

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION

A SOCIETY THAT INCLUDES BASIC SCIENCE, THE FAILING HEART, AND ADVANCED LUNG DISEASE

20

SAN DIEGO · CALIFORNIA

MANCHESTER GRAND HYATT SAN DIEGO

17



PRELIMINARY PROGRAM

**THIRTY-SEVENTH
ANNUAL MEETING AND SCIENTIFIC SESSIONS
APRIL 5-8, 2017**



37

INTERNATIONAL SOCIETY FOR
HEART & LUNG TRANSPLANTATION

THIRTY-SEVENTH ANNUAL MEETING AND SCIENTIFIC SESSIONS SAN DIEGO, CALIFORNIA ISHLT ACADEMIES:

APRIL 5-8, 2017

CONVENING AT THE
MANCHESTER GRAND HYATT HOTEL
SAN DIEGO, CA, USA

ISHLT ACADEMY: CORE COMPETENCY COURSE
IN MECHANICAL CIRCULATORY
SUPPORT
April 4, 2017

ISHLT ACADEMY: CORE COMPETENCY COURSE
IN PEDIATRIC MECHANICAL
CIRCULATORY SUPPORT
April 4, 2017

ISHLT ACADEMY: CORE COMPETENCY COURSE
IN INFECTIOUS DISEASES IN
THORACIC TRANSPLANTATION
AND MECHANICAL
CIRCULATORY SUPPORT
April 4, 2017

ISHLT ACADEMY: MASTER CLASS IN PULMONARY
HYPERTENSION
April 4, 2017

ISHLT ACADEMY: MASTER CLASS IN MECHANICAL
CIRCULATORY SUPPORT
April 4, 2017



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DEAR COLLEAGUE:

ON BEHALF OF MARYL JOHNSON, MD, PRESIDENT OF THE INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION, the ISHLT Board of Directors and the 2017 Scientific Program Committee, I have the honor of inviting you to attend the Society's 37th Annual Meeting and Scientific Sessions to be held April 5-8, 2017 in San Diego, California.

The 2017 Annual Meeting will be held at the newly renovated Manchester Grand Hyatt Hotel, which is ideally situated on San Diego Bay between the San Diego Convention Center and the city's popular Seaport Village. San Diego's thriving downtown districts, including the historic Gaslamp Quarter, offer a diverse array of accommodations, activities, dining, shopping and cultural attractions, all within walkable city blocks. When the sun goes down, the city's Gaslamp Quarter comes alive as it takes center stage in San Diego's bustling nightlife scene. With a colorful array of restaurants, nightclubs, art galleries and boutiques, you will find plenty of things to do, all within walking distance.

We hope to build on the tremendous success of the 2016 Washington, DC meeting, the best attended meeting in the Society's history. While the meeting will begin as usual on Wednesday and end as usual on Saturday at 1:30 pm, the format of the San Diego meeting will be different from previous meetings. The Opening Plenary will take place on Wednesday instead of Thursday, after which will see Symposia sessions distributed throughout the week, instead of being only on Wednesday. Additionally, two clusters of program content will be focused on a couple of days rather than spread throughout the meeting with Infectious Diseases on Wednesday and Thursday (to follow the Infectious Disease Academy on Tuesday), and Pathology on Friday.





The plenary sessions will feature some transplant specific content but also some thought provoking talks from outside of our world sure to stimulate thought and conversations. This year's plenaries will also be notable for a couple of dynamic duos. The first is a powerhouse couple from the Baltimore area. Sommer Gentry, a theoretical mathematician from the US Naval Academy, will address the role of novel solutions to the donor allocation system in her talk *Share and Share Alike: Optimizing Organ Allocation in an Era of Increasing Need*. Her husband, Dorry Segev, a transplant surgeon from Johns Hopkins, will help us wrestle with the promises and pitfalls of transplant centers using social media to interact with patients and the broader community in his presentation, *Tweets, Texts and Posts: Does Social Media Improve or Complicate Communication in Medicine?* Our second duo features two of ISHLT's past presidents, Lori West and Allan Glanville, engaging in a lively debate about how much risk we should take for the sake of our transplant recipients.

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 research presentation 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 sunny San Diego for the 37th ISHLT Annual Meeting and Scientific Sessions!

With best regards,

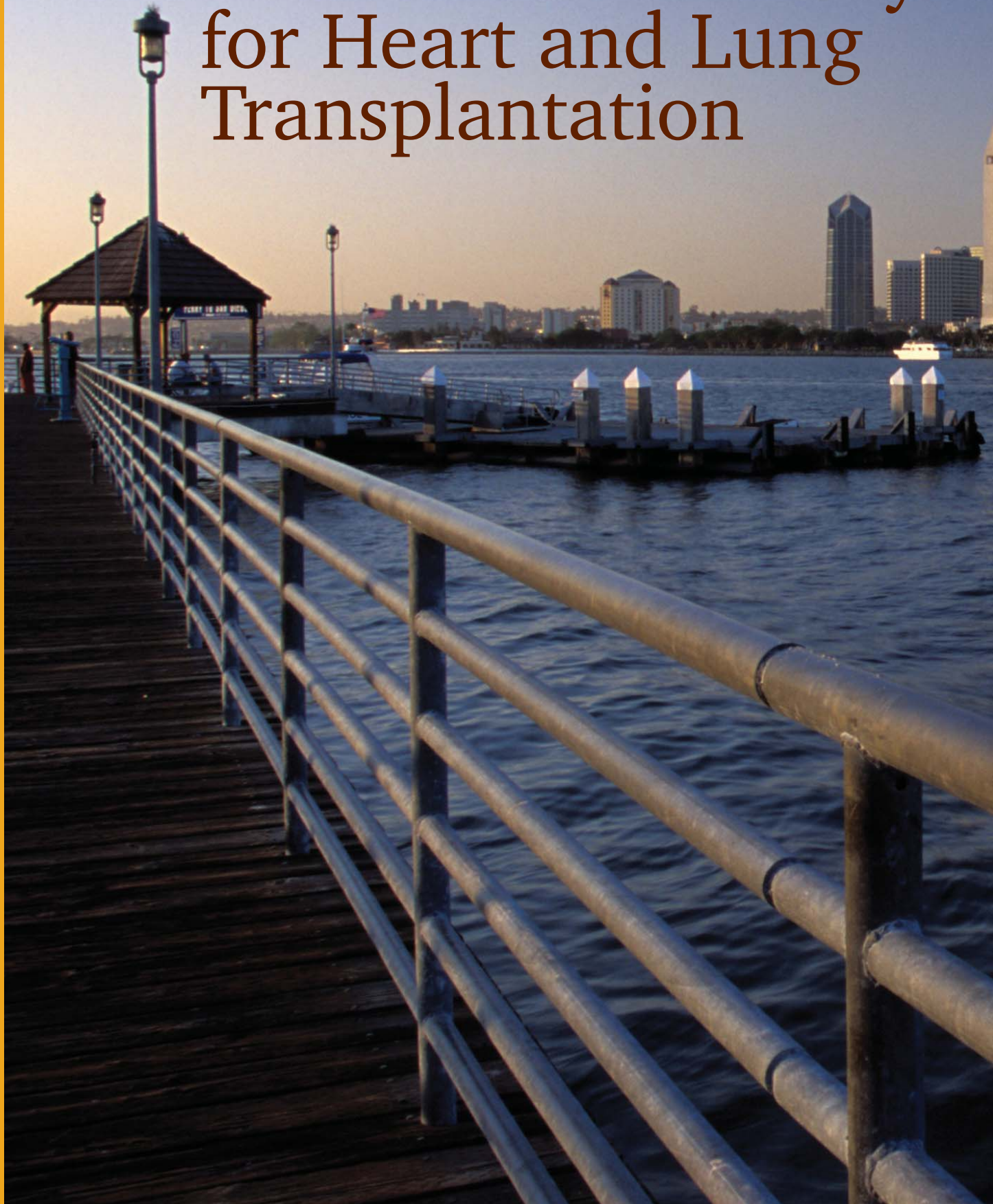
Jeffrey Teuteberg, MD


ISHLT 37th Annual Meeting Scientific Program Chair



ABOUT

International Society for Heart and Lung Transplantation





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 3400 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.

The purposes of the Society are:

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

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.

Annual Meeting General Information



MEETING LOCATION

The ISHLT 37th Annual Meeting and Scientific Sessions will be held at the Manchester Grand Hyatt Hotel San Diego, California.

REGISTRATION

Registration for the meeting must be made via the ISHLT website <http://www.isHLT.org/meetings/registrationHousingAndTourForms.asp> or via the Official ISHLT Registration Form. Online registration is strongly encouraged. A \$300 discount off the on-site registration fee is offered to those who register on or before February 22, 2017. A \$150 discount off the on-site registration fee is offered to those who register between February 23 and March 17, 2017. Individuals who have not registered on or before March 17, 2017 must register on-site at the meeting. A confirmation letter will be emailed to all individuals who register on or before March 17, 2017. An Official ISHLT Registration Form is included in this booklet on page 87 and may also be obtained from our website <http://www.isHLT.org/meetings/registrationHousingAndTourForms.asp>. The registration fee includes admission into all scientific sessions, and the Exhibit Hall. The registration fee also includes coffee breaks each day and entry to Exhibit Hall receptions.

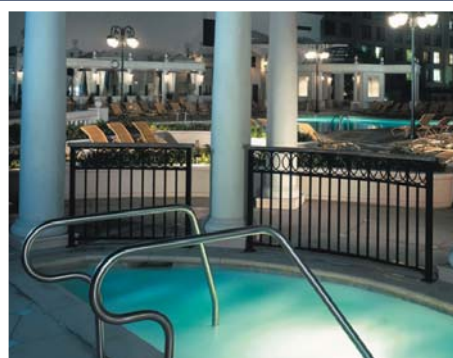
HOTEL RESERVATIONS

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 Manchester Grand Hyatt Hotel San Diego. The discounted rate is subject to availability and is guaranteed until March 14, 2017. 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/IntlSocHeartLung2017>.

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. A credit card will be required to reserve a block of rooms.





PRESIDENT'S COCKTAIL *Reception*

USS Midway

The President's Cocktail Reception will be held Thursday, April 6 from 8:00-9:30 pm at the USS Midway Museum, the longest-serving US Navy aircraft carrier of the twentieth century. The USS Midway is located alongside the historic Navy Pier at 910 North Harbor Drive. While there you'll have the opportunity to see more than 30 restored naval aircraft on the flight deck and two Hangar Bays where you'll be able to see cockpit exhibits and even experience a flight simulator.

Admittance to this event requires an advance ticket purchase. 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 and allied health professionals.

CME

CREDIT DESIGNATION STATEMENT

ISHLT designates this live activity for a maximum of *32 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

ACCREDITATION

Continuing Pharmacy Education Credits (CPE) will be applied for.

ANCC

ACCREDITATION

Amedco is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation. This course is co-provided by Amedco and the International Society for Heart and Lung Transplantation (ISHLT). Maximum of 32.00 contact hours.

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.



CONTINUING EDUCATION INFORMATION

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.



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:

BSTR	Basic Science and Translational Research	ID	Infectious Diseases	PEDS	Pediatrics
EEP	Economics, Ethics, Public Policy	LTX	Lung Transplantation Adult	PHARM	Pharmacy and Pharmacology
HF	Heart Failure Adult	MCS	Mechanical Circulatory Support Adult	PH	Pulmonary Hypertension
HTX	Heart Transplantation Adult	NHSAH	Nursing, Health Science and Allied Health	CASE	Junior Faculty Clinical Case Reports
		PATH	Pathology	LBCS	Late Breaking Clinical Science



2017 Annual Meeting

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Daniel Zimpfer, MD, Vienna, Austria ■



SYMPOSLA HIGHLIGHTS

of the 2017 Annual Meeting

BASIC SCIENCE AND TRANSLATIONAL RESEARCH

The basic science and translational research symposia will feature diverse and dynamic speakers who are internationally recognized leaders in the field. We hope that each session will bring together in one room basic scientists as well as clinical researchers and clinicians who wish to further discuss and explore topics in heart and lung failure and transplantation. In *Not CAVing to CLAD-tastrophe: Emerging Mechanisms in Chronic Heart and Lung Allograft Disease*, experts will review endothelial biology, innate immunity, and antibody-based immunology in both heart and lung allograft dysfunction. The speakers will also explore the potential clinical implications of the available data. *How to Mend a Broken Heart: Approaches for Cardiac Regeneration* will be an exciting state-of-the-art set of lectures by thought-provoking speakers and experts in tissue engineering and cell therapy for heart failure who will discuss hurdles and perspectives of stem cell therapy on the way to clinical application. We will explore the evolving field of the microbiome in *Living in a 'Bacterial' World: Microbiome in Thoracic Transplantation*. The intricacies of the microbiome's effects on health disease, on post-transplant immunology, and specifically on heart and lung transplantation will be addressed. In addition to these three primary symposia, other talks focused on basic and translational research have been incorporated into other symposia in order to create a well-rounded, high-quality program for the attendees.



HEART FAILURE AND TRANSPLANTATION

Our goal is to advance attendee's knowledge of specific heart failure entities and controversies in heart transplantation. We begin with *Cardiogenic Shock: Types, Teams and Tactics* – defining shock types, care delivery and bridging strategies. Three additional symposia: 1) *Getting to the Heart of Muscular Dystrophies*, 2) *Chagasic Cardiomyopathy: Lessons to Be Learned*, and 3) *The Tsunami of Adult Congenital Heart Disease Patients Who Need Advanced Therapies: Are We Prepared?* – will explore less well known but growing etiologies of heart failure and their management, including the use of circulatory support and implications for post-transplant management. As an international community, we share a donor organ shortage, and the symposium *Making Every Heart Count* will discuss optimizing the use of donor organs. Controversy remains about when to proceed with combined heart-lung, heart-kidney, or heart-liver transplantation, topics that will be tackled in *A Tale of Two Organs: Selecting and Managing Multi-Organ Transplant Recipients*. To round things out, two symposia will be devoted to topics where consensus conferences have been held, but we still have a lot to learn: *PGD and Vasoplegia After Heart Transplantation: Sink or Swim* and *Dealing with Antibodies Before and After Heart Transplant: Do We Have New Arrows in our Quiver?* Join us in San Diego for the opportunity of a lifetime to learn from each other!



INFECTIOUS DISEASES

ID content at ISHLT 2017 will kick off with the *ISHLT Academy: Core Competencies in Infectious Diseases* all day on Tuesday (separate registration required). The remainder of the meeting will feature an exciting line-up of ID content throughout the program, concentrated on the first two days of the meeting to make access to the presentations as convenient as possible for those ID specialists who cannot commit a week away from work. We start with a joint symposium featuring ISHLT and ESCMID speakers discussing *Ongoing Challenges in Transplant Infectious Diseases*, including fungi, multidrug resistant bacteria, and viruses including HCV, HIV and EB. Following that we present *Those Darn CARVs* and learn about respiratory viruses in lung transplantation, the clinical and basic science correlations with CLAD, as well as treatment options and novel therapeutics in the pipeline. We then go *Around the World in 80 Days* to learn from experts about transplantation in areas endemic for Zika virus, tuberculosis, and HBV along with providing valuable advice for our patients when they travel. Mycobacterium abscessus has come of age with its very own symposium where we learn about *Taming of the Shrew*, with talks on epidemiology, clinical manifestations, and therapeutics. We end with a fiery debate

to settle the issue of whether patients infected with *M. abscessus* can be safely transplanted. Other content that will be of interest to ID attendees includes a symposium dedicated to Chagasic cardiomyopathy, a sunrise symposium on HIV and cardiothoracic transplantation, and presentations on the respiratory microbiome and virome analysis for monitoring of post-transplant immune status.



LUNG TRANSPLANTATION

In times of a changing landscape in lung transplant management, this year's lung transplant symposia will focus on important universal themes, including careful recipient selection, sensible donor allocation, safe peri-transplant ECMO use, pragmatic post-transplant treatment strategies and meticulous post-transplant follow-up. Excellent speakers will highlight the do's and don'ts in *There Is No Such Thing as Perfect: Selecting Recipients for Lung Transplantation*, with emphasis on non-standard, controversial, rare or difficult transplant referrals. Recent results of implementing the 2015 US Lung Allocation Score model will be discussed in *Lung Allocation Scores: Making the Complex Simple, or Just the Simple Complex?*, but will also address how to further improve equity in organ allocation world-wide. Practicalities and controversies of ECMO bridging to transplant, as well as its

post-transplant use, will be debated in *ECMO in Lung Transplantation: Sensational Success or Fantastic Failure?* Light will be shed on novel post-transplant treatment strategies in *Extracorporeal Photophoresis: Shedding Light on Rejection?* and in *Bench to Bedside: How Advances in Immunobiology Shape the Care of Today's Lung Transplant Recipients*. Finally, the need for a holistic approach to patient care will be addressed in *Thinking Outside the Box: Extra-Pulmonary Management in Lung Transplantation*, focusing on the most common extra-pulmonary problems encountered in lung transplant recipients during follow-up. We are convinced that the meaningful reflections on these themes presented during this meeting will positively shape the daily care of all our lung transplant recipients.



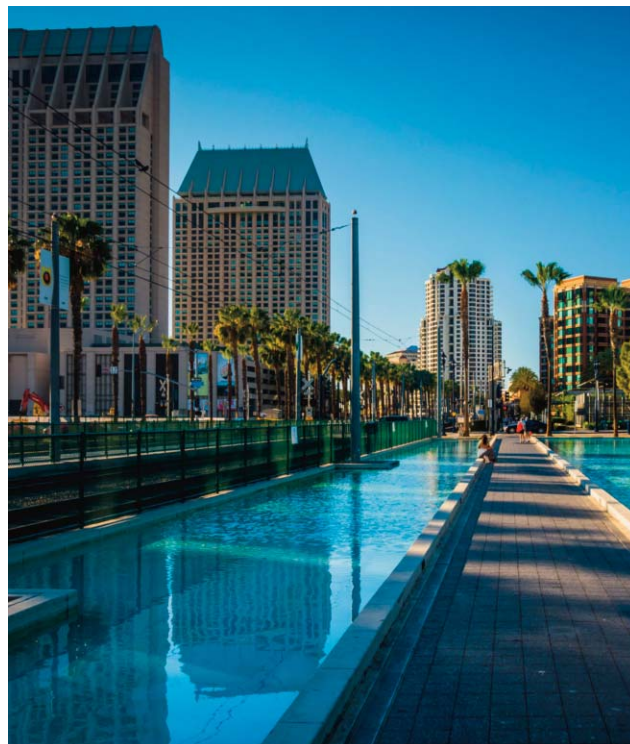


MECHANICAL CIRCULATORY SUPPORT

New ideas in MCS will be presented at ISHLT 2017 in San Diego. The symposium *Mechanical Circulatory Support – The Interface of Design and Outcome* will discuss the physical possibilities and ideas involved in designing mechanical pumps to perform better, reduce adverse events and become better connected to patients. In *To Pulse or Not to Pulse? That is the Question*, we will focus on the impact of pulsatility on brain and blood vessel function, as well as the design and rationale for pulsatile and counterpulsation technology. Dr. Mandeep Mehra will talk about pulsatility from a scientific and existential perspective. *Walk with Me: Exercise Physiology* in the VAD Patient will look at the physiology of exercise in LVAD patients, delving into the increasingly complex world of antibodies in MCS patients. More LVAD complications will be explored in the Aiming off Target symposium, focusing on the non-cardiac consequences of LVADs. Finally, a joint ISHLT/ICCAC symposium will involve members from both societies looking at optimizing outpatient strategies in managing LVAD patients. With these and other symposia, we believe the ISHLT 2017 MCS symposia will have something for everyone.

NURSING, HEALTH SCIENCES AND ALLIED HEALTH

Optimizing outcomes is a multidisciplinary endeavor that needs investments along the transplant continuum. Pre-transplant, there are many psychosocial risk factors that can be targeted for intervention. *When Should We Call It Quits? The Efficacy of Interventions to Ameliorate Psychosocial Risk Factors* will review the efficacy of treatments available to ameliorate psychosocial risk factors. The state-of-the-art of e-health technology in delivering care will be discussed in *E-health, Wearables, Social Media and Big Data in Transplantation: Fancy Toys or True Care Innovations?* Interactive communication options via social media and the value of the big data for transplantation will also be explored. Patient Reported Outcomes (PRO) are increasingly used to capture outcomes in transplantation. *Completing the Picture: Patient Reported Outcomes as an Essential Source of Information in Evaluating Transplantation Outcomes* will provide insights in the concept, measurement and application of PROs. Outcomes of pediatric transplant patients may be jeopardized due to specific challenges related to neurocognitive development, problems in communication with health care workers, and transition. *Live Long and Prosper: Thriving after Pediatric Transplantation* will focus on the psychosocial, behavioral challenges, as well as communication and developmental issues in pediatric transplant patients. Specific attention will be given to adolescence and models for transition.





PATHOLOGY

This year's pathology symposium, *Let's Get Personal! Precision Diagnostics in Thoracic Transplantation*, combines pathology and basic science and covers the topical issue of precision medicine/diagnosis for delivering personalized treatment, molecular diagnosis including cell free DNA (liquid biopsies), microRNA, next generation sequencing and transcriptome analysis of biopsy material. A highlight will be the future possibilities with genome editing using CRISPR-Cas9 technology. A Sunrise Symposium, *Mixed Rejection (MR) of the Cardiac Allograft: The Next Frontier*, will discuss the relevance of mixed cellular and antibody mediated rejection in relation to diagnosis, management and clinical outcomes.



PEDIATRIC THORACIC TRANSPLANTATION AND HEART FAILURE

Difficult clinical situations sometimes require complex solutions. This year, the pediatric symposia will delve into difficult clinical situations that we all face in our practices. *The Failing Fontan: Where Do We Go from Here?* will discuss optimization of Fontan patients prior to transplant, timing of transplant listing, and multi-organ transplant options, as well as examine programmatic issues with taking on Fontan patients. *HLA, AMR and DSA – Approaching Antibodies in Kids* will examine antibodies before and after transplant, including how to measure antibodies, how to manage the allosensitized patient before transplant, and how to handle donor-specific antibodies and antibody-mediated rejection. *Upcoming Opportunities and Challenges in Pediatric Lung Transplantation* will address bridging to lung transplant via ECMO, changing indications in pediatric lung and heart-lung transplant, the limits of ABO-incompatible lung transplantation and the Potts shunt in children with pulmonary hypertension. Lastly, *Live Long and Prosper: Thriving after Pediatric Transplantation* will include discussions of neurodevelopmental outcomes, the role of exercise and sports, recommendations for communicating with teenagers and young adults, and approaches for transition of children to adult transplant care.



