| TIME | | | | | |
| 7:00 AM | | | Poster Mount 7 am - 10 am | JFTC Meeting | |
| 8:00 AM | | | | | |
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| 10:00 AM | | Exhibit Hall Open 10 am - 7 pm | Poster Hall Open 10 am - 7 pm | | |
| 10:30 AM | | | | | |
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| 12:00 PM | PH Council Meeting | | | PATH Council Meeting | JHLT ED Board Lunch |
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| 2:00 PM | SYMPOSIUM 29 Joint ISHLT/PVRI Symposium: (PH, BSI, LF, LTX, NNSAH, PHARM) | | | | |
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| 3:30 PM | | | | 2017 SPC Meeting | |
| 4:00 PM | | | | | |
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| 5:30 PM | | | | | |
| 6:00 PM | | Wine and Cheese Reception | Moderated Poster Session 2 | Past Presidents Committee Meeting | |
| 7:00 PM | | | Poster Renumber | | |
| 8:00 PM | | | | | |
| 9:00 PM | | | | | |
| 10:00 PM | | | | | |
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DAILY TIME TABLE

| FRIDAY April 29 | | | | | | | |
|-----------------|---|---|---|---|---|--|---|
| LEVEL | LOBBY LEVEL | MEZZANINE LEVEL | LOBBY LEVEL | LOBBY LEVEL | LOBBY LEVEL | LOBBY LEVEL | EXHIBITION LEVEL |
| ROOM | Salons 2-3 | Thurgood Marshall | Salon 1 | Maryland Suite | Virginia Suite | Delaware Suite | Washington 2 |
| TIME | | | | | | | |
| 7:00 AM | | SUNRISE 1 MCS Challenges (MCS, HF, HTX, NHSAH) | SUNRISE 2 Timing Support (ALL) | SUNRISE 3 Thoracic Organ Tx (LTX, HF, HTX, LF, NHSAH, PEDS, PHARM) | SUNRISE 4 Closure on PH Issue (PH, LTX, NHSAH, PEDS) | SUNRISE 5 Thoracic Tx Clinician Needs to Know (ALL) | SUNRISE 6 Nosocomial Infect. (ID, ALL) |
| 8:00 AM | PLENARY | | | | | | |
| 10:00 AM | ANNUAL BIZ MTG | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK |
| 10:30 AM | CONCURRENT 21 | CONCURRENT 22 | CONCURRENT 23 | SYMPOSIUM 30 JHLT @ ISHLT (ALL) | CONCURRENT 24 | CONCURRENT 25 | CONCURRENT 26 |
| 12:00 PM | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | LUNCH BREAK | HFTX Council Meeting | PED Council Meeting |
| 2:00 PM | CONCURRENT 27 | CONCURRENT 28 | CONCURRENT 29 | CONCURRENT 30 | CONCURRENT 31 | CONCURRENT 32 | CONCURRENT 33 |
| 3:30 PM | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK |
| 4:00 PM | CONCURRENT 34 | CONCURRENT 35 | CONCURRENT 36 | CONCURRENT 37 | CONCURRENT 38 | CONCURRENT 39 | CONCURRENT 40 |
| 5:30 PM | | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK |
| 6:00 PM | | MINI ORALS 7 | MINI ORALS 8 | MINI ORALS 9 | MINI ORALS 10 | MINI ORALS 11 | MINI ORALS 12 |
| 7:00 PM | | | | | | | |
| 8:00 PM |  PRESIDENT'S COCKTAIL RECEPTION 8 PM – 9:30 PM Smithsonian National Museum of Natural History | | | | | | |
| 9:00 PM | | | | | | | |
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FRIDAY April 29

| LEVEL | EXHIBITION LEVEL | EXHIBITION LEVEL | EXHIBITION LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL |
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| ROOM | Washington 1 | Exhibit Hall A | Exhibit Hall B & C | Harding | Wilson | Hoover | Taft |
| TIME | | | | | | | |
| 7:00 AM |  |  | Poster Mount 7 am – 10 am | | | | |
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| 10:00 AM | | Exhibit Hall Open 10 am – 4 pm | Poster Hall Open 10 am – 7 pm | | | | |
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| 12:00 PM | | | | IMACS User Meeting | ISHLT/AST Lung Tx Benefit Meeting | ID Council Meeting | R & DB Committee Meeting |
| 2:00 PM | SYMPOSIUM 31 Performing Under Pressure: Lung Tx in PH and PAH (PH, ALL) | | | | | | |
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| 3:30 PM | | | | | | | |
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PRESIDENT'S COCKTAIL RECEPTION 8 PM – 9:30 PM



Smithsonian
National Museum of Natural History

DAILY TIME TABLE

| SATURDAY April 30 | | | | | | | | |
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| LEVEL | MEZZANINE LEVEL | LOBBY LEVEL | LOBBY LEVEL | LOBBY LEVEL | EXHIBITION LEVEL | EXHIBITION LEVEL | LOBBY LEVEL | |
| ROOM | Thurgood Marshall | Maryland Suite | Virginia Suite | Delaware Suite | Washington 2 | Washington 1 | Registration Convention | |
| TIME | | | | | | | | |
| 7:00 AM | SUNRISE 7 Assessing the Right Ventricle (MCS, ALL) | SUNRISE 8 Rethink Valv Dis (HF, HTX, MCS, NNSAH, PEDS, PH) | SUNRISE 9 Lung Tx Benefit is More than Survival (LTX, ALL) | SUNRISE 10 Amb ECMO Adults (NNSAH, HF, HTX, LTX, MCS) | SUNRISE 11 Controv. in Ped. Heart Failure (PEDS, HF, NNSAH, PHARM) | SUNRISE 12 Precision Medicine in Tx: Drug Levels (ALL) | Annual Meeting Registration 7 am – Noon | |
| 8:00 AM | CONCURRENT 41 | CONCURRENT 42 | CONCURRENT 43 | CONCURRENT 44 | CONCURRENT 45 | CONCURRENT 46 | | |
| 9:30 AM | BREAK | BREAK | BREAK | BREAK | BREAK | BREAK | | |
| 9:45 AM | PLENARY | | | | | | | |
| 10:00 AM | | | | | | | | |
| 10:30 AM | | | | | | | | |
| 11:45 AM | | | | | | | | |
| 12:00 PM | CONCURRENT 47 | CONCURRENT 48 | CONCURRENT 49 | CONCURRENT 50 | CONCURRENT 51 | CONCURRENT 52 | | Academy Registration Noon – 3 pm |
| 1:30 PM | | | | | | | | |
| 1:45 PM | | | | | MCS MASTERS ACADEMY 1:45 – 6:30 pm | MCS MASTERS ACADEMY 1:45 – 6:30 pm | | |
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SATURDAY April 30

| LEVEL | MEZZANINE LEVEL | MEZZANINE LEVEL |
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| ROOM | Madison | Harding |
| TIME | | |
| 7:00 AM | Speaker Ready Room Open 7 am - 5 pm | |
| 7:45 AM | | |
| 8:00 AM | | Committee/ Council Reports 7:45 am - 9:45 am |
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| 11:45 AM | ISHLT Board of Directors Meeting 12 Noon - 6 pm | |
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ISHLT 36th ANNUAL MEETING AND SCIENTIFIC SESSIONS
PRELIMINARY SCIENTIFIC PROGRAM

MEMORIALS ABOUND IN WASHINGTON, D.C.



WORLD WAR I MEMORIAL



KOREAN WAR MEMORIAL



VIETNAM WAR MEMORIAL



WORLD WAR II MEMORIAL

8:00 AM - 10:00 AM

Pre-Meeting Symposium 01: Anticoagulation and MCS: Can We Do Better? (Salons 2-3) (MCS, HF, PHARM)

CHAIRS: Michael A. Shullo, PharmD and Sanem Nalbantgil, MD

SESSION SUMMARY: The goal of this symposium is to familiarize clinicians with current, widely available tests of blood coagulability and pitfalls in their interpretation in the MCS population. Additional topics will include comorbid states, such as acquired von Willebrand's disease and genetic variations like Factor V mutations, and how they impact patients after device implantation.

8:00 AM Too Thick or Too Thin? Bleeding and Thrombosis in MCS, Ulrich Jorde, MD, Montefiore Medical Center/Albert Einstein College of Medicine, Bronx, NY, USA

8:15 AM Q & A

8:20 AM Pre-operative Genetic Screening for Coagulation Abnormalities and Impact on Post-operative Management, Douglas L. Jennings, PharmD, New York – Presbyterian, New York, NY, USA

8:35 AM Q & A

8:40 AM Who Should Be Monitoring INR and How? Anna L. Meyer, MD, Leipzig Heart Center, Leipzig, Germany

8:55 AM Q & A

9:00 AM Heparin Monitoring: Xa vs. aPTT, Christopher S. Hayward, MD, St. Vincent's Hospital, Sydney, Australia

9:15 AM Q & A

9:20 AM Is There a Role for Antiplatelet Monitoring in MCS? Robert L. Page, II, PharmD, MSPH, University of Colorado, Denver, CO, USA

9:35 AM Q & A

9:40 AM Alternative Approaches to Recurrent Bleeding – Octreotide, Hormonal Therapy, Etc., Nir Uriel, MD, University of Chicago, Chicago, IL, USA

9:55 AM Q & A

8:00 AM - 10:00 AM

Pre-Meeting Symposium 02: Controversies in Heart Transplantation: Past, Present and Future (Thurgood Marshall) (HTX, HF, ID, NNSAH, PATH, PEDS, PHARM)

CHAIRS: Savitri E. Fedson, MD and Eulalia Roig, MD

SESSION SUMMARY: This session will review current immunosuppressant pharmacology as well as the current status of rejection surveillance. The utility of endomyocardial biopsy will be debated and then a report on future of heart transplant immunosuppression will be presented including perspectives on where the next advances will come from.

8:00 AM Back to Basics: Pharmacology & Pharmacodynamics of Immunosuppressants, Tam Khuu, PharmD, UCLA, Los Angeles, CA, USA

8:20 AM Putting it Together: Approaches to Immune Monitoring, Michael Pham, MD, Stanford University, Palo Alto, CA, USA

8:40 AM DEBATE: Cardiac Biopsy is Essential for Post-transplant Rejection Surveillance (PRO), Stuart D. Russell, MD, Johns Hopkins Hospital, Baltimore, MD, USA

8:55 AM DEBATE: Cardiac Biopsy is Essential for Post-transplant Rejection Surveillance (CON), Howard Eisen, MD, Drexel University, Philadelphia, PA, USA

9:10 AM DEBATE REBUTTAL (PRO), Stuart D. Russell, MD

9:15 AM DEBATE REBUTTAL (CON), Howard Eisen, MD

9:20 AM The Future of Heart Transplant Immunosuppression: Something's Old, Something's New, Something's Borrowed, Somebody's Blue, David A. Baran, MD, Newark Beth Israel, Newark, NJ, USA

9:40 AM PANEL DISCUSSION

8:00 AM - 10:00 AM

Pre-Meeting Symposium 03: Current Innovations and Future of EVLP (Salon 1) (LTX, LF, MCS)

CHAIRS: Christopher H. Wigfield, MD, FRCS and Jasleen Kukreja, MD, MPH

SESSION SUMMARY: This symposium will explore the prospect of gene, cell, drug and molecular interventions during EVLP to improve outcomes for lung transplant recipients. How essential EVLP is to the running of a modern day program will be debated.

8:00 AM The Future of Lung Repair – Drug and Molecular Interventions during EVLP, Christine L. Lau, MD, University of Virginia, Charlottesville, VA, USA

8:15 AM Q & A

8:20 AM The Future of Lung Repair – Cell and Gene Interventions during EVLP, Shaf Keshavjee, MD, FRCS, Toronto General Hospital, Toronto, ON, Canada

8:35 AM Q & A

8:40 AM The Future of Lung Preservation Techniques, Gregor Warnecke, MD, Hannover Medical School, Hannover, Germany

8:55 AM Q & A

9:00 AM EVLP as a Platform to Reduce Infection, John Dark, MB, FRCS, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

9:15 AM Q & A

9:20 AM Is Reduced Allo Responsiveness after EVLP a Reality? – Long Term Follow Up, Goran Dellgren, MD, PhD, Salgrenska University Hospital, Goteborg, Sweden

9:35 AM Q & A

9:40 AM DEBATE: My Clinical Program Needs an EVLP Service (PRO), Frank d'Ovidio, MD, FRCS, Columbia University, New York, NY, USA

9:50 AM DEBATE: My Clinical Program Needs an EVLP Service (CON), David C. McGiffin, MB, BS, FRACS, Alfred Hospital, Melbourne, Australia

8:00 AM - 10:00 AM

Pre-Meeting Symposium 04:
Under Pressure: Pulmonary Hypertension in Parenchymal Lung Disease (Maryland Suite)
(PH, HF, LF, LTX)

CHAIRS: Oksana A. Shlobin, MD and Trevor J. Williams, MD

SESSION SUMMARY: Pulmonary hypertension (PH) is a common and serious complication of interstitial lung diseases (ILD). Its occurrence and severity are highly variable. This session will summarize the clinical features of this challenging condition and review its impact on gas exchange and cardiac function. Challenges related to lung transplantation for ILD with PH will be reviewed. A pro-con debate will discuss the controversies regarding the use of PAH targeted therapies for this indication.

8:00 AM PH in ILD: Pathophysiology and Epidemiology, John Granton, MD, University of Toronto, Toronto, ON, Canada

8:15 AM Q & A

8:20 AM Shrinking with Age: The Role of Telomerases in ILD and PH-ILD, Leann Silhan, MD, Johns Hopkins School of Medicine, Baltimore, MD, USA

8:35 AM Q & A

8:40 AM Connective Tissue Disease PH-ILD: Which One Matters? Jerome Le Pavec, MD, Hôpital Marie Lannelongue, Le Plessis Robinson, France

8:55 AM Q & A

9:00 AM Sarcoid-associated Pulmonary Hypertension: An Enigma or a Run of the Mill Complication? Robert P. Baughman, MD, University of Cincinnati, Cincinnati, OH, USA

9:15 AM Q & A

9:20 AM Impact of PH on Transplant Outcomes in ILD, Jens Gottlieb, MD, Medical School Hannover, Hannover, Germany

9:35 AM Q & A

9:40 AM Are PAH Specific Therapies Beneficial in PH-ILD? Steven Nathan, MD, Inova Fairfax Hospital, Falls Church, VA, USA

9:55 AM Q & A

8:00 AM - 10:00 AM

Pre-Meeting Symposium 05:
Making It Work: Heart Transplant Challenges from the Surgeon's Perspective (Virginia Suite)
(HTX, HF, MCS, NHSAH, PEDS)

CHAIRS: Hannah Copeland, MD and Tahir Yagdi, MD

SESSION SUMMARY: This session will discuss the controversies, advances, and new directions in heart transplant surgery.

8:00 AM Out of Time: Surgical Options for Late Graft Failure, Vivek Rao, MD, PhD, Toronto General Hospital, Toronto, ON, Canada

8:20 AM Surgical Management of Cardiac Primary Graft Dysfunction, Yoshifumi Naka, MD, Columbia University, New York, NY, USA

8:40 AM When Great Vessels Go Bad Following Transplantation, Gregorio Rabago, MD, Clinica Universitaria Apartado, Pamplona, Spain

9:00 AM Valvular Heart Disease after Heart Transplant, Andreas Zuckermann, MD, Medical University of Vienna, Vienna, Austria

9:20 AM Advanced Plumbing: How to Manage Complex Connections in Adult Congenital Heart Transplant Recipients, Jonathan M. Chen, MD, Seattle Children's Hospital, Seattle, WA, USA

9:40 AM PANEL DISCUSSION

8:00 AM - 10:00 AM

Pre-Meeting Symposium 06:
Back to the Future: Cell Therapy for Thoracic Organ Failure and Transplant? (Delaware Suite)
(ALL)

CHAIRS: Daniel Chambers, MBBS, MRCP, FRACP, MD and Esme Dijke, PhD

SESSION SUMMARY: This session will focus on cutting edge therapies that involve cells. There will be a focus on using cells to repair or fully regenerate a failing organ, for transplant tolerance induction or treatment of chronic rejection.

8:00 AM Tissue Engineering for Dummies: How to Build a Heart or Lung, Doris Taylor, PhD, Texas Heart Institute, Houston, TX, USA

8:15 AM Q & A

8:20 AM Cell Therapy for the Failing Organ: Patch Up the Heart, Eduardo Marban, MD, PhD, Cedars-Sinai Medical Center, Los Angeles, CA, USA

8:35 AM Q & A

8:40 AM Cell Manipulation for Transplant Tolerance, Joren C. Madsen, MD, DPhil, Massachusetts General Hospital, Boston, MA, USA

8:55 AM Q & A

9:00 AM Myeloid Cells to Induce Transplant Tolerance, Angus Thomson, PhD, DSc, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

9:15 AM Q & A

9:20 AM Stem Cells to Cure the Incurable: Treatment for Chronic Lung and Heart Allograft Dysfunction, Sonja Schrepfer, MD, PhD, Stanford University Transplant and Stem Cell Immunobiology Lab (TSI), Stanford, CA, USA

9:35 AM Q & A

9:40 AM Case Presentation: Back to the Future: Real Life Example of Cell Therapy and Tolerance in Lung Transplantation, Alice L. Gray, MD, Duke University Medical Center, Durham, NC, USA

9:45 AM Case-Based Discussion: Back to the Future: Real Life Example of Cell Therapy and Tolerance in Lung Transplantation, Duane Davis, MD, MBA, Florida Hospital, Orlando, FL, USA

8:00 AM - 10:00 AM

Pre-Meeting Symposium 07:
The Future is Here: Emerging Issues in Infectious Disease (Washington Ballroom 2)
(ID, HTX, LF, LTX, MCS, NHSAH, PEDS, PHARM)

CHAIRS: Me-Linh Luong, MD and Denis Hadjiliadis, MD

SESSION SUMMARY: This symposium will explore the emergence and resurgence of difficult to treat pathogens in thoracic transplant and MCS patients that challenge practitioners worldwide.