PULMONARY HYPERTENSION

Pulmonary hypertension is once again at the forefront of the ISHLT Scientific Sessions with six outstanding and provocative symposia! Symposia will explore current controversies in chronic thromboembolic disease, intricacies of ECMO in pre-capillary pulmonary hypertension, as well as novel cardiopulmonary hemodynamics and their impact on right ventricular and kidney function. A sunrise symposium will highlight similarities and differences in treatment of children and adults with pulmonary hypertension focusing on the strategies to adopt from each other's practices. This year, we present a unique joint symposium of the ISHLT in partnership with the Pulmonary Hypertension Association (PHA) which, along with the always exciting *Great Debates in Pulmonary Hypertension*, are two symposia that are NOT TO BE MISSED!

We look forward to seeing you in sunny San Diego!

PHARMACY & PHARMACOLOGY

Pharmacy and pharmacology will be the buzz of the meeting with four symposia appealing to all areas of the ISHLT membership. In our Thursday afternoon symposium, *Weeding Out Fact from Fiction: Exploring the Highs and Lows of Marijuana Use in the Transplant Population*, we will explore whether or not marijuana in all its forms is actually detrimental for our patients and how programs can navigate this legal and clinical minefield. Back by popular demand, join us at the Thursday Sunrise symposium for *Lifecycle Journey of Thrombosis in Mechanical Circulatory Support Patients*. We discuss the latest insights into the science of thrombus formation and how surgical techniques and medications can combine to give the best outcomes for our patients. The HOPE act assures that HIV and Transplantation Isn't Going Away and our Friday Sunrise symposium focuses the clinician on this vital topic. Experts will provide clarity on the burning questions including: How should end-stage HIV associated lung and heart disease be optimally managed? What unique infectious risks do HIV positive donors and recipients present, and how can the transplant and HIV medications be managed in tandem to optimize care? During our Saturday Sunrise session, *Pregnant – Scared? So Are We*, an expert panel will present the facts of life for our female transplant and CHD populations, many of whom can now consider pregnancy. We will present the best and safest multidisciplinary management of pregnancy after transplantation.





MONDAY | APRIL 3, 2017

8:00 AM – 10:00 PM

Exhibit Hall Build
(HARBOR A-H)

8:00 AM – 8:00 PM

Poster Hall Build
(SEAPORT, HARBOR AND CORONADO FOYERS)

4:00 PM – 8:00 PM

Academy Registration Open
(SEAPORT FOYER)

Speaker Ready Room Open
(BALBOA ABC)

PRELIMINARY PROGRAM

Schedule At A Glance

All meetings and activities will take place at the Manchester Grand Hyatt Hotel unless otherwise specified. All papers will be presented in English.

Please check the ISHLT web site <http://www.isHLT.org/meetings/annualMeeting.asp> for updates.

The ISHLT 2017 mobile app, which will be available approximately two weeks prior to the Annual Meeting and the Final Program Pocket Guide, which is distributed on site, will reflect the very latest session schedule and room assignments.

TUESDAY | APRIL 4, 2017

6:30 AM – 7:00 PM

Academy Registration
(SEAPORT FOYER)

6:00 AM – 8:00 PM

Speaker Ready Room Open
(BALBOA ABC)

7:45 AM – 1:00 PM

ISHLT Academy: Master Class in
Mechanical Circulatory Support
(SEAPORT F AND SEAPORT G)

8:00 AM – 2:00 PM

ISHLT Board of Directors Meeting
(CITY VIEW AB)

7:45 AM – 6:00 PM

ISHLT Academy: Core Competency Course
in Pediatric Mechanical Circulatory Support
(GRAND HALL A)

ISHLT Academy: Core Competency Course
in Mechanical Circulatory Support
(GRAND HALL B)

ISHLT Academy: Core Competency Course
in Infectious Diseases
(GRAND HALL D)

8:00 AM – 6:00 PM

Poster Hall Build
(SEAPORT, HARBOR AND CORONADO FOYERS)

8:00 AM – 10:00 PM

Exhibit Hall Build
(HARBOR A-H)

2:00 PM – 5:00 PM

ISHLT Board/Committee/Council
Leadership Orientation
(VISTA ABC)

1:45 PM – 7:00 PM

ISHLT Academy: Master Class in
Mechanical Circulatory Support
(GASLAMP AB AND GASLAMP CD)

2:00 PM – 7:00 PM

ISHLT Academy: Master Class in
Pulmonary Hypertension
(SEAPORT F AND SEAPORT G)

3:00 PM – 7:00 PM

Annual Meeting Registration
(SEAPORT FOYER)

6:00 PM – 8:00 PM

Standards and Guidelines Committee Meeting
(LA JOLLA A)

WEDNESDAY | APRIL 5, 2017

7:00 AM – 6:15 PM

Registration Open
(SEAPORT FOYER)

Speaker Ready Room Open
(BALBOA ABC)

7:00 AM – 10:00 AM

Exhibitor Set-Up
(HARBOR A-H)

Poster Session 1 Mount
(SEAPORT, HARBOR AND CORONADO FOYERS)

8:00 AM – 10:00 AM

SYMPOSIUM 01:
Joint ISHLT/ICCAC Symposium: Besides
the Surgery – How to Make VAD Patients
Successful
(SEAPORT A-E) (MCS, HF, HTX, NHSAH)

SYMPOSIUM 02:
When Should We Call It Quits? The Efficacy
of Interventions to Ameliorate Psychosocial
Risk Factors
(GRAND HALL A) (HTX, HF, MCS, NHSAH)

SYMPOSIUM 03:
PGD and Vasoplegia After Heart Transplantation:
Sink or Swim
(GRAND HALL B) (HTX, HF, MCS)

SYMPOSIUM 04:
Thinking Outside the Box: Extra-Pulmonary
Management in Lung Transplantation
(GRAND HALL C) (LTX, BSTR, ID, NHSAH,
PATH, PEDS, PHARM, PH)

SYMPOSIUM 05:
Joint ISHLT/PHA Symposium: PH and Transplant: Where Do We Go From Here?
(GRAND HALL D) (PH, HF, HTX, LTX, MCS, NHTSAH, PEDS)

SYMPOSIUM 06:
The Failing Fontan – Where Do We Go From Here?
(SEAPORT F-G) (PEDS, EEP, HF, HTX)

SYMPOSIUM 07:
Joint ISHLT/ESCMID Symposium: Ongoing Challenges in Transplant Infectious Diseases
(SEAPORT H) (ID, HTX, LTX, MCS, PHARM)

9:00 AM – 7:00 PM
Press Office Open
(OLD TOWN A)

10:00 AM – 10:30 AM
Coffee Break
(HARBOR A-H)

10:00 AM – 7:15 PM
Exhibit Hall Open
(HARBOR A-H)
Poster Hall Open
(SEAPORT, HARBOR AND CORONADO FOYERS)

10:30 AM – 12:30 PM
OPENING PLENARY
(SEAPORT A-E) (ALL)

12:30 PM – 2:30 PM
Lunch Break

12:30 PM – 2:30 PM
Nursing, Health Sciences and Allied Health Scientific Council Meeting
(GRAND HALL A)

Pulmonary Hypertension Scientific Council Meeting
(GRAND HALL D)

Pediatric Transplantation Scientific Council Meeting
(SEAPORT F-G)

Infectious Diseases Scientific Council Meeting
(CORONADO A-C)

Junior Faculty Mentor Lunch Meeting
(VISTA ABC)

Grants and Awards Committee Meeting
(GASLAMP A)

Education Committee Meeting
(GASLAMP B)

I2C2 Committee Meeting
(GASLAMP C)

Transplant Registry Committee Meeting
(GASLAMP D)

2:30 PM – 4:00 PM
ORAL SESSIONS

4:00 PM – 4:30 PM
Coffee Break
(HARBOR A-H)

4:30 PM – 6:00 PM
ORAL SESSIONS

SYMPOSIUM 08:
ECMO in Pre-Capillary PH: What is the Best Option for My Patient?
(GRAND HALL D) (PH, HF, LTX, PEDS, PH)

SYMPOSIUM 09:
JHLT at ISHLT: The Year in a Capsule
(CORONADO A-C) (ALL)

6:00 PM – 6:15 PM
Coffee Break
(HARBOR A-H)

6:15 PM – 7:15 PM
MINI ORAL SESSIONS

Exhibit Hall Opening Reception
(HARBOR A-H)

MODERATED POSTER SESSION 1
(SEAPORT, HARBOR AND CORONADO FOYERS)

7:15 PM – 8:15 PM
Poster Session 1 Removal
(SEAPORT, HARBOR AND CORONADO FOYERS)

7:30 PM – 10:00 PM
ICCAC Annual Meeting
(GRAND HALL D)

7:00 AM – 6:30 PM

Registration Open
(SEAPORT FOYER)

Speaker Ready Room Open
(BALBOA ABC)

7:00 AM – 8:00 AM

Junior Faculty and Trainee Scientific Council Meeting
(GASLAMP A-C)

7:00 AM – 10:00 AM

Poster Session 2 Mount
(SEAPORT, HARBOR AND CORONADO FOYERS)

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 01:
Walk With Me: Exercise Physiology in the LVAD Patient
(GRAND HALL A) (MCS, ALL)

SUNRISE SYMPOSIUM 02:
Chagasic Cardiomyopathy: Lessons To Be Learned
(GRAND HALL B) (HF, HTX, ID, MCS)

SUNRISE SYMPOSIUM 03:
Lifecycle Journey of Thrombosis in Mechanical Circulatory Support Patients
(GRAND HALL C) (PHARM, HF, HTX, MCS, NHSAH)

SUNRISE SYMPOSIUM 04:
Completing the Picture: Patient Reported Outcomes (PROs) as an Essential Source of Information in Evaluating Transplantation Outcomes
(GRAND HALL D) (NHSAH, ALL)

SUNRISE SYMPOSIUM 05:
Upcoming Opportunities and Challenges in Pediatric Lung Transplantation
(SEAPORT F-G) (PEDS, HF, LTX, MCS, PH)

SUNRISE SYMPOSIUM 06:
“Those Darn CARVs:” Community Acquired Respiratory Viruses in Lung Transplant
(CORONADO A-C) (ID, LTX, PATH, PHARM)

8:00 AM – 10:00 AM

SYMPOSIUM 10:
Antibodies in Mechanical Circulatory Support: The Phantom Menace
(SEAPORT A-E) (MCS, BSTR, HF, HTX, PEDS, PHARM)

SYMPOSIUM 11:
Not CAVing to CLADtastrophe: Emerging Mechanisms of Chronic Heart and Lung Allograft Disease
(GRAND HALL A) (BSTR, HTX, LTX, PATH, PHARM)

SYMPOSIUM 12:
A Tale of Two Organs: Selecting and Managing Multi-Organ Transplant Recipients
(GRAND HALL B) (HTX, ALL)

SYMPOSIUM 13:
Lung Allocation Scores: Making the Complex Simple, or Just the Simple Complex?
(GRAND HALL C) (LTX, ALL)

SYMPOSIUM 14:
CTEPH: Current Controversies and New Directions
(GRAND HALL D) (PH)

SYMPOSIUM 15:
HLA, AMR and DSA – Approaching Antibodies in Kids
(SEAPORT F-G) (ALL)

SYMPOSIUM 16:
“Around the World in 80 Days:” Infectious Challenges in Cardiothoracic Transplantation
(CORONADO A-C) (ID, HF, HTX, LTX)

9:00 AM – 7:00 PM

Press Office Open
(OLD TOWN A)

10:00 AM – 10:30 AM

Coffee Break
(HARBOR A-H)

10:00 AM – 7:15 PM

Exhibit Hall Open
(HARBOR A-H)

Poster Hall Open
(SEAPORT, HARBOR AND CORONADO FOYERS)

10:30 AM – 12:30 PM

PLENARY SESSION

(SEAPORT A-E)

(ALL)

12:30 PM – 2:00 PM

Lunch Break

12:30 PM – 2:00 PM

**Mechanical Circulatory Support
Scientific Council Meeting**

(GRAND HALL A)

**Pulmonary Transplantation
Scientific Council Meeting**

(GRAND HALL C)

**Pharmacy and Pharmacology
Scientific Council Meeting**

(SEAPORT F-G)

JHLT Editorial Board Lunch Meeting

(SEAVIEW A-C)

**Registries and Databases Committee
Lunch Meeting**

(GASLAMP D)

**International Pediatric Heart
Failure Registry Meeting**

(OLD TOWN B)

2:00 PM – 3:30 PM

ORAL SESSIONS

3:30 PM – 4:00 PM

Coffee Break

(HARBOR A-H)

2018 Symposium Planning Committee Meeting

(GASLAMP D)

4:00 PM – 6:00 PM

SYMPOSIUM 17:

To Pulse or Not To Pulse? That is the Question

(SEAPORT A-E)

(ALL)

SYMPOSIUM 18:

**Weeding Out Fact from Fiction - the Highs and
Lows of Marijuana Use in Transplant**

(GRAND HALL A)

(PHARM, ALL)

SYMPOSIUM 19:

Cardiogenic Shock: Types, Teams and Tactics

(GRAND HALL B)

(HF, HTX, MCS)

SYMPOSIUM 20:

**ECMO in Lung Transplantation: Sensational
Success or Fantastic Failure?**

(GRAND HALL C)

(LTX, ALL)

**SYMPOSIUM 21: Cardiopulmonary
Hemodynamics, the Right Ventricle, and
the Kidney: Connecting All the Dots**

(GRAND HALL D)

(PH, HF, HTX, LTX, MCS)

SYMPOSIUM 22:

**Let's Get Personal! Precision Diagnostics in
Thoracic Transplantation**

(SEAPORT F-G)

(PATH, ALL)

SYMPOSIUM 23:

**Taming of the Shrew: Mycobacterium
Abscessus in Lung Transplantation**

(CORONADO A-C)

(ID, ALL)

6:00 PM – 6:15 PM

Coffee Break

(HARBOR A-H)

6:00 PM – 7:00 PM

Past President's Meeting

(GASLAMP D)

6:15 PM – 7:15 PM

MINI ORAL SESSIONS

Wine and Cheese Reception

(HARBOR A-H)

MODERATED POSTER SESSION 2

(SEAPORT, HARBOR AND CORONADO FOYERS)

7:15 PM – 8:15 PM

Poster Session 2 Removal

(SEAPORT, HARBOR AND CORONADO FOYERS)

8:00 PM – 9:30 PM

President's Cocktail Reception

USS MIDWAY MUSEUM

(NAVY PIER AT 910 NORTH HARBOR DRIVE)

7:00 AM – 6:30 PM

Registration Open
(SEAPORT FOYER)

Speaker Ready Room Open
(BALBOA ABC)

7:00 AM – 10:00 AM

Poster Session 3 Mount
(SEAPORT, HARBOR AND CORONADO FOYERS)

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 07:
Getting to the Heart of Muscular Dystrophies
(GRAND HALL A) (ALL)

SUNRISE SYMPOSIUM 08:
Live Long and Prosper: Thriving After
Pediatric Transplantation
(GRAND HALL B) (PEDS, EEP, HF, HTX, LTX,
MCS, NNSAH, PHARM)

SUNRISE SYMPOSIUM 09:
Mixed Rejection (MR) of the Cardiac Allograft:
The Next Frontier
(GRAND HALL C) (PATH, BSTR, HF, HTX)

SUNRISE SYMPOSIUM 10:
Contrasts and Similarities in Children and
Adults: IPAH, Portopulmonary Hypertension,
and Perioperative Management
(GRAND HALL D) (PH, BSTR, HF, LTX, NNSAH,
PEDS, PHARM)

SUNRISE SYMPOSIUM 11:
There is No Such Thing as Perfect: Selecting
Recipients for Lung Transplantation
(SEAPORT G-H) (LTX, ID, NNSAH, PEDS)

SUNRISE SYMPOSIUM 12:
HIV and Transplantation: It Isn't Going Away...
(CORONADO A-C) (PHARM, HTX, ID, LTX,
NNSAH, PEDS, PH)

8:00 AM – 9:30 AM
ORAL SESSIONS

9:00 AM – 7:00 PM
Press Office Open
(OLD TOWN A)

9:30 AM – 10:00 AM

Annual Business Meeting
(SEAPORT A-E)

Coffee Break
(HARBOR A-H)

9:30 AM – 4:00 PM

Exhibit Hall Open
(HARBOR A-H)

9:30 AM – 6:45 PM

Poster Hall Open
(SEAPORT, HARBOR AND CORONADO FOYERS)

10:00 AM – 11:30 AM
ORAL SESSIONS

11:30 AM – 1:30 PM

Lunch Break

11:30 AM – 1:30 PM

**Heart Failure and Transplantation
Scientific Council Meeting**
(GRAND HALL B)

**Basic Science and Translational
Research Scientific Council Meeting**
(SEAPORT G-H)

Pathology Scientific Council Meeting
(CORONADO A-C)

IMACS Users Group Meeting
(GASLAMP A-C)

DCD Registry Committee Lunch Meeting
(GASLAMP D)

1:30 PM – 3:30 PM

SYMPOSIUM 24:
Aiming Off Target: Non-Cardiac
Consequences of LVAD Support
(SEAPORT A-E) (MCS, BSTR, HF)

SYMPOSIUM 25:
Dealing with Antibodies Before and After
Heart Transplant: Do We Have New Arrows
in our Quiver?
(GRAND HALL A) (ALL)

SYMPOSIUM 26:
Making Every Heart Count
(GRAND HALL B) (HTX, EEP, HF, HTX)

SYMPOSIUM 27:
Bench to Bedside: How Advances in Immunology Shape the Care of Today's Lung Transplant Recipients
(GRAND HALL C) (LTX, BSTR, HTX, ID, NHSAH, PATH, PEDS, PHARM)

SYMPOSIUM 28:
Great Debates in Pulmonary Hypertension
(GRAND HALL D) (PH, ALL)

SYMPOSIUM 29:
How to Mend a Broken Heart: Approaches for Cardiac Regeneration
(SEAPORT G-H) (BSTR, HF, HTX, PATH, PHARM)

SYMPOSIUM 30:
E-health, Wearables, Social Media and Big Data in Transplantation: Fancy Toys or True Care Innovations?
(CORONADO A-C) (NHSAH, ALL)

3:30 PM – 4:00 PM
Coffee Break
(HARBOR A-H)

4:00 PM – 5:30 PM
ORAL SESSIONS

5:30 PM – 5:45 PM
Coffee Break
(SEAPORT FOYER)

5:45 PM – 6:45 PM
MINI ORAL SESSIONS

MODERATED POSTER SESSION 3
(SEAPORT, HARBOR AND CORONADO FOYERS)

6:45 PM – 7:45 PM
Poster Session 3 Removal
(SEAPORT, HARBOR AND CORONADO FOYERS)

7:00 AM – 1:30 PM
Speaker Ready Room Open
(BALBOA ABC)

7:00 AM – 8:00 AM
SUNRISE SYMPOSIUM 13:
Mechanical Circulatory Support – The Interface of Design and Outcome
(GRAND HALL A) (MCS, BSTR, EEP, HF, HTX)

SUNRISE SYMPOSIUM 14:
The Tsunami of ACHD Patients Who Need Advanced Therapies: Are We Prepared?
(GRAND HALL B) (HTX, HF, LTX, MCS, PEDS, PH)

SUNRISE SYMPOSIUM 15:
Extracorporeal Photopheresis: Shedding Light on Rejection?
(GRAND HALL C) (LTX, BSTR, HTX, ID, NHSAH, PATH, PEDS, PHARM)

SUNRISE SYMPOSIUM 16:
Pregnant – Scared? So Are We... Management of Pregnancy in Our Complex Patients
(SEAPORT G-H) (PHARM, HTX, LTX, MCS, NHSAH, PEDS)

SUNRISE SYMPOSIUM 17:
Living in a 'Bacterial' World: Microbiome in Thoracic Transplantation
(CORONADO A-C) (BSTR, ALL)

8:00 AM – 9:30 AM
ORAL SESSIONS

9:30 AM – 9:45 AM
Coffee Break
(SEAPORT FOYER)

9:45 AM – 11:45 AM
PLENARY SESSION
(SEAPORT A-E) (ALL)

11:45 AM – 12:00 PM
Coffee Break
(SEAPORT FOYER)

12:00 PM – 1:30 PM
ORAL SESSIONS

12:00 PM – 6:00 PM
ISHLT Board of Directors Meeting
(CITY VIEW AB)

SATURDAY | APRIL 8, 2017

7:00 AM – 12:00 PM
Registration Open
(SEAPORT FOYER)



37TH ANNUAL MEETING PRELIMINARY PROGRAM

Time Table Schedule

SCIENTIFIC SESSIONS • ISHLT ACADEMIES

Daily Time Table

TUESDAY, APRIL 4

MANCHESTER GRAND HYATT HOTEL							
ROOM	GRAND HALL A	GRAND HALL B	GRAND HALL C	SEAPORT F	SEAPORT G	SEAPORT & PALM FOYERS	BALBOA ABC
TIME							
6:00 AM						ISHLT Academy Registration Open 6:30 am - 7 pm	Speaker Ready Room Open 6 am - 8 pm
7:45 AM	ISHLT ACADEMY:		ISHLT ACADEMY:	ISHLT ACADEMY:	ISHLT ACADEMY:		
8:00 AM	PED and Adult Congenital MCS Core Competency Course 7:45 am - 6 pm	ISHLT ACADEMY: MCS Core Competency Course 8 am - 6 pm	ID Core Competency Course 7:45 am - 6 pm	MCS Master Class 7:45 am - 1 pm	MCS Master Class 7:45 am - 1 pm		
1:00 PM							
2:00 PM							
3:00 PM							
5:00 PM							
6:00 PM							
7:00 PM							
8:00 PM							

TUESDAY, APRIL 4

MANCHESTER GRAND HYATT HOTEL

ROOM	GASLAMP AB	GASLAMP CD	LA JOLLA A	VISTA ABC	CITY VIEW AB	
TIME						
6:00 AM						
7:45 AM						
8:00 AM					Board of Directors Meeting 8 am - 2 pm	
1:00 PM				Leadership Orientation Mtg. 2 pm - 5 pm		
2:00 PM	ISHLT ACADEMY: MCS Master Class 1:45 pm - 6:50 pm	ISHLT ACADEMY: MCS Master Class 1:45 pm - 6:50 pm				
5:00 PM						
6:00 PM			Standards and Guidelines Committee Mtg. 6 pm - 8 pm			
7:00 PM						
8:00 PM						