8:00 AM Mycobacterium Abscessus and Friends, Fernanda Silveira, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

8:15 AM Q & A

8:20 AM RSV and the Paramyxoviruses: Should We Treat? Peter M. Hopkins, FRACP, Prince Charles Hospital, Brisbane, Australia

8:35 AM Q & A

8:40 AM The Unwelcome Guests: Strongyloides and Chagas Disease, Fernando Bacal, MD, Heart Institute, University of Sao Paulo, Sao Paulo, Brazil

8:55 AM Q & A

9:00 AM The Fungus Among Us: Scedosporium and Other Emerging Fungi, Orla Morrissey, MD, Alfred Hospital, Melbourne, Australia

9:15 AM Q & A

9:20 AM Running Away With It: C. difficile and Norovirus, Ignacio M. Echenique, MD, Cleveland Clinic Florida, Weston, FL, USA

9:35 AM Q & A

9:40 AM The Coming Apocalypse: Resistant Gram negatives, B cepaciae, Achromobacter, Stenotrophomonas, Shirish Huprikar, MD, Mount Sinai Medical Center, New York, NY, USA

9:55 AM Q & A

10:15 AM - 12:15 PM

Pre-Meeting Symposium 08:
Joint ISHLT-ICCAC MCS Symposium: Joined at the Heart - International Perspectives on MCS Issues (Salons 2-3)
(MCS, HF, HTX, NHSAH)

CHAIRS: Jennifer A. Beckman, MSN-FNP, RN, CHFNP and Stephan Schueler, MD, PhD, FRCS

SESSION SUMMARY: This session will discuss questions frequently asked by MCS Teams around the world regarding program structure, practice guidelines, international variations in care delivery from a program perspective, and challenges faced by patients, families and staff caring for them.

10:15 AM Coordinator Perspective: Characteristics of a Successful MCS Program, Tonya I. Elliott, MSN, RN, CCTC, CHFNP, MedStar Washington Hospital Center, Washington, DC, USA

10:30 AM Q & A

10:35 AM Engaging Patients and Caregivers: Successful Strategies to Care for Patients Living Far Far Away - The International Perspective, Desiree Robson, RN, BSc (Hons), St Vincent's Hospital, Sydney, Australia

10:50 AM Q & A

10:55 AM Engaging Patients and Caregivers: Successful Strategies to Care for Patients Living Far Far Away - The North American Perspective, Annemarie Kaan, MCN, RN, St. Paul's Hospital, Vancouver, BC, Canada

11:10 AM Q & A

11:15 AM Collaborative Care in the ICU, Aly El Banayosy, MD, Nazih Zuhdi Transplant Institute, Oklahoma City, OK, USA

11:30 AM Q & A

11:35 AM Delivering Optimal Care While Reaching For Exceptional Outcomes - The North American Perspective, Carole Ballew, MSN, University of Virginia Health System, Charlottesville, VA, USA

11:50 AM Q & A

11:55 AM Delivering Optimal Care While Reaching For Exceptional Outcomes - The International Perspective, Thomas Schläglhofer, BSc, Medical University of Vienna, Vienna, Austria

12:10 PM Q & A

10:15 AM - 12:15 PM

Pre-Meeting Symposium 09:
Donor Heart Selection: Strategies to Improve Organ Utilization (Thurgood Marshall)
(HTX, LTX, MCS, NHSAH, PEDS)

CHAIRS: Jon A. Kobashigawa, MD and Maria G. Crespo-Leiro, MD

SESSION SUMMARY: This symposium will focus on strategies to improve organ utilization in heart transplantation. Since lack of donor organs and appropriate donor management guidelines is a pressing problem worldwide, it will be of great importance to have a symposium dedicated to delivering the outcomes of two recent consensus conferences in this area.

10:15 AM US and European Donor Management Consensus Conferences: Key Messages to Improve Heart and Lung Utilization, Kiran K. Khush, MD, MAS, Stanford University, Stanford, CA, USA

10:35 AM Q & A

10:39 AM Donor Management vs Organ Reconditioning: Lessons From Lung Transplantation, Arne Neyrinck, MD, PhD, University Hospital Leuven, Leuven, Belgium

10:59 AM Q & A

11:03 AM Heart Allocation Score: Insights from Eurotransplant, Jacqueline M. Smits, MD, PhD, Eurotransplant International, Leiden, Netherlands

11:23 AM Q & A

11:27 AM DCD Hearts: An Additional Resource or the Answer to the Donor Crisis? Kumud Dhital, MD, St Vincent's Hospital, Sydney, Australia

11:47 AM Q & A

11:51 AM Donor Risk Scores and Allocation Algorithms: Will Numbers Do Better than the Surgeon's Basic Instinct? Abbas Ardehali, MD, UCLA Medical Center, Los Angeles, CA, USA

12:11 PM Q & A

10:15 AM - 12:15 PM

Pre-Meeting Symposium 10: Joint ISHLT/ESC Symposium: Left, Right, and Together: The Facts and Future of Pulmonary Hypertension in Left Heart Disease

in collaboration with the ISHLT Scientific Council on Pulmonary Hypertension and the ESC RV/Pulmonary Circulation Working Group **[Salon 1]**

(PH, ALL)

CHAIRS: Stavros Konstantinides, MD, PhD, FESC and Mardi Gombert-Maitland, MD

SESSION SUMMARY: A joint session with the European Society of Cardiology Working Group of the Right Ventricle and the Pulmonary Circulation. This session will explore the role of the pulmonary circulation in heart failure from left heart disease. It will discuss the interdependence of the right and left heart as well as diagnostic strategies and treatments.

10:15 AM Pulmonary Hypertension-Left Heart Disease: Defining Group 2 PH, Irene Lang, MD, Medical University of Vienna, Vienna, Austria

10:35 AM Is All Heart Failure the Same on the Pulmonary Circulation, and How Does It Impact Survival? Nazzareno Galiè, MD, Bologna University Hospital, Bologna, Italy

10:55 AM Monitoring and Therapeutic Options for Pulmonary Hypertension in Left Heart Disease, Raymond L. Benza, MD, Allegheny General Hospital, Pittsburgh, PA, USA

11:15 AM Provocative Testing in Pulmonary Hypertension in Left Heart Disease, Robert Naeije, MD, Free University of Brussels, Brussels, Belgium

11:35 AM DEBATE: Diastolic Pulmonary Gradient is a Marker of Pulmonary Vasculopathy in Pulmonary Hypertension in Left Heart Disease (PRO), Jean-Luc Vachiery, MD, Erasme University Hospital – ULB, Brussels, Belgium

11:43 AM DEBATE: Diastolic Pulmonary Gradient is a Marker of Pulmonary Vasculopathy in Pulmonary Hypertension in Left Heart Disease (CON), Stephan Rosenkranz, MD, Herzzentrum der Universität zu Köln, Köln, Germany

11:51 AM DEBATE REBUTTAL (PRO), Jean-Luc Vachiery, MD

11:53 AM DEBATE REBUTTAL (CON), Stephan Rosenkranz, MD

11:55 AM A Challenging Case of Pulmonary Hypertension, Myung H. Park, MD, Houston Methodist, Houston, TX, USA

12:00 PM PANEL DISCUSSION

10:15 AM - 12:15 PM

Pre-Meeting Symposium 11: Multiorgan Transplantation for Lung Recipients: When is Two Better than One? (Maryland Suite) [LTX, HTX]

CHAIRS: Peter M. Hopkins, FRACP and Lianne G. Singer, MD, FRCPC

SESSION SUMMARY: Referrals for multi-organ transplantation have increased as patients accumulate more complex comorbidities and those considered for re-transplantation have acquired renal disease. This session will evaluate the indications, benefits, disadvantages and challenges of performing multi-organ transplantation in patients with advanced lung disease. This will include how organ allocation policies differ in this group of potential recipients.

10:15 AM Heart-Lung Transplantation is Dead - The Right Ventricle Will Remodel, Walter Klepetko, MD, Medical University of Vienna, Vienna, Austria

10:30 AM Q & A

10:35 AM Combined Lung-Liver Transplantation - How Bad Does the Liver Have to Be? Daniel Chambers, MBBS, MRCP, FRACP, MD, The Prince Charles Hospital, Brisbane, Australia

10:50 AM Q & A

10:55 AM Combined Lung-Liver Transplantation - Surgical Approach and Post-operative Management, John J. Dunning, FRCS, Papworth Hospital, Cambridge, United Kingdom

11:10 AM Q & A

11:15 AM Combined Lung-Kidney Transplantation - What to Do with Vulnerable Kidneys Pre-lung Transplant? Gregory I. Snell, FRACP, MBB, Alfred Hospital, Melbourne, Australia

11:30 AM Q & A

11:35 AM Ethics and Equity in Multi-Organ Transplantation, Edward J. Garrity, MD, MSc, The University of Chicago, Chicago, IL, USA

11:50 AM Q & A

11:55 AM Is There an Allograft Combi Effect in Multi-Organ Transplantation? Mark Greer, MB BCH, Hanover Medical School, Hannover, Germany

12:10 PM Q & A

10:15 AM - 12:15 PM

Pre-Meeting Symposium 12: It's All in the Translation: CMV from Bedside to Bench and Back Again (Virginia Suite) [ALL]

CHAIRS: Jutta K. Preiksaitis, MD and Martin Zamora, MD

SESSION SUMMARY: This session seeks to evaluate the latest epidemiologic studies in CMV, new antiviral agents, and understanding the effective immune response to CMV. These effects range from direct organ-specific disease, to the burden of potentially toxic drug use, to indirect effects on the graft including CLAD and cardiac allograft vasculopathy.

10:15 AM Be Still My Heart: CMV and CAV, Juan F. Delgado Jimenez, PhD, University Hospital 12 de Octubre, Madrid, Spain

10:35 AM Q & A

10:39 AM Breathless: CMV and CLAD, Glen Westall, FRACP, PhD, Alfred Hospital, Melbourne, Australia

10:59 AM Q & A

11:03 AM Measuring the Immune Response to CMV: Expanding Our Options, Laurie D. Snyder, MD, Duke University Medical Center, Durham, NC, USA

11:23 AM Q & A

11:27 AM The CMV Toolkit: What Do We Have Now? Kyle L. Dawson, PharmD, Houston Methodist, Houston, TX, USA

11:47 AM Q & A

11:51 AM The CMV Toolkit: What Is On the Horizon? Robin K. Avery, MD, Johns Hopkins Hospital, Baltimore, MD, USA

12:11 PM Q & A

10:15 AM - 12:15 PM

Pre-Meeting Symposium 13:
Child's Play: Infectious Risk After Transplant During Everyday Life (Delaware Suite)
(PEDI, HTX, ID, LTX, NNSAH, PHARM)

CHAIRS: Debra A. Dodd, MD and Richard Kirk, FRCP, FRCPCH

SESSION SUMMARY: This session addresses commonly encountered situations in the care of thoracic transplant recipients that place them at increased risk of infection. Audience will be invited to participate using an electronic response system.

10:15 AM Isolation – So Old Hat!
Michele Estabrook, MD, St. Louis Children's Hospital, St Louis, MO, USA

10:30 AM The Cystic Fibrosis Child – A Risk to Their Transplanted Twin or Not?
Nicolaus Schwerk, MD, Hannover Medical School, Hannover, Germany

10:45 AM Outbreak – Measles, Varicella and Mumps, Marian G. Michaels, MD, MPH, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

11:00 AM Food and Water – Dangerous Stuff! Shirish Huprikar, MD, Mount Sinai Medical Center, New York, NY, USA

11:15 AM You Ain't Nothing But a Hound Dog! Nancy P. Blumenthal, DNP, CRNP, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

11:30 AM Can We Visit Grandma? Lara Danziger-Isakov, MD, MPH, Children's Hospital Medical Center, Cincinnati, OH, USA

11:45 AM PANEL DISCUSSION

10:15 AM - 12:15 PM

Pre-Meeting Symposium 14:
Genomics: What Do I Have to Know and How Will It Affect My Practice? (Washington Ballroom 2)
(NNSAH, BSTR, HF, HTX, LTX)

CHAIRS: Evan P. Kransdorf, MD, PhD and Bernice L. Coleman, PhD, NP

SESSION SUMMARY: This session will provide an introduction to genomics and will discuss its application in the care of thoracic transplant patients. The session will highlight the need for development of nursing competencies related to genomics.

10:15 AM Genomics: A Crash Course, Edward Cantu, III, MD, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

10:45 AM Proteomic and Genomic Biomarkers of Allograft Injury: Coming Soon to a Lab Near You, Bruce McManus, MD, PhD, St. Paul's Hospital, Vancouver, BC, Canada

11:00 AM Differences in Minority Tacrolimus Levels: Would Genotyping Shed Light on Dosing? Patricia A. Uber, PharmD, Virginia Commonwealth University, Richmond, VA, USA

11:15 AM Behavioral Genetics: Is There a Future for Personalized Medicine to Support Patient Self-Management in Transplantation? Sabina M. De Geest, RN, PhD, University of Basel, Basel, Switzerland

11:30 AM It's Not All Smooth Sailing: Ethical Implications of Genomic Applications in Transplantation, Lynne Stevenson, MD, Brigham and Women's Hospital, Boston, MA, USA

11:45 AM Emerging Age of Personal Medicine: Need for Genetic Nursing Competencies in Transplantation, Kathleen Calzone, PhD, APGN, FAAN, National Cancer Institute, Bethesda, MD, USA

12:00 PM PANEL DISCUSSION

1:45 PM - 3:45 PM

Pre-Meeting Symposium 15:
Achilles Heel: Infectious Complications in MCS (Salons 2-3)
(MCS, HTX, ID, NNSAH, PHARM)

CHAIRS: Neil W. Wrightson, RN and Catherine Orla Morrissey, MD

SESSION SUMMARY: Infections account for clinically significant morbidity/mortality, increased cost of care, and reduced quality of life in MCS patients. This session will discuss strategies to reduce complications and identify and treat them effectively.

1:45 PM MCS Infection – What is the Scope of the Problem? Shashank S. Desai, MD, Inova Fairfax Hospital, Falls Church, VA, USA

2:00 PM Q & A

2:05 PM Preventing DLI: Role of a Dressing Change Protocol, Barbara Cagliostro, MSN, New York-Presbyterian/Columbia University, New York, NY, USA

2:20 PM Q & A

2:25 PM If We Can't See It, Does It Not Exist? Imaging Modalities for Diagnosis of MCSD Infections, Stanley I. Martin, MD, Geisinger Health System, Danville, PA, USA

2:40 PM Q & A

2:45 PM Approach to the MCSD Recipient with Bloodstream Infection, Saima Aslam, MD, MS, UCSD Medical Center, San Diego, CA, USA

3:00 PM Q & A

3:05 PM PANEL DISCUSSION

3:25 PM DEBATE: Device Infection, Thrombosis, and CVA – It Is All Linked (PRO), Nader Moazami, MD, Cleveland Clinic, Cleveland, OH, USA

3:35 PM DEBATE: Device Infection, Thrombosis, and CVA – It Is All Linked (CON), Stephan Schueler, MD, PhD, FRCS, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

1:45 PM - 3:45 PM

Pre-Meeting Symposium 16:
When Right is Wrong! Management of the Dying Right Ventricle (Thurgood Marshall)
(HF, ALL)

CHAIRS: Teresa De Marco, MD and Daniel H. Kim, MD

SESSION SUMMARY: This session will show how evaluation of right heart function plays an important role in the assessment of patients undergoing placement of left ventricular assist devices or heart transplantation.

1:45 PM Deconstructing the Right Ventricle: An Overview of RV Structure and Function, Mechanical, Electrical, and Chemical Signaling, J. Eduardo Rame, MD, University of Pennsylvania, Philadelphia, PA, USA

2:02 PM Q & A

2:05 PM Peering Through the Looking Glass: Imaging the Right Ventricle, Marc A. Simon, MD, University of Pittsburgh, Pittsburgh, PA, USA

2:22 PM Q & A

2:25 PM Finger on the Pulse: Hemodynamic Considerations in RV Failure, Ryan J. Tedford, MD, Johns Hopkins University, Baltimore, MD, USA

2:42 PM Q & A

2:45 PM RV-PA Coupling in PAH: Can Medical Management Restore the Balance? Rogerio Souza, MD, University of Sao Paulo, Sao Paulo, Brazil

3:02 PM Q & A

3:05 PM OR in the Morning: "Buffing" the Bad Right Ventricle, Vigneshwar Kasirajan, MD, Virginia Commonwealth University, Richmond, VA, USA

3:22 PM Q & A

3:25 PM Heterotopic Heart Transplant - What's Old is What's New Again! Hannah Copeland, MD, Indiana University, Indianapolis, IN, USA

3:42 PM Q & A

1:45 PM - 3:45 PM

Pre-Meeting Symposium 17:
The Biology of Aging and Lung Transplantation (Salon 1)
(LTX, ID, LF, MCS, NNSAH, PH)

CHAIRS: John McDyer, MD and Tanya J. McWilliams, MD, PhD

SESSION SUMMARY: This session will provide the latest clinical and translational science on aging and lung transplant. By the end of this session, attendees will recognize basic science concepts such as genetic telomeropathies and immunosenescence that may impede post transplant outcomes. These insights will enhance our approach to elderly lung transplant candidates/recipients.