Daily Time Table

WEDNESDAY, APRIL 5

MANCHESTER GRAND HYATT HOTEL							
ROOM	SEAPORT A-E	GRAND HALL A	GRAND HALL B	GRAND HALL C	GRAND HALL D	SEAPORT F-G	SEAPORT H
TIME							
7:00 AM							
8:00 AM	SYMPOSIUM 01 MCS ISHLT/ICCAC	SYMPOSIUM 02 NNSAH Psychosoc Risk	SYMPOSIUM 03 HEART PGD/Vasoplegia	SYMPOSIUM 04 LUNG Extra Pulm Mgt	SYMPOSIUM 05 PH ISHLT/PHA	SYMPOSIUM 06 PEDS Failing Fontan	SYMPOSIUM 07 ID ISHLT/ESCMID
9:00 AM	MCS, HF, HTX, NNSAH	HTX, HF, MCS, NNSAH	HTX, HF, MCS	LTX, BSTR, ID, NNSAH, PATH, PEDS, PHARM, PH	PH, HF, HTX, LTX, MCS, NNSAH, PEDS	PEDS, EER, HF, HTX	ID, HTX, LTX, MCS, PHARM
10:00 AM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	
11:00 AM	OPENING PLENARY					Overflow OPENING PLENARY	
NOON							
	LUNCH BREAK	NNSAH Council Meeting	LUNCH BREAK	LUNCH BREAK	PH Council Meeting	PEDS Council Meeting	
1:00 PM							
2:00 PM							
3:00 PM	MCS Oral	MCS Oral	HEART Oral	LUNG Oral	PH Oral	PEDS Oral	
4:00 PM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	
5:00 PM	MCS Oral	MCS Oral	HEART Oral	LUNG Oral	SYMPOSIUM 08 PH ECMO in PH	PEDS Oral	
6:00 PM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	
6:15 PM		Mini Oral 1	Mini Oral 2	Mini Oral 3	Mini Oral 4	Mini Oral 5	
7:00 PM							
7:15 PM							
7:30 PM					BREAK		
9:00 PM					ICCAC Annual Meeting 7:30 - 10:00 pm		
10:00 PM							

WEDNESDAY, APRIL 5

MANCHESTER GRAND HYATT HOTEL									
ROOM	CORONADO A-C	HARBOR A-H	SEAPORT, HARBOR CORONADO FOYERS	VISTA ABC	GASLAMP A	GASLAMP B	GASLAMP C	GASLAMP D	
TIME									
7:00 AM		Exhibitor Set-Up 7 am - 10 am	Poster Mount 7 am - 10 am						
8:00 AM									
9:00 AM									
10:00 AM		Exhibit Hall Open 10 am - 7:15 pm	Poster Hall Open 10 am - 7:15 pm						
11:00 AM									
NOON									
1:00 PM	ID Council Meeting					Junior Faculty Mentor Lunch	Grants & Awards Committee Meeting	Education Committee Meeting	I2C2 Committee Meeting
2:00 PM									
3:00 PM	ID Oral								
4:00 PM	BREAK								
5:00 PM	SYMPOSIUM 06 JHLT @ ISHLT Sess								
6:00 PM	BREAK								
6:15 PM	Mini Oral 6	Opening Reception 6:15 pm - 7:15 pm	Poster Session 1 6 pm - 7:15 pm						
7:00 PM									
7:15 PM			Poster Removal 7:15 pm - 8:15 pm						
7:30 PM									
9:00 PM									
10:00 PM									

Daily Time Table

THURSDAY, APRIL 6

MANCHESTER GRAND HYATT HOTEL							
ROOM	SEAPORT A-E	GRAND HALL A	GRAND HALL B	GRAND HALL C	GRAND HALL D	SEAPORT F-G	CORONADO A-C
TIME							
7:00 AM		SUNRISE SYMP 01 MCS Walk With Me MCS, ALL	SUNRISE SYMP 02 HEART Chagasic CM HF, HTX, ID, MCS	SUNRISE SYMP 03 PHARM Lifecycle PHARM, HF, HTX, MCS, NHSAH	SUNRISE SYMP 04 NNSAH Ptnt Outcome NNSAH, ALL	SUNRISE SYMP 05 PEDS Lung Tx PEDS, HF, LTX, MCS, PH	SUNRISE SYMP 06 ID CARVs ID, LTX, PATH, PHARM
8:00 AM	SYMPOSIUM 10 MCS Antibodies MCS	SYMPOSIUM 11 BSTR CAV & CLAD	SYMPOSIUM 12 HEART Tale of 2 Organs	SYMPOSIUM 13 LUNG Alloc Score	SYMPOSIUM 14 PH CTEPH	SYMPOSIUM 15 PEDS Antibodies	SYMPOSIUM 16 ID Challenges
9:00 AM	MCS, BSTR, HF, HTX, PEDS, PHARM	BSTR, HTX, LTX, PATH PHARM	HTX, ALL	LTX, ALL	PH	ALL	ID, HF, HTX, LTX
10:00 AM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
	PLENARY						
11:00 AM							
NOON							
1:00 PM	LUNCH BREAK	MCS Council Meeting	LUNCH BREAK	LUNG Council Meeting	LUNCH BREAK	PHARM Council Meeting	LUNCH BREAK
2:00 PM	MCS Oral	BSTR Oral	HEART Oral	LUNG Oral	PH Oral	PEDS Oral	JFTC Case Session
3:00 PM							
4:00 PM	SYMPOSIUM 17 MCS To Pulse or Not	SYMPOSIUM 18 PHARM Marijuana	SYMPOSIUM 19 HEART Cardiogenic Shock	SYMPOSIUM 20 LUNG ECMO	SYMPOSIUM 21 PH Connecting Dots	SYMPOSIUM 22 PATH Get Personal!	SYMPOSIUM 23 ID Abscessus
5:00 PM	ALL	PHARM, ALL	HF, HTX, MCS	LTX, ALL	PH, HF, HTX, LTX, MCS	PATH, ALL	ID, ALL
6:00 PM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
6:15 PM		Mini Oral 7	Mini Oral 8	Mini Oral 9	Mini Oral 10	Mini Oral 11	Mini Oral 12
7:00 PM							
7:15 PM							
7:30 PM							
8:00 PM							
8:15 PM	<i>President's Cocktail Reception • USS MIDWAY MUSEUM • President's Cocktail Reception • USS MIDWAY MUSEUM • President's Cocktail Reception</i>						
9:00 PM							
9:15 PM							

THURSDAY, APRIL 6

MANCHESTER GRAND HYATT HOTEL					
ROOM	HARBOR A-H	SEAPORT, HARBOR CORONADO FOYERS	SEAVIEW A-C	GASLAMP D	OLD TOWN B
TIME					
7:00 AM		Poster Mount 7 am - 10 am			
8:00 AM					
9:00 AM					
10:00 AM	Exhibit Hall Open 10 am - 7:15 pm	Poster Hall Open 10 am - 7:15 pm			
11:00 AM					
NOON			JHLT Editorial Board Lunch Meeting	Registries & Databases Committee Lunch Meeting	IPHFR Meeting
1:00 PM					
2:00 PM					
3:00 PM					
4:00 PM				2018 SPC MTG	
5:00 PM					
6:00 PM				Past Presidents Meeting	
6:15 PM	Wine/Cheese Recep 6:15 pm - 7:15 pm	Poster Session 2 6:15 pm - 7:15 pm			
7:00 PM					
7:15 PM		Poster Removal 7:15 pm - 8:15 pm			
7:30 PM					
8:00 PM					
8:15 PM	<i>President's Cocktail Reception • USS MIDWAY MUSEUM • President's Cocktail Reception</i>				
9:00 PM					
9:15 PM					

Daily Time Table

FRIDAY, APRIL 7

MANCHESTER GRAND HYATT HOTEL							
ROOM	SEAPORT A-E	GRAND HALL A	GRAND HALL B	GRAND HALL C	GRAND HALL D	SEAPORT G-H	CORONADO A-C
TIME							
7:00 AM		SUNRISE SYMP 07 HEART Muscular Dystrophies ALL	SUNRISE SYMP 08 NHSAH Live Long (Peds) PEDS, EEP, HF, HTX, LTX MCS, NHSAH, PHARM	SUNRISE SYMP 09 PATH Mixed Rejection PATH, BSTR, HF, HTX	SUNRISE SYMP 10 PH Kids & Adults PH, BSTR, HF, LTX, NHSAH, PEDS, PHARM	SUNRISE SYMP 11 LUNG Recipient Selection LTX, ID, NHSAH, PEDS	SUNRISE SYMP 12 PHARM HIV PHARM, HTX, ID, LTX NHSAH, PEDS, PH
8:00 AM	MCS Oral	MCS Oral	HEART Oral	LUNG Oral	HEART Oral	PEDS Oral	CAVES Session
9:00 AM	Business Meeting	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
10:00 AM	MCS Oral	MCS Oral	HEART Oral	LUNG Oral	NHSAH Oral	BSTR Oral	PATH Oral
11:00 AM	LUNCH BREAK	LUNCH BREAK	HEART Council Meeting	LUNCH BREAK	LUNCH BREAK	BSTR Council Meeting	PATH Council Meeting
NOON							
1:00 PM							
2:00 PM	SYMPOSIUM 24 MCS LVAD Support	SYMPOSIUM 25 HEART Antibodies in HTX	SYMPOSIUM 26 HEART Every Heart Counts	SYMPOSIUM 27 LUNG Bench - Bedside LTX, BSTR, HTX, ID, NHSAH PATH, PEDS, PHARM	SYMPOSIUM 28 PH Great Debates in PH PH, ALL	SYMPOSIUM 29 BSTR Cardiac Regen BSTR, HF, HTX, PATH PHARM	SYMPOSIUM 30 NHSAH E-Health NHSAH, ALL
3:00 PM	MCS, BSTR, HF	ALL	HTX, EEP, HF, HTX				
4:00 PM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
4:00 PM	MCS Oral	MCS Oral	HEART Oral	LUNG Oral	HEART Oral	PEDS Oral	PHARM Oral
5:00 PM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
5:45 PM		Mini Oral 13	Mini Oral 14	Mini Oral 15	Mini Oral 16	Mini Oral 17	Mini Oral 18
6:45 PM							
7:45 PM							
8:45 PM							
9:45 PM							
10:45 PM							

FRIDAY, APRIL 7

MANCHESTER GRAND HYATT HOTEL				
ROOM	HARBOR A-H	SEAPORT, HARBOR CORONADO FOYERS	GASLAMP A-C	GASLAMP D
TIME				
7:00 AM		Poster Mount 7 am - 10 am		
8:00 AM				
9:00 AM				
10:00 AM	Exhibit Hall Open 9:30 am - 4 pm	Poster Hall Open 9:30 am - 6:45 pm		
11:00 AM				
NOON			IMACS User Meeting	DCD Reg Meeting
1:00 PM				
2:00 PM				
3:00 PM				
4:00 PM	Exhibit Hall Strike 4 pm - 11 pm			
5:00 PM				
5:45 PM		Poster Session 3 5:45 pm - 6:45 pm		
6:45 PM		Poster Removal 6:45 pm - 7:45 pm		
7:45 PM		Poster Strike 7:45 pm - 11 pm		
8:45 PM				
9:45 PM				
10:45 PM				

Daily Time Table

SATURDAY, APRIL 8

MANCHESTER GRAND HYATT HOTEL							
ROOM	SEAPORT A-E	GRAND HALL A	GRAND HALL B	GRAND HALL C	GRAND HALL D	SEAPORT G-H	CORONADO A-C
TIME							
7:00 AM		SUNRISE SYMP 13 MCS Design & Outcome MCS, BSTR, EEP, HF, HTX	SUNRISE SYMP 14 HEART ACHD Patients HTX, HF, LTX, MCS, PEDS, PH	SUNRISE SYMP 15 LUNG Extracorp Photo LTX, BSTR, HTX, ID, NHSAH PATH, PEDS, PHARM		SUNRISE SYMP 16 PHARM Pregnant & Scared PHARM, HTX, LTX, MCS NHSAH, PEDS	SUNRISE SYMP 17 BSTR Microbiome BSTR, ALL
8:00 AM	MCS Oral	MCS Oral	HEART Oral	LUNG Oral	HEART Oral	BSTR Oral	Oral
9:30 AM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
9:45 AM	PLENARY						
11:45 AM	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK	BREAK
NOON	MCS Oral	MCS Oral	HEART Oral	LUNG Oral	HEART Oral	BSTR Oral	NNSAH Oral
1:00 PM							
1:30 PM	STRIKE 1:15 pm - 5 pm	STRIKE 1:15 pm - 5 pm	STRIKE 1:15 pm - 5 pm	STRIKE 1:15 pm - 5 pm	STRIKE 1:15 pm - 5 pm	STRIKE 1:15 pm - 5 pm	STRIKE 1:15 pm - 5 pm
2:00 PM							
3:00 PM							
4:00 PM							
5:00 PM							
6:00 PM							
7:00 PM							
8:00 PM							

SATURDAY, APRIL 8

MANCHESTER GRAND HYATT HOTEL					
ROOM	HARBOR A-H	SEAPORT AND PALM FOYERS	BALBOA ABC	CITYVIEW AB	
TIME					
7:00 AM	Exhibit Hall Strike 7 am - 1 pm	OPEN 7 am - Noon	OPEN 7 am - 1:30 pm		
8:00 AM					
9:30 AM					
9:45 AM					
11:45 AM					
NOON			STRIKE Noon - 5 pm		ISHLT Board of Directors Meeting Noon - 6pm
1:00 PM					
1:30 PM				STRIKE 1:30 pm - 5 pm	
2:00 PM					
3:00 PM					
4:00 PM					
5:00 PM					
6:00 PM					
7:00 PM					
8:00 PM					

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION

37TH ANNUAL MEETING AND SCIENTIFIC SESSIONS



Preliminary Scientific Program

8:00 AM – 10:00 AM

SYMPOSIUM 01: Joint ISHLT/ICCAC Symposium: Besides the Surgery – How to Make VAD Patients Successful (SEAPORT A-E)
(MCS, HF, HTX, NHSAH)

CHAIRS: Ivan Netuka, MD, PhD and Thomas Schlöglhofer, BSc

SESSION SUMMARY: This session, supported by a collaborative effort with the International Consortium of Circulatory Assist Clinicians (ICCAC), is designed to discuss questions frequently asked by MCS Teams around the world regarding multidisciplinary program structure, practice guidelines, VAD education including simulation labs, cost-effectiveness and international aspects in care delivery from a program perspective, and with patients, families and staff caring for them.

8:00 AM Multidisciplinary Approaches to Optimize VAD Patient Management in High Volume Centers

Friedrich Kaufmann, MSc, German Heart Institute, Berlin, Germany

8:12 AM Q&A

8:17 AM Caring for the Pediatric VAD Patient – They Aren't Just Small Adults

Jodie Lantz, MSN, RN, PCNS-BC, Children's Health Dallas, Dallas, TX, USA

8:29 AM Q&A

8:34 AM Keep Them at Home: Interventions to Prevent Readmission

Lori Edwards, RN, MSN, Inova Fairfax Hospital, Richmond, VA, USA

8:46 AM Q&A

8:51 AM Measuring and Managing Blood Pressure in CF-LVAD Recipients

Brent C. Lampert, DO, Ohio State University, Columbus, OH, USA

9:03 AM Q&A

9:08 AM Echocardiography in LVAD Recipients: How and What to Measure?

Peter J. Bergin, MBBS, FRACP, Alfred Hospital, Melbourne, Australia

9:20 AM Q&A

9:25 AM Optimizing Unloading with Right Heart Catheterization Ramp Studies

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

9:37 AM Q&A

9:42 AM Do We Need Antiplatelet Drugs and Anticoagulants to Manage LVAD Patients?

Haifa Lyster, MSc, Royal Brompton Harefield Hospital, Middlesex, United Kingdom

9:54 AM Q&A

8:00 AM – 10:00 AM

SYMPOSIUM 02: When Should We Call It Quits? The Efficacy of Interventions to Ameliorate Psychosocial Risk Factors (GRAND HALL A)
(HTX, HF, MCS, NHSAH)

CHAIRS: Lavanya Bellumkonda, MD and Jane MacIver, RN, NP, PhD

SESSION SUMMARY: This session will start by briefly reviewing the literature on psychosocial risk factors including: psychiatric illness, poor social support, medical non-adherence and substance abuse. The majority of the presentations will, however, focus on the interventions available to mitigate the risks associated with each variable and the efficacy of those interventions. Thus, the focus is how to use the psychosocial assessment as a means of problem identification for intervention rather than as a gate keeping function. A panel discussion with all speakers will conclude this session.

8:00 AM The Impact of Psychiatric Risk Factors on Outcomes in Heart Failure, MCS and Cardiothoracic Transplant Patients

Heike Spaderna, PhD, University of Trier, Trier, Germany

8:15 AM The Efficacy of Interventions for Psychiatric Risk Factors in Cardiothoracic Transplantation and MCS

Quincy Young, PhD, RPsych, St. Paul's Hospital, Vancouver, BC, Canada

8:30 AM It Takes a Village: Social Support and Social Determinants of Health in MCS and Cardiothoracic Transplantation as Potential Targets for Intervention

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

8:45 AM When Do We Call It Quits: Intervention Strategies and Outcomes for Medical Non-Adherence

Mary Amanda Dew, PhD, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

9:00 AM Are All Substances Made Equal?

Andrea DiMartini, MD, University of Pittsburgh, Pittsburgh, PA, USA

9:15 AM Case Presentation (Part 1): The Good, The Bad and The Ugly

Jay Baumwol, MBBS, FRACP, Fiona Stanley Hospital, Murdoch, Australia

9:25 AM Q&A

9:30 AM Case Presentation (Part 2): The Good, The Bad and The Ugly

Gillian Coult, PhD, Alfred Hospital, Melbourne, Australia

9:40 AM Q&A

9:45 AM Panel Discussion

8:00 AM – 10:00 AM

SYMPOSIUM 03: Primary Graft Dysfunction (PGD) and Vasoplegia After Heart Transplantation: Sink or Swim

(GRAND HALL B)
(HTX, HF, MCS)

CHAIRS: Scott Silvestry, MD and Hermann Reichenspurner, MD, PhD

SESSION SUMMARY: The session goals are to review the existing and updated knowledge on primary graft dysfunction (PGD) and vasoplegia after heart transplantation. The presentations include: review of the published literature and ISHLT 2014 PGD definitions; the UK prospective PGD study; donor, recipient and surgical risk factors; as well as experiences with post-transplant vasoplegia, with possible lessons learned from non-transplant heart surgery. There will be a 30-minute panel discussion at the end.

8:00 AM Review of the Published Literature and the ISHLT 2014 PGD Definition

Jon A. Kobashigawa, MD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

8:15 AM Review of Risk Factors for PGD: Donor, Recipient and Surgical Procedure

Jennifer Cook, MD, University of Arizona, Tucson, AZ, USA

8:30 AM First Prospective Observational Study on PGD: UK The Heart Evaluation and Retrieval for Transplantation Study

Andre R. Simon, MD, PhD, Harefield Hospital, London, United Kingdom

8:45 AM Vasoplegia after Adult Heart Transplantation and MCS Surgery

Maria M. Patarroyo Aponte, MD, Allegheny General Hospital, Pittsburgh, PA, USA

9:00 AM Severe PGD and Post-Operative Vasoplegia: Complications on the Same Spectrum or Different Entities?

Hiroo Takayama, MD, Columbia University, New York, NY, USA

9:15 AM What Can We Learn from Non-Transplant Cardiac Surgery?

Paul J. Mohacsi, MD, University Hospital, Bern, Switzerland

9:30 AM Panel Discussion

8:00 AM – 10:00 AM

SYMPOSIUM 04: Thinking Outside the Box: Extra-Pulmonary Management in Lung Transplantation**(GRAND HALL C)**

(LTX, BSTR, ID, NHSAH, PATH, PEDS, PHARM, PH)

CHAIRS: Adrian C Lawrence, MD and Helen Whitford, MBBS, FRACP

SESSION SUMMARY: Gastrointestinal complications, extra-pulmonary factors or concurrent systemic disorders may compromise long-term outcome following lung transplantation. This session highlights new paradigms of disease understanding, diagnosis, treatment, prevention and possibilities for investigational trial design.

8:00 AM Gastro-Intestinal Dysmotility in Thoracic Organ Transplantation Revisited: Importance, Evaluation, Treatment

Frank D'Ovidio, MD, Columbia University, New York, NY, USA

8:20 AM Q&A**8:24 AM Gastro-Intestinal Malignancies in Thoracic Organ Transplantation: Collateral Damage?**

Monique Malouf, MD, St. Vincent's Hospital, Sydney, Australia

8:44 AM Q&A**8:48 AM New Lungs – Old Sinuses: Friends or Foes?**

Joseph M. Pilewski, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

9:08 AM Q&A**9:12 AM Lung Transplantation in Systemic Disorders: Need for a Holistic Approach**

Joseph P. Lynch, III, MD, UCLA Medical Center, Los Angeles, CA, USA

9:32 AM Q&A**9:36 AM Pregnancy After Thoracic Organ Transplantation: Unwanted but Unavoidable?**

Mitesh Thakrar, MD, Alberta Lung Transplant Program, Calgary, AB, Canada

9:56 AM Q&A

8:00 AM – 10:00 AM

SYMPOSIUM 05: Joint ISHLT/PHA Symposium: PH and Transplant: Where Do We Go From Here?**(GRAND HALL D)**

(PH, HF, HTX, LTX, MCS, NHSAH, PEDS)

CHAIRS: Oksana A. Shlobin, MD and Karen Fagan, MD

SESSION SUMMARY: Lung transplantation is a viable treatment option for Group I pulmonary arterial hypertension (PAH). In addition, the presence of a secondary forms of PH (Group 2 or 3) in patients who require heart or lung transplant confers a high risk of complications. This symposium, supported by a collaborative effort with the Pulmonary Hypertension Association (PHA), will address various aspects of lung transplantation in adult and pediatric patients with different forms of PH.

8:00 AM Transplantation for PH in the Era of LAS

Roham Zamanian, MD, Stanford University, Stanford, CA, USA

8:15 AM Q&A**8:20 AM Effect of Non-Group 1 Pulmonary Hypertension on Lung Transplantation**

Jorn Carlsen, MD, DMSc, Copenhagen University Hospital, Copenhagen, Denmark

8:35 AM Q&A**8:40 AM Saving the Lung: Liver Transplant in Portopulmonary Hypertension**

Sonja Bartolome, MD, UT Southwestern Medical Center, Dallas, TX, USA

8:55 AM Q&A**9:00 AM Oops: Pregnancy in Pulmonary Hypertension**

Valerie McLaughlin, MD, University of Michigan, Ann Arbor, MI, USA

9:15 AM Q&A**9:20 AM Challenging Choices: Switching Between IV and Oral Prostanoid Therapy**

Joel Wirth, MD, Maine Medical Center, Portland, ME, USA

9:35 AM Q&A**9:40 AM Quality of Life is Most Important: Patient Related Outcomes in PH**

Mardi Gomborg-Maitland, MD, Inova Heart and Vascular Institute, Falls Church, VA, USA

9:55 AM Q&A

8:00 AM – 10:00 AM

SYMPOSIUM 06: The Failing Fontan – Where Do We Go From Here?**(SEAPORT F-G)**

(PEDS, EEP, HF, HTX)

CHAIRS: Thomas Moller, MD, PhD and Steven Kindel, MD

SESSION SUMMARY: The aim is to discuss the care of the Fontan patient with heart failure across the spectrum, from pre-transplant medical management to mechanical support and heart transplantation. Timing of transplantation and listing, multi-organ transplantation and listing, and listing policies will all be discussed. Finally, a difficult case will be presented to the expert speaker panel at the end of the session.