1:45 PM Immunobiology of Aging in Lung Transplantation, Daniel R. Goldstein, MD, Yale University, New Haven, CT, USA

2:00 PM Q & A

2:05 PM The Long and Short Of It: Telomerase Mutations and Implications for Lung Transplantation, Mary Armanious, MD, Johns Hopkins University, Baltimore, WA, USA

2:20 PM Q & A

2:25 PM Frailty is a Superior Measure of Age than Date of Birth, Jonathan Singer, MD, UCSF, San Francisco, CA, USA

2:40 PM Q & A

2:45 PM Immunosuppressive Regimens Including CNI Sparing Protocols in the Elderly Lung Transplant Patient, Steve Ivulich, PharmD, Alfred Hospital, Melbourne, Australia

3:00 PM Q & A

3:05 PM Infectious Challenges in the Older Lung Transplant Recipient, Shahid Husain, MD, MS, University Health Network, Toronto, ON, Canada

3:20 PM Q & A

3:25 PM DEBATE: Septuagenarians Should Be Eligible For Lung Transplantation (PRO), Erik A. M. Verschuur, MD, PhD, University Medical Centre Groningen, Groningen, Netherlands

3:35 PM DEBATE: Septuagenarians Should Be Eligible For Lung Transplantation (CON), Steven Hays, MD, FRCPC, UCSF, San Francisco, CA, USA

1:45 PM - 3:45 PM

Pre-Meeting Symposium 18:
Proximal, Distal, Balloons, and Scalpels: Current Issues in CTEPH (Maryland Suite)
(PH, HF, LF, PEDS)

CHAIRS: William Auger, MD and Olaf Mercier, MD, PhD

SESSION SUMMARY: This session will focus on indications for pulmonary endarterectomy (PEA), updated definitions, medical therapy both pre and post PEA, as well as the use of balloon pulmonary angioplasty in CTEPH.

1:45 PM Epidemiology and Diagnosis of CTEPH: From Initial Insult to Elusive V/Q Scan, C. Dario Vizza, MD, University of Rome, Rome, Italy

2:05 PM Q & A

2:09 PM The Surgeon's Paradise: Pre-operative Risk Stratification and Intra-operative Grading System of CTEPH, Michael M. Madani, MD, UCSD Medical Center, San Diego, CA, USA

2:29 PM Q & A

2:33 PM BPA vs PEA: Selection Criteria for the Appropriate Use of Balloon Pulmonary Angioplasty, Elie Fadel, MD, Hospital Marie Lannelongue, Le Plessis Robinson, France

2:53 PM Q & A

2:57 PM Distal Disease: Who is a Surgical Candidate and Not? Marc De Perrot, MD, University of Toronto, Toronto, ON, Canada

3:17 PM Q & A

3:21 PM CTEPH Thereafter: How to Define Residual PH After PEA? Marion Delcroix, MD, University Hospital Leuven, Leuven, Belgium

3:41 PM Q & A

1:45 PM - 3:45 PM

Pre-Meeting Symposium 19:

Between a Rock and a Hard Place: Debating Treatment Decisions for Marginal Psychosocial Candidates

(Virginia Suite)

(NNSAH, HF, HTX, LTX, MCS)

CHAIRS: Michael G. Petty, PhD, RN, CNS and Michael A. McDonald, MD

SESSION SUMMARY: This session will include three debates, each one presenting a marginal psychosocial candidate for transplant (TX) listing and/or mechanical circulatory support (MCS) implantation. Speakers will use best available evidence and current clinical practice in different healthcare systems to guide the arguments.

1:45 PM Case Presentation for DEBATE 1: You Can Go Your Own Way, Michael A. McDonald, MD, Toronto General Hospital, Toronto, ON, Canada

1:50 PM DEBATE 1: You Can Go Your Own Way (PRO), Fabienne Dobbels, MSc, PhD, KU Leuven, Leuven, Belgium

2:00 PM DEBATE 1: You Can Go Your Own Way (CON), Luke J. Burchill, MD, Oregon Health Sciences University, Portland, OR, USA

2:10 PM PANEL DISCUSSION

2:25 PM Case Presentation for DEBATE 2: MCS: I Don't Need Anyone's Help! Finn Gustafsson, MD, PhD, ViCare Medical Rigshospitalet, Copenhagen, Denmark

2:30 PM DEBATE 2: MCS: I Don't Need Anyone's Help! (PRO), Quincy Young, PhD, RPsych, St. Paul's Hospital, Vancouver, BC, Canada

2:40 PM DEBATE 2: MCS: I Don't Need Anyone's Help! (CON), Jeremy Kobulnik, MD, University of Toronto, Toronto, ON, Canada

2:50 PM PANEL DISCUSSION

3:05 PM Case Presentation for DEBATE 3: Substance Use: It's OK To Dabble, Nancy P. Blumenthal, CRNP, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

3:10 PM DEBATE 3: Substance Use: It's OK To Dabble (PRO), Mary Amanda Dew, PhD, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

3:20 PM DEBATE 3: Substance Use: It's OK To Dabble (CON), Jay Baumwol, MBBS, FRACP, Royal Perth Hospital, Perth, Australia

3:30 PM PANEL DISCUSSION

1:45 PM - 3:45 PM

Pre-Meeting Symposium 20:

Big Data to Answer Big Questions: Biobanking to "Omics" to Personalized Medicine in Thoracic Organ Transplantation

(Delaware Suite)

(ALL)

CHAIRS: Howard Eisen, MD and Glen P. Westall, FRACP, PhD

SESSION SUMMARY: As organ transplant research programs continue to develop worldwide, there will be an urgent need to externally validate individual findings before clinical application. This session will review how and why we collect each biospecimen and ensure proper use of those specimens. The aim is to personalize modern medicine by integrating multilevel clinical and omic data into clinical management tools.

1:45 PM Why to Biobank? How It Has Advanced Our Understanding of Transplant Immunobiology? Peter Heeger, MD, Mount Sinai Medical Center, New York, NY, USA

2:00 PM Q & A

2:05 PM How to Biobank? Lessons Learned (The Hard Way), Jason D. Christie, MD, University of Pennsylvania, Philadelphia, PA, USA

2:20 PM Q & A

2:25 PM Big Data and Modeling: Turning Diversity Into Patient Care Benefit, Octavio Pajaro, MD, Mayo Clinic, Phoenix, AZ, USA

2:40 PM Q & A

2:45 PM OMICS in Heart Transplant: Pumping Out the Answers? Hendrik Milting, PhD, Heart & Diabetes Center, Bad Oeynhausen, Germany

3:00 PM Q & A

3:05 PM OMICS in Lung Transplant: Airing Out the Data, Christophe Pison, MD, PhD, Université de Grenoble, Grenoble, France

3:20 PM Q & A

3:25 PM Turning Dream Into Reality: How Will Omics and Big Data Deliver Personalized Medicine? Mario C. Deng, MD, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA

3:40 PM Q & A

1:45 PM - 3:45 PM

Pre-Meeting Symposium 21:

Unraveling "Chronic Rejection" in the Heart (Washington Ballroom 2)

(PATH, BSI, HF, HTX, LTX, PEDS)

CHAIRS: Carmela D. Tan, MD and Martin J. Goddard, FRCS MRCPa

SESSION SUMMARY: This session will evaluate "chronic rejection;" a controversial and somewhat ambiguous term. Despite major advances in HLA matching, rejection surveillance, and immunosuppression in cardiac transplantation, allograft vasculopathy (CAV) and other "chronic rejection" changes at the microvascular and myocardial levels continue to contribute to premature demise of transplanted hearts.

1:45 PM Beyond CAV: Immunopathology, Histopathology, and Ultrastructural Pathology in "Chronic Rejection" of the Cardiac Allograft, M. Elizabeth H. Hammond, MD, LDS Hospital, Salt Lake City, UT, USA

2:05 PM Q & A

2:09 PM Evidence for Local Antibody Production in Cardiac Allograft Vasculopathy, Manon Huibers, PhD, University Medical Center, Utrecht, Netherlands

2:29 PM Q & A

2:33 PM Complement and Non-complement Mediated Mechanisms of Graft Injury and Their Role in "Chronic Rejection," William M. Baldwin III, MD PhD, Cleveland Clinic, Cleveland, OH, USA

2:53 PM Q & A

2:57 PM "Chronic Rejection" Elsewhere: Analogs and Lessons from the Transplanted Lung, Kidney and Liver, Desley Neil, FRCPath, Queen Elizabeth Hospital, Birmingham, United Kingdom

3:17 PM Q & A

3:21 PM Animal Models of Graft Vasculopathy - Evidence for Antibodies and Potential Therapeutic Targets, Sonja Schrepfer, MD, PhD, University Heart Center Hamburg, Hamburg, Germany

3:41 PM Q & A



VIETNAM WAR MEMORIAL



WEDNESDAY APRIL 27, 2016

4:00 PM - 6:00 PM

**Pre-Meeting Symposium 22:
Great Debates in MCS**

[Salons 2-3]
[MCS, HF, HTX, NHSAH]

CHAIRS: Eugene C. DePasquale, MD and
Steven S.L. Tsui, MD, FRCS

SESSION SUMMARY: The role of MCS worldwide is steadily increasing, however, certain challenges remain in management of LVAD patients. This session focuses on controversial treatment strategies for patients at the boundaries of accepted MCS management.

- 4:00 PM Case Presentation for DEBATE 1: Age > 70: Destination Therapy, Not Heart Transplant,** Sebastian V. Rojas, MD, Hannover Medical School, Hannover, Germany
- 4:05 PM DEBATE 1: Age > 70: Destination Therapy, Not Heart Transplant (PRO),** Andrew J. Boyle, MD, Piedmont Heart Institute, Atlanta, GA, USA
- 4:15 PM DEBATE 1: Age > 70: Destination Therapy, Not Heart Transplant (CON),** Joseph G. Rogers, MD, Duke University Medical Center, Durham, NC, USA
- 4:25 PM DEBATE REBUTTAL (PRO),** Andrew J. Boyle, MD
- 4:30 PM DEBATE REBUTTAL (CON),** Joseph G. Rogers, MD
- 4:35 PM Case Presentation for DEBATE 2: INTERMACS 4-7: The Time is Now,** Brent C. Lampert, DO, The Ohio State University Wexner Medical Center, Columbus, OH, USA
- 4:40 PM DEBATE 2: INTERMACS 4-7: The Time is Now (PRO),** Jeffrey J. Teuteberg, MD, University of Pittsburgh, Pittsburgh, PA, USA
- 4:50 PM DEBATE 2: INTERMACS 4-7: The Time is Now (CON),** Daniel Zimpfer, MD, Medical University of Vienna, Vienna, Austria
- 5:00 PM DEBATE REBUTTAL (PRO),** Jeffrey J. Teuteberg, MD
- 5:05 PM DEBATE REBUTTAL (CON),** Daniel Zimpfer, MD
- 5:10 PM Case Presentation for DEBATE 3: Minimally Invasive Implantation is the Procedure of Choice,** Julia Riebandt, MD, Medical University of Vienna, Vienna, Austria
- 5:15 PM DEBATE 3: Minimally Invasive Implantation is the Procedure of Choice (PRO),** Jan D. Schmitto, MD, PhD, MBA, Hannover Medical School, Hannover, Germany
- 5:30 PM DEBATE 3: Minimally Invasive Implantation is the Procedure of Choice (CON),** Daniel J. Goldstein, MD, Montefiore Medical Center, Bronx, NY, USA
- 5:45 PM DEBATE REBUTTAL (PRO),** Jan D. Schmitto, MD, PhD, MBA
- 5:50 PM DEBATE REBUTTAL (CON),** Daniel J. Goldstein, MD

4:00 PM - 6:00 PM

**Pre-Meeting Symposium 23:
A 2016 Focused Update on AMR
in Cardiac Transplantation: Im-
munologic Diagnostics and the
Treatment of Refractory AMR**

[Thurgood Marshall]

[HTX, BSI, HF, HTX, NHSAH, PATH,
PEDS, PHARM]

CHAIRS: Palak Shah, MD, MS and
A. G. Kfoury, MD, FACC

SESSION SUMMARY: This symposium will provide a state-of-the-art evaluation of diagnosing and managing antibody-mediated rejection (AMR) of the cardiac allograft with a focus on immunologic, pathologic and genomic diagnostics as well as the pharmacologic and non-pharmacologic treatment of more refractory AMR.

4:00 PM *It is a time to Move to Molecular Technologies for Detection of AMR*, Elaine F. Reed, PhD, UCLA Immunogenetics Center, Los Angeles, CA, USA

4:20 PM Q & A

4:24 PM *Do We Need Both Histologic and Immunologic Features on Biopsy to Accurately Diagnose Antibody-Mediated Rejection?* Annalisa Angelini, MD, University of Padua, Padua, Italy

4:44 PM Q & A

4:48 PM *What Drug Therapies, What Data for Refractory AMR?* Jignesh Patel, MD, PhD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

5:08 PM Q & A

5:12 PM *What Immunologic Testing Features Suggest Clinically Significant Antibodies vs an Innocent Bystander?* Kathryn J. Tinckam, MD, University Health Network, Toronto, ON, Canada

5:32 PM Q & A

5:36 PM *Management of Antibodies in Heart Transplantation: Insights from 2016 Consensus Conference*, Jon A. Kobashigawa, MD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

5:56 PM Q & A

4:00 PM - 6:00 PM

**Pre-Meeting Symposium 24:
Endotypes of CLAD and Novel
Treatment Strategies** (Salon 1)

[LTX, BSI, PATH, PEDS]

CHAIRS: Tereza Martinu, MD and
Stijn E. Verleden, PhD

SESSION SUMMARY: The aim of this symposium is to provide both basic and clinical data regarding different CLAD phenotypes, their differing prognoses and treatment algorithms. Novel treatments will be reviewed including the role of cell based therapies and extracorporeal photopheresis.

4:00 PM *Current and Historical Evidence for Phenotyping of CLAD*, Miranda Paraskeva, MBBS, Alfred Hospital, Melbourne, Australia

4:15 PM Q & A

4:20 PM *CLAD Endotypes - Diagnosis, Radiology and Pathology*, Masaaki Sato, MD, University of Tokyo, Tokyo, Japan

4:35 PM Q & A

4:40 PM *Contemporary Medical and Surgical Treatment Options for CLAD Phenotypes - Are All CLAD Patients Created Equal?* Jens Gottlieb, MD, Hannover Medical School, Hannover, Germany

4:55 PM Q & A

5:00 PM *Extracorporeal Photopheresis and Regulatory T cells - Role in CLAD?* Christian Benden, MD, University Hospital Zurich, Zurich, Switzerland

5:15 PM Q & A

5:20 PM *Cell-Based Therapy for CLAD - Current Evidence and Future Prospects*, Cesar Keller, MD, The Mayo Clinic, Jacksonville, FL, USA

5:35 PM Q & A

5:40 PM *Future Perspectives: Prevention of CLAD - Why are We Failing and How to Improve?* Scott M. Palmer, MD, MHS, Duke University, Durham, NC, USA

5:55 PM Q & A

4:00 PM - 6:00 PM

**Pre-Meeting Symposium 25:
Inflammation and Altered
Metabolism in Pulmonary
Hypertension** (Maryland Suite)

[PH, ALL]

CHAIRS: Thenappan Thenappan, MD and
John Granton, MD

SESSION SUMMARY: This session will combine basic and translational research focusing on alteration in metabolism and inflammation in pulmonary vascular disease.

4:00 PM *The Pathobiology of Inflammation in Pulmonary Hypertension*, Marc Humbert, MD, Université Paris-Sud, Clamart, France

4:15 PM Q & A

4:20 PM *The Impact of Insulin Resistance in Pulmonary Hypertension*, Anna Hemnes, MD, Vanderbilt University, Nashville, TN, USA

4:35 PM Q & A

4:40 PM *Inflammatory Cytokines and Their Role In Pulmonary Hypertension*, Mark Nicolls, MD, Stanford University, Palo Alto, CA, USA

4:55 PM Q & A

5:00 PM *Alterations in Lipid Metabolism in Pulmonary Hypertension*, Ioana Preston, MD, Tufts Medical Center, Boston, MA, USA

5:15 PM Q & A

5:20 PM *MicroRNAs in Pulmonary Hypertension: Insights in Signaling Pathways*, Lars Huber, MD, University Hospital Zurich, Zurich, Switzerland

5:35 PM Q & A

5:40 PM *Neurohormonal and Metabolic Modulations for Improving Right Ventricular-Pulmonary Artery Coupling in PAH*, Lisa M. Mielniczuk, MD, University of Ottawa Heart Institute, Ottawa, ON, Canada

5:55 PM Q & A

4:00 PM - 6:00 PM

Pre-Meeting Symposium 26:
Hanging in the Balance: Minimizing Risk and Maximizing Benefit with Donor Derived Infection
(Virginia Suite)

(ALL)

CHAIRS: Martha L. Mooney, MD, FACP and Kate Gould, FRCPath

SESSION SUMMARY: Maintaining the balance between the shortage of donor organs and avoiding transmission of infection is an ongoing challenge in thoracic transplantation. Attendees at this session will receive a complete update of the current state of donor-derived infections to be prepared for that next complex donor call.