8:00 AM Sustainable Palliation: Optimizing Fontan Patients Prior to Heart Transplant

Jack Rychik, MD, Children's Hospital of Philadelphia, Philadelphia, PA, USA

8:15 AM Q&A**8:20 AM Call for Help! Surgical Options for End-Stage Fontan Failure**

Asif Hasan, MD, Freeman Hospital, Newcastle Upon Tyne, United Kingdom

8:35 AM Q&A**8:40 AM Do You Want to List Too Early or Too Late? How to Determine When Fontan Patients Should Be Listed for Transplant**

Claire Irving, MBChB, MRCPCH, MD, Children's Hospital at Westmead, Sydney, Australia

8:55 AM Q&A**9:00 AM It's Not JUST the Heart: Multi-Organ Transplantation in Fontan Patients**

Daniel N. Bernstein, MD, Stanford University, Stanford, CA, USA

9:15 AM Q&A**9:20 AM Will Anybody Still Transplant My Patient? Programmatic Issues With Taking On Complex Fontan Patients**

Richard Kirk, FRCP, FRCPCH, UT Southwestern Medical Center, Dallas, TX, USA

9:35 AM Q&A**9:40 AM Case Presentation – The Failing Fontan Patient**

Kathleen Simpson, MD, Washington University and Saint Louis Children's Hospital, St. Louis, MO, USA

9:50 AM Panel Discussion

8:00 AM – 10:00 AM

SYMPOSIUM 07: Joint ISHLT/ ESCMID Symposium: Ongoing Challenges in Transplant Infectious Diseases**(SEAPORT H)**
(ID, HTX, LTX, MCS, PHARM)**CHAIRS:** Lara Danziger-Isakov, MD, MPH and Oriol Manuel, MD

SESSION SUMMARY: This session, supported by a collaborative effort with the European Society of Clinical Microbiology and Infectious Diseases (ESCMID), will provide important insight on relevant issues surrounding the care of thoracic organ transplant candidates and recipients and patients on mechanical circulatory support with infections.

8:00 AM Non-Cultural Methods for Diagnosis and Prevention of Invasive Fungal Infections: Are We There Yet?
Barbara Alexander, MD, Duke University, Durham, NC, USA

8:15 AM Q&A

8:20 AM Role of Inhaled Antimicrobials in the Era of Multidrug Resistance
Benoit Guery, MD, University Hospital Vaudois, Lausanne, Switzerland

8:35 AM Q&A

8:40 AM Infection in Thoracic Organ Transplant Recipients on ECMO
Nicolas Mueller, MD, University Hospital Zurich, Zurich, Switzerland

8:55 AM Q&A

9:00 AM Hepatitis C in Donor and Thoracic Organ Transplant Candidates and Recipients: A New Horizon
Paolo A. Grossi, MD, PhD, University of Insubria, Varese, Italy

9:15 AM Q&A

9:20 AM Experience in HIV Infection in Thoracic Organ Transplantation and MCS
Shirish Huprikar, MD, Mount Sinai Medical Center, New York, NY, USA

9:35 AM Q&A

9:40 AM EBV and Anellovirus Viremia as Markers of Risk of Infection in Lung Transplant Recipients
José Maria Aguado, MD, Hospital 12 de Octubre, Madrid, Spain

9:55 AM Q&A

10:30 AM – 12:30 PM

OPENING PLENARY SESSION**(SEAPORT A-E)**
(ALL)**CHAIRS:** Jeffrey J Teuteberg, MD and Maryl R Johnson, MD**10:30 AM Welcome/Program Chair Report**

Jeffrey J. Teuteberg, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

10:35 AM Thoracic Registry Report

Josef Stehlik, MD, MPH, University of Utah School of Medicine, Salt Lake City, UT, USA

10:55 AM MCSD Registry Reports

James L. Kirklin, MD, University of Alabama, Birmingham, AL, USA

11:05 AM President's Report

Maryl R. Johnson, MD, University of Wisconsin School of Medicine, Madison, WI, USA

11:20 AM Featured Abstract**11:35 AM Interactive Discussant****11:40 AM Featured Abstract****11:55 AM Interactive Discussant**

12:00 PM PIONEER AWARD RECIPIENT LECTURE: Experiences of the Beginning
Stuart W. Jamieson, MB, FRCS, UC San Diego Health System, La Jolla, CA, USA

2:30 PM – 4:00 PM

ORAL SESSIONS

4:30 PM – 6:00 PM

ORAL SESSIONS

4:30 PM – 6:00 PM

SYMPOSIUM 08: ECMO in Pre-Capillary PH: What is the Best Option for My Patient?**(GRAND HALL D)**
(PH, HF, LTX, PEDS, PH)**CHAIRS:** Ellie Fadel, MD and Corey E Ventetuolo, MD

SESSION SUMMARY: ECMO options in patients with pre-capillary PH are multiple. They include peripheral VA ECMO through the lower or upper body, central ECMO, VV ECMO, or the new option of oxyRVAD. The indications depend on the patient conditions and underlying cause of PH. This symposium presents an overview of the different options and their application according to the sub-group of patients. There will be a focus on pediatric patients with PAH, adult patients with PAH, IPF-PH patients, and CTEPH patients. A panel discussion with all speakers will conclude this session.

4:30 PM Peripheral vs. Central: ECMO in PAH Patients

Olaf Mercier, MD, PhD, Centre Chirurgical Marie Lannelongue, Fontenay aux roses, France

4:50 PM OxyRVAD: Who is a Candidate?

Charles Hoopes, MD, University of Alabama, Birmingham, AL, USA

5:10 PM ECMO in Pediatric Patients with PAH: What are the Particularities?

Pirooz Eghtesady, MD, St. Louis Children's Hospital, St Louis, MO, USA

5:30 PM ECMO in Non-PAH Pulmonary Hypertension: Clots and Scars

Walter Klepetko, MD, Medical University of Vienna, Vienna, Austria

5:50 PM Panel Discussion

4:30 PM – 6:00 PM

**SYMPOSIUM 09: JHLT at ISHLT:
The Year in a Capsule****(CORONADO A-C)
(ALL)****CHAIRS: Duane Davis, MD, MBA and
Martin Schweiger, MD, PhD**

SESSION SUMMARY: This session will highlight the most impactful publications in JHLT over the past year. Following the presentation of each publication by a member of the Junior Faculty and Trainee Council a senior editorial consultant of the JHLT will relate the presented articles to the greater body of published literature and discuss how they advance our understanding of the field.

**4:30 PM Introduction and Recognition
of Top Papers of the Year**

Patricia Uber, PharmD, Virginia
Commonwealth University, Richmond,
VA, USA

**4:40 PM Highlights of Heart
Transplantation and Mechanical
Circulatory Support**

Agnieszka Ciarka, MD, Catholic
University of Leuven, Leuven, Belgium

**4:55 PM Senior Editor Perspective:
Heart Transplantation and Mechanical
Circulatory Support**

Hermann Reichenspurner, MD, PhD,
University Heart Centre Hamburg,
Hamburg, Germany

**5:00 PM Highlights of Lung
Transplantation and Pulmonary
Hypertension**

Hrishikesh S. Kulkarni, MD, Washington
University School of Medicine, St. Louis,
MO, USA

**5:15 PM Senior Editor Perspective:
Lung Transplantation and Pulmonary
Hypertension**

Andrew J. Fisher, FRCP, PhD, Freeman
Hospital, Newcastle upon Tyne, United
Kingdom

**5:20 PM Highlights of Pediatric
Heart and Lung Transplantation**

Erin Albers, MD, Seattle Children's
Hospital, Seattle, WA, USA

**5:35 PM Senior Editor Perspective:
Pediatric Heart and Lung
Transplantation**

Jennifer Conway, MD, Stollery
Children's Hospital, Edmonton, AB,
Canada

**5:40 PM Highlights of Infectious
Diseases**

Saima Aslam, MD, MS, UCSD Medical
Center, San Diego, CA, USA

**5:55 PM Senior Editor Perspective:
Infectious Diseases**

Margaret Hannan, MD, Mater
Misericordiae University Hospital,
Dublin, Ireland

6:15 PM – 7:15 PM

MINI ORAL SESSIONS**MODERATED POSTER SESSION 1**

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 01: Walk With Me: Exercise Physiology in the LVAD Patient**(GRAND HALL A)**
(MCS, ALL)**CHAIRS:** Christopher S. Hayward, MD and Jorge Silva Enciso, MD

SESSION SUMMARY: Ventricular assist devices improve functional class and quality of life due to its impact on exercise capacity. Long-term LVAD support is associated with improved central hemodynamics and exercise performance. Although, the maximal effects on functional performance continue to be marginal, pump flow changes and cardiac output augmentation does occur during exercise. Understanding the basis of exercise physiology in LVAD patients may allow for future interventions to enhance exercise performance.

7:00 AM Invasive Exercise Hemodynamic Evaluation in LVAD Patients

David M. Kaye, MD, PhD, Alfred Hospital, Melbourne, Australia

7:10 AM Q&A**7:15 AM Factors Influencing Exercise Performance in LVAD Patients**

Stuart D. Russell, MD, Johns Hopkins Hospital, Baltimore, MD, USA

7:25 AM Q&A**7:30 AM Pulsatility and Exercise Performance in Continuous vs. Pulsatile Flow**

Christopher S. Hayward, MD, St. Vincent's Hospital, Sydney, Australia

7:40 AM Q&A**7:45 AM Right Ventricular Function During Exercise in LVAD Patients**

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

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 02: Chagasic Cardiomyopathy: Lessons To Be Learned**(GRAND HALL B)**
(HF, HTX, ID, MCS)**CHAIRS:** Alejandro M. Bertolotti, MD and Stanley Martin, MD

SESSION SUMMARY: The cardiac form of Chronic Chagas Disease is responsible for inability to work, low quality of life and death among infected individuals. Chagas disease currently affects approximately 8 to 11 million people in South America, Central America and Mexico, and approximately 80 million people are at risk for contracting the illness. Although an estimated 300,000 persons with Chagas disease live in the United States, little is known about the burden of Chagasic heart disease. A 12-minute panel discussion with all speakers will conclude this session.

7:00 AM Chronic Chagas Disease and Chagasic Cardiomyopathy

Anna K. Sa, MD, Pro Cardiac Hospital, Rio de Janeiro, Brazil

7:12 AM Arrhythmic Storm as the First and Last Manifestation of Chagas Disease

Fabiana G. Marcondes-Braga, MD, PhD, Heart Institute, Sao Paulo, Brazil

7:24 AM Heart Transplant in Chagasic Cardiomyopathy: How to Manage Immunosuppression

Fernando Bacal, MD, PhD, University of Sao Paulo, Sao Paulo, Brazil

7:36 AM Reactivation of Chagas Post-Transplant: Diagnosis and Pharmaceutical Management

Lisa P. Peters, PharmD, MedStar Washington Hospital Center, Washington, DC, USA

7:48 AM Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 03: Lifecycle Journey of Thrombosis in Mechanical Circulatory Support Patients**(GRAND HALL C)**
(PHARM, HF, HTX, MCS, NNSAH)**CHAIRS:** Stephan Schueler, MD, PhD, FRCS and Christina T. Doligalski, PharmD, BCPS

SESSION SUMMARY: This lifecycle journey is an enduring case with 3 defined points. The time points discussed include implantation and management strategies that influence thrombotic risk; management of anticoagulation including review of current therapy, potential novel therapies and appropriate monitoring; the anatomy of the clot and potential mechanisms of thrombosis in MCS.

7:00 AM Lifecycle Journey Case Presentation

Christina T. Doligalski, PharmD, BCPS, Tampa General Hospital, Tampa, FL, USA

7:03 AM Influence of Surgical Techniques on Pump Thrombosis: How Physics Can Help Patient Management

Thomas Krabatsch, MD, PhD, German Heart Institute, Berlin, Germany

7:18 AM Lifecycle Journey Case Update

Christina Doligalski, PharmD, BCPS

7:19 AM Prevention of Thrombosis in Mechanical Support: Where Are We Going?

Ed Horn, PharmD, Allegheny General Hospital, Pittsburgh, PA, USA

7:34 AM Lifecycle Journey Case Update

Christina Doligalski, PharmD, BCPS

7:35 AM What Pathology Can Tell Us About Mechanisms of Thrombosis

Lisa Baumann Kreuziger, MD, Medical College of Wisconsin, Milwaukee, WI, USA

7:50 AM Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 04:
Completing the Picture: Patient Reported Outcomes (PROs) as an Essential Source of Information in Evaluating Transplantation Outcomes**(GRAND HALL D)**
(NHSAH, ALL)**CHAIRS:** Maria R. Molina, MSN, CRNP, CCRN and James Kirklín, MD

SESSION SUMMARY: Patient Reported Outcomes (PRO) are increasingly used to capture the outcomes of transplant recipients and living donors and have become an inherent part of the evaluation of transplant programs' quality assessment and performance improvement. PROs drive patient centered outcomes research (PCOR). The aim of this session is to explain the concept of patient reported outcomes, how PROs measures are developed and how PROs are assessed to successfully perform PCOR. Further it will provide a number of examples on the use of PROs in clinical practice, research and quality assessment and performance and in clinical practice.

7:00 AM *The Crucial Importance of PROs for Transplant Evaluation from a Clinical, Research and Quality Assurance Perspective*

Linda Ohler, MSN, FAAN, George Washington University, Washington, DC, USA

7:15 AM Q&A**7:20 AM** *State of the Art Development of PRO Assessments for Patient Centered Outcomes Research (PCOR)*

Sabina M. De Geest, RN, PhD, University of Basel, Basel, Switzerland

7:35 AM Q&A**7:40 AM** *PROs in Pediatric Transplant Patients: Special Issues*

Kathleen L. Grady, PhD, APN, FAAN, Northwestern Memorial Hospital, Chicago, IL, USA

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 05: **Upcoming Opportunities and Challenges in Pediatric Lung Transplantation****(SEAPORT F-G)**
(PEDI, HF, LTX, MCS, PEDS, PH)**CHAIRS:** Marc G. Schecter, MD and Christian Benden, MD, FCCP

SESSION SUMMARY: Over recent years, outcomes after lung transplantation in children have improved. Against this background, new challenges arise and new opportunities come up. At this symposium, selection criteria and bridging strategies to lung transplantation for critically ill neonates are discussed, and overall changing indications for pediatric lung transplantation given the decreasing number of children with cystic fibrosis referred for it. In addition, alternative approaches to lung transplant such as Potts-shunts in children with severe pulmonary arterial hypertension are reviewed, and strategies debated to increase the donor pool, for example ABO incompatible lung transplantation in smaller children.

7:00 AM *Bridge over Troubled Water: ECMO for the Critically Ill Newborn as a Bridging Strategy to Transplantation – Who is the Right Candidate?*

Stuart C. Sweet, MD, PhD, St. Louis Children's Hospital, St. Louis, MO, USA

7:12 AM Q&A**7:15 AM** *New Kids on the Block: Is There a Change of Indications for Pediatric Lung and Heart-Lung Transplantation?*

Bart L. Rottier, MD, University Medical Center Groningen, Groningen, Netherlands

7:27 AM Q&A**7:30 AM** *ABO Incompatible Lung Transplantation in Infants and Small Children to Expand the Donor Pool: Where is the Age Limit and What Has To Be Considered?*

Melinda P. Solomon, MD, FRCPC, Hospital for Sick Children, Toronto, ON, Canada

7:42 AM Q&A**7:45 AM** *Potts-Shunt in Children with Severe PAH: A Promising Procedure to Avoid Lung Transplantation?*

Maria C. Gazzaneo, MD, Texas Children's Hospital, Houston, TX, USA

7:57 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 06: **"Those Darn CARVs:" Community Acquired Respiratory Viruses in Lung Transplant****(CORONADO A-C)**
(ID, LTX, PATH, PHARM)**CHAIRS:** Pali Shah, MD and Aric L. Gregson, MD

SESSION SUMMARY: Respiratory viruses following lung transplantation are a common occurrence and can range from the common cold to fulminant respiratory failure. Respiratory viruses have also been implicated in the development of Chronic Lung Allograft Dysfunction (CLAD), the most significant cause of mortality following lung transplantation. Available therapies are limited, however, as is the data supporting their use. Improved understanding of the host response to respiratory viruses may help contribute to the novel therapeutics.

7:00 AM *Respiratory Viruses and CLAD: Epidemiology and Clinical Data*

Erika Lease, MD, University of Washington, Seattle, WA, USA

7:10 AM Q&A**7:15 AM** *Respiratory Viruses and CLAD: Pathogenesis and Host Response*

Tereza Martinu, MD, Toronto General Hospital/UHN, Toronto, ON, Canada

7:25 AM Q&A**7:30 AM** *To Treat or Not to Treat: A Critical Review of Currently Available Therapies*

Allan Glanville, MBBS, MD, FRACP, St. Vincent's Hospital, Sydney, Australia

7:40 AM Q&A**7:45 AM** *In the Pipeline: Novel Therapeutics*

Christopher Ensor, PharmD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

7:55 AM Q&A

8:00 AM – 10:00 AM

SYMPOSIUM 10: Antibodies in Mechanical Circulatory Support: The Phantom Menace**(SEAPORT A-E)****(MCS, BSTR, HF, HTX, PEDS, PHARM)****CHAIRS: Jon A. Kobashigawa, MD and Andreas Zuckermann, MD**

SESSION SUMMARY: As the number of patients requiring mechanical circulatory support (MCS) increases, allosensitization in this population presents a special challenge as it limits options for transplantation. This session will discuss the nature of sensitization in MCS patients, epidemiology, risk of the sensitized MCS patient, therapeutic options and post-transplant management. A 20-minute panel discussion with all speakers will conclude this session.

8:00 AM Is the MCS Device Immunomodulatory?

Elaine F. Reed, PhD, UCLA Immunogenetics Center, Los Angeles, CA, USA

8:20 AM Sensitization in the Pediatric MCS Population

Francesco Parisi, MD, Bambino Gesù Pediatric Hospital, Rome, Italy

8:40 AM Approach to the Sensitized MCS Patient: Desensitization and Other Strategies

Jignesh K. Patel, MD, PhD, Cedars-Sinai Heart Institute, Los Angeles, CA, USA

9:00 AM Epidemiology and Risk of the Sensitized MCS Patient

Michael Shullo, PharmD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

9:20 AM What Happens to the Antibodies After Heart Transplant?

Howard Eisen, MD, Drexel University, Philadelphia, PA, USA

9:40 AM Panel Discussion

8:00 AM – 10:00 AM

SYMPOSIUM 11: Not CAVing to CLADtastrophe: Emerging Mechanisms of Chronic Heart and Lung Allograft Disease**(GRAND HALL A)****(BSTR, HTX, LTX, PATH, PHARM)****CHAIRS: Elizabeth H. Hammond, MD and Christopher H. Wigfield, MD, FRCS**

SESSION SUMMARY: In this session, we will examine factors which have been recently implicated in coronary artery vasculopathy and chronic lung allograft dysfunction. Donor and recipient innate immune responses, autoimmune responses triggered by alloimmunity, and the pivotal role of endothelium and micro-vasculature will be explored. The goal of the session is to identify new pathologic and molecular targets for treatment in both Cardiac Allograft Vasculopathy (CAV) and Chronic Lung Allograft Dysfunction (CLAD). Importantly, this session will examine parallels between chronic processes in the transplanted heart and lung and bring together research and clinical experts in lung and heart transplantation.

8:00 AM Pivotal Role of the Endothelium in CAV

Daniel Jane-Wit, MD, PhD, Yale School of Medicine, New Haven, CT, USA

8:15 AM Q&A**8:20 AM Critical Effect of Airway Microvasculature on CLAD Development**

Mark R. Nicolls, MD, Stanford University, Stanford, CA, USA

8:35 AM Q&A**8:40 AM DAMPs, PAMPS and Innate Immunity in CAV**

Joren C. Madsen, MD, DPhil, Massachusetts General Hospital, Boston, MA, USA

8:55 AM Q&A**9:00 AM DAMPs, PAMPs and Innate Immunity in CLAD**

Scott M. Palmer, MD, MHS, Duke University, Durham, NC, USA

9:15 AM Q&A**9:20 AM Antibodies in CAV: The Role of Autoimmunity in Alloimmunity**

Christine M. Lin, MD, University of Colorado, Denver, CO, USA

9:35 AM Q&A**9:40 AM Antibodies and B Cells in Pathogenesis of CLAD**

Masaaki Sato, MD, University of Tokyo, Tokyo, Japan

9:55 AM Q&A

8:00 AM – 10:00 AM

SYMPOSIUM 12: A Tale of Two Organs: Selecting and Managing Multi-Organ Transplant Recipients**(GRAND HALL B)****(HTX, ALL)****CHAIRS: Teresa De Marco, MD and Jose Gonzalez-Costello, MD**

SESSION SUMMARY: This session will use a combination of lectures and debates to highlight treatment options for patients who have primary thoracic organ failure and secondary end-organ dysfunction. Appropriate selection and management of multi-organ recipients will be discussed. In addition, speakers will address unique challenges faced in multi-organ transplantation, including a review of the policies and ethical considerations in allocating multiple organs to a single individual. A 15-minute panel discussion will conclude this session.

8:00 AM Heart-Lung Transplantation: How Bad do the Ventricles Have to Be?

John J. Dunning, FRCS, Papworth Hospital, Cambridge, United Kingdom

8:15 AM DEBATE (PRO): Heart Transplant Candidates with Vulnerable Kidneys Should Undergo Combined Heart-Kidney Transplantation

Eugene C. DePasquale, MD, UCLA David Geffen School of Medicine, Los Angeles, CA, USA

8:30 AM DEBATE (CON): Heart Transplant Candidates with Vulnerable Kidneys Should Undergo Combined Heart-Kidney Transplantation,

Marcelo Cantarovich, MD, McGill University Health Centre, Montreal, QC, Canada

8:45 AM DEBATE (PRO): Heart Transplant Candidates with Bridging Fibrosis Should Undergo Combined Heart-Liver Transplantation

Sudhir S. Kushwaha, MD, Mayo Clinic, Rochester, MN, USA

9:00 AM DEBATE (CON): Heart Transplant Candidates with Bridging Fibrosis Should Undergo Combined Heart-Liver Transplantation

Charles E. Canter, MD, St Louis Children's Hospital, St. Louis, MO, USA

9:15 AM Thoracic and Abdominal Tug of War: Management of the Multi-Organ Transplant Recipient

Richard C. Daly, MD, Mayo Clinic, Rochester, MN, USA

9:30 AM Ethical Principles in Allocating Multiple Organs to One Recipient

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

9:45 AM Panel Discussion

8:00 AM – 10:00 AM

SYMPOSIUM 13: Lung Allocation Scores (LAS): Making the Complex Simple, or Just the Simple Complex?**(GRAND HALL C)**
(LTX, ALL)**CHAIRS:** Kevin M. Chan, MD and Allan Glanville, MBBS, MD, FRACP**SESSION SUMMARY:** This symposium highlights the lung allocation systems employed worldwide, describe changes in US lung allocation since the implementation of the LAS, review the results of the LAS by Eurotransplant, describe early results of the LAS revision, and discuss controversies on allocation equality raised by the LAS.**8:00 AM Who Needs LAS Anyway? Lung Allocation Around the World**
Are Martin Holm, MD, Oslo University Hospital, Oslo, Norway**8:20 AM Q&A****8:24 AM Lung Allocation Score: The Changing Landscape of Lung Transplantation in the USA**
Thomas M. Egan, MD, MSC, University of North Carolina School of Medicine, Chapel Hill, NC, USA**8:44 AM Q&A****8:48 AM Modification of the USA LAS Model 2015: Early Results**
Leah Edwards, PhD, United Network for Organ Sharing (UNOS), Richmond, VA, USA**9:08 AM Q&A****9:12 AM LAS in Eurotransplant: Towards a Uniform Approach?**
Jacqueline Smits, MD, PhD, Eurotransplant International Foundation, Leiden, Netherlands**9:32 AM Q&A****9:36 AM LAS Controversies: Improving Equity in Organ Allocation?**
Edward R. Garrity, Jr., MD, University of Chicago, Chicago, IL, USA**9:56 AM Q&A**

8:00 AM – 10:00 AM

SYMPOSIUM 14: Chronic Thromboembolic Pulmonary Hypertension (CTEPH): Current Controversies and New Directions**(GRAND HALL D)**
(PH)**CHAIRS:** William Auger, MD and C. Dario Vizza, MD**SESSION SUMMARY:** This symposium will review some of the key questions and controversial topics in patients with CTEPH in the preoperative and postoperative period.**8:00 AM Out-of-Proportion Pulmonary Vascular Resistance (PVR): Operative Suitability and Perioperative Considerations**

Marc De Perrot, MD, Toronto General Hospital, Toronto, ON, Canada

8:15 AM Q&A**8:20 AM Medical Therapy for CTEPH as “Bridge” to Surgery: Right or Wrong?**
Manreet Kanwar, MD, Allegheny General Hospital, Pittsburgh, PA, USA**8:35 AM Q&A****8:40 AM The Right Ventricular (RV) in CTEPH: How to Assess Before and After Pulmonary Endarterectomy**
Paul Forfia, MD, Temple University, Philadelphia, PA, USA**8:55 AM Q&A****9:00 AM Chronic Thromboembolic Disease Without PH at Rest: Treat or Not?**
John Granton, MD, University of Toronto, Toronto, ON, Canada**9:15 AM Q&A****9:20 AM Residual PH after Pulmonary Endarterectomy (PEA): What Definition Should We Use?**
Joanna Pepke-Zaba, MD, Papworth Hospital, Cambridge, United Kingdom**9:35 AM Q&A****9:40 AM Is Balloon Pulmonary Angioplasty (BPA) an Alternative or Complementary to PEA?**
Hiromi Matsubara, MD, PhD, Okayama Medical Center, Okayama, Japan**9:55 AM Q&A**

8:00 AM – 10:00 AM

SYMPOSIUM 15: HLA, AMR and DSA – Approaching Antibodies in Kids**(SEAPORT F-G)**
(ALL)**CHAIRS:** Steven A. Webber, MBChB and Robert G. Weintraub, FRACP, FACC**SESSION SUMMARY:** The goal of this symposia is to educate transplant clinicians in the use of antibody testing in the assessment of patients who are candidates for transplant, and for assessment and treatment of Antibody Mediated Rejection (AMR) after transplant. The session will start with basic science background principles in HLA antibodies, and end with a case of an allo-sensitized patient, with a forum discussion by the experts.**8:00 AM Back to the Basics: HLA Antibodies, Donor-Specific Antibodies, and How to Measure Them**
Anat Roitburg-Tambur, DMD/PhD, Northwestern University, Chicago, IL, USA**8:15 AM Q&A****8:20 AM Before Transplant: Why the PRA Matters**
Anne Dipchand, MD, Hospital for Sick Children, Toronto, ON, Canada**8:35 AM Q&A****8:40 AM Before Transplant: Why the PRA Doesn't Matter Anymore**
Brian Feingold, MD, Children's Hospital of Pittsburgh, Pittsburgh, PA, USA**8:55 AM Q&A****9:00 AM After Transplant: What To Do With New DSA?**
Matthew Fenton, MRCPC, Great Ormond Street Hospital for Children, London, United Kingdom**9:15 AM Q&A****9:20 AM After Transplant: How to Diagnose and Treat AMR in Kids**
Melanie D. Everitt, MD, Children's Hospital Colorado, Aurora, CO, USA**9:35 AM Q&A****9:40 AM Case Presentation: Managing an Allosensitized Patient to Transplant**
Ching Kit Chen, MBBS, MRCPC, KK Women's and Children's Hospital, Singapore, Singapore**9:50 AM Panel Discussion**

8:00 AM – 10:00 AM

SYMPOSIUM 16: “Around the World in 80 Days:” Infectious Challenges in Cardiothoracic Transplantation**(CORONADO A-C)**
(ID, HF, HTX, LTX)**CHAIRS:** Saima Aslam, MD, MS and
Shahid Husain, MD, MS**SESSION SUMMARY:** The rise of cardiothoracic (CT) transplantation in emerging countries has led to unique infectious challenges. The goal of the symposium is to understand the impact of locally endemic infections such as Zika virus, hepatitis B, and tuberculosis on CT transplant recipients in different areas of the world. The presentations will cover the scope of the problem, management strategies, outcomes and travel advice.**8:00 AM Perspective on Zika Virus and Other Emerging Infections from Latin America**

Silvia V. Campos, MD, Heart Institute of Sao Paulo Medical School, Sao Paulo, Brazil

8:20 AM Q&A**8:24 AM Hepatitis B and Thoracic Transplantation**

Emily A. Blumberg, MD, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

8:44 AM Q&A**8:48 AM Screening and Management of Latent Tuberculosis**

Subramanian Swaminathan, MD, MNAMS, Global Hospitals, Chennai/Bengaluru, India

9:08 AM Q&A**9:12 AM Treatment of Tuberculosis**

Amparo Sole, MD, PhD, Hospital Universitario la Fe, Valencia, Spain

9:32 AM Q&A**9:36 AM Travel Advice for the Immunocompromised Traveler: Prophylaxis, Vaccination and Other Preventive Measures**

Robin Avery, MD, Johns Hopkins Medicine, Baltimore, MD, USA

9:56 AM Q&A

10:30 AM – 12:30 PM

PLENARY SESSION

(SEAPORT A-E)
(ALL)**CHAIRS:** Hermann Reichenspurner, MD, PhD and David O. Taylor, MD**10:30 AM Putting an End to Transplantation? Translating the Promise of Stem Cell Therapy into Practice**

Brenda Ogle, PhD, University of Minnesota, Minneapolis, MN, USA

10:50 AM Featured Abstract**11:05 AM Interactive Discussant****11:10 AM Tweets, Texts and Posts: Does Social Media Improve or Complicate Communication in Medicine?**

Dorry Segev, MD, PhD, Johns Hopkins School of Medicine, Baltimore, MD, USA

11:30 AM Share and Share Alike: Optimizing Organ Allocation in an Era of Increasing Need

Sommer Gentry, PhD, United States Naval Academy, Annapolis, MD, USA

11:50 AM Featured Abstract**12:05 PM Interactive Discussant****12:10 PM Metabolomics: New Tools to Understand Rejection**

Brendan Keating, PhD, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

2:00 PM – 3:30 PM

ORAL SESSIONS

4:00 PM – 6:00 PM

SYMPOSIUM 17: To Pulse or Not To Pulse? That is the Question**(SEAPORT A-E)**
(ALL)**CHAIRS:** Paolo Colombo, MD and
Bart Meyns, MD, PhD**SESSION SUMMARY:** Human evolution has favored a pulsatile heart pump as the optimal way for organ perfusion. CF-LVAD physiology, with low to no pulsatility, has challenged that widely accepted notion. Although the present technology had been rapidly adapted, we are still hampered by morbidities that limit the expansion into the less sick group. Are we missing the pulse? Thus, methods to generate pulsatility and possibly create a hybrid between the man-made and mankind are presently being explored. A 15-minute panel discussion with all speakers will conclude this session.**4:00 PM Physiologic and Clinical Impact of Pulsatile vs. Nonpulsatile Flow on Blood Vessels and Vital Organs**

Nader Moazami, MD, Cleveland Clinic, Cleveland, OH, USA

4:15 PM Physiologic and Clinical Impact of Pulsatile vs. Nonpulsatile Flow on the Brain

William K. Cornwell, III, MD, University of Colorado, Denver, CO, USA

4:30 PM Best Strategies to Measure Arterial Pulsatility and Tissue Perfusion in CF-LVAD Patients

Melana Yuzefpolskaya, MD, Columbia University, New York, NY, USA

4:45 PM Design and Rationale for New Pulsatile Technology

Stephen C. Koenig, PhD, University of Louisville, Louisville, KY, USA

5:00 PM Hemodynamic Effects of Counterpulsation

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

5:15 PM Long-term Ambulatory Counterpulsation Using iVAS

Val Jeevanandam, MD, University of Chicago Medicine, Chicago, IL, USA

5:30 PM The Pulse of Life – A Scientific and Existential Perspective

Mandeep Mehra, MD, FRCP, FACC, FESC, Brigham and Women's Hospital/Harvard Medical School, Boston, MA, USA

5:45 PM Panel Discussion

4:00 PM – 6:00 PM

SYMPOSIUM 18: Weeding Out Fact from Fiction – The Highs and Lows of Marijuana Use in Transplant**(GRAND HALL A)**
(PHARM, ALL)**CHAIRS: Adam Cochrane, PharmD and Vincent G. Valentine, MD**

SESSION SUMMARY: Increasing prevalence of medicinal and recreational cannabis use among transplant recipients has sparked discussion on the legal and safety ramifications of cannabis use in this patient population. This symposium will discuss the pharmacology of cannabis as well as explore the data surrounding the legal ramifications and risk/benefits of cannabis use in transplantation.

4:00 PM The Pharmacology of a Weed: Clinical Pharmacology of Cannabis and CannabinoidsRobert L. Page, PharmD, MSPH,
University of Colorado, Denver, CO, USA**4:15 PM Q&A****4:20 PM Cannabis: Wonder-Drug or Devil's Weed? The Psychosocial Impact of Cannabis Use Post-Transplant**Patrick Smith, PhD, Duke University
Medical Center, Durham, NC, USA**4:35 PM Q&A****4:40 PM Cannabis Use and Graft Function: What Do We Know?**Lianne G. Singer, MD, FRCPC, Toronto
General Hospital, Toronto, ON, Canada**4:55 PM Q&A****5:00 PM But the Government Says I Can: Regulatory Implications of Legalizing Cannabis**Lorriana E. Leard, MD, UCSF Medical
Center, San Francisco, CA, USA**5:15 PM Q&A****5:20 PM DEBATE (PRO): Cannabis Use Pre-Transplant – Don't Judge Me!**

Martin Zamora, MD, University of Colorado, Denver, CO, USA

5:35 PM DEBATE (CON): Cannabis Use Pre-Transplant – Don't Judge Me!Erik Verschuuren, MD, PhD, University
Medical Centre Groningen, Groningen,
Netherlands**5:50 PM DEBATE REBUTTAL (PRO)**

Martin Zamora, MD

5:55 PM DEBATE REBUTTAL (CON)

Erik Am Verschuuren, MD, PhD

4:00 PM – 6:00 PM

SYMPOSIUM 19: Cardiogenic Shock: Types, Teams and Tactics**(GRAND HALL B)**
(HF, HTX, MCS)**CHAIRS: Lynn R Punnoose, MD and Marian Urban, MD**

SESSION SUMMARY: Cardiogenic shock encompasses a broad clinical spectrum, including acute MI, primary RV failure and biventricular failure. This session will incorporate individual presentations describing (1) the spectrum and prevalence of cardiogenic shock subtypes, (2) national and international approaches to management and temporary mechanical support selection and (3) the interdisciplinary approach to device management involving heart failure, interventional, critical care and imaging cardiologists.

4:00 PM Phenotypes of Cardiogenic Shock: How to Move Beyond Anecdotes to Estimate Subtype PrevalenceShelley A. Hall, MD, Baylor University
Medical Center, Dallas, TX, USA**4:15 PM Q&A****4:20 PM Hemodynamics of Temporary MCS: Do They Help Guide Device Selection? What if You Don't Have Them?**Gabriel Sayer, MD, University of
Chicago, Chicago, IL, USA**4:35 PM Q&A****4:40 PM The Use of SHOCK Teams in Hospitals with Advanced Heart Failure Care**Jose N. Nativi, MD, University of Utah
School of Medicine, Salt Lake City, UT,
USA**4:55 PM Q&A****5:00 PM Refractory Ventricular Tachycardia (VT) with Hemodynamic Compromise: Temporary Device Choice and Ablative Options**A. Reshad Garan, MD, Columbia
University, New York, NY, USA**5:15 PM Q&A****5:20 PM Weaning Temporary Mechanical Circulatory Support: Echocardiographic vs. Hemodynamic Parameters – This Is How We Do It**Jamie L. Kennedy, MD, University of
Virginia Health System, Charlottesville,
VA, USA**5:35 PM Q&A****5:40 PM Weaning Temporary Mechanical Circulatory Support: Echocardiographic vs. Hemodynamic Parameters – This Is How We Do It**Evgenij V. Potapov, MD, PhD, Berlin
Heart Center, Berlin, Germany**5:55 PM Q&A**

4:00 PM – 6:00 PM

SYMPOSIUM 20: ECMO in Lung Transplantation: Sensational Success or Fantastic Failure?**(GRAND HALL C)**
(LTX, ALL)**CHAIRS: Erika Berman Rosenzweig, MD and Reda E. Girgis, MD**

SESSION SUMMARY: This symposium gives a state-of-the art overview of the current ECMO technology, including cannulation strategies, patient selection, peri-operative and program management.

4:00 PM ECMO Technique: Configuration, Cannulae, ComplicationsMartin Strueber, MD, Michigan State
University College of Human Medicine,
East Lansing, MI, USA**4:20 PM Q&A****4:24 PM ECMO Candidate Selection for Elective ECMO**Clemens Aigner, MD, Universität
Duisburg-Essen, Essen, Germany**4:44 PM Q&A****4:48 PM ECMO as Urgent Bridge to Transplant**Gregor Warnecke, MD, Hannover
Medical School, Hannover, Germany**5:08 PM Q&A****5:12 PM Post-Operative ECMO for Rescue Therapy**Göran Dellgren, MD, Sahlgrenska
University Hospital, Göteborg, Sweden**5:32 PM Q&A****5:36 PM ECMO Program Management: Bridge over Troubled Water?**David Michael McMullan, MD, Seattle
Children's Hospital, Seattle, WA, USA**5:56 PM Q&A**

4:00 PM – 6:00 PM

SYMPOSIUM 21: Cardiopulmonary Hemodynamics, the Right Ventricle, and the Kidney: Connecting All the Dots**(GRAND HALL D)**
(PH, HF, HTX, LTX, MCS)**CHAIRS: Ryan J. Tedford, MD and Marco Guazzi, MD, PhD**

SESSION SUMMARY: This symposium reviews hot topics in hemodynamic assessment and management of patients with pulmonary hypertension including measures of pulmonary vascular compliance, the emerging role of right ventricular reserve assessment, and the interaction between right heart and kidney function. In the final two talks, the speakers debate the need for provocative testing in patients meeting hemodynamic criteria for Group I PAH but who have at least some phenotypic characteristics of group II PH. A panel discussion with all speakers will conclude this session.

4:00 PM Forget About Pulmonary Vascular Resistance (PVR), Only Pulmonary Vascular Compliance Matters

Thenappan Thenappan, MD, University of Minnesota, Minneapolis, MN, USA

4:20 PM No Time to Rest: The Importance of Right Ventricular Reserve in Pulmonary Hypertension

Robert Naeije, MD, Université Libre de Bruxelles, Brussels, Belgium

4:40 PM The Cardiorenal Syndrome in Right Heart Failure: Just Central Venous Pressure (CVP) or More to the Story?

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

5:00 PM Case Presentation: Age >65, mPAP>25mmHg, Borderline Pulmonary Artery Wedge Pressure (PAWP)

Rebecca Cogswell, MD, University of Minnesota, Minneapolis, MN, USA

5:05 PM DEBATE (PRO): It is Essential to Unmask PH Due to Left Heart Disease (LHD) with Volume Loading and/or Exercise Testing

Marc A. Simon, MD, University of Pittsburgh, Pittsburgh, PA, USA

5:25 PM DEBATE (CON): It is Essential to Unmask PH Due to Left Heart Disease (LHD) with Volume Loading and/or Exercise Testing

Susanna Mak, MD, PhD, Mount Sinai Hospital, Toronto, ON, Canada

5:45 PM Panel Discussion

4:00 PM – 6:00 PM

SYMPOSIUM 22: Let's Get Personal! Precision Diagnostics in Thoracic Transplantation**(SEAPORT F-G)**
(PATH, ALL)**CHAIRS: Patrick Bruneval, MD and Sean Agbor-Enoh, MD**

SESSION SUMMARY: In recent years, methodologies of precision medicine have been applied to the study of post-transplant pathobiology. Basic molecular mechanisms involved in acute and chronic allograft rejection have been uncovered, and novel molecular tools for the non-invasive monitoring of heart and lung transplantation have been discovered. This symposium brings together state-of-the-art scientific speakers who lead the field as we make a transition to personalized transplant care.

4:00 PM Precision Medicine: Applying Circulating Cell-Free DNA to Monitor Transplant Health Outcomes

Hannah Valantine, MD, National Institutes of Health, Bethesda, MD, USA

4:15 PM Q&A**4:20 PM How to Use the Virome to Monitor Post-Transplant Immune Status**

Iwijn De Vlaminck, PhD, Cornell University, Ithaca, NY, USA

4:35 PM Q&A**4:40 PM Tissue and Circulating Long-Noncoding RNA and MicroRNA in Thoracic Transplantation**

Howard J. Eisen, MD, Drexel University College of Medicine, Philadelphia, PA, USA

4:55 PM Q&A**5:00 PM Transcriptomic Analysis of Endomyocardial Biopsies for Precision Diagnosis**

Jean-Paul Duong Van Huyen, MD, Hospital Necker, Paris, France

5:15 PM Q&A**5:20 PM Next Generation Sequencing and Signatures: Applications in Transplant Diagnostics**

Bruce McManus, MD, PhD, St. Paul's Hospital, Vancouver, BC, Canada

5:35 PM Q&A**5:40 PM The Future of Precision Medicine: Genome Editing Using CRISPR/Cas9 Technology**

Christof Fellmann, PhD, University of California, Berkeley, CA, USA

5:55 PM Q&A

4:00 PM – 6:00 PM

SYMPOSIUM 23: Taming of the Shrew: Mycobacterium Abscessus in Lung Transplantation**(CORONADO A-C)**
(ID, ALL)**CHAIRS: Jens Gottlieb, MD and Me-Linh Luong, MD**

SESSION SUMMARY: Mycobacterium abscessus is increasingly isolated pre- and post-lung transplant (LT). It causes a wide spectrum of infection including disseminated post-LT. Pre-LT isolation is a risk for post-LT infection and patient-to-patient transmission may occur. It is resistant to many antibiotics. Prolonged combination therapy is required and side-effects are frequent. Thus, many centers consider M. abscessus a contra-indication to LT. Good outcomes appear linked to aggressive peri-operative management. A 10-minute panel discussion with all speakers will conclude this session.

4:00 PM Epidemiology and Modes of Transmission

Cameron Wolfe, MD, Duke University, Durham, NC, USA

4:15 PM Q&A**4:20 PM Clinical Manifestations, Diagnosis and Antimicrobial Susceptibility**

Orla Morrissey, MD, The Alfred Hospital, Melbourne, Australia

4:35 PM Q&A**4:40 PM Management of M. Abscessus in the Lung Transplant Candidate: Preparation for Transplantation**

Fernanda Silveira, MD, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

4:55 PM Q&A**5:00 PM Antimicrobial Therapy of M. Abscessus: Current and Novel Agents**

Patricia Ging, PharmD, Mater Misericordiae University Hospital, Dublin, Ireland

5:15 PM Q&A**5:20 PM DEBATE (PRO): Patients with M. Abscessus Can Be Safely Transplanted**

Vincent Valentine, MD, University of Alabama, Birmingham, AL, USA

5:35 PM DEBATE (CON): Patients with M. Abscessus Can Be Safely Transplanted

Paul Corris, MB, FRCP, Freeman Hospital, Newcastle upon Tyne, United Kingdom

5:50 PM Panel Discussion

6:15 PM – 7:15 PM

MINI ORAL SESSIONS

MODERATED POSTER SESSION 2



7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 07: Getting to the Heart of Muscular Dystrophies**(GRAND HALL A)**
(ALL)**CHAIRS: Forum Kamdar, MD PhD and Takeshi Nakatani, MD, PhD**

SESSION SUMMARY: Neuromuscular disorders result in significant skeletal muscle weakness and increasingly severe cardiomyopathy. The objectives of this session are to identify cardiomyopathy as a common sequela of neuromuscular disorders, review current medical therapies for treating heart failure in this unique population and discuss the use of advanced heart failure therapies such as cardiac transplantation and LVADs for pediatric and adult patients with end-staged neuromuscular cardiomyopathy.