4:00 PM Donor Derived Infections: The European Perspective, Paolo A. Grossi, MD, PhD, University of Insubria, Varese, Italy

4:17 PM Q & A

4:20 PM Donor Derived Infections: The North American Perspective, Joanna M. Schaenman, MD, PhD, UCLA School of Medicine, Los Angeles, CA, USA

4:37 PM Q & A

4:40 PM The Infected Donor: Pre-transplant & Post-transplant Management, Phillip Zakowski, MD, Tower ID Medical Associates, Inc., Los Angeles, CA, USA

4:57 PM Q & A

5:00 PM The Encephalitic Donor: A Cautionary Tale, Me-Linh Luong, MD, St. Luc Hospital, Montreal, QC, Canada

5:17 PM Q & A

5:20 PM Playing the Odds: The ABCs of NAT for HIV, HCV and HBV in Increased Risk Donors, Michael G. Ison, MD, MS, Northwestern Memorial Hospital, Chicago, IL, USA

5:37 PM Q & A

5:40 PM The HIV-positive Donor: "Hope" or Havoc? Emily A. Blumberg, MD, University of Pennsylvania, Philadelphia, PA, USA

5:57 PM Q & A

4:00 PM - 6:00 PM

Pre-Meeting Symposium 27:
VAD in Patients with Congenital Heart Disease (Delaware Suite)
(PEDI, HF, HTX, MCS, NNSAH)

CHAIRS: Angela Lorts, MD and Martin Schweiger, MD

SESSION SUMMARY: This session will focus on VAD therapy for heart failure in congenital heart disease and will debate current organ allocation policies for ACHD patients.

4:00 PM VADs for Univentricular Circulation – Fact or Fiction? Pirooz Eghtesady, MD, PhD, St. Louis Children's Hospital, St. Louis, MO, USA

4:15 PM Q & A

4:20 PM Can We Get VAD Patients Home? Jennifer Conway, MD, Stollery Children's Hospital, Edmonton, AB, Canada

4:35 PM Q & A

4:40 PM Collateral Damage From VADs – What Will Compromise Transplant Outcomes? Charles E. Canter, MD, St Louis Children's Hospital, St. Louis, MO, USA

4:55 PM Q & A

5:00 PM ACHD Patients – Why Are They Different? Leigh C. Reardon, MD, UCLA Medical Center, Los Angeles, CA, USA

5:15 PM Q & A

5:20 PM DEBATE: Congenital Heart Disease Patients Should Get Priority Organ Allocation (PRO), David Crossland, MRCP, Freeman Hospital, Newcastle upon Tyne, United Kingdom

5:30 PM DEBATE: Congenital Heart Disease Patients Should Get Priority Organ Allocation (CON), Heather J. Ross, MD, MHSc, FRCPC, Toronto General Hospital, Toronto, ON, Canada

5:40 PM PANEL DISCUSSION

4:00 PM - 6:00 PM

Pre-Meeting Symposium 28:
Lifecycle Journey of Hepatitis C Heart Failure Patient in 2016
(Washington Ballroom 2)
(PHARM, HF, HTX, ID, MCS, NNSAH)

CHAIRS: Jerrica E. Shuster, PharmD and Andreas Zuckermann, MD

SESSION SUMMARY: The lifecycle journey of a heart failure patient with hepatitis C will be used to evaluate issues including candidate selection, balancing the risk of immunosuppression and malignancy post transplant and finally, when to palliate.

4:00 PM Case Presentation: Lifecycle Journey, Jerrica E. Shuster, PharmD, Barnes-Jewish Hospital, St. Louis, MO, USA

4:04 PM Hepatitis C Medications – New Armamentarium Has Arrived! Adam B. Cochran, PharmD, Inova Fairfax Hospital, Falls Church, VA, USA

4:21 PM Lifecycle Journey Case Update, Jerrica E. Shuster, PharmD

4:25 PM Chronic Hepatitis C Candidate – Timing of Intervention, Paolo A. Grossi, MD, PhD, University of Insubria, Varese, Italy

4:37 PM Lifecycle Journey Case Update, Jerrica E. Shuster, PharmD

4:41 PM Immunosuppression – A Tricky Balance? Michael Shullo, PharmD, University of Pittsburgh, Pittsburgh, PA, USA

4:58 PM Lifecycle Journey Case Update, Jerrica E. Shuster, PharmD

5:02 PM Malignancies in Heart Transplant, Donna M. Mancini, MD, New York Presbyterian Hospital, New York, NY, USA

5:19 PM Lifecycle Journey Case Update, Jerrica E. Shuster, PharmD

5:23 PM Heavy is the Heart..., Deborah E. Meyers, MD, FRACP, FACC, Texas Heart Institute, Houston, TX, USA

5:45 PM PANEL DISCUSSION

6:00 PM - 7:00 PM

MODERATED POSTER SESSION I



Thursday

APRIL 28, 2016

WASHINGTON MONUMENT

8:00 AM - 10:00 AM

OPENING PLENARY SESSION

Transplantation: Where Does the Science End and the Art Begin? (Salons 1-3)

[ALL]

CHAIRS: Duane Davis, MD, MBA and Andrew J. Fisher, FRCP, PhD

8:00 AM *Welcome/Program Chair Report*, Andrew J. Fisher, FRCP, PhD, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

8:05 AM *Thoracic Registry Report*, Josef Stehlik, MD, MPH, University of Utah School of Medicine, Salt Lake City, UT, USA

8:25 AM *IMACS Registry Report*, James K. Kirklin, MD, University of Alabama, Birmingham, AL, USA

8:35 AM *Featured Abstract 1*

8:45 AM *Interactive Discussant 1*

8:50 AM *Introduction to Speaker*, Reda E. Girgis, MD, Spectrum Health Hospitals, Grand Rapids, MI, USA

8:52 AM *From Lung Transplant to Lincoln Center*, Charity Tilleman-Dick, Washington, DC, USA

9:15 AM *President's Report*, Duane Davis, MD, MBA, Florida Hospital, Orlando, FL USA

9:30 AM *Pioneer Award Recipient Lecture: The Quest for Effective Immunosuppression*, Roy Calne, FRCP, FRCS, FRS, Cambridge University, London, United Kingdom

10:30 AM - 12:00 PM

CONCURRENT ABSTRACT SESSIONS

2:00 PM - 3:30 PM

Symposium 29:

Joint ISHLT/PVRI Symposium: Exploring Combination Therapy in PAH (Washington Ballroom 1)
(PH, BSI, LF, LTX, NNSAH, PHARM)

CHAIRS: Paul A. Corris, MB BS FRCP and Myung H. Park, MD

SESSION SUMMARY: This joint symposium between ISHLT and the Pulmonary Vascular Research Institute (PVRI), will explore the clinical data regarding combination therapy in PAH and identify differences suggesting that not all combinations are the same. The potential for drug interactions and differences in pharmacology of drugs in the same broad class will be discussed. Finally the strategy of when to introduce combination therapy including triple therapy will be discussed.

2:00 PM *Combination Therapy in PAH: What Do The Clinical Trials Tell Us?* Paul A. Corris, MBBS FRCP, Freeman Hospital, Newcastle upon Tyne, United Kingdom

2:20 PM *The Differing Pharmacology Between Drugs in PDE5i and ERA Class and their Interactions*, Martin Wilkins, MD, Imperial College, London, United Kingdom

2:40 PM *The Pharmacology of sGC Stimulators from Bench to Bedside, Single Therapy and In Combination*, Ardeschir Ghofrani, MD, University of Giessen, Giessen, Germany

3:00 PM *Which Combinations, and Upfront or Sequential When Treating PAH?* Mardi Gomberg-Maitland, MD, University of Chicago, Chicago, IL, USA

3:20 PM **PANEL DISCUSSION**

2:00 PM - 3:30 PM

CONCURRENT ABSTRACT SESSIONS

4:00 PM - 5:30 PM

CONCURRENT ABSTRACT SESSIONS

6:00 PM - 7:00 PM

MINI ORAL ABSTRACT SESSIONS

MODERATED POSTER SESSION 2



Friday
APRIL 29, 2016
LINCOLN MEMORIAL

7:00 AM - 8:00 AM

Sunrise Symposium 01:
MCS Challenges and Engineering Solutions (Thurgood Marshall)
(MCS, HF, HTX, NHSAH)

CHAIRS: Jan D. Schmitto, MD, PhD, MBA and George M. Wieselthaler, MD

SESSION SUMMARY: In this session the latest technologies and trends in MCS will be presented, with particular focus on challenges such as bleeding and thrombosis, new pump concepts and pump miniaturization, physiologic pump control or usability of peripherals.

7:00 AM *Flow, Shear and MCS Coagulopathies: Mechanisms, Design Implications, Next Steps*, Mark Slaughter, MD, University of Louisville, Louisville, KY, USA

7:12 AM Q & A

7:15 AM *Size Matters: Limitations and Drawbacks of Pump Miniaturization*, Ulrich Steinseifer, PhD, University Hospital Aachen, Aachen, Germany

7:27 AM Q & A

7:30 AM *What Technologies Will Be the Most Impactful to Reduce Adverse Events?* Scott C. Silvestry, MD, Florida Hospital Transplant Institute, Orlando, FL, USA

7:42 AM Q & A

7:45 AM *Smarter Pumps: Hemodynamic Monitoring and Physiological Control*, Francesco Moscato, PhD, Medical University of Vienna, Vienna, Austria

7:57 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 02:
Timing Support in Cardiogenic Shock: When to Move Forward
(Salon 1)
(ALL)

CHAIRS: Francisco Arabia, MD and Susan M. Joseph, MD

SESSION SUMMARY: Cardiogenic shock remains a clinical challenge with a high mortality despite advances in medical and surgical therapies. This session will describe techniques to evaluate and manage to promote improved outcomes.

7:00 AM *INTERMACS 0: Making A Case for Severe Refractory Cardiogenic Shock*, Jaime A. Hernandez-Montfort, MD MPH, Newark Beth Israel Medical Center, Newark, NJ, USA

7:12 AM Q & A

7:15 AM *Choice of Support: Evidence Based or Expertise Driven?* Pranav Loyalka, MD, Memorial Hermann, Houston, TX, USA

7:27 AM Q & A

7:30 AM *Friday Night Disaster: Considerations Before, During and After the OR*, Evgenij V. Potapov, MD, PhD, Berlin Heart Center, Berlin, Germany

7:42 AM Q & A

7:45 AM *Transition from Acute Support to Durable Ventricular Support or Transplant: Challenges and Limitations*, Bart Meyns, MD, PhD, KU Leuven, Leuven, Belgium

7:57 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 03:
Thoracic Organ Transplantation and Malignancy (Maryland Suite)
(LTX, HF, HTX, LF, NHSAH, PEDS, PHARM)

CHAIRS: Robin Vos, MD, PhD and Cassie C. Kennedy, MD

SESSION SUMMARY: This session will discuss the controversies in managing thoracic organ transplant candidates who have previously had cancer and in recipients who develop a malignancy after transplant.

7:00 AM *When is Malignancy a Contraindication To or Indication For Lung Transplantation?* David Weill, MD, Stanford University Medical Center, Stanford, CA, USA

7:12 AM Q & A

7:15 AM *Cancer Screening Guidelines - Are They Good Enough for Thoracic Organ Transplant Recipients?* Monique Malouf, FRACP, St. Vincent's Hospital, Sydney, Australia

7:27 AM Q & A

7:30 AM *Lung Transplantation for Patients with Chronic GVHD Following Allogeneic Stem Cell Transplant*, Samuel Goldfarb, MD, Children's Hospital of Pittsburgh, Pittsburgh, PA, USA

7:42 AM Q & A

7:45 AM *Management of Patients with Unexpected Cancer in Explanted Lung or in the Pulmonary Allograft*, Thomas K. Waddell, MD, PhD, Toronto General Hospital, Toronto, ON, Canada

7:57 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 04:
Let's Come to Some Closure on the Issue of Pulmonary Hypertension in Congenital Heart Disease (Virginia Suite)
 [PH, LTX, NHSAH, PEDS]

CHAIRS: Jacqueline R. Szmuszkovicz, MD and Oliver Miera, MD

SESSION SUMMARY: The aims of this session are to explain the classification and physiology of different congenital shunt lesions and to discuss indications and risks for shunt closure. Furthermore use of PAH therapies and timing of referral for transplantation for Eisenmenger's syndrome and Fontan circulation will be discussed.

7:00 AM Not Every Hole is Created Equal: Congenital Shunt Physiology, Classification, and the Association with Pulmonary Hypertension, Warren A. Zuckerman, MD, Columbia University, New York, NY, USA

7:12 AM Q & A

7:15 AM ASD with PAH: To Close or Not to Close, That is the Question..., Dana P. McGlothlin, MD, Kaiser San Francisco, San Francisco, CA, USA

7:27 AM Q & A

7:30 AM Feelin' Blue: Advanced PAH Therapies for Eisenmenger's Syndrome and Timing of Referral for Transplantation, Maurice Beghetti, MD, HUG Children's University Hospital, Geneva, Switzerland

7:42 AM Q & A

7:45 AM The Fontan Under Pressure: A Role for PAH Therapies? Alexander R. Opatowsky, MD, Boston Children's and Brigham & Women's Hospital, Boston, MA, USA

7:57 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 05:
Back to Basics: What the Thoracic Transplant Clinician Needs to Know About Immunobiology (Delaware Suite)
 [ALL]

CHAIRS: Monica Colvin, MD and Andrew E. Gelman, PhD

SESSION SUMMARY: The goal of this symposium is to provide the clinical thoracic transplant professional with a basic yet clinically oriented overview of the immunobiology responsible for thoracic allograft injury after transplantation.

7:00 AM Where Do We Start? Link Between Innate and Adaptive Immunity in Early Events After Transplantation, Daniel Kreisel, MD, PhD, Washington University School of Medicine, St. Louis, MO, USA

7:15 AM Q & A

7:20 AM The Bat CAV: Mechanisms of the Vanishing Coronaries, Stephan M. Ensminger, MD, DPhil, Heart & Diabetes Center NRW, Bad Oeynhausen, Germany

7:35 AM Q & A

7:40 AM So CLAD You Came! Mechanisms of Chronic Lung Allograft Rejection, Lee Borthwick, RN, Freeman Hospital, Newcastle upon Tyne, United Kingdom

7:55 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 06:
The Fly in the Ointment: Nosocomial Infections (Washington Ballroom 2)
 [ALL]

CHAIRS: Kathleen L. Grady, PhD, APN, FAAN and Margaret M. Hannan, MD

SESSION SUMMARY: Nosocomial infections are a dreaded reality in critically ill patients either awaiting or following organ transplantation. This sessions will review antimicrobial stewardship practices, preventative clinical care strategies, and management options that decrease the rate of infections and improve outcomes in the hospital setting.

7:00 AM Educate Before You Medicate: Antimicrobial Stewardship, Mary Bradbury, PharmD, Inova Fairfax Hospital, Falls Church, VA, USA

7:12 AM Q & A

7:15 AM An Ounce of Prevention is Worth a Pound of Cure: Infection Prevention, Valentina Stosor, MD, Northwestern University, Chicago, IL, USA

7:27 AM Q & A

7:30 AM Devices, SIRS and Open Chest – The Role of Antibiotics? Angela Lorts, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

7:42 AM Q & A

7:45 AM Outbreak! Infection Clusters and the Transplant Center, Barbara D. Alexander, MD, Duke University, Durham, NC, USA

7:57 AM Q & A

8:00 AM - 10:00 AM

PLENARY SESSION:
Where is the Future for Innovation? [Salons 2-3]
 (ALL)

CHAIRS: John Dark, MB, FRCS and
 Lori J. West, MD, DPhil

8:00 AM *Innovation in an Age of Risk Adversity and Regulation*, Robert M. Califf, MD, US Food and Drug Administration, Washington, DC, USA

8:25 AM *Featured Abstract 2*

8:35 AM *Interactive Discussant 2*

8:40 AM *Cell Therapy for Advanced Lung Disease: Pathway to the Clinic*, Dennis Wigle, MD, PhD, Mayo Clinic, Rochester, MN, USA

9:00 AM *Featured Abstract 3*

9:10 AM *Interactive Discussant 3*

9:15 AM *Research and Innovation by Crowdfunding*, Denny Luan, Experiment, San Francisco, CA, USA

9:35 AM *Minimizing the Risk of Preventable Patient Deaths*, Michael Shabot, MD, Memorial Hermann Health System, Houston, TX, USA

10:30 AM - 12:00 PM

Symposium 30:
JHLT at ISHLT: The Year in a Capsule [Maryland Suite]
 (ALL)

CHAIRS: Jonathan N. Johnson, MD and
 Maryl R. Johnson, MD

SESSION SUMMARY: This session will highlight the most exciting publications in JHLT over the past year, followed by a discussion by one of the senior editorial consultants of the journal to relate the presented articles to the greater body of published literature and discuss how they advance our understanding in the field.

10:30 AM *Introduction and Recognition of Top Papers of the Year*, Mandeep R. Mehra, MD, MBBS, FACC, FACP, Brigham & Women's Hospital, Boston, MA, USA

10:40 AM *Highlights of Heart Transplantation and Mechanical Circulatory Support*, Eugene C. DePasquale, MD, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA

10:55 AM *DISCUSSANT: Highlights of Heart Transplantation and Mechanical Circulatory Support*, Andreas Zuckermann, MD, Medical University of Vienna, Vienna, Austria

11:00 AM *Highlights of Lung Transplantation*, Howard J. Huang, MD, Baylor University Medical Center, Dallas, TX, USA

11:15 AM *DISCUSSANT: Highlights of Lung Transplantation*, John Dark, MB, FRCS, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

11:20 AM *Highlights of Pediatric Heart and Lung Transplantation*, Ranny Goldwasser, MD, University Hospital Heidelberg, Heidelberg, Germany

11:35 AM *DISCUSSANT: Highlights of Pediatric Heart and Lung Transplantation*, David Morales, MD, Cincinnati Children's Hospital, Cincinnati, OH, USA

11:40 AM *Highlights of Pulmonary Hypertension*, Bradley Maron, MD, Brigham and Women's, Boston, MA, USA

11:55 AM *DISCUSSANT: Highlights of Pulmonary Hypertension*, Myung H. Park, MD, Houston Methodist, Houston, TX, USA

10:30 AM - 12:00 PM

CONCURRENT ABSTRACT SESSIONS

2:00 PM - 3:30 PM

Symposium 31:
Performing Under Pressure: Lung Transplantation in PH and PAH [Washington Ballroom 1]
 (PH, ALL)

CHAIRS: Reda E. Girgis, MD and
 Walter Klepetko, MD

SESSION SUMMARY: The session will focus on the opportunities, pitfalls, and challenges in bridging patients with PAH and advanced lung disease complicated by PH to lung transplantation.

2:00 PM *Prognosis of PAH: Eligibility and Timing of Transplant Referral*, Antonio Roman, MD, Hospital Universitari Vall d'Hebron, Barcelona, Spain

2:15 PM *The LAS for PAH: Impact of New Revisions*, Sangeeta Bhorade, MD, Northwestern Memorial Hospital, Chicago, IL, USA

2:30 PM *PH and the risk of Primary Graft Dysfunction in Lung Transplantation*, James Lee, MD, University of Pennsylvania, Philadelphia, PA, USA

2:45 PM *Matching Bridging Strategies to Unique Clinical Situations in PH and Lung Transplant*, Erika Berman Rosenzweig, MD, Columbia University, New York, NY, USA

3:00 PM *Perioperative and Early Postoperative Challenges in PH and Lung Transplantation*, Martin Strueber, MD, Spectrum Health Hospitals, Grand Rapids, MI, USA

3:15 PM **PANEL DISCUSSION**

2:00 PM - 3:30 PM

CONCURRENT ABSTRACT SESSIONS

4:00 PM - 5:30 PM

CONCURRENT ABSTRACT SESSIONS

6:00 PM - 7:00 PM

MINI ORAL ABSTRACT SESSION

MODERATED POSTER SESSION 3



Saturday

APRIL 30, 2016

THOMAS JEFFERSON MEMORIAL

7:00 AM - 8:00 AM

Sunrise Symposium 07:

Clear as Mud: Assessing the Right Ventricle

[Thurgood Marshall]
[MCS, ALL]

CHAIRS: Pascal N. Leprince, MD, PhD and Palak Shah, MD, MS

SESSION SUMMARY: This session will address the challenges of the diagnosis, pre- and post-operative management, and long-term consequences of right ventricular dysfunction after left ventricular mechanical support.

7:00 AM How Do We Assess RV Function and Predict RV Dysfunction After LVAD? Michael S. Kiernan, MD, Tufts Medical Center, Boston, MA, USA

7:15 AM Q & A

7:20 AM Peri-operative Approach to RV Dysfunction, Tobias Deuse, MD, PhD, University Heart Center Hamburg, Hamburg, Germany

7:35 AM Q & A

7:40 AM What If We Guess Wrong? The Approach to Chronic RV Dysfunction, Susan M. Joseph, MD, Washington University School of Medicine, St. Louis, MO, USA

7:55 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 08:

Rethinking Valvular Disease in Heart Failure (Maryland Suite)

[HF, HTX, MCS, NNSAH, PEDS, PH]

CHAIRS: Tuvia Ben Gal, MD and Richard Cheng, MD

SESSION SUMMARY: Valvular heart disease is emerging as a progressively more common cause of congestive heart failure. Proper timing is crucial in managing these patients. However, it is not uncommon to find patients with valvular disease and advanced heart failure that may have missed the surgical window. The question often arises "Does left or right ventricle dysfunction become so far advanced that surgery is impossible? The advent of percutaneous devices may advance the timing of mechanical intervention further with potential improvement in outcomes and delay the need of mechanical support or transplant. This session will provide guidance on how to approach these patients based on current knowledge and the future in an area that is evolving.

7:00 AM Lost Cause: When is the Ventricle Too Poor to Fix the Aortic Valve? Stephan M. Ensminger, MD, DPhil, Heart & Diabetes Centre NRW, Bad Oeynhausen, Germany

7:12 AM Q & A

7:15 AM The Forgotten Valve: Lessons to be Learned in Tricuspid Regurgitation, Ivan Knezevic, MD, University Clinical Centre, Ljubljana, Slovenia

7:27 AM Q & A

7:30 AM Medical/Percutaneous Treatment of Mitral Valve Disease: The Future Beckons, Sofia C. Masri, MD, University of Washington, Seattle, WA, USA

7:42 AM Q & A

7:45 AM Mitral Intervention with Poor LVEF: Worth the Risk? Hermann Reichenspurner, MD, PhD, University Heart Centre Hamburg, Hamburg, Germany

7:57 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 09:

Lung Transplant Benefit is More Than Just Survival (Virginia Suite)

[LTX, ALL]

CHAIRS: Fabienne Dobbels, MSc, PhD and Cynthia J. Gries, MD, MSc

SESSION SUMMARY: This session will discuss how quality of life outcomes such as sense of wellbeing, functional status and relief from disability that clinicians and patient's consider fundamental, define the net benefit of lung transplantation.

7:00 AM What is Health-Related Quality of Life Really, and Does Lung Transplant Improve It? Christiane Kugler, RN, PhD, University Witten, Witten, Germany

7:12 AM Neurocognitive Changes After Lung Transplantation - Are They Important? Patrick Smith, PhD, MPH, Duke University, Durham, NC, USA

7:24 AM Integrating Quality of Life and Survival Outcomes in Lung Transplantation, Roger D. Yusen, MD, MPH, Washington University School of Medicine, St. Louis, MO, USA

7:36 AM How to Assess Functional Impairment and Disability Post Lung Transplant, Jonathan P. Singer, MD, UCSF, San Francisco, CA, USA

7:48 AM PANEL DISCUSSION

7:00 AM - 8:00 AM

Sunrise Symposium 10:
Ambulatory ECMO in Adults: We Like to Move It, Move It (Delaware Suite)
(NHSAH, HF, HTX, LTX, MCS)

CHAIRS: Maria C. Gazzaneo, MD and Kevin C. Carney, MSN, CRNP, CCTC

SESSION SUMMARY: Ambulation of patients supported on ECMO is a relatively new concept. This session will explore the risks and benefits of mobilizing adult patients supported on ECMO with a focus on the importance of the team approach.

7:00 AM What Lessons Can We Learn From Our Children? Christian Benden, MD, University Hospital Zurich, Zurich, Switzerland

7:12 AM Medical Considerations in the Ambulation of ECMO Patients, Enrique Diaz Guzman Zavala, MD, University of Alabama, Birmingham, AL, USA

7:24 AM It Takes a Village: Implementing Ambulatory ECMO in the Adult Setting, Bryan Boling, RN, BSN, DNPc, University of Kentucky, Lexington, KY, USA

7:36 AM Physiotherapy Considerations in the Ambulation of ECMO Patients, Kate Hayes, BPhysio (Hons), MPhysio (Cardio), PhD(c), The Alfred Hospital, Melbourne, Australia

7:48 AM PANEL DISCUSSION

7:00 AM - 8:00 AM

Sunrise Symposium 11:
Controversies in Pediatric Heart Failure (Washington Ballroom 2)
(PEDS, HF, NHSAH, PHARM)

CHAIRS: Joshua D. Sparks, MD and Thomas Moller, MD, PhD

SESSION SUMMARY: Pediatric heart failure therapy is coming of age. Medication, MCS and SCD prevention will be discussed. The new heart failure registry's importance in informing treatment decisions in the future will be considered.

7:00 AM Pharmaceutical Options - Are The New Ones Any Better? Robert E. Shaddy, MD, The Children's Hospital, Philadelphia, PA, USA

7:12 AM Q & A

7:15 AM Who Dies Suddenly And Can We Prevent It? Robert G. Weintraub, FRACP, FACC, Royal Children's Hospital, Melbourne, Australia

7:27 AM Q & A

7:30 AM Making Palliative Care Part of the Plan, Elizabeth Blume, MD, Boston Children's Hospital, Boston, MA, USA

7:42 AM Q & A

7:45 AM Will the New ISHLT Pediatric Heart Failure Registry (iPHFR) Save Lives or Just Create More Work? Anne I. Dipchand, MD, Hospital for Sick Children, Toronto, ON, Canada

7:57 AM Q & A

7:00 AM - 8:00 AM

Sunrise Symposium 12:
Precision Medicine in Transplantation: Drug Levels and Beyond (Washington Ballroom 1)
(ALL)

CHAIRS: Mandeep R. Mehra, MD, MBBS, FACC, FACP and Patricia Ging, PharmD

SESSION SUMMARY: The goal of this session is to examine the role of precision medicine in transplantation. From understanding whether pharmacogenetics can both guide dosing of immunosuppressants and predict adverse effects to how in the modern era we have medications that alter gene expression.

7:00 AM Pharmacogenetics: Is It Ready for Prime Time? Tam Khuu, PharmD, UCLA, Los Angeles, CA, USA

7:15 AM Q & A

7:20 AM Genetic Predictors of Medication-induced Adverse Effects, Christina Aquilante, PharmD, University of Colorado, Aurora, CO, USA

7:35 AM Q & A

7:40 AM Therapeutic Gene Modulation - What Can We Learn From CF? Denis Hadjiliadis, MD, University of Pennsylvania, Philadelphia, PA, USA

7:55 AM Q & A

SATURDAY APRIL 30, 2016

8:00 AM – 9:30 AM

CONCURRENT ABSTRACT SESSIONS

9:45 AM – 11:45 AM

PLENARY SESSION

Pushing New Scientific Frontiers: It's In Our Heritage
[Thurgood Marshall]
(ALL)

CHAIRS: Jeffrey J. Teuteberg, MD and
Maryl R. Johnson, MD

9:45 AM Awards Presentations

10:05 AM Lifetime Achievement Award to Adrian and Jean Kantrowitz, Robert L. Kormos, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

10:15 AM The Influence of the Microbiota in Immunity and Transplantation, Jonathan S. Bromberg, MD, PhD, University of Maryland School of Medicine, Baltimore, MD, USA

10:40 AM Featured Abstract 4

10:50 AM Interactive Discussant 4

10:55 AM Precision Medicine in Organ Transplantation: Moving from Off the Rack to Bespoke, Alexandre Loupy, MD, PhD, Necker Hospital, Paris, France

11:15 AM PRESIDENT'S DEBATE: This House Believes That Regulatory Monitoring Adversely Affects Patient Outcomes (PRO), Mandeep R. Mehra, MD, MBBS, FACC, FACP, Harvard Medical School and Brigham & Women's Hospital, Boston, MA, USA

11:30 AM PRESIDENT'S DEBATE: This House Believes That Regulatory Monitoring Adversely Affects Patient Outcomes (CON), Joseph G. Rogers, MD, Duke University Medical Center, Durham, NC, USA

12:00 PM – 1:30 PM

CONCURRENT ABSTRACT SESSIONS





HFTX

MEZZANINE LEVEL
THURGOOD MARSHALL NORTH

TUESDAY, APRIL 26TH

ISHLT ACADEMY CORE
COMPETENCIES COURSE

**HEART FAILURE AND
CARDIAC TRANSPLANT
MEDICINE**

LTX

MEZZANINE LEVEL
THURGOOD MARSHALL SOUTH AND WEST

TUESDAY, APRIL 26TH

ISHLT ACADEMY
MASTER CLASS

**PULMONARY
TRANSPLANTATION**

MCS

MEZZANINE LEVEL
THURGOOD MARSHALL EAST

TUESDAY, APRIL 26TH

ISHLT ACADEMY CORE
COMPETENCIES COURSE

**MECHANICAL
CIRCULATORY SUPPORT**

MCS

EXHIBITION LEVEL
WASHINGTON 1 AND 2

SATURDAY, APRIL 30TH

ISHLT ACADEMY
MASTER CLASS

**MECHANICAL
CIRCULATORY SUPPORT**

The **ishlt academy** draws on the wealth of experience and expertise within the Society to deliver high quality educational experiences with the goal of enabling our members to improve and maintain the highest possible standards in the care of patients with advanced heart and lung disease. The **ishlt academy** represents the ‘brand name’ that is associated with the educational opportunities offered by the ISHLT to its members and interested non-members. The purpose of the **ishlt academy** is to develop an enduring resource of education in core and masters level competencies in the fields of cardiopulmonary transplantation, mechanical and biological support of the failing heart, advanced lung disease (including pulmonary vascular disease), infectious diseases and other related disciplines.

*The following **ishlt academy** courses will be conducted in conjunction with the ISHLT Annual Meeting:*

**ISHLT ACADEMY CORE
COMPETENCIES COURSE
HEART FAILURE AND CARDIAC
TRANSPLANT MEDICINE**

Tuesday, April 26, 7:45 am – 5:15 pm

**ISHLT ACADEMY CORE
COMPETENCIES COURSE
MECHANICAL CIRCULATORY
SUPPORT**

Tuesday, April 26, 8 am – 5:30 pm

**ISHLT ACADEMY MASTER CLASS
PULMONARY TRANSPLANTATION**

Tuesday, April 26,
8 am – 12:50 pm and 2 pm – 6:50 pm

NOTE: This is a ½ day course that will be offered in the morning and repeated in the afternoon. Please register for only one of these courses. If the course (morning or afternoon) that you have selected is sold out you will automatically be registered for the other course (morning or afternoon) if it is not sold out.

**ISHLT ACADEMY MASTER CLASS
MECHANICAL CIRCULATORY
SUPPORT**

Saturday, April 30, 1:45 pm – 6:30 pm

NOTE: This is a ½ day course on Saturday immediately after the Annual Meeting ends.

YOU MAY REGISTER FOR THESE COURSES via the Annual Meeting registration form. Attendance at the Annual Meeting is **NOT** required in order to register for an **ishlt academy** course.

Attendance at **ALL** **ishlt academy** courses is very limited. Please register early.

ISHLT ACADEMY CORE COMPETENCIES COURSE HEART FAILURE AND CARDIAC TRANSPLANT MEDICINE

TUESDAY, APRIL 26, 2016

**Marriott Wardman Park Hotel, Thurgood Marshall Ballroom North
Washington, DC, USA**

Scientific Program Committee

Chair: Teresa De Marco, MD, FACC,
University of California, San Francisco, CA, USA

Co-Chair: Frances Johnson, MD,
University of Iowa Hospital & Clinics, Iowa City, IA, USA

Co-Chair: Andrew Kao, MD,
St. Luke's Cardiovascular Consultant, Kansas City, MO, USA

Educational Goals

The educational goals of this activity are to provide a concise review of clinical knowledge and essential professional skills to facilitate best practice of surgical and medical aspects involved in the care of patients with advanced heart failure.

Learning Objectives

At the conclusion of this meeting, participants will have improved competence and professional performance in their ability to:

- 1** Understand the general concepts, definitions and general principles of management of patients with heart failure with depressed and preserved ejection fraction.
- 2** Identify the clinical signs and risk factors of patients with late-stage heart failure.
- 3** Understand the general concepts, definitions and general principles of management of patients with pulmonary hypertension due to left heart disease.
- 4** Understand indications and timing for advanced therapies in late-stage heart failure.
- 5** Recognize the various types of mechanical circulatory support, their outcomes, and rates of adverse events.
- 6** Understand the general immunological basis for transplantation, its therapeutic targets and potential complications.
- 7** Understand the socio-economic burden of mechanical circulatory devices and heart transplantation.