7:00 AM Heart Failure in Muscular Dystrophies: No Longer Just a Skeletal Muscle Disorder

Daniel J. Garry, MD, PhD, University of Minnesota Medical Center, Minneapolis, MN, USA

7:10 AM Q&A**7:15 AM Heart Failure Medical Treatment for Muscular Dystrophy: When and How to Treat**

Dennis Duboc, MD, CHU Paris Centre, Hospital Cochin, Paris, France

7:25 AM Q&A**7:30 AM Mechanical Circulatory Support in Muscular Dystrophy Cardiomyopathy**

Antonio Amodeo, MD, Bambino Gesù Pediatric Hospital, Rome, Italy

7:40 AM Q&A**7:45 AM Cardiac Transplantation in Muscular Dystrophies,**

Jeffrey Towbin, MD, Le Bonheur Children's Hospital, Memphis, TN, USA

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 08: Live Long and Prosper: Thriving After Pediatric Transplantation**(GRAND HALL B)**
(PEDI, EEP, HF, HTX, LTX, MCS, NNSAH, PHARM)**CHAIRS: Caron L. Burch, MSN and Estela Azeka, MD**

SESSION SUMMARY: The session will focus on the psychosocial, behavioral challenges as well as communication and developmental issues in pediatric transplant patients. Specific attention will be given to adolescence and models for transition.

7:00 AM Neurodevelopmental Outcomes after Pediatric Cardiothoracic Transplant

Simon Urschel, MD, University of Alberta, Edmonton, AB, Canada

7:10 AM Q&A**7:15 AM Keep Moving! Physical Exercise and Competitive Sports After Pediatric Transplantation**

Kari Nytroen, PhD, Oslo University Hospital Rikshospitalet, Oslo, Norway

7:25 AM Q&A**7:30 AM Nobody Understands Me! Communication Strategies to Reach Teenagers and Young Adults**

Melissa Cousino, PhD, University of Michigan Transplant Center, Ann Arbor, MI, USA

7:40 AM Q&A**7:45 AM Transitioning to Adult Care: Does Anything Work?**

Jonathan N. Johnson, MD, Mayo Clinic, Rochester, MN, USA

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 09: Mixed Rejection (MR) of the Cardiac Allograft: The Next Frontier**(GRAND HALL C)**
(PATH, BSTR, HF, HTX)**CHAIRS: Gerald J. Berry, MD and Marny Fedrigo, MD, PhD**

SESSION SUMMARY: Cellular rejection and antibody mediated rejection are well-characterized. These two forms of rejection are most often considered separately, if not mutually exclusive. Increasingly, an overlap in features of these two rejection patterns is being noted (coined "mixed rejection"). Insights into the immune mechanisms of rejection may be gleaned from a better understanding of mixed rejection. A panel discussion with all speakers will conclude this session.

7:00 AM T- and B-cell Immunity in Mixed Rejection: Time to Tango

Esme Dijke, PhD, University of Alberta, Edmonton, AB, Canada

7:15 AM Is the Pathology of Mixed Rejection More Than Just ACR + AMR? See for Yourself

Dylan Miller, MD, Intermountain Central Laboratory, Salt Lake City, UT, USA

7:30 AM Clinical Insights into the Behavior of Mixed Rejection in Heart Transplantation

A. G. Kfoury, MD, FACC, Intermountain Medical Center, Murray, UT, USA

7:45 AM Panel Discussion

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 10: Contrasts and Similarities in Children and Adults: IPAH, Portopulmonary Hypertension and Perioperative Management**(GRAND HALL D)****(PH, BSTR, HF, LTX, NHSAH, PEDS, PHARM)****CHAIRS: Jean-Luc Vachieri, MD and Brian Feingold, MD**

SESSION SUMMARY: This symposium will provide attendees with details on current management of pulmonary arterial hypertension (PAH) in adults and children. Three different clinical scenarios are discussed: idiopathic PAH, portopulmonary PAH, and perioperative PAH care. A panel discussion with all speakers will conclude this session.

7:00 AM New Treatment Paradigms in IPAH Management in Children: How Do We Extrapolate Data from Adults?Erika Berman Rosenzweig, MD,
Columbia University, New York, NY, USA**7:15 AM Challenges in Portopulmonary Hypertension: Different in Children?**

Michel De Pauw, MD, Ghent University Hospital, Ghent, Belgium

7:30 AM Peri-operative Management of Infants, Children and Adolescents with Pulmonary Vascular Disease: "Tried as an Adult?"Jacqueline R. Szmuszkovicz, MD,
Children's Hospital, Los Angeles, CA, USA**7:45 AM Panel Discussion**

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 11: There is No Such Thing as Perfect: Selecting Recipients for Lung Transplantation**(SEAPORT G-H)****(LTX, ID, NHSAH, PEDS)****CHAIRS: Rupal Shah, MD and Geert M. Verleden, MD, PhD**

SESSION SUMMARY: Selection of lung transplant recipients is challenging, often due to limitations of current selection criteria. This sunrise symposium highlights cutting edge research and practical knowledge on physiologic factors, psychological features and non-standard, controversial or rare transplant indications to assist in selecting lung transplant recipients.

7:00 AM Identifying the Right Candidate: Body Composition, Physiologic Frailty and Age

Jonathan P. Singer, MD, MS, UCSF Medical Center, San Francisco, CA, USA

7:17 AM Q&A**7:20 AM Psychological and Neuro-cognitive Frailty: Effect on Transplant Outcomes**

James A. Blumenthal, PhD, Duke University Medical Center, Durham, NC, USA

7:37 AM Q&A**7:40 AM "Extended Criteria" Recipients: How Far Should We Go?**

Jens Gottlieb, PhD, Hannover Medical School, Hannover, Germany

7:57 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 12: HIV and Transplantation: It Isn't Going Away...**(CORONADO A-C)****(PHARM, HTX, ID, LTX, NHSAH, PEDS, PH)****CHAIRS: Patricia Uber, PharmD and Joanna M. Schaenman, MD, PhD**

SESSION SUMMARY: This session will review end-stage heart and lung diseases associated with HIV and discuss key infectious diseases and pharmacotherapy management considerations in both the transplant and post-transplant phases of care. Lastly, HIV to HIV transplantation in the cardio-thoracic population will be discussed.

7:00 AM The Art and Science of HIV Associated Cardiomyopathy

Marco Masetti, MD, Malpighi University Hospital, Bologna, Italy

7:10 AM Q&A**7:15 AM HIV Associated Pulmonary Arterial Hypertension: True, True and Related**

Robert Frantz, MD, Mayo Clinic, Minneapolis, MN, USA

7:25 AM Q&A**7:30 AM HIV: The ID Perspective on the Donor and Recipient**

Valentina Stosor, MD, Northwestern University, Chicago, IL, USA

7:40 AM Q&A**7:45 AM A Delicate Balance: Management of Transplant Meds, HIV Meds and ID Prophylaxis Meds**

Christine Hui, PharmD, UCSF Medical Center, San Francisco, CA, USA

7:55 AM Q&A

8:00 AM – 9:30 AM

ORAL SESSIONS

10:00 AM – 11:30 AM

ORAL SESSIONS

1:30 PM – 3:30 PM

SYMPOSIUM 24: Aiming Off Target: Non-Cardiac Consequences of LVAD Support(SEAPORT A-E)
(MCS, BSTR, HF)**CHAIRS: Mustafa Toma, MD and Emma Birks, MD, PhD**

SESSION SUMMARY: The relevance of non-cardiac consequences of LVAD support is being increasingly recognized. Many of these “off-target-organ” effects have largely driven the morbidity and mortality of LVAD-supported patients, and these will become more relevant with the rise of the destination therapy population. In this symposium, each speaker will discuss alterations in a different organ system with LVAD support and future directions for research and technologic development to address these alterations.

1:30 PM Continuous-Flow Effects on the Systemic Vasculature and Endothelium

Amrut V. Ambardekar, MD, University of Colorado, Aurora, CO, USA

1:45 PM Q&A**1:50 PM LVAD Effects on Skeletal Musculature and Exercise Capacity**

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

2:05 PM Q&A**2:10 PM Renal Function with LVAD Support**

Meredith A. Brisco, MD MSCE, Temple University, Philadelphia, PA, USA

2:25 PM Q&A**2:30 PM Hematologic Perturbations Caused by Mechanical Support**

Anna L. Meyer, MD, Leipzig Heart Center, Leipzig, Germany

2:45 PM Q&A**2:50 PM Neuropsychological Function in Long-term LVAD Patients**

Ralph Petrucci, MD, Drexel University College of Medicine, Philadelphia, PA, USA

3:05 PM Q&A**3:10 PM Gastrointestinal Physiologic Changes Associated With Continuous-Flow Pumps**

Brian Houston, MD, Johns Hopkins Hospital, Baltimore, MD, USA

3:25 PM Q&A

1:30 PM – 3:30 PM

SYMPOSIUM 25: Dealing With Antibodies Before and After Heart Transplant: Do We Have New Arrows in Our Quiver?(GRAND HALL A)
(ALL)**CHAIRS: Michael Shullo, PharmD and Luciano Potena, MD, PhD**

SESSION SUMMARY: This session will provide an overview of the current management strategies for sensitized patients pre- and post-transplant by discussing desensitization pharmacotherapy, long-term management and monitoring, key challenges and strategies, immunogenetic and non-HLA considerations, and possible downstream implications on target cells, incorporating the newest research-based evidence supplemented with experience from seasoned multidisciplinary clinicians.

1:30 PM Overview of the Management of the Sensitized Heart Transplant Candidate and Recipient

Monica Colvin, MD, University of Michigan, Ann Arbor, MI, USA

1:45 PM Q&A**1:50 PM Strategies for Desensitization of the Heart Transplant Candidate**

Laura M. Lourenco, PharmD, University of Chicago Medicine, Chicago, IL, USA

2:05 PM Q&A**2:10 PM Downstream Implications of Desensitization**

Rajalingam Raja, PhD, UCSF Medical Center, San Francisco, CA, USA

2:25 PM Q&A**2:30 PM DEBATE (PRO): No Time to Wait: Proceed to Heart Transplant with Low Level Donor Specific Antibodies**

Barbara Pisani, MD, Wake Forest Medical Center, Winston-Salem, NC, USA

2:45 PM DEBATE (CON): No Time to Wait: Proceed to Heart Transplant with Low Level Donor Specific Antibodies

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

3:00 PM DEBATE (PRO): Asymptomatic Donor Specific Antibodies After Transplant: Everyone Should Be Treated

Sharon Chih, MD, University of Ottawa Heart Institute, Ottawa, ON, Canada

3:15 PM DEBATE (CON): Asymptomatic Donor Specific Antibodies After Transplant: Everyone Should Be Treated

Palak Shah, MD, MS, Inova Fairfax Hospital, Falls Church, VA, USA

1:30 PM – 3:30 PM

SYMPOSIUM 26: Making Every Heart Count(GRAND HALL B)
(HTX, EEP, HF, HTX)**CHAIRS: Kiran K. Khush, MD and Jason W. Smith, MD**

SESSION SUMMARY: This symposium focuses on donor heart utilization, from use of expanded criteria donors to improved stewardship of donor hearts, reducing waste of potentially usable hearts and breaking open the doors of DCD heart procurement.

1:30 PM Is The Expanded Criteria Donor the New Standard Criteria Donor?

Andre R. Simon, MD, PhD, Harefield Hospital, London, United Kingdom

1:45 PM Q&A**1:50 PM Can We Revive the DCD Heart?**

Stephen Large, FRCS, Papworth Hospital, Cambridge, United Kingdom

2:05 PM Q&A**2:10 PM Resource Stewardship in Donor Selection**

Michael Pham, MD, California Pacific Medical Center, San Francisco, CA, USA

2:25 PM Q&A**2:30 PM The Public Health Service (PHS) Increased Risk Donor: What Is the Real Risk of Infection?**

Michael Ison, MD, Northwestern University, Chicago, IL, USA

2:45 PM Q&A**2:50 PM Evaluation of the Heart at Time of Donor Procurement**

William E. Stansfield, MD, Toronto General Hospital, Toronto, ON, Canada

3:05 PM Q&A**3:10 PM Getting The Heart Home – How to Procure the Donor Heart**

Hannah Copeland, MD, VA McGuire Medical Center/Virginia Commonwealth University, Richmond, VA, USA

3:25 PM Q&A

1:30 PM – 3:30 PM

SYMPOSIUM 27: Bench to Bedside: How Advances in Immunology Shape the Care of Today's Lung Transplant Recipients**(GRAND HALL C)****(LTX, BSTR, HTX, ID, NNSAH, PATH, PEDI, PHARM)****CHAIRS: Ciara M. Shaver, MD and Andrew J. Fisher, FRCP, PhD**

SESSION SUMMARY: Recent advances in immunology have important implications for modern day clinical care. This session will highlight some important scientific advances in genomics and immunology with direct applicability to clinical issues including immunosuppression, graft surveillance, drug dosing, and antibody mediated rejection. This session will help to bridge the gap between translational immunology research and current clinical practice.

1:30 PM The Immunobiology of Lung Transplantation: From Bench to Bedside
Rebecca A. Shilling, MD, University of Chicago, Chicago, IL, USA

1:50 PM Q&A

1:54 PM The Quest for Biomarkers for Acute and Chronic Lung Rejection: Where Are We Now?
John R. Greenland, MD, PhD, UCSF Medical Center, San Francisco, CA, USA

2:14 PM Q&A

2:18 PM Tackling the Immune System: Novel Biologicals and Immunomodulators in Lung Transplant Recipients
Stephen Juvet, MD, PhD, Toronto General Research Institute, Toronto, ON, Canada

2:38 PM Q&A

2:42 PM Antibody-Targeted Therapies in Lung Transplantation: When and How to Use?
Ramsey R. Hachem, MD, Washington University School of Medicine, St. Louis, MO, USA

3:02 PM Q&A

3:06 PM Targeting Non-Immune Cells: Novel Treatment Options in Lung Transplantation
Daniel Chambers, MBBS, MRCP, FRACP, MD, The Prince Charles Hospital, Brisbane, Australia

3:26 PM Q&A

1:30 PM – 3:30 PM

SYMPOSIUM 28: Great Debates in Pulmonary Hypertension**(GRAND HALL D)****(PH, ALL)****CHAIRS: Teresa De Marco, MD, FACC and Paul A. Corris, MB FRCP**

SESSION SUMMARY: The diagnosis and management of pulmonary hypertension is steadily being refined by ongoing investigations in the field. However, knowledge gaps and challenges still remain. This session will explore in case and debate format controversial diagnostic and management dilemmas beyond accepted practice. Topics include adding additional Pulmonary Arterial Hypertension (PAH) specific therapy in a stable patient, treatment of borderline pulmonary hypertension, and managing pulmonary hypertension complicated by Interstitial Lung Disease (ILD).

1:30 PM Case Presentation: "I'm Doing Fine Doc, Do I Really Need Another Pill?"
Roberto Badagliacca, MD, University of Rome Sapienza, Rome, Italy

1:35 PM DEBATE (PRO): My Patient with PAH is Clinically Stable on Monotherapy: I Should Escalate to Dual or Triple Therapy
Rogerio Souza, MD, University of Sao Paulo, Sao Paulo, Brazil

1:50 PM DEBATE (CON): My Patient with PAH is Clinically Stable on Monotherapy: I Should Escalate to Dual or Triple Therapy
Veronica Franco, MD, Ohio State University, Columbus, OH, USA

2:05 PM CASE PRESENTATION: To Treat or Not To Treat...Borderline PAH
Richa Agarwal, MD, Allegheny General Hospital, Pittsburgh, PA, USA

2:10 PM DEBATE (PRO): "Borderline" PAH Should Be Treated with PAH Specific Therapy
Bradley Maron, MD, Brigham and Women's Hospital, Boston, MA, USA

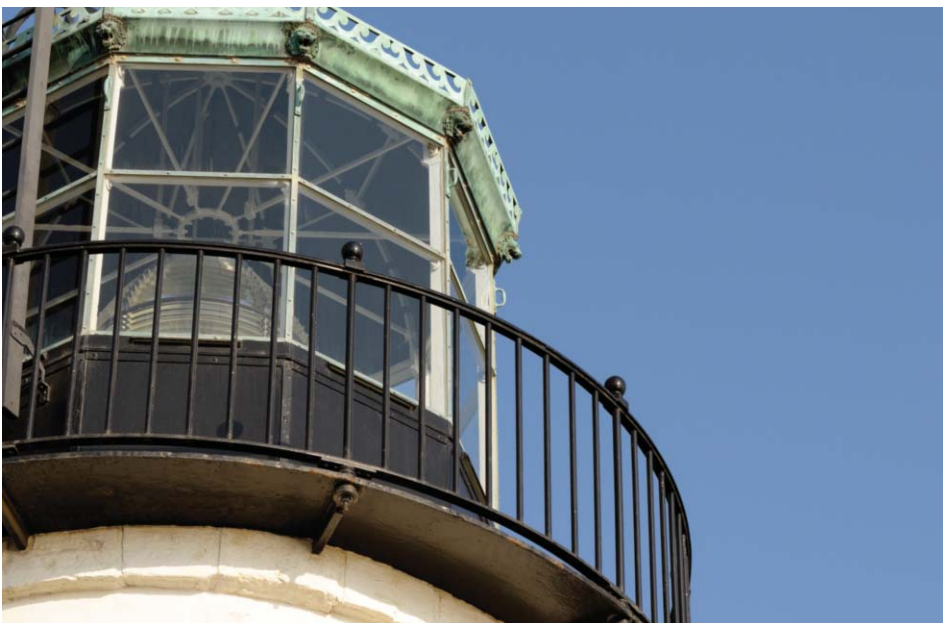
2:25 PM DEBATE (CON): "Borderline" PAH Should Be Treated with PAH Specific Therapy
Jean-Luc Vachiery, MD, Erasme University Hospital – ULB, Brussels, Belgium

2:40 PM CASE PRESENTATION: To Treat or Not To Treat...Interstitial Lung Disease (ILD)-PH
Christopher King, MD, FACP, FCCP, Inova Fairfax Hospital, Falls Church, VA, USA

2:45 PM DEBATE (PRO): Pulmonary Hypertension Due to Lung Disease Should Be Treated with PAH Specific Therapies
Steven D. Nathan, MD, Inova Fairfax Hospital, Falls Church, VA, USA

3:00 PM DEBATE (CON): Pulmonary Hypertension Due to Lung Disease Should Be Treated with PAH Specific Therapies
Marius Hoepfer, MD, Hannover Medical School, Hannover, Germany

3:15 PM Panel Discussion



1:30 PM – 3:30 PM

SYMPOSIUM 29: How to Mend a Broken Heart: Approaches for Cardiac Regeneration

(SEAPORT G-H)

(BSTR, HF, HTX, PATH, PHARM)

CHAIRS: Esme Dijke, PhD and Daniel TS Reichart, MD

SESSION SUMMARY: This session provides an overview of mechanisms of heart failure and different experimental approaches for cardiac regeneration. Implications for multipotent stem cell therapies are presented, followed by cell independent strategies to cardiac regeneration. Furthermore, the potential of pluripotent stem cells and stem cell-derived cardiomyocytes, as well as myocardial tissue engineering approaches, will be discussed.

1:30 PM Mechanisms of Heart Failure and Experimental Therapeutic Options

Claudius Mahr, DO, University of Washington, Seattle, WA, USA

1:45 PM Q&A

1:50 PM Multipotent Stem Cells and Cardiac Progenitors in Clinical Trials

Joshua Hare, MD, Miller School of Medicine, Miami, FL, USA

2:05 PM Q&A

2:10 PM MicroRNAs and Cell Independent Strategies for Cardiac Regeneration

Pradeep Mammen, MD, UT Southwestern Medical Center, Dallas, TX, USA

2:25 PM Q&A

2:30 PM Cardiac Cell Injection for Heart Failure: Pluripotent Stem Cells (PSC) and Stem Cell-Derived Cardiomyocytes

Tobias Deuse, MD, PhD, UCSF Medical Center, San Francisco, CA, USA

2:45 PM Q&A

2:50 PM Myocardial Tissue Engineering: Where Are We Now and Where Are We Heading?

Simon Pecha, MD, University Heart Centre Hamburg, Hamburg, Germany

3:05 PM Q&A

3:10 PM Pluripotent Stem Cells: Hurdles and Perspectives on the Way to Clinical Application

Doris Taylor, MD, Texas Heart Institute, Houston, TX, USA

3:25 PM Q&A

1:30 PM – 3:30 PM

SYMPOSIUM 30: E-Health, Wearables, Social Media and Big Data in Transplantation: Fancy Toys or True Care Innovations?**(CORONADO A-C)**
(NNSAH, ALL)**CHAIRS: Deborah Page, NP and Steve Ivulich, PharmD**

SESSION SUMMARY: The purpose of this symposium is to discuss the state-of-the-art of e-health technology (telemedicine, telehealth and interactive health technology applications) in delivering care (e.g. long-distance care, self-management support) in end-stage organ disease, LVAD and transplantation. In addition, interactive communication options via social media for public involvement as well as research dissemination will be reviewed. Moreover the value of the big data for transplantation will be explored.

1:30 PM *The Many Faces of E-health: An Overview*

Fabienne Dobbels, MSc, PhD, University of Leuven, Leuven, Belgium

1:45 PM Q&A**1:50 PM *The Importance of Involving End-Users When Designing Interactive Health Technology Applications for Self-Management Support***

Annette DeVito-Dabbs, PhD, RN, ACNS-BC, FAAN, University of Pittsburgh School of Nursing, Pittsburgh, PA, USA

2:05 PM Q&A**2:10 PM *The ABCs of Social Media***

Mary N. Walsh, MD, St. Vincent Hospital, Indianapolis, IN, USA

2:25 PM Q&A**2:30 PM *Closer to the Heart: The Impact of Distance to Care and Remote Care***

Tam Khuu, PharmD, UCLA Medical Center, Los Angeles, CA, USA

2:45 PM Q&A**2:50 PM *Big Data: Big Impact***

Josef Stehlik, MD, MPH, University of Utah School of Medicine, Salt Lake City, UT, USA

3:05 PM Q&A**3:10 PM *New Ethical and Legal Challenges Surrounding E-health in Transplantation***

JiYeon Choi, PhD, RN, University of Pittsburgh School of Nursing, Pittsburgh, PA, USA

3:25 PM Q&A

4:00 PM – 5:30 PM

ORAL SESSIONS

5:45 PM – 6:45 PM

**MINI ORAL SESSIONS
MODERATED POSTER SESSION 3**

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 13:
Mechanical Circulatory Support – The Interface of Design and Outcome**(GRAND HALL A)**
(MCS, BSTR, EEP, HF, HTX)**CHAIRS: Ulrich Steinseifer, PhD and Robert L. Kormos, MD**

SESSION SUMMARY: Despite the advance of mechanical circulatory support systems over the past decade they remain limited by the significant incidence of adverse events (AE). In this session approaches to understand and limit AE such as thrombosis, bleeding and infection will be addressed. Particularly, the role of system component interfaces, smart monitoring and alarms using pressure sensors and data mining techniques, and the “design thinking” paradigm for devices that embody multi-factorial challenges.