HFTX

Target Audience

While all members are invited to enroll, this course is primarily designed to be of benefit for clinicians and allied professionals who are in the early stages of their careers or who are in training, are part of a new program or desire an update on the current state of the field. The information presented is intended to provide a strong foundation of the overarching principles of heart failure and transplant medicine, rather than as a detailed update for those who are already proficient in the field.

Accreditation Statement

The International Society for Heart and Lung Transplantation (ISHLT) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Credit Designation Statement

ISHLT designates this live activity for a maximum of 8.25 AMA PRA Category 1 Credits™. Physicians should

claim only the credit commensurate with the extent of their participation in the activity.

ACPE Credit

This activity may be eligible for ACPE credit, see final CPE activity announcement for specific details.

Disclosure

Current guidelines state that participants in CME activities must be made aware of any affiliation or financial interest that may affect the program content or a speaker's presentation. Planners, Faculty and Chairs participating in this meeting are required to disclose to the program audience any real or apparent conflict(s) of interest related to the content of their presentations or service as Chair/Planner. These disclosures will be distributed at the meeting. Additionally, all speakers have been asked to verbally disclose at the start of their presentation if a product they are discussing is not labeled for the use under discussion or is still investigational.

SCIENTIFIC PROGRAM SCHEDULE

7:00 AM – 7:45 AM

REGISTRATION AND MORNING COFFEE

7:45 AM – 8:00 AM

WELCOME AND OVERVIEW

Teresa De Marco, MD, FACC,
University of California,
San Francisco, CA, USA

Frances Johnson, MD,
University of Iowa Hospital
& Clinics, Iowa City, IA, USA

Andrew Kao, MD,
St. Luke's Cardiovascular
Consultant, Kansas City, MO, USA

8:00 AM – 8:45 AM

SESSION 1: Heart Failure: General Overview and Concepts

Chair: Andrew Kao, MD

8:00 AM Epidemiology and Natural History: Emphasis on Heart Failure with Reduced Ejection Fraction (HFrEF)

Lee Goldberg, MD, MPH, University of Pennsylvania, Philadelphia, PA, USA

8:15 AM Pathophysiology:

Neurohormones and Beyond

Finn Gustafsson, MD, PhD, Rigshospitalet, Copenhagen, Denmark

8:30 AM Types of Cardiomyopathies:

Dilated, Hypertrophic, Infiltrative
Deborah Meyers, MD, FRACP, FACC,
Texas Heart Institute, Houston, TX, USA

8:45 AM – 9:30 AM

SESSION 2: Evaluation of Patients With Heart Failure

Chair: Andrew Kao, MD

8:45 AM Initial Evaluation and Screening Guidelines

Finn Gustafsson, MD, PhD,
Rigshospitalet, Copenhagen, Denmark

9:00 AM Role of Right Heart Catheterization and Hemodynamic Monitoring

James Fang, MD, University of Utah Health Sciences Center, Salt Lake City, UT, USA

9:15 AM Risk Stratification in HFrEF – Is it Time for Advanced Therapies?

Lee Goldberg, MD, MPH, University of Pennsylvania, Philadelphia, PA, USA

9:30 AM – 9:45 AM

COFFEE BREAK

9:45 AM – 10:50 AM

SESSION 3: Management of The Patient With Chronic Left Ventricular Systolic Dysfunction

Chair: Andrew Kao, MD

9:45 AM Pharmacologic Management of HFrEF: Evidence-based, Guideline-directed

JoAnn Lindenfeld, MD, Vanderbilt University, Nashville, TN, USA

10:00 AM Non-Pharmacologic Management: Impact of Lifestyle and Comorbidities

Peter Macdonald, MD, PhD, St. Vincent's Hospital, Sydney, Australia

10:15 AM Principles for Arrhythmia Management and Role of Electrical Device-Based Therapy for HFrEF

JoAnn Lindenfeld, MD, Vanderbilt University, Nashville, TN, USA

10:35 AM Surgical Management of Valvular Disease and Ischemic Heart Failure

Carmelo Milano, MD, Duke University Medical Center, Durham, NC, USA

10:50 AM – 11:50 AM

SESSION 4: Acute Heart Failure Evaluation And Management

Chair: Teresa De Marco, MD, FACC

10:50 AM *Scope of the Problem and Pharmacologic Management: What Does the Evidence Show Us?*

Heather J. Ross, MD, MHSc, FRCPC, Toronto General Hospital, Toronto, Canada

11:05 AM *Crash and Burn: Percutaneous Tools for Acute, Severe Decompensation*

Stuart Russell, MD, Johns Hopkins University, Baltimore, MD, USA

11:20 AM *Transitions of Care: Home Inotropes, VAD's, Palliative Care*

Deborah Meyers, MD, FRACP, FACC, Texas Heart Institute, Houston, TX, USA

11:35 AM *Panel Discussion*

All morning speakers.

11:50 AM – 12:50 PM

LUNCH BREAK

[a box lunch is included in the registration fee]

12:15 PM – 12:45 PM

SPECIAL LUNCH SESSION

Chair: Andrew Kao, MD

12:15 PM *Case Presentation:*

Cardiorenal Syndrome: What is it and How is it Treated?

Maria Rosa Costanzo, MD, Midwest Heart Specialists-Advocate Medical, Naperville, IL, USA

12:30 PM *Case Presentation:*

Cardiopulmonary Exercise Test Interpretation

Marco Guazzi, MD, PhD, IRCC Pol San Donato, Milan, Italy

12:50 PM – 1:10 PM

SESSION 5: Heart Failure With Preserved Ejection Fraction (HFpEF)

Chair: Teresa De Marco, MD, FACC

12:50 PM *Epidemiology, Diagnosis and Therapeutic Options: What is the Evidence Base for HFpEF?*

Marco Guazzi, MD, PhD, IRCC Pol San Donato, Milan, Italy

1:10 PM – 1:50 PM

SESSION 6: Pulmonary Hypertension

Chair: Teresa De Marco, MD, FACC

1:10 PM *Pulmonary Hypertension Due to Left Heart Failure: Epidemiology, Pathophysiology, Diagnosis and Management Strategies*

Jean Luc Vachiery, MD, Erasme University Hospital – UBL, Brussels, Belgium

1:30 PM *Case Presentation: Distinguishing PH Due to HFpEF from PAH – Now What?*

James Fang, MD, University of Utah Health Sciences Center, Salt Lake City, UT, USA

1:35 PM *Case Discussion:*

Marco Guazzi, MD, PhD, IRCC Pol San Donato, Milan, Italy; Jean-Luc Vachiery, MD, Erasme University Hospital – UBL, Brussels, Belgium

1:50 PM – 2:05 PM

COFFEE BREAK

2:05 PM – 3:40 PM

SESSION 7: Heart Transplantation 101

Chair: Frances Johnson, MD

2:05 PM *Evaluation of Heart Transplant Candidates – Let's Not Forget Congenital Heart Disease*

Heather Ross, MD, MHSc, FRCPC, Toronto General Hospital, Toronto, Canada

2:25 PM *Evaluation and Management of the Potential Heart Donor*

Carmelo Milano, MD, Duke University Medical Center, Durham, NC, USA

2:40 PM *Peri-Operative Management of the Heart Transplant Recipient*

Peter Macdonald, MD, PhD, St. Vincent's Hospital, Sydney, Australia

2:55 PM *Immunologic Concepts of Heart Transplantation*

Maria Rosa Costanzo, MD, Midwest Heart Specialists – Advocate Medical, Naperville, IL, USA

3:10 PM *Immunosuppression and Rejection*

Luciano Potena, MD, PhD, University of Bologna, Italy

3:25 PM *Long-Term Care of Heart Transplant Recipients*

Luciano Potena, MD, PhD, University of Bologna, Italy

3:40 PM – 3:55 PM

COFFEE BREAK

3:55 PM – 5:10 PM

SESSION 8: Mechanical Circulatory Support

Chair: Frances Johnson, MD

3:55 PM *State-of-the-Art Devices and Outcomes*

Paul Mohacsi, MD, Swiss Cardiovascular Center, Bern, Switzerland

4:10 PM *Patient Selection and Timing*

Stuart Russell, MD, Johns Hopkins University, Baltimore, MD, USA

4:25 PM *Practical Peri-Operative Management of MCS Patients*

Paul Mohacsi, MD, Swiss Cardiovascular Center, Bern, Switzerland

4:40 PM *Adverse Events Post VAD Placement: Identification and Management*

Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Chicago, IL, USA

4:55 PM *Case Presentation: The Challenges of Destination Therapy*

Geetha Bhat, MD, PhD, Advocate Christ Medical Center, Chicago, IL, USA

5:00 PM *Case Discussion:*

Paul Mohacsi, MD, Swiss Cardiovascular Center, Bern, Switzerland; Stuart Russell, MD, Johns Hopkins University, Baltimore, MD, USA

5:10 PM – 5:15 PM

COURSE SYNOPSIS

Frances Johnson, MD, University of Iowa Hospital & Clinics, Iowa City, IA, USA

5:15 PM **ADJOURN**



ISHLT ACADEMY CORE COMPETENCIES COURSE
MECHANICAL CIRCULATORY
SUPPORT

TUESDAY, APRIL 26, 2016

**Marriott Wardman Park Hotel, Thurgood Marshall Ballroom East
Washington, DC, USA**

Scientific Program Committee

Chair: Jennifer Cowger, MD, MS,
St. Vincent Heart Center of Indiana, Indianapolis, IN, USA

Co-Chair: Daniel Zimpfer, MD,
Medical University of Vienna, Vienna, Austria

Co-Chair: Jennifer Beckman, MSN-FNP, RN, CHFN,
University of Washington, Seattle, WA, USA

Educational Goals

The educational goals of this activity are to provide a concise review of clinical knowledge and essential professional skills to facilitate best practice of surgical and medical aspects involved in the care of patients during assessment as candidates and as recipients of mechanical circulatory support.

Target Audience

While all members are invited to enroll, this course is primarily designed to be of benefit for clinicians and allied professionals who are in the early stages of their careers or who are in training and/or are part of a new program or desire an update on the current state of the field. The information presented covers core competencies and is intended to provide a strong foundation of the overarching principles of mechanical support, rather than as a detailed update for those who are already proficient experts in the field.

Accreditation Statement

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Learning Objectives

At the conclusion of this meeting, participants will have improved competence and professional performance in their ability to:

- 1 Understand how to risk stratify patient with advanced heart failure in order to assess MCS surgical risk and optimally time mechanical circulatory support (MCS) implantation.
- 2 Recognize the medical and social factors which impact patient outcomes during short- and long-term MCS.
- 3 Recognize the various types of MCS support available for patients with advanced single or biventricular heart failure and the technological differences that may impact pump selection and patient/device management.
- 4 Optimize MCS implantation techniques and patient/pump management during the index admission intensive care unit and inpatient general care periods.
- 5 Manage patients and the MCS during outpatient long-term support with an understanding of interventions that can reduce patient- and device-related adverse events during MCS.
- 6 Diagnose and manage common clinical dilemmas and adverse encountered after MCS.

SCIENTIFIC PROGRAM SCHEDULE

7:15 AM – 8:00 AM
REGISTRATION AND
MORNING COFFEE

8:00 AM – 9:15 AM
SESSION 1:
*Review of The Current
State of MCS*

Chair: Stephan Schueler,
MD, PhD, FRCS

8:00 AM Welcome and Overview
Jennifer Cowger, MD, MS, St. Vincent
Heart Center of Indiana, Indianapolis,
IN, USA

8:15 AM MCS Technology 101
TBD

Review of current technologies
available, pump behaviors with
different loading conditions, and
the TAH.

8:30 AM BTT and DT Outcome
Andreas O. Zuckermann, MD, PhD,
University of Vienna, Vienna, Austria

Review state of outcomes and adverse
events with current technologies

**8:45 AM Short-term Support
and Shock**
Jonathan Haft, MD, University of
Michigan, Ann Arbor, MI, USA

Overview of percutaneous
technologies, biventricular support
considerations, and ECMO.

9:00 AM Q&A

9:15 AM – 10:30 AM
SESSION 2:
Patient Selection

Chair: TBD

**9:15 AM When Should Patients be
Referred: Warning Signs**
Douglas Horstmanshof, MD, Integris
Baptist Medical Center, Oklahoma City,
OK, USA

Risk factors which presage patient
decline (renal function, intolerance
of medications, hospitalizations, etc,
helping to risk stratify patients based
on HF severity and MCS operative risk.

**9:30 AM Assessing and Optimizing
RV Function Preoperatively**
Anna Meyer, MD, University of
Leipzig, Leipzig, Germany

Impact of RV failure, pre-operative
assessment and management of
the RV including imaging and risk
prediction.

**9:45 AM Quality of Life After VAD
and the Impact of Frailty and
Social Behaviors on VAD Success**
Susan Joseph, MD, Washington
University School of Medicine,
St. Louis, MO, USA

Other factors that can have a
significant impact on success after
VAD and some screening tools
available for risk assessment.

**10:00 AM Other Medical Co-Morbid-
ities that May Impact VAD Success**
Douglas Horstmanshof, MD, Integris
Baptist Medical Center, Oklahoma
City, OK, USA

Impact of peripheral vascular disease,
end-stage renal failure, and other
chronic medical illnesses on short
and long term VAD success.

10:15 AM Q&A

10:30 AM – 10:45 AM
COFFEE BREAK

10:45 AM – NOON
SESSION 3:
Surgical Considerations

Chair: Vivek Rao, MD, PhD

**10:45 AM Key Surgical Aspects of
Implantation**
Nader Moazami, MD, Cleveland Clinic,
Cleveland, OH, USA

Overview of the most crucial surgical
considerations: inflow cannula/pump
placement, driveline, etc.

11:05 AM How Much Else is Too Much?
Daniel Zimpfer, MD, Medical University
of Vienna, Vienna, Austria

Concomitant operative procedures:
TV, Aortic valve, prior Dor, congenitals

11:25 AM Tailoring Pumps to Patients
Stephan Schueler, MD, PhD, Freeman
Hospital, Newcastle upon Tyne, United
Kingdom

Case based discussion of considera-
tions for pump-patient matching

11:45 AM Q&A

NOON – 1:00 PM
LUNCH BREAK

[a box lunch is included in the
registration fee]

1:00 PM – 2:15 PM

**SESSION 4:
Postoperative Care**

Chair: Andreas Zuckermann, MD

1:00 PM Managing the RV Postop
Stephan Schueler, MD, PhD, FRCS,
Freeman Hospital, Newcastle upon
Tyne, United Kingdom

Considerations for impact of LVAD
pump speed on RV function and use of
inotropes and pulmonary vasodilators

**1:20 PM Anticoagulation and
Antiplatelet Therapy**

Vivek Rao, MD, PhD, Toronto General
Hospital, Toronto, Canada

Current MCS recommendation on when
to start anticoagulation, antiplatelet
therapy regimens, as well as data on
platelet function testing and heparin
level monitoring.

**1:40 PM Pump Speed Optimization:
The Role of Imaging and Hemody-
namics**

Nir Uriel, MD, University of Chicago,
Chicago, IL, USA

Overview of how to meld imaging
and hemodynamics to optimize
pump settings

2:00 PM Q&A

2:15 PM – 3:15 PM

**SESSION 5:
Transition To Home**

Chair: Nir Uriel, MD

**2:15 PM VAD Education: Patient/
Caregiver Assessments and
Strategies for Successful VAD
Self-Care**

Thomas Schloeglhofer, BSc, Medical
University of Vienna, Vienna, Austria

Approaches to education of the patient
and caregiver prior to discharge, and
strategies for educating the local
medical community

**2:30 PM Starting New: How to
Start and Succeed in MCS**

Michael Dickinson, MD, Spectrum
Health, Grand Rapids, MI

Challenges to starting a VAD program
and key elements of success.

**2:45 PM The Outpatient Clinic:
Laboratory, Blood pressure and
Echo Monitoring**

Jennifer Beckman, MSN-FNP, RN, CHFN,
University of Washington, Seattle, WA,
USA

Lab, blood pressure and echo monitor-
ing of VAD patients in the outpatient
setting.

3:00 PM Q&A

3:15 PM – 3:30 PM

COFFEE BREAK

3:30 PM – 5:20 PM

**SESSION 6:
Long Term Management of
Patients and Complications**

Chair: Nadir Moazami, MD,
Cleveland Clinic,
Cleveland, OH, USA

**3:30 PM LVAD Infections: Prevention,
Diagnosis, and Management**

Margaret Hannan, MD, Mater Misericor-
diae University Hospital, Dublin, Ireland

VAD infections, radiology studies
important for diagnosis, and
therapeutic recommendations

**3:50 PM Stroke: Risk factors for
Hemorrhagic and Embolic CNS
Complications and Management
Strategies**

Samer Najjar MD, MedStar Heart
institute, Washington, DC, USA

Discuss diagnosis, risk factors, and
management strategies for CNS
events in MCS patients.

**4:10 PM Pump Thrombosis:
Diagnostic Strategies and
Management Algorithms**

Simon Maltais, MD, PhD, Mayo Clinic,
Rochester, MN, USA

Frequency, diagnosis, and management
strategies for suspected pump throm-
bosis.

**4:30 PM Aortic Insufficiency in
LVAD Recipients: Incidence,
Screening, and Management**

Jennifer Cowger, MD, MS, St Vincent
Heart Center of Indiana, Indianapolis,
IN, USA

Cumulative incidence, clinical
consequences, and management
of AI after LVAD.

4:50 PM GI Bleeding

Keyur Shah, MD, Virginia Common-
wealth University, Richmond, VA, USA

Frequency, diagnosis and management
of GI bleeding after LVAD therapy,
including new data on octreotide

5:10 PM Q&A

5:20 PM SUMMARY

5:30 PM ADJORN





ISHLT ACADEMY MASTER CLASS PULMONARY TRANSPLANTATION

TUESDAY, APRIL 26, 2016

**Marriott Wardman Park Hotel,
Thurgood Marshall Ballroom South and West
Washington, DC, USA**

Chair: Kevin M. Chan, MD,
University of Michigan Health Systems, Ann Arbor, MI, USA

Scientific Program Committee

Goran Dellgren, MD, PhD, Sahlgrenska University Hospital, Goteborg, Sweden

David Hormuth, MD, Indiana University School of Medicine, Indianapolis, IN, USA

Lorriana Leard, MD, University of California San Francisco, San Francisco, CA, USA

Geert M. Verleden, MD, PhD, FERS, University Hospital Gasthuisberg, Leuven, Belgium

Course Summary

The Pulmonary Council Education Workforce is proud to offer this educational opportunity to ISHLT members. This Master Class is intended for members with higher levels of expertise [completed the core curriculum course on lung transplantation and/or primary practice in lung transplantation \geq 5 years] who have managed patients with one or more of the topics intended for discussion. The course setting will generate a highly interactive environment composed of a smaller group of individuals designed to enhance individual expertise and network development. Utilizing the concept of “convergent discussion”, faculty moderators will use controversial statements or case presentations to lead the group through audience participation, towards specific answers based on practice gaps and learning objectives. Following a 15 minute introductory and overview presentation, each participant will rotate through 60 minute course deliberations on antibody mediated rejection (AMR), chronic lung allograft dysfunction (CLAD), extra-corporeal lung support (ECLS), and lung organ donor management. One to two references on each topic will be recommended reading to participants in preparation for this class. We anticipate that this method of collaborative learning will lead to application and integration of new knowledge into participant practice.

Educational Goals

The overarching goal is to provide an advanced learning opportunity for specialists in the field of lung transplantation on the treatment of AMR, CLAD, ECLS and organ donor management.

Target Audience

Experienced [primary practice in lung transplantation \geq 5 years or completed the ISHLT core curriculum course on lung transplantation] Transplant Pulmonologists/Respirologists, Cardiothoracic Surgeons with Lung Transplant experience, Physician Specialists in Lung Transplantation (Pathology, Immunology, Anesthesiology, etc), Nurses, Physician Assistants and Allied Health Professionals with involvement in Lung Transplantation.

Practice Gaps

- 1** The presence of HLA and non-HLA donor specific antibodies (DSA) is associated with various types of antibody mediated graft dysfunction. A surveillance strategy to monitor lung transplant recipients for donor HLA and non-HLA antibodies, understanding the criteria for AMR and developing an approach to management of clinical AMR, are practice gaps in specialist knowledge that result in limitations of clinical care.
- 2** Chronic lung allograft dysfunction (CLAD) encompasses a heterogeneous group of clinical syndromes with substantial variability in disease progression and response to treatment. However, optimal strategies for phenotyping, preventing, detecting and treating CLAD remain controversial. Individual practitioners often lack the depth of experience and knowledge to address these management issues.
- 3** The use of ECMO as a bridge-to-lung transplantation is becoming increasingly more common. The indications, management, transplant evaluation difficulties and the postoperative short-term management of these patients may be problematic. Practitioners may lack the extensive expertise required to appropriately address these decisions
- 4** Significant variability exists in the management of potential lung donors. Ventilator strategies and the recognition of the futility of continued donor management differ greatly between OPOs and transplant centers. An understanding that the standardization of lung donor management will lead to more uniform information across regions will close this practice gap in specialist knowledge.

Learning Objectives

Upon completion of the Master Class, participants will be able to:

- Understand the strategies to monitor donor specific antibody activity in lung transplant recipients.
- Diagnose, monitor and treat clinical antibody mediated rejection (AMR) in lung transplant recipients.
- Understand the role of testing, risk factors and features for the diagnosis and differentiation between restrictive versus obstructive chronic lung allograft dysfunction (CLAD).
- Understand the significance of macrolide responsive CLAD and discuss the optimal modality and timing of treatment in non-responders according to CLAD phenotyping.
- Understand best practice plans for success using ECMO as a bridge to lung transplantation.
- Discuss the different factors that should lead to ECMO termination without transplantation.
- Understand a strategy of ventilator management and donor lung recruitment that will lead to more consistent outcomes.
- Identify factors that will lead to the recognition of deteriorating donor lungs while understanding the role for ex-vivo lung perfusion (EVLP).



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SCIENTIFIC PROGRAM SCHEDULE

IMPORTANT NOTE – This class will be repeated in the afternoon from 2 pm – 6 pm. The presentation times will be adjusted accordingly and distributed in the Final Program.

7:15 AM – 8:00 AM
REGISTRATION AND
MORNING COFFEE

8:00 AM – 8:15 AM
WELCOME AND INTRODUCTIONS

Kevin M. Chan, MD,
University of Michigan Health Center,
Ann Arbor, MI, USA

Lorriana Leard, MD,
University of California San Francisco,
San Francisco, CA, USA

8:15 AM – 9:15 AM
Small Group Interactive Discussion A: Antibody Mediated Rejection

Moderator: Lorriana Leard, MD

The presence of HLA and non-HLA donor specific antibodies (DSA) is associated with various types of antibody mediated graft dysfunction. Antibody mediated rejection (AMR) may also be a contributing factor to the development of chronic lung allograft dysfunction (CLAD) as well as decreased survival. The ISHLT has developed an Expert Consensus Document on the clinical and pathological definition of AMR. This has important implications for clinical practice, therapeutic interventions, and the design of research protocols.

8:15 AM Case Scenario: Asymptomatic lung transplant recipient found to have positive donor specific antibodies four weeks following the procedure
Deborah Levine, MD, University of Texas Health Science Center, San Antonio, TX, USA

TEACHING/DISCUSSION POINTS

- a. What is included in an evaluation for Pulmonary AMR
- b. Surveillance of pre-transplant and post-transplant DSA
- c. What does a positive DSA mean in the face of normal graft function and normal pathology
- d. Role of C4d staining in the evaluation of Pulmonary AMR
- e. Is there a role for medical therapy in the setting of a positive DSA with no pathologic or clinical findings?

8:45 AM Case Scenario: Lung transplant recipient found to have an abnormal CT of the chest, positive donor specific antibodies and histopathology consistent with antibody mediated rejection
Deborah Levine, MD, University of Texas Health Science Center, San Antonio, TX, USA

TEACHING/DISCUSSION POINTS

- a. What is Pulmonary AMR?
- b. What are the pathologic findings of Pulmonary AMR?
- c. What are the different treatment strategies for Pulmonary AMR?

- d. When do you initiate therapy for Pulmonary AMR?
- e. What indices indicate a positive response to therapy?

8:15 AM – 9:15 AM
Small Group Interactive Discussion B: Chronic Lung Allograft Dysfunction (CLAD)

Moderator: Geert M. Verleden, MD, PhD

It is becoming increasingly evident that chronic lung allograft dysfunction (CLAD) encompasses a heterogeneous group of clinical syndromes with substantial variability in disease progression and response to treatment. However, optimal strategies for phenotyping, preventing, detecting and treating CLAD remain controversial.

8:15 AM Case Scenario: Bilateral lung recipient with a history of obstructive airway complications and declining graft function two years after transplantation
Jens Gottlieb, MD, Hannover Medical School, Hannover, Germany

TEACHING/DISCUSSION POINTS

- a. Differential diagnosis and confounders of CLAD
- b. Baseline FEV1 in patients with obstructive airway complications
- c. Role of bronchoalveolar lavage in identification of response of CLAD to therapy

- d. Second line treatment options for CLAD
- e. Photopheresis-when to start and when to stop
- f. Is there a role of surgery in graft dysfunction

8:45 AM Case Scenario: Bilateral lung recipient with declining lung function, obstructive pattern and evolving pulmonary opacities

Jens Gottlieb, MD, Hannover Medical School, Hannover, Germany

TEACHING/DISCUSSION POINTS

- a. CLAD phenotyping and differential diagnosis
- b. Risk factors for CLAD
- c. Criteria to phenotype CLAD
- d. Evolution patterns within CLAD
- e. Treatment of CLAD
- f. Role of retransplantation, azithromycin, other treatment options?

9:15 AM – 9:20 AM

Speakers switch rooms;
Delegates remain seated

9:20 AM – 10:20 AM

SMALL GROUP INTERACTIVE
DISCUSSION ROTATIONS A
AND B REPEATED

10:20 AM – 10:45 PM

COFFEE BREAK

10:45 AM – 11:45 AM

Small Group Interactive Discussion C: Extracorporeal Lung Support (ECLS) As A Bridge To Transplantation

Moderator: Goran Dellgren, MD, PhD

The use of ECMO as a bridge-to-lung transplantation is becoming increasingly more common especially after improvements in technology that allow extra-corporeal lung support in the awake, ambulating patient. The indications, management, transplant evaluation difficulties and the postoperative short-term management of these patients may be problematic.

10:45 AM Case Scenario: 65 year old woman with dermatomyositis related ILD is on vvECMO due to acute pneumonia and continues to deteriorate. The lung transplant team is consulted at this time

Jonathan Singer, MD, University of California Medical Center, San Francisco, CA, US

TEACHING/DISCUSSION POINTS

- a. ECMO decisions: vv and va ECMO – when should transition be considered?
- b. Awake versus sedated?
- c. Tracheostomy versus oral/nasal intubation?
- d. Physiotherapy versus cautious conservative management
- e. Kidney function decisions: RRT versus forced diuresis
- f. How to manage work-up in non-listed patients when lung transplantation is the only remaining option?

11:15 AM Case Scenario: 30 year old man with CF, on the waiting list for lung transplantation, develops pneumonia requiring mechanical ventilation and subsequent ECMO support. Hemoptysis and barotrauma ensue

Jonathan Singer, MD, University of California Medical Center, San Francisco, CA, USA

TEACHING/DISCUSSION POINTS

- a. When should complications on non-weanable ECMO be regarded as too much to pursue lung transplantation?
- b. What combination of complications should result in ECMO termination without lung transplantation?
- c. How do we balance empathy, hope and social needs in a patient that cannot be weaned from ECMO?
- d. Ethical arguments to pursue/decline LTx in a young very sick patient that cannot be weaned from ECMO?
- e. How to manage the patient when there is no other option than ECMO-termination?
- f. How to manage the relatives when there is no other option than ECMO-termination?

10:45 AM – 11:45 AM

Small Group Interactive Discussion D: Lung Donor Management

Moderator: David Hormuth, MD, Indiana University School of Medicine, Indianapolis, IN, USA

Significant variability exists in management of potential lung donors. Ventilator strategies, fluid choice and use of adjunctive antimicrobial and pharmacologic measures differ greatly between OPOs and transplant centers. While it must be recognized that some measures have significant implications on other potential donor organs, some affect the lungs alone. Standardization of lung donor management will allow standardized interpretable information across regions and the number of quality organs will be increased.

10:45 AM Case Scenario: Forty year old male donor, nonsmoker, who suffered a traumatic brain injury. Bilateral lungs are offered to your recipient who is currently hospitalized for hypoxemia (LAS 54). PaO2/FiO2 = 276

Matthew Hartwig, MD, Duke University, Durham, NC, USA

TEACHING/DISCUSSION POINTS

- a. Selection criteria
- b. Recruitment techniques
- c. Donor Operation management
- d. Options to optimize post-transplant function

11:15 AM Case Scenario: Thirty-two year old male smoker, declared brain dead on hospital day 3; PaO2/FiO2 = 350. Lungs are accepted for your patient but the donor surgery is delayed and the most recent PaO2/FiO2 = 260

Matthew Hartwig, MD, Duke University, Durham, NC, USA

TEACHING/DISCUSSION POINTS

- a. Analysis of deterioration of oxygenation
- b. Futility – are these lungs no longer suitable
- c. Intraoperative analysis – could a single lung be an option
- d. Potential role for ex-vivo lung perfusion

11:45 AM – 11:50 AM

Speakers switch rooms;
Delegates remain seated

11:50 AM – 12:50 PM

SMALL GROUP INTERACTIVE
DISCUSSION ROTATIONS C
AND D REPEATED

12:50 PM – 1:00 PM

Closing Remarks

Kevin M. Chan, MD,
University of Michigan Health Center,
Ann Arbor, MI, USA

Lorriana Leard, MD,
University of California San Francisco,
San Francisco, CA, USA





ISHLT ACADEMY MASTER CLASS
**MECHANICAL CIRCULATORY
SUPPORT (MCS)**

SATURDAY, APRIL 30, 2016

**Marriott Wardman Park Hotel,
Washington Ballrooms 1 and 2
Washington, DC, USA**

Chairs: Stavros Drakos, MD, PhD,
University of Utah School of Medicine, Salt Lake City, UT, USA
Simon Maltais, MD, PhD,
Mayo Clinic, Rochester, MN, USA

Scientific Program Committee

Navin Kapur, MD, Tufts Medical Center, Boston, MA, USA

Sanem Nalbantgil, MD, Ege University Medical Center, Izmir, Turkey

Salpy Pamboukian, MD, MSPH, University of Alabama at Birmingham,
Birmingham, AL, USA

Vivek Rao, MD, PhD, University of Toronto, Toronto, ON, Canada

Jan Schmitto, MD, PhD, MBA, Hannover Medical School, Hannover, Germany

Course Summary

The MCS Master Class presents a unique international educational opportunity for specialists and developing experts in the field of Mechanical Circulatory Support. A concerted effort brings together faculty and experts to provide an interactive environment well beyond core competency training. The MCS Master Class is arranged in advanced breakout sessions for every participant to take full advantage of an integrated curriculum and the exceptional networking opportunity. The specific topics are devised according to defined clinical practice gaps in this fast developing specialty.

Educational Goals

The overarching goal is to provide an advanced learning opportunity for specialists and developing experts in the field of MCS and devices for treatment of heart failure patients.

Target Audience

Cardiothoracic Surgeons and Cardiologists with MCS experience, Specialists in Heart Failure Care, allied health professionals with involvement in MCS patients, VAD Coordinators and critical care specialists, heart transplant professionals.

Practice Gaps

- 1** The therapeutic options of acute cardiogenic shock have been evolving with the introduction of various reliable MCS options. Comprehensive clinical expertise of advanced usage of these therapies including patient and device selection and transition to next step therapies constitute currently major limitations in the care of these critically ill patients.
- 2** The diagnosis and therapy of complex and combined adverse events such as device thrombosis, gastrointestinal bleeding and thromboembolic complications is challenging and individual practitioners often face difficulties in developing effective strategies to appropriately identify and treat these adverse events.
- 3** With the rapid evolution of surgical approaches and significant advances in internal medicine, the individual practitioners may lack the extensive expertise required to appropriately select (a) patients and (b) surgical approaches to achieve the best possible outcome.
- 4** The diagnostic and therapeutic approaches for right ventricular failure and aortic insufficiency in MCS patients have recently been revolutionized with the introduction of hemodynamics, new echocardiographic criteria and new technologies/ therapeutic options. Such practice gaps in specialist knowledge and clinical skills constitute major limitations in the care of MCS patients.

Learning Objectives

- 1** Understand the technical and hemodynamic aspects of various acute circulatory support devices and review the evidence supporting their use in the setting of ischemic cardiogenic shock.
- 2** Develop a systematic approach to diagnosis and therapy of complex adverse events after MCS implantation such as device thrombosis, recurrent gastrointestinal bleeding and thromboembolic complications.
- 3** Appropriately select patients for long-term MCS options with particular consideration in anticipated surgical management aspects (e.g. concomitant surgical interventions) and medical aspects like minimizing the risk for post-operative need for chronic dialysis.
- 4** Understand the diagnostic and therapeutic challenges of RV failure (both early and late) and aortic insufficiency during chronic MCS therapy

MCS

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SCIENTIFIC PROGRAM SCHEDULE

1:00 PM – 1:45 PM

REGISTRATION AND REFRESHMENTS

1:45 PM – 1:50 PM

WELCOME AND INTRODUCTIONS

Stavros Drakos, MD, PhD,

University of Utah School of Medicine,
Salt Lake City, UT, USA

Simon Maltais, MD, PhD,

Mayo Clinic, Rochester, MN, USA

1:50 PM – 2:50 PM

Small Group Interactive Discussion A: Acute MCS For Intermacs 0-1 Profiles

Moderator: Stavros Drakos, MD, PhD

1:50 PM Case Scenario: Management Challenges for Patients with Acute Ischemic Cardiogenic Shock

Navin Kapur, MD, Tufts Medical Center,
Boston, MA, USA

TEACHING/DISCUSSION POINTS

1. Cardiogenic shock definition and various approaches to classify it based on acuity and severity
2. Technical features of existing acute circulatory support device including: cannulation approaches, pump types, and advantages/disadvantages of each device
3. Hemodynamic impact of each acute circulatory support device on ventricular

function, left ventricular wall stress, and ventriculo-arterial coupling

4. Revascularization options and the role of acute circulatory support in the management of myocardial ischemia due to both abrupt coronary thrombosis or in the setting of chronic multivessel coronary disease
5. Existing evidence on the utilization of acute circulatory support in the setting of ischemic cardiogenic shock
6. Intra-procedural and post-procedural management of acute circulatory support devices for ischemic cardiogenic shock with a specific focus on assessing myocardial recovery while on circulatory support

2:20 PM Case Scenario: Transition from short to long-term MCS support

Jan Schmitto, MD, PhD, MBA, Hannover Medical School, Hannover, Germany

TEACHING/DISCUSSION POINTS

1. Different option strategies for acute MCS support and assess utility vs. futility of support
2. How to balance efficacy and appropriateness of current available acute MCS options
3. Advantages and disadvantages for each acute device options and how to balance the choice of support with different clinical scenarios (univentricular vs. biventricular failure; cardiac vs. mixed cardiopulmonary collapse; short vs. prolonged acute MCS support)
4. Treatment option for frequent complications on acute MCS support (peripheral vascular compromise, left ventricular decompression and pulmonary edema, hemolysis and bleeding)

5. Left ventricular recovery assessment on acute device support

6. Right ventricular function and risk assessment for transition to long-term support
7. Appropriate timing and strategy for transition of acute to long-term support

1:50 PM – 2:50 PM

Small Group Interactive Discussion B: Complex Coagulation Issues In MCS Patients

Moderator: Simon Maltais, MD, PhD

1:50 PM Case Scenario: The 'hemolyzing' patient – Will he clot or will he bleed?