7:00 AM *Interfaces and Mechanical Circulatory Support: Challenges and Opportunities for System and Outcome Improvement*

Marvin J. Slepian, MD, University of Arizona, Tucson, AZ, USA

7:10 AM Q&A**7:15 AM** *Will Pressure Sensors Help in Making Smarter Pumps?*

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

7:25 AM Q&A**7:30 AM** *Anticipation of Adverse Events: Do the Data Speak For Themselves?*

Francesco Moscato, PhD, Medical University of Vienna, Vienna, Austria

7:40 AM Q&A**7:45 AM** *Design/Interconnected Thinking for Better Biomedical Devices*

J. Yasha Kresh, PhD, Drexel University College of Medicine, Philadelphia, PA, USA

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 14: The Tsunami of Adult Congenital Heart Disease (ACHD) Patients Who Need Advanced Therapies: Are We Prepared?**(GRAND HALL B)**
(HTX, HF, LTX, MCS, PEDS, PH)**CHAIRS: Heather J. Ross, MD, MHSc, FRCPC and Sanem Nalbantgil, MD**

SESSION SUMMARY: A need exists for advanced therapies for Adult Congenital Heart Disease (ACHD) patients. The session will begin with the challenges of bringing ACHD patients to transplant. The session will also include talks on surgical planning and mechanical support options for these patients, accurate imaging evaluation, and treatment of pulmonary hypertension. We will discuss a team based approach to successful outcomes as well as dual organ transplantation and will end with a discussion of allocation in ACHD patients worldwide.

7:00 AM *How to Know When an Adult with Complex Congenital Heart Disease Needs Heart Transplantation*

Alexander R. Opatowsky, MD, The Children’s Hospital, Philadelphia, PA, USA

7:15 AM Q&A**7:20 AM** *Surgical Considerations for MCS and Heart Transplant ACHD*

Martin Schweiger, MD, Children’s Hospital, Zurich, Switzerland

7:35 AM Q&A**7:40 AM** *Care of the ACHD Patient After MCS or Heart Transplant: The Challenge is Just Beginning*

Jonathan Menachem, MD, Hospital of the University of Pennsylvania, Philadelphia, PA, USA

7:55 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 15:
Extracorporeal Photopheresis: Shedding Light on Rejection?**(GRAND HALL C)**
(LTX, BSTR, HTX, ID, NHSAH, PATH, PEDS, PHARM)**CHAIRS: Matthew R. Morrell, MD and Christian Benden, MD, FCCP**

SESSION SUMMARY: This session will explore mechanisms and clinical indications of extracorporeal photopheresis (ECP) with a goal to increase understanding of the possible benefits of ECP and adoption of this therapy in lung and heart transplant recipients.

7:00 AM *ECP: Everything Under the Sun*

Jill Adamski, MD, PhD, Mayo Clinic, Phoenix, AZ, USA

7:17 AM Q&A**7:20 AM** *ECP in Heart Transplantation: Have the Lights Gone Out?*

Andreas Zuckermann, MD, Medical University of Vienna, Vienna, Austria

7:37 AM Q&A**7:40 AM** *ECP in Lung Transplantation: Light at the End of the Tunnel?*

Mark Greer, MB BCh, Hannover Medical School, Hannover, Germany

7:57 AM Q&A

7:00 AM – 8:00 AM

SUNRISE SYMPOSIUM 16:
**Pregnant – Scared? So Are We...
Management of Pregnancy in Our
Complex Patients****(SEAPORT G-H)**
(PHARM, HTX, LTX, MCS, NHSAH, PEDS)**CHAIRS:** Susan M. Joseph, MD and
Christa Kirk, PharmD

SESSION SUMMARY: Women of reproductive age account for over 1/3 of all SOT recipients. Most are advised to avoid pregnancy for several years post-transplant, if not altogether. However, as outcomes post-transplant continue to improve, more women are able to consider pregnancy. There are numerous risks to the transplant recipient, organ and fetus. Hence, there is a great need for expertise in addressing family planning, fertility, contraception, and care during and after pregnancy.

**7:00 AM The Facts of Life: Pregnancy
After Thoracic Organ Transplant**
Robin Vos, MD, PhD, KU Leuven,
Leuven, Belgium**7:10 AM Q&A****7:15 AM Labor of Love: Pregnancy
in the Heart Failure/Congenital
Population**
Leigh C. Reardon, MD, UCLA Medical
Center, Los Angeles, CA, USA**7:25 AM Q&A****7:30 AM In the Mix: Orchestrating
the Multidisciplinary Care of the Post-
Transplant/MCS/Complex Congenital
Pregnant Patient**
Mary Canobbio, RN, FAAN, UCLA
Medical Center, Los Angeles, CA, USA**7:40 AM Q&A****7:45 AM Treating the Mother,
Protecting the Baby: Drug Therapy
During and After Pregnancy**
Jennifer Eshelman, PharmD, Children's
Hospital Colorado, Aurora, CO, USA**7:55 AM Q&A**

7:00 AM – 8:00 AM

**SUNRISE SYMPOSIUM 17: Living
in a 'Bacterial' World: Microbiome
in Thoracic Transplantation****(CORONADO A-C)**
(BSTR, ALL)**CHAIRS:** Howard Eisen, MD and
Bryan Coburn, MD, PhD,
FRCPC

SESSION SUMMARY: The goal of this session is to explore the role of the microbiome in affecting posttransplant outcomes or in reflecting the extent of immunosuppression. Discussion will include an overview of the effect of the microbiome on health and disease followed by transplant specific considerations. Included in this is the question of whether changes in the bacterial or viral micro biome can be used to reflect the extent of immunosuppression, thus facilitating modulation of immunosuppression to improve outcomes.

**7:00 AM The Microbiome in Health
and Disease**
W. H. Wilson Tang, MD, Cleveland
Clinic Foundation, Cleveland, OH, USA**7:10 AM Q&A****7:15 AM Microbiome in Transplan-
tation**
Maria-Luisa Alegre, MD PhD, University
of Chicago, Chicago, IL, USA**7:25 AM Q&A****7:30 AM The Microbiome and
Immunosuppression in Heart
Transplant**
Kiran Khush, MD, MAS, Stanford
University, Stanford, CA, USA**7:40 AM Q&A****7:45 AM Microbiome in Lung
Transplantation and Gut-Lung Axis**
Sangeeta M. Bhorade, MD,
Northwestern Memorial Hospital,
Chicago, IL, USA**7:55 AM Q&A**

9:45 AM – 11:45 AM

PLENARY SESSION**(SEAPORT A-E)**
(ALL)**CHAIRS:** Andrew J. Fisher, FRCP, PhD
and Christian Benden, MD
FCCP**9:45 AM Awards Presentations****10:10 AM Featured Abstract****10:25 AM Interactive Discussant****10:30 AM Using the Financial Markets
to Fund Early-Stage Drug Development**
Roger M. Stein, PhD, MIT Laboratory
for Financial Engineering, Boston,
MA, USA**10:55 AM Featured Abstract****11:10 AM Interactive Discussant****11:15 AM PRESIDENT'S DEBATE
(PRO): We Must Take Greater Risks
for the Sake of Our Patients!**
Lori J. West, MD, DPhil, University of
Alberta, Edmonton, AB, Canada**11:30 AM PRESIDENT'S DEBATE
(CON): We Must Take Greater Risks
for the Sake of Our Patients!**
Allan R. Glanville, MBBS, MD, FRACP,
St. Vincent's Hospital, Sydney, Australia

12:00 PM – 1:30 PM

ORAL SESSIONS

ISHLT ACADEMY

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION
TUESDAY, APRIL 4, 2017



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.

MANCHESTER GRAND HYATT HOTEL • SAN DIEGO, CA

THE FOLLOWING **ISHLT ACADEMY** COURSES WILL BE CONDUCTED
IN CONJUNCTION WITH THE ISHLT ANNUAL MEETING **APRIL 4**

MCS

MASTER CLASS
SEAPORT F AND SEAPORT G

**MECHANICAL
CIRCULATORY SUPPORT**

7:45AM-1PM

MCS

CORE COMPETENCY COURSE
GRAND HALL B

**MECHANICAL
CIRCULATORY SUPPORT**

8AM-5:30PM

ID

CORE COMPETENCY COURSE
GRAND HALL D

**INFECTIOUS DISEASES IN THORACIC
TRANSPLANTATION AND MECHANICAL
CIRCULATORY SUPPORT** **7:45AM-5:15PM**

MCS
PEDIATRIC

CORE COMPETENCY COURSE
GRAND HALL A

**PEDIATRIC AND ADULT
CONGENITAL MECHANICAL
CIRCULATORY SUPPORT** **7:45AM-5:15PM**

MCS

MASTER CLASS
SEAPORT F AND SEAPORT G
REPEAT OF MORNING COURSE

**MECHANICAL
CIRCULATORY SUPPORT**

1:45PM-6:50PM

PH

MASTER CLASS
SEAPORT F AND SEAPORT G

**PULMONARY
HYPERTENSION**

2PM-7PM

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 limited. **Please register early.**



**ISHLT ACADEMY
MASTER CLASS IN
MECHANICAL CIRCULATORY SUPPORT**

TUESDAY, APRIL 4, 2017

7:45AM-1PM

**SEAPORT F
SEAPORT G**

SCIENTIFIC PROGRAM CHAIRS

Chair: Stavros Drakos, MD, PhD
University of Utah School of Medicine, Salt Lake City, UT, USA

Co-Chair: Ivan Netuka, MD, PhD
Institute for Clinical and Experimental Medicine, Prague, Czech Republic

SCIENTIFIC PROGRAM COMMITTEE

Keith Aaronson, MD, University of Michigan, Ann Arbor, Michigan, USA

Anson Cheung, MD, University of British Columbia, Vancouver, Canada

Chris Hayward, MD, St. Vincent's Hospital, Sydney, Australia

Lars Lund, MD, PhD, Karolinska Institute, Stockholm, Sweden

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.

PRACTICE GAPS

- 1.** The outcomes of cardiogenic shock have remained poor, large randomized trials are scarce and the management of these patients remains challenging. Comprehensive clinical expertise of advanced usage of evolving MCS options including patient and device selection and transition to next step therapies constitute currently major limitations in the care of these critically ill patients.
- 2.** Specific approaches to optimize the exercise capacity of MCS patients is an unmet clinical need.
- 3.** The disparities in the cardiac recovery outcomes observed between various centers indicate that implementing targeted patient selection and subsequently effective diagnostic and therapeutic protocols to facilitate cardiac recovery is challenging for the majority of practitioners.
- 4.** The diagnosis and management of complex and combined adverse events such as cerebrovascular hemorrhagic accidents, device thrombosis and gastrointestinal bleeding is challenging and practitioners often face difficulties in developing effective strategies to appropriately identify and treat these adverse events.
- 5.** The diagnostic and therapeutic approaches for early and late right ventricular failure in MCS patients has been evolving with the introduction of new diagnostic criteria and new technologies/therapeutic options. Such practice gaps in specialist knowledge and clinical skills constitute major limitations in the care of MCS patients.
- 6.** With the rapid evolution of minimally invasive surgical approaches the individual practitioners may lack the extensive expertise required to appropriately select patients and surgical approaches to achieve the best possible outcome.

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 and Transplant Coordinators and critical care specialists, heart transplant professionals.

LEARNING OBJECTIVES

- 1.** Identify the challenges during the diagnosis and management of complex cardiogenic shock patients and the potential benefits of a multidisciplinary team approach.
- 2.** List effective strategies to optimize exercise capacity and facilitate myocardial recovery in MCS patients.
- 3.** Explain how to appropriately select patients for long-term MCS options with particular consideration in anticipated surgical management aspects.
- 4.** Describe how to develop a systematic approach to diagnosis and therapy of complex and combined adverse events such as device thrombosis, recurrent gastrointestinal bleeding and stroke.
- 5.** Name the diagnostic and therapeutic challenges of early and late RV failure.

ACCREDITATION STATEMENT

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CREDIT DESIGNATION STATEMENT

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ANCC CREDIT

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ACPE CREDIT

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SCIENTIFIC PROGRAM SCHEDULE



7:00 AM – 7:45 AM
REGISTRATION AND
MORNING COFFEE

7:45 AM – 8:00 AM
WELCOME AND INTRODUCTIONS
Stavros Drakos, MD, PhD, University of
Utah School of Medicine, Salt Lake City,
UT, USA

8:00 AM – 9:00 AM
SMALL GROUP INTERACTIVE
DISCUSSION A: Acute MCS for
Profound Cardiogenic Shock/Intermacs
0-1 Profiles
Moderator: Stavros Drakos, MD, PhD

8:00 AM Case Scenario: Management
Challenges for ‘Crash and Burn’ Patients:
‘Shock Team’ Approach to MCS
Hiroo Takayama, MD, Columbia University,
NY, USA

8:30 AM Case Scenario: Transition
from Short to Long-term Support
Keith Aaronson, MD, University of
Michigan, Ann Arbor, MI, USA

9:05 AM – 10:05 AM
SMALL GROUP INTERACTIVE
DISCUSSION B: Complex Coagulation
Issues in MCS Patients
Moderator: Ivan Netuka, MD, PhD

9:05 AM Case Scenario: Recurrent
GI Bleeding and Pump Thrombosis
Simon Maltais, MD, PhD, Mayo Clinic,
Rochester, MN, USA

9:35 AM Case Scenario: Management
of Cerebrovascular Hemorrhagic
Accidents
Chris Hayward, MD, St. Vincent’s Hospital,
Sydney, Australia

10:05 AM – 10:30 AM
COFFEE BREAK

10:30 AM – 11:30 AM
SMALL GROUP INTERACTIVE
DISCUSSION C: Patient Selection and
Management (I)
Moderator: Stavros Drakos, MD, PhD

10:30 AM Case Scenario: Bridge to
Recovery: From Prediction to
Implementation
Snehal Patel, MD, Einstein/Montefiore,
Bronx, NY, USA

11:00 AM Case Scenario: Optimizing
The Exercise Capacity of Chronic MCS
Pts: Implications for Heart Recovery
Assessment
Bart Meyns, MD, University Hospitals
Leuven, Leuven, Belgium

11:35 AM – 12:35 PM
SMALL GROUP INTERACTIVE
DISCUSSION D: Patient Selection
and Management (II)
Moderator: Ivan Netuka, MD, PhD

11:35 AM Case Scenario: Early
and Late RV Failure: From Prediction
to Management
Lars Lund, MD, PhD, Karolinska Institute,
Stockholm, Sweden

12:05 PM Case Scenario: Minimally
Invasive Surgical Approaches from
Implant to Explant
Anson Cheung, MD, University of British
Columbia, Vancouver, Canada

12:35 PM – 12:50 PM
CLOSING REMARKS
Stavros Drakos, MD, PhD, University of
Utah School of Medicine, Salt Lake City,
UT, USA
Ivan Netuka, MD, PhD, Institute for
Clinical and Experimental Medicine,
Prague, Czech Republic



**ISHLT ACADEMY
CORE COMPETENCY COURSE IN
MECHANICAL CIRCULATORY SUPPORT**

TUESDAY, APRIL 4, 2017

8AM–5:30PM

GRAND HALL B

SCIENTIFIC PROGRAM COMMITTEE

- Chair:** Jennifer Cowger, MD, MS
St. Vincent Heart Center of Indiana, Indianapolis, Indiana, USA
- Co-Chair:** Palak Shah, MD, MS
Inova Heart and Vascular Institute, Falls Church, Virginia, USA
- Co-Chair:** Diyar Saeed, MD
Heinrich-Heine University, Dusseldorf, Germany

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.

LEARNING OBJECTIVES

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

1. Explain 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. Discuss 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. Identify MCS implantation techniques and patient/pump management during the index admission intensive care unit and inpatient general care periods.
5. Describe how to 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.

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ACPE CREDIT

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SCIENTIFIC PROGRAM SCHEDULE



7:00 AM – 8:00 AM

MORNING COFFEE AND REGISTRATION

8:00 AM – 9:15 AM

SESSION 1: Review of The Current State of MCS

Chair: Diyar Saeed, MD

8:00 AM *Welcome and Overview*

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

8:05 AM *MCS Technology 101*

Scott Silvestry, MD, Florida Transplant Institute, Orlando, FL, USA

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

8:25 AM *BTT and DT Outcome*

Lynne Warner Stevenson, MD, Brigham & Women's Hospital, Boston, MA, USA

Review state of outcomes and adverse events with current technologies

8:40 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 with Panel*

9:15 AM – 10:30 AM

SESSION 2: Patient Selection

Chair: Scott Silvestry, MD

9:15 AM *When Should Patients be Referred: Warning Signs*

Douglas Horstmanshoff, 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.

9:35 AM *Assessing and Optimizing RV Function Preoperatively*

Thomas Krabatsch, MD, PhD, Deutsches Herzzentrum, Berlin, Germany

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

9:55 AM *Quality of Life After VAD and the Impact of Frailty and Social Behaviors on VAD Success*

Kathleen Grady, PhD, APN, FAAN, Northwestern University, Chicago, IL, USA

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

10:15 AM *Q&A with Panel*

10:30 AM – 10:45 AM

COFFEE BREAK

10:45 AM – 12:00 PM

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*

Diyar Saeed, MD, Heinrich-Heine University, Dusseldorf, Germany

Case based discussion of considerations for pump-patient matching * will add in TAH discuss

11:45 AM *Q&A with Panel*

12:00 PM – 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 Zuckerman, MD, PhD

1:00 PM *Managing the RV Postop*

Christopher Salerno, MD, St. Vincent Heart Center of Indiana, Indianapolis, Indiana, USA

Considerations for impact of LVAD pump speed on RV function and use of inotropes, pulmonary vasodilators, and temporary RV support postoperatively

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. **will ask to address factor Xa monitoring

1:40 PM *Pump Speed Optimization: The Role of Imaging and Hemodynamics*

Jerry Estep, MD, Houston Methodist DeBakey Heart & Vascular Center, Houston, TX, USA

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

2:00 PM *Q&A with Panel*

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 Schlöglhofer, 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 *Optimal Outpatient Management of VAD Recipients*

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

Lab, blood pressure and echo monitoring of VAD patients in the outpatient setting.

3:00 PM *Q&A with Panel*

3:15 PM – 3:30 PM

COFFEE BREAK

3:30 PM – 5:20 PM

SESSION 6: Long Term Management of Patients and Complications

Chair: Nader Moazami, MD

This session will have a case built in to the discussion. Audience participation is encouraged through audience response system (ARS) when prompted.

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

Paolo A Grossi, MD, PhD, University of Insubria, Varese, Italy

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 Washington Hospital Center, 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*

Palak Shah, MD, MS, Inova Heart and Vascular Institute, Falls Church, VA, USA

Frequency, diagnosis, and management strategies for suspected pump thrombosis.

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*

Anna Meyer, MD, Heart Center Leipzig University, Leipzig, Germany

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

5:10 PM *Q&A with Panel*

5:20 PM *Summary*

Palak Shah, MD, MS, Inova Heart and Vascular Institute, Falls Church, VA, USA

5:30 PM *Adjourn*



**ISHLT ACADEMY
CORE COMPETENCY COURSE IN
INFECTIOUS DISEASES IN THORACIC
TRANSPLANTATION AND
MECHANICAL CIRCULATORY SUPPORT**

TUESDAY, APRIL 4, 2017

7:45AM–5:15PM

GRAND HALL D

SCIENTIFIC PROGRAM COMMITTEE

- Co-Chair: Martha Mooney, MD, FACP**
Sentara Norfolk Transplant Center/Eastern Virginia Medical School,
Norfolk, VA, USA
- Co-Chair: Shahid Husain, MD, MS**
University Health Network, Toronto, Canada
- Members: Michele Estabrook, MD, St. Louis Children's Hospital,**
St. Louis, MO, USA
- Robin Avery, MD, Johns Hopkins University, Baltimore, MD, USA**
- Kate Gould, FRCPath, NUTH NHS Foundation Trust,**
Newcastle Upon Tyne, United Kingdom
- Orla Morrissey, MD, The Alfred Hospital, Melbourne, Australia**

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 infectious disease concerns in cardiothoracic transplantation and mechanical circulatory support, rather than as a detailed update for those who are already proficient experts in the field.

LEARNING OBJECTIVES

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

- 1.** Explain how to utilize pretransplant evaluation and screening of the cardiothoracic transplant recipient and donor to minimize the risk of infections in cardiothoracic transplant and MCS recipients.
- 2.** Describe how to control and prevent infection in cardiothoracic transplantation and MCS recipients.
- 3.** Identify clinical infections and how to use diagnostic methodology for the detection of bacterial, fungal, viral, and parasitic infectious diseases
- 4.** Discuss the pharmacology of anti-infective agents in cardiothoracic transplant and MCS recipients.