Ulrich Jorde, MD, Montefiore Medical Center, Bronx, NY, USA

TEACHING/DISCUSSION POINTS

1. Workup of hemolysis
2. Treatment of hemolysis – one size fits all?
3. Proposal: Hemolysis alone requires device exchange!
4. Logfile analysis to diagnose and treat device thrombosis – device specific review.
5. Comprehensive treatment algorithm for device thrombosis with or without recurrent gastrointestinal bleeding: When to cut and when to bust.
6. Device thrombosis complicated by stroke – what now?

2:20 PM Case Scenario: Chronic infection management on durable support and thromboembolic complication

Salpy Pamboukian, MD, MSPH, University of Alabama at Birmingham, Birmingham, AL, USA

TEACHING/DISCUSSION POINTS

1. Medical management of chronic driveline infection
 - a. Antibiotics strategies in MCS patients with chronic device related infections including IV vs. oral therapy and duration of treatment
 - b. Role of prophylactic antibiotics
 - i. Patients who have not experienced a device related infection
 - ii. Patient who have had a previous device related infection
2. Utility vs. futility of surgical management
 - a. Role of less invasive surgical techniques including surgical debridement and use of wound vac therapy
 - b. Role of more invasive surgical strategies for infection management including device exchange and transplantation
3. Pathophysiology that leads to perturbations in coagulation cascade in chronically infected patients
4. Practical considerations in patients with bleeding/thrombotic complications with ongoing driveline infection.
 - a. Changes in anticoagulation targets in chronically infected patients
 - b. Management of infected patients with concomitant (bleeding or thromboembolism)

2:50 PM – 2:55 PM

Speakers switch rooms;
Moderators remain in the same room; Delegates remain seated.

2:55 PM – 3:55 PM

SMALL GROUP INTERACTIVE
DISCUSSION ROTATIONS A
AND B REPEATED

3:55 PM – 4:10 PM

COFFEE BREAK

4:10 PM – 5:10 PM

Small Group Interactive Discussion C: Patient Selection Challenges For Long-Term MCS Support

Moderator: Stavros Drakos, MD, PhD

4:10 PM Case Scenario: Predicting renal function recovery in marginal MCS candidates

Meredith Brisco, MD, MSCE, Medical University of South Carolina, Charleston, SC, USA

TEACHING/DISCUSSION POINTS

1. Renal function in LVAD patients (estimation equations, creatinine clearance, proteinuria)
2. Heart failure-induced renal dysfunction with a high potential for recovery vs. intrinsic and irreversible kidney disease
3. Potential for renal recovery against the risk of acute kidney injury and need for chronic dialysis post operatively
4. Prevention of acute kidney injury (medication, imaging and hemodynamic considerations before surgery)
5. When to pull the trigger on dialysis
6. Important considerations when dialyzing an LVAD patient: method, duration, frequency of monitoring

4:40 PM Case Scenario: Decision-making for concomitant surgical procedures for durable implants

Vivek Rao, MD, PhD, University of Toronto, Toronto, ON, Canada

TEACHING/DISCUSSION POINTS

1. Rationale for concomitant repair of the mitral and/or tricuspid valve at the time of LVAD implant
2. Risks and benefits of aortic valve intervention and surgical strategies to address it.
3. Organized surgical plan defining appropriateness of concomitant surgical intervention.
4. Risk of concomitant surgical interventions at the time of durable implant, balanced with indication for implant (bridge-to-transplantation, destination therapy, potential recovery)

4:10 PM – 5:10 PM

Small Group Interactive Discussion D: Management of Post-Vad Complications

Moderator: Simon Maltais, MD, PhD

4:10 PM Case Scenario: Management of early and late RV failure after LVAD implantation

Sanem Nalbantgil, MD, Ege University Medical Center, Izmir, Turkey

TEACHING/DISCUSSION POINTS

1. RV failure risk prediction and management before LVAD implantation (Pre-operative IABP or percutaneous RV support devices)
2. BiVAD vs. TAH vs. transplantation decision making

3. Medical management of early RV failure after durable LVAD support (emphasis on speed optimization, drug therapy)
4. Timing and selection of temporary RVAD support for early RV failure
5. Decision making for switch from temporary to durable RV support.
6. Definition and management of late RV failure after VAD implantation

4:40 PM Case Scenario: Chronic aortic insufficiency on durable support: diagnosis and treatment

Nir Uriel, MD, University of Chicago, Chicago IL, USA

TEACHING/DISCUSSION POINTS

1. New echo criteria for aortic insufficiency in CF-LVAD
2. Hemodynamics effect of aortic insufficiency on LVAD
3. Treatment algorithms to decide on the need for intervention in patients with aortic insufficiency.
4. Current treatment options for patients with significant aortic insufficiency.
5. Potential effect of new CF-LVAD (HM 3, MVAD) on the development of aortic insufficiency.
6. Medical and surgical strategies to improve or correct aortic insufficiency post-LVAD implantation

5:10 PM – 5:15 PM

Speakers switch rooms;
Moderators remain in the same room; Delegates remain seated.

5:15 PM – 6:15 PM

SMALL GROUP INTERACTIVE
DISCUSSION ROTATIONS
C AND D REPEATED

6:15 PM – 6:30 PM

Closing Remarks

Stavros Drakos, MD, PhD

University of Utah School of Medicine, Salt Lake City, UT, USA

Simon Maltais, MD, PhD,

Mayo Clinic, Rochester, MN, USA



INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION
36th ANNUAL MEETING & SCIENTIFIC SESSIONS – April 26-30, 2016

**REGISTRATION POLICIES AND INSTRUCTIONS
FOR COMPLETING THE REGISTRATION FORM**

1. The Annual Meeting registration fee includes attendance at all Pre-Meeting Symposia, Plenary Sessions, Concurrent Sessions, Mini Oral Sessions, Poster Sessions, exhibit hall receptions, coffee breaks and one ticket to the President's Cocktail Reception.
2. For those who register prior to March 19, 2016 and do not register as industry, the non-member registration fee includes membership in the Society from the date of registration through December 31, 2016. You will be required to complete a membership application, which will be emailed to you, in order to activate your membership. Please mark the box provided if you do NOT wish to accept the offer of membership. Declining the offer will not result in a reduction of the non-member registration fee.
3. **DO NOT** fax your registration form if you are paying by check or bank draft. Registration forms received without payment will not be processed.
4. **Individuals whose registration and payment are not postmarked by April 8, 2016 must register on-site.** Registration fees are determined by the date when **payment in full is postmarked/faxed/made online.** Registration forms sent without payment in full or with invalid credit card information are subject to the registration fee in effect at the time payment in full is postmarked/ faxed or when the correct credit card information is provided.
5. Cancellations must be submitted in writing in order to qualify for any refund and should be emailed to **phyllis.glenn@ishlt.org**. For written cancellation notices **RECEIVED by March 19, 2016**, a refund of the scientific session fees paid will be given, less a \$100 handling fee. **For written cancellation notices received after March 19, 2016, no refund of any fees will be given. All cancellation refunds will be issued approximately 15 days after the meeting.**
6. **The Full/Physician Rate** is available only to individuals who have achieved an MD degree or the equivalent.
7. **The Industry Rate** is available to anyone whose primary employer is a for-profit commercial entity, excluding medical centers and health care provider.
8. **The Allied Health/Non-Physician rate** is available to individuals who have not achieved an MD or the equivalent [e.g. PhDs, non-MD researchers, nurses, pharmacists, physical therapists, psychologists, social workers, etc.] and are not pharmaceutical or device company employees/consultants. Non-members choosing this rate must include with their registration forms a letter signed by the chief/dean of their program verifying their employment and allied health status. Forms submitted without this letter will not be processed. On-line registrants must upload their verification letter.
9. **The Trainee rate** is available only to individuals who are actively participating in a formal training program [i.e. medical, graduate, and nursing students, residents, fellows, or the equivalent]. Non-members choosing this rate must include with their registration forms a letter signed by the chief/dean of their program verifying their training status. Forms submitted without this letter will not be processed. On-line registrants must upload their verification letter.
10. Full payment in **US funds only** must accompany your registration. Checks must be made payable to ISHLT and must be drawn on a US bank. All bank fees incurred for the processing of your payment will be billed to you.
11. **Wire Transfers must be received by March 21, 2016. There will be an additional fee for wire transfers in the amount of \$35 which must be paid by the sender.** Please request bank/wire transfer instructions by emailing leeann.mills@ishlt.org.
12. **Travel agencies/sponsoring agencies will not be allowed to pick up multiple registrants' name badges. Only the person registered for the meeting may pick up his/her name badge. No Exceptions.**
13. All registrant name changes/replacements are due by March 21, 2016. After this date, there will be a \$25 fee for each name change/replacement.
14. Age Restriction: Children ages 12 and over must purchase a Guest Activity Registration in order to attend the events described for this activity. Children under 16 must be accompanied by an adult at all times. Children under 16 are not permitted in the Exhibit Hall at any time.

**QUESTIONS???? Call the ISHLT Headquarters Office at 972-490-9495,
or email us at meetings@ishlt.org or fax us at 972-490-9499.**

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION
36th ANNUAL MEETING & SCIENTIFIC SESSIONS and
ISHLT ACADEMY COURSES – April 26-30, 2016
REGISTRATION FORM

IMPORTANT: See page 74 for instructions, rate descriptions and refund/registration policies.
ON-LINE REGISTRATION IS ENCOURAGED AND IS AVAILABLE ON THE ISHLT WEBSITE: www.isHLT.org
[Forms that are faxed/mailed in must be legible in order for us to process.]

Last Name: _____ First Name: _____ Middle Initial: _____

Credential (MD, RN, FRCS, etc.): _____ Institution/Organization Name for Inclusion on Badge: _____

Preferred Mailing Address: Mandatory. This MUST be the valid mailing address of the individual being registered. Travel agent and sponsoring company addresses will not be accepted.) Please indicated if this is a home or business address: Home: _____ Business: _____

Mailing Address: _____

City: _____ State: _____ Post Code: _____ Country: _____

Telephone: _____ Fax: _____ Email: _____

(Mandatory: Confirmation will be sent to this email only)

| ANNUAL MEETING SCIENTIFIC SESSIONS: | Early Bird Registration Postmarked on or before March 18 | Pre-Registration Postmarked March 19 – April 8++ | TOTAL |
|--|---|---|--------------|
| Full/Physician Member | \$ 795 | \$ 945 | \$ _____ |
| Full/Physician Non-Member* | \$ 1120 | \$ 1270 | \$ _____ |
| Industry Member** | \$ 1020 | \$ 1170 | \$ _____ |
| Industry Non-Member** | \$ 1345 | \$ 1495 | \$ _____ |
| Allied Health/Non-Physician Member | \$ 465 | \$ 615 | \$ _____ |
| Allied Health/Non-Physician Non-Member* | \$ 790 | \$ 940 | \$ _____ |
| Trainee Member | \$ 355 | \$ 505 | \$ _____ |
| Trainee Non-Member* | \$ 515 | \$ 665 | \$ _____ |
| Guest Activity Registration+ | \$ 100 | \$ 125 | \$ _____ |
| Guest Name for Badge: _____ | | | |

ISHLT ACADEMY COURSES: [Please check box for the Academies you wish to register for; Core Competency Courses include a box lunch.]

- Core Competencies in Heart Failure and Cardiac Tx Medicine, Tuesday, April 26 (7:45 am – 5:15 pm)
 - Core Competencies in Mechanical Circulatory Support, Tuesday, April 26 (8 am – 6 pm)
 - Master Class in Pulmonary Transplantation, Tuesday, April 26 (8 am – 1 pm)
 - Master Class in Pulmonary Transplantation, Tuesday, April 26 (2 pm – 7 pm. Please Note: This is a repeat of the morning course)
 - Master Class in Mechanical Circulatory Support, Saturday, April 30 (1:45 pm – 6:30 pm)
- | | | | |
|--|--------|--------|----------|
| No. of Academy Courses: _____ x ISHLT Member | \$ 250 | \$ 300 | \$ _____ |
| No. of Academy Courses: _____ x Non-Member | \$ 300 | \$ 350 | \$ _____ |

* Includes membership in the Society through December 31, 2016 with completed membership application.

Please check here if you wish to decline this membership offer (no refund or reduction of fee)

** Industry is defined as anyone whose primary employer is a for-profit commercial entity, excluding medical centers and health care provider.

+ Includes access to the plenary sessions, exhibit hall, wine and cheese receptions and President's Cocktail Reception. Guest MUST be accompanying a registrant in one of the other categories. Please see instruction #14 regarding age restrictions for children.

++ Registrations postmarked after April 8 will not be processed before the meeting and such registrants must go to the on-site registration desk to complete their registration. **Registration fees for forms postmarked after April 8 and for on-site registration will be \$350 more than early bird registration. On-site registration for Academy courses will only be offered for those courses which are not sold-out during pre-registration. Academy registration fees for forms postmarked after April 8 and for on-site Academy registration will be \$100 more than early bird registration fees.**

JUNIOR FACULTY MENTOR LUNCH: [Wednesday; Advance purchase only. Tickets will not be sold on-site.]

Registration is limited to the first 100 junior faculty members of ISHLT who are registered for the meeting.

| | | |
|-------|-------|----------|
| \$ 15 | \$ 15 | \$ _____ |
|-------|-------|----------|

ONLINE RECORDED SESSIONS: [Reflects a 15-20% discount off on-site prices; available for paying registrants only.]

| MEMBER PRICING | NON-MEMBER PRICING | |
|--|---------------------------|--|
| <input type="checkbox"/> Entire Annual Meeting | \$ 210 | <input type="checkbox"/> Entire Annual Meeting \$ 270 \$ _____ |
| <input type="checkbox"/> Entire Annual Meeting (Allied Health pricing) | \$ 125 | <input type="checkbox"/> Entire Annual Meeting (Allied Health pricing) \$ 160 \$ _____ |
| <input type="checkbox"/> Entire Annual Meeting (Trainee pricing) | \$ 100 | <input type="checkbox"/> Entire Annual Meeting (Trainee pricing) \$ 125 \$ _____ |
| <input type="checkbox"/> Academy: Core Competencies in Heart Failure and Tx Medicine | \$ 80 | <input type="checkbox"/> Academy: Core Competencies in Heart Failure and Tx Medicine \$ 105 \$ _____ |
| | | TOTAL DUE AND ENCLOSED: \$ _____ |

PAYMENT: See Instruction #11 For Wire Transfer Instructions. If not registering online, full payment in US funds only must accompany your registration form by check or credit card. Checks must be made payable to ISHLT and must be drawn on a US bank. Credit card payments are accepted with this entire form completed including all credit card information below and may be mailed or faxed. (To avoid duplicate charges do not mail AND fax your form.)

Credit Card: VISA Mastercard American Express Card Number: _____

Card Holder Signature: _____ CSC Code:* _____ Expiration Date: _____

*CSC: Credit Card Security Code is the 3 digit code on the back of MC/VISA card and 4 digit code on front of AMEX card.

Card Holder Name: _____ Card Holder Billing Zip/Postal Code: _____

(MANDATORY)

(MANDATORY)

Card Holder Billing Street Address: _____

(MANDATORY)

Send this form and payment in full to: ISHLT Registration, 14673 Midway Road, Suite 200, Addison, TX 75001, or fax to 972.490.9499.





INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION

FUTURE MEETINGS:

2017 37th Annual Meeting and Scientific Sessions
San Diego, CA, USA

2018 38th Annual Meeting and Scientific Sessions
Nice, France

**ISHLT 36th Annual
Meeting and
Scientific Sessions**

WASHINGTON DC

APRIL 27-30, 2016



14673 Midway Road, Suite 200
Addison, Texas 75001