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SCIENTIFIC PROGRAM SCHEDULE



7:00 AM – 7:45 AM
MORNING COFFEE AND
REGISTRATION

7:45 AM *Welcome and Overview*
Martha Mooney, MD, FACP, Sentara
Norfolk Transplant Center/EVMS,
Norfolk, VA, USA
Shahid Husain, MD, MS, University Health
Network, Toronto, ON, Canada

8:00 AM – 9:20 AM
**SESSION 1: Impact of Surgery and
Immunosuppression on Infection in
CT TX Recipient and Donor Selection
Considerations**

8:00 AM *Impact of the Surgical
Transplant Procedure on Infection
Risk in CT TX*
Andreas Zuckermann, MD, Medical
University of Vienna, Vienna, Austria

8:15 AM *The Devil Made Me Do It:
Impact of Immunosuppression on
Infection Risk in CT TX*
Shahid Husain, MD, MS, University Health
Network, Toronto, Canada

8:30 AM *Not All Transplant Recipients
are Created Equal! Pre-transplant
Screening of Recipients*
Michele Estabrook, MD, St. Louis Children's
Hospital, St. Louis, MO, USA

8:50 AM *Beware the Trojan Horse:
Pre-transplant Screening of Donors
and Donor Derived Infections*
Valentina Stosor, MD, Northwestern
University Feinberg School of Medicine,
Chicago, IL, USA

9:10 AM Q&A

9:20 AM – 10:20 AM

SESSION 2: Diagnosing Infection in CT TX and Treatment Considerations

9:20 AM *Diagnostic Microbiology and Pathology for Infections in CT TX*
Kate Gould, FRCPATH, NUTH NHS Foundation Trust, Newcastle Upon Tyne, United Kingdom

9:40 AM *Diagnostic Radiology for Infections in CT TX*
Allan Glanville, MBBS, MD, FRACP, St. Vincent's Hospital, Sydney, Australia

9:55 AM *This Could Happen to You... Drug Interactions and Toxicity Errors to Avoid with Anti-infectives and Immunosuppression and Cracking the Therapeutic Drug Monitoring Code*
Christopher Ensor, PharmD, BCPS-CV, University of Pittsburgh, Pittsburgh, PA, USA

10:15 AM Q&A

10:20 AM – 10:35 AM

COFFEE BREAK

10:35 AM – 11:35 AM

SESSION 3: Bacterial and Parasitic Pathogens

10:35 AM *Nosocomial Threats and Tackling Multidrug Resistant Bacteria: If We Persist, We Will Wear Down the Resistance!*
Kate Gould, FRCPATH, NUTH NHS Foundation Trust, Newcastle Upon Tyne, United Kingdom

10:55 AM *Bugs that Upset Us and Send Us into Orbit: Mycobacteria and Nocardia*
Orla Morrissey, MD, The Alfred Hospital, Melbourne, Australia

11:10 AM *Unwelcome Visitors: Parasitic Infections in CT TX: Toxoplasmosis, Strongyloidiasis, Chagas*
Fernando Bacal, MD, University of Sao Paulo, Sao Paulo, Brazil

11:25 AM Q&A

11:35 AM – 12:45 PM

SESSION 4: Viral Infections in CT TX

11:35 AM *CMV: A Perennial Problem*
Robin Avery, MD, Johns Hopkins University, Baltimore, MD, USA

11:50 AM *EBV/PTLD: A Continual Conundrum*
Erik Verschuuren, MD, PhD, University Medical Centre Groningen, Groningen, The Netherlands

12:05 PM *Challenges from the Community: Respiratory Viruses, Parvovirus, Norovirus and Others*
Joanna Schaeenman, MD, PhD, David Geffen School of Medicine, Los Angeles, CA, USA

12:20 PM *HIV, HCV, HBV: Risks Redefined?*
Emily Blumberg, MD, University of Pennsylvania, Philadelphia, PA, USA

12:40 PM Q&A

12:45 PM – 1:45 PM

LUNCH (a box lunch is included in the registration fee)

1:45 PM – 2:55 PM

SESSION 5: Fungal Infections and Other Areas of Concern for Travel and Safe Living after CT TX

1:45 PM *There is a Fungus Among Us. Perils from Without: Mold, Yeast, and Guidelines*
Shahid Husain, MD, MS, University Health Network, Toronto, Canada

2:05 PM *Perils from Within: Endemic Fungi*
Me-Linh Luong, MD, St. Luc Hospital, Montreal, Canada

2:20 PM *Emerging Fungal Pathogens*
Robin Avery, MD, Johns Hopkins University, Baltimore, MD, USA

2:35 PM *Life in the Global Community after Transplant: Travel, Safe Living and Emerging Pathogens. Real Risks Outside the Bubble: Roaming Charges*
Michele Estabrook, MD, St. Louis Children's Hospital, St. Louis, MO, USA

2:50 PM Q&A

2:55 PM – 3:10 PM

COFFEE BREAK

3:10 PM – 4:10 PM

SESSION 6: Infection in the Setting of Mechanical Circulatory Support (MCS)

3:10 PM *An Ounce of Prevention Saves a Pound of Hurt: Prevention and Diagnosis of Infections in MCS*
Saima Aslam, MD, MS, University of California San Diego, San Diego, CA, USA

3:25 PM *VAD Gone Bad: Medical and Surgical Remedies of VAD Specific and VAD Related Infections*
Martha Mooney, MD, FACP, Sentara Norfolk Transplant Center, Norfolk, VA, USA

3:45 PM *Hungry Circuits in Extracorporeal Support (ECMO, Plasmapheresis, Renal Replacement Therapy) and Steering Clear of Anticoagulation Glitches with Antibiotics in Mechanical Circulatory Support*
Haifa Lyster, MSc, Royal Brompton, Middlesex, United Kingdom

4:00 PM Q&A

4:10 PM – 5:00 PM

SESSION 7: When the Rubber Hits the Road: Case Presentations

4:10 PM *Case 1: HIV/HBV/HCV in Cardiothoracic Transplantation*
Emily Blumberg, MD, University of Pennsylvania, Philadelphia, PA, USA

4:30 PM *Case 2: Lung Transplant Recipient with Pulmonary Infiltrates: Transplant Infectious Disease Consults Transplant Pulmonologist to Make the Diagnosis.*

Aric Gregson, MD, University of California Los Angeles School of Medicine, Los Angeles, CA, USA

4:50 PM Q&A

5:00 PM – 5:15 PM

COURSE SUMMARY & EVALUATION

Martha Mooney, MD, FACP, Sentara Norfolk Transplant Center/EVMS, Norfolk, VA, USA
Shahid Husain, MD, MS, University Health Network, Toronto, Canada

5:15 PM Adjourn

**ISHLT ACADEMY
CORE COMPETENCY COURSE IN
PEDIATRIC AND ADULT CONGENITAL
MECHANICAL CIRCULATORY SUPPORT**

TUESDAY, APRIL 4, 2017

7:45AM–5:15PM

GRAND HALL A

The pediatric mechanical circulatory support (MCS) field continues to grow and has enough unique challenges to justify an entire session dedicated to learning about pediatric support strategies. The first pediatric MCS core academy has been designed to provide education to care providers of all experience levels. The basic principles of MCS, including patient/device selection, peri-operative management, and basics of transition to home will be discussed. The goal will be to learn from didactics but also allow for discussion in order to share experiences and learn from each other.

In addition to the core academy that will be conducted at the 2017 ISHLT annual meeting, an extensive document has been written by a diverse international committee and can be found on the ISHLT education website. This document is in outline form with current references and includes all topics that are important to the management of this unique patient population.

SCIENTIFIC PROGRAM COMMITTEE

- Chair:** **Angela Lorts, MD**
Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, USA
- Co-Chair:** **Holger Buchholz, MD**
University of Alberta, Stollery Children's Hospital, Edmonton, Alberta, Canada
- Members:** **Jenna Murray, MSN, RN, CPNP-AC**, Lucile Packard Children's Hospital, Palo Alto, CA, USA
- Leonardo Salazar, MD**, Fundacion Cardiovascular de Columbia, Bucaramanga, Columbia
- Martin Schweiger, MD, PhD**, FEBS Children's Hospital Zurich, Zurich, Switzerland
- Asif Hasan, MB, FRCS**, Freeman Hospital, Newcastle upon Tyne, United Kingdom

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 pediatric patients and adult congenital heart disease patients that require ventricular assist device support.

TARGET AUDIENCE

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.

LEARNING OBJECTIVES

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

1. Evaluate a patient for VAD implantation including preoperative assessment, preparation of patient prior to VAD implantation, and optimal timing of placement.
2. Understand device selection, strategies for VAD implantation, intraoperative assessment techniques and postoperative management.
3. Define device-specific anticoagulation management as well as the recognition and care of adverse events related to both temporary and chronic device therapy.

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SCIENTIFIC PROGRAM SCHEDULE



7:00 AM – 7:45 AM
MORNING COFFEE AND
REGISTRATION

7:45 AM Welcome and Overview
Angela Lorts, MD, Cincinnati Children's
Hospital, Cincinnati, OH, USA
Holger Buchholz, MD, University of
Alberta Hospital, Edmonton, Canada

8:00 AM – 9:05 AM
**SESSION 1: Review of the Current
State of MCS in Pediatrics and Adult
Congenital Heart Disease**
Chair: **Richard Kirk, FRCP, FRCPC**

**8:00 AM Current State: Durable Device
Options, Indications and Outcomes
(Pulsatile)**
David Morales, MD, Cincinnati Children's
Hospital, Cincinnati, OH, USA
A review of current technologies avail-
able, update on future developments.

**8:15 AM Current State: Durable Device
Options, Indications and Outcomes
(Continuous)**
Martin Schweiger, MD, PhD, Children's
Hospital, Zurich, Switzerland
Overview of MCS in ACHD patients.

**8:30 AM Current State: Temporary
Device Options, Indications and
Outcomes**
Jennifer Conway, MD, Stollery Children's
Hospital, Edmonton, Canada
Overview of temporary support in variety
of scenarios as bridge to other forms of
support, transplantation or recovery.

**8:45 AM Case Presentation with
Discussion: Child Presenting with
Probable Myocarditis – Device Selection
for Size and Indication**
Leonardo Salazar, MD, Fundacion
Cardiovascular de Colombia, Bucaramanga,
Colombia

9:05 AM – 10:10 AM
SESSION 2: Patient Selection
Chair: **Angela Lorts, MD**

**9:05 AM An Art Not Always a Science –
When is the Right Time for Referral?**
Aamir Jeewa, MD, Texas Children's
Hospital, Houston, TX, USA
Evaluating timing for implantation.

**9:20 AM Pre-VAD Work Up Prior to
Implantation; Including Psychosocial
Considerations**

Oliver Miera, MD, Deutsches Herzzentrum
Berlin, Berlin, Germany
Pre-VAD evaluation to be done prior to
decision to implant.

**9:35 AM Medical Co-morbidities and
That may VAD Success and Potential
Strategies for Optimization**
Janet Scheel, MD, Children's National
Health System, Washington, DC, USA
End-organ dysfunction and the effect on
VAD patient outcome.

**9:50 AM Case Presentation With Discus-
sion: Infant With End-organ Dysfunc-
tion-patient Selection and Optimization
Prior to VAD Implantation**
Richard Kirk, FRCP, FRCPC, Children's
Medical Center, Dallas, TX, USA

10:10 AM – 10:30 AM
COFFEE BREAK

10:30 AM – 11:20 AM
**SESSION 3: Surgical Considerations for
Both Pediatrics and Adult Congenital**
Chair: **Martin Schweiger, MD, PhD**

**10:30 AM VAD Implantation (Extracor-
poreal Berlin Heart, Temporary Contin-
uous Flow Devices): Key Surgical Aspects**
Jake Jaquiss, MD, Duke Children's Heart
Center, Durham, NC, USA
Key surgical techniques to implanting
pulsatile devices in children.

**10:45 AM VAD Implantation (Intracor-
poreal HVAD, HeartMate II): Key
Surgical Aspects**
Antonio Amodeo, MD, Bambino Gesù
Pediatric Hospital, Rome, Italy
Key surgical techniques to implanting
continuous flow devices in children.

**11:00 AM Case Presentation With
Discussion: Assessment of Optimal
Inflow Placement with Hemodynamics
and Echocardiography in the Immediate
Peri-operative Setting**
Lucas Eastaugh, MBBS, Royal Children's
Hospital, Melbourne, Australia

11:20 AM – 12:00 PM
SESSION 4: “Unique Patient Population”
Chair: Jennifer Conway, MD

11:20 AM Case Presentation With Discussion: Adult Congenital VAD Case
Jake Jaquiss, MD, Duke Children’s Heart Center, Durham, NC, USA

11:40 AM Case Presentation with Discussion: Adolescent Risky Behavior
Jenna Murray, MSN, RN, CPNP-AC, Lucile Packard Children’s Hospital, Palo Alto, CA, USA

12:00 PM – 1:00 PM
LUNCH BREAK (a box lunch is included in the registration fee)

1:00 PM – 2:05 PM
SESSION 5: Peri-Operative Care of the Vad Patient
Chair: Leonardo Salazar, MD

1:00 PM Managing the RV After LVAD Placement
Richard Kirk, FRCP, FRCPCH, Children’s Medical Center, Dallas, TX, USA
How to detect RV failure and to support the RV to prevent a Bi-VAD.

1:15 PM Is There a “Standard” for Post-operative Care?
Angela Lorts, MD, Cincinnati Children’s Hospital, Cincinnati, OH, USA
Routine post-operative care of the VAD patient in both the ICU and step down unit.

1:30 PM Pump Speed Optimization: Tailoring Post-operative Management to Clinical and Echocardiographic Assessment
Lucas Eastaugh, MBBS, Royal Children’s Hospital, Melbourne, Australia
Using hemodynamic monitoring to optimize the pump function.

1:45 PM Case Presentation with Discussion: Driveline Infection
Holger Buchholz, MD, University of Alberta Hospital, Edmonton, Canada

2:05 PM – 3:15 PM
SESSION 6: Hematologic Management of the Pediatric VAD Patient
Chair: Holger Buchholz, MD

2:05 PM Overview of Anticoagulation of the Various Pump Types
Christina Vanderpluym, MD, Boston Children’s Hospital, Boston, MA, USA
Brief overview of anticoagulation goals for various pump types and how the goals differ between adults and children.

2:20 PM Pump Thrombosis: Detection and Management
Jennifer Conway, MD, Stollery Children’s Hospital, Edmonton, Canada
How to determine if a pump is thrombosed and treatment options.

2:35 PM Stroke in Pediatric VAD Patients: What are Our Options?
Oliver Miera, MD, Deutsches Herzzentrum Berlin, Berlin, Germany
Characterizing pediatric strokes and discussing changes in therapy after they occur.

2:50 PM Case Presentation with Discussion: Tamponade Post HVAD Implantation
David Morales, MD, Cincinnati Children’s Hospital, Cincinnati, OH, USA

3:10 PM – 3:30 PM
COFFEE BREAK

3:30 PM – 5:00 PM
SESSION 7: Now We Are Going to Send Them Home?
Chair: Antonio Amodeo, MD

3:30 PM The Beginning of a New Program: Necessary Team Components?
Christina Vanderpluym, MD, Boston Children’s Hospital, Boston, MA, USA
The building blocks to starting a pediatric VAD program, the challenges faced, and the key elements of success.

3:45 PM Preparing the Patient, Family and Community for Discharge
Jenna Murray, MSN, RN, CPNP-AC, Lucile Packard Children’s Hospital, Palo Alto, CA, USA
Creative multidisciplinary approaches to patient/caregiver education and comprehensive preparation for the local community.

4:00 PM The Outpatient Clinical Assessment: Blood Pressure, Laboratory Testing, Echo Monitoring and Rehabilitation
Aamir Jeewa, MD, Texas Children’s Hospital, Houston, TX, USA

Effective clinical assessment and monitoring strategies of the child outpatient on VAD support.

4:15 PM Destination/Palliative Care Considerations
Janet Scheel, MD, Children’s National Health System, Washington, DC, USA

Challenges in offering destination therapy to a child and how to maneuver failed VAD support.

4:30 PM – 5:00 PM
QUESTIONS/DISCUSSION

Panel members will reflect on day and open up for discussion.

5:00 PM – 5:15 PM
CLOSING ADDRESS
Angela Lorts, MD, Cincinnati Children’s Hospital, Cincinnati, OH, USA
Holger Buchholz, MD, University of Alberta Hospital, Edmonton, Canada

5:15 PM Adjourn



**ISHLT ACADEMY
MASTER CLASS IN
MECHANICAL CIRCULATORY SUPPORT**

TUESDAY, APRIL 4, 2017

1:45PM–6:50PM

**GASLAMP AB
GASLAMP CD**

SCIENTIFIC PROGRAM CHAIRS

Chair: Stavros Drakos, MD, PhD
University of Utah School of Medicine, Salt Lake City, UT, USA

Co-Chair: Ivan Netuka, MD, PhD
Institute for Clinical and Experimental Medicine, Prague, Czech Republic

SCIENTIFIC PROGRAM COMMITTEE

Keith Aaronson, MD, University of Michigan, Ann Arbor, Michigan, USA

Anson Cheung, MD, University of British Columbia, Vancouver, Canada

Chris Hayward, MD, St. Vincent's Hospital, Sydney, Australia

Lars Lund, MD, PhD, Karolinska Institute, Stockholm, Sweden

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.

PRACTICE GAPS

- 1.** The outcomes of cardiogenic shock have remained poor, large randomized trials are scarce and the management of these patients remains challenging. Comprehensive clinical expertise of advanced usage of evolving MCS options including patient and device selection and transition to next step therapies constitute currently major limitations in the care of these critically ill patients.
- 2.** Specific approaches to optimize the exercise capacity of MCS patients is an unmet clinical need.
- 3.** The disparities in the cardiac recovery outcomes observed between various centers indicate that implementing targeted patient selection and subsequently effective diagnostic and therapeutic protocols to facilitate cardiac recovery is challenging for the majority of practitioners.
- 4.** The diagnosis and management of complex and combined adverse events such as cerebrovascular hemorrhagic accidents, device thrombosis and gastrointestinal bleeding is challenging and practitioners often face difficulties in developing effective strategies to appropriately identify and treat these adverse events.
- 5.** The diagnostic and therapeutic approaches for early and late right ventricular failure in MCS patients has been evolving with the introduction of new diagnostic criteria and new technologies/therapeutic options. Such practice gaps in specialist knowledge and clinical skills constitute major limitations in the care of MCS patients.
- 6.** With the rapid evolution of minimally invasive surgical approaches the individual practitioners may lack the extensive expertise required to appropriately select patients and surgical approaches to achieve the best possible outcome.

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 and Transplant Coordinators and critical care specialists, heart transplant professionals.

LEARNING OBJECTIVES

1. Identify the challenges during the diagnosis and management of complex cardiogenic shock patients and the potential benefits of a multidisciplinary team approach.
2. List effective strategies to optimize exercise capacity and facilitate myocardial recovery in MCS patients.
3. Explain how to appropriately select patients for long-term MCS options with particular consideration in anticipated surgical management aspects.
4. Describe how to develop a systematic approach to diagnosis and therapy of complex and combined adverse events such as device thrombosis, recurrent gastrointestinal bleeding and stroke.
5. Name the diagnostic and therapeutic challenges of early and late RV failure.

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 4.25 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

ANCC CREDIT

Amedco is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This course is co-provided by Amedco and the International Society for Heart and Lung Transplantation (ISHLT). Maximum of 4.25 contact hours.

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. Please refer to the Participant Notification document for a list of all disclosures. 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



1:00 PM – 1:45 PM
REGISTRATION AND COFFEE

1:45 PM – 2:00 PM
WELCOME AND INTRODUCTIONS
Stavros Drakos, MD, PhD, University of Utah School of Medicine, Salt Lake City, UT, USA

2:00 PM – 3:00 PM
SMALL GROUP INTERACTIVE
DISCUSSION A: Acute MCS for Profound Cardiogenic Shock/ INTERMACS 0-1 Profiles
Moderator: **Stavros Drakos, MD, PhD**

2:00 PM Case Scenario: Management Challenges for ‘Crash and Burn’ Patients: ‘Shock Team’ Approach to MCS
Hiroo Takayama, MD, Columbia University, NY, USA

2:30 PM Case Scenario: Transition from Short to Long-term Support
Keith Aaronson, MD, University of Michigan, Ann Arbor, MI, USA

3:05 PM – 4:05 PM
SMALL GROUP INTERACTIVE
DISCUSSION B: Complex Coagulation Issues in MCS Patients
Moderator: **Ivan Netuka, MD, PhD**

3:05 PM Case Scenario: Recurrent GI Bleeding and Pump Thrombosis
Simon Maltais, MD, PhD, Mayo Clinic, Rochester, MN, USA

3:35 PM Case Scenario: Management of Cerebrovascular Hemorrhagic Accidents
Chris Hayward, MD, St. Vincent’s Hospital, Sydney, Australia

4:05 PM – 4:30 PM
COFFEE BREAK

4:30 PM – 5:30 PM
SMALL GROUP INTERACTIVE
DISCUSSION C: Patient Selection and Management (I)
Moderator: **Stavros Drakos, MD, PhD**

4:30 PM Case Scenario: Bridge to Recovery: From Prediction to Implementation
Snehal Patel, MD, Einstein/Montefiore, Bronx, NY, USA

5:00 PM Case Scenario: Optimizing the Exercise Capacity of Chronic MCS Pts: Implications for Heart Recovery Assessment
Bart Meyns, MD, University Hospitals Leuven, Leuven, Belgium

5:35 PM – 6:35 PM
SMALL GROUP INTERACTIVE
DISCUSSION D: Patient Selection and Management (II)
Moderator: **Ivan Netuka, MD, PhD**

5:35 PM Case Scenario: Early and Late RV Failure: From Prediction to Management
Lars Lund, MD, PhD, Karolinska Institute, Stockholm, Sweden

6:05 PM Case Scenario: Minimally Invasive Surgical Approaches from Implant to Explant
Anson Cheung, MD, University of British Columbia, Vancouver, Canada

6:35 PM – 6:50 PM
CLOSING REMARKS
Stavros Drakos, MD, PhD, University of Utah School of Medicine, Salt Lake City, UT, USA
Ivan Netuka, MD, PhD, Institute for Clinical and Experimental Medicine, Prague, Czech Republic



**ISHLT ACADEMY
MASTER CLASS IN
PULMONARY HYPERTENSION**

TUESDAY, APRIL 4, 2017

**SEAPORT F
SEAPORT G**

2PM-7PM

SCIENTIFIC PROGRAM CHAIRS

Co-Chair: Myung Park, MD
Houston Methodist, Houston, TX, USA

Co-Chair: Ioana Preston, MD
Tufts Medical Center, Boston, MA, USA

SCIENTIFIC PROGRAM COMMITTEE

Members: Robert Frantz, MD, Mayo Clinic, Rochester, MN, USA

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

Manreet Kanwar, MD, Allegheny General Hospital, Pittsburgh, PA, USA

Steven Nathan, MD, Inova Fairfax Hospital, Falls Church, VA, USA

COURSE SUMMARY

The Pulmonary Hypertension (PH) Master Class is intended for members with higher levels of expertise (completed the core curriculum course on PH and/or primary practice in PH \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" and the technique of "audience response system," faculty moderators will use complex situations and controversial statements during practical case presentations in order to lead the group through active audience participation, towards specific answers based on practice gaps and learning objectives.

The four topics covered include: Advanced Pulmonary Arterial Hypertension (PAH Group 1); PH Due to Left Heart Failure (PH Group 2); PH Due to Advanced Lung Disease (PH Group 3); and Chronic Thromboembolic PH (CTEPH, PH Group 4). The topics chosen will cover the major aspects of various forms of PH and highlight the significant differences in the diagnosis and management of these entities.

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 and interactive learning will lead to application and integration of new knowledge into participant practice.

PRACTICE GAPS

- 1.** Advanced medical therapies and treatment algorithms for PAH have evolved tremendously in the recent years. The management of patients with advanced PAH and acute (or acute on chronic) right heart failure poses real challenges: their mortality is extremely high and salvage therapies used as bridge to a successful transplantation are complex. The implementation of advanced supportive measures in a failing right heart such as parenteral prostanoid replacement therapies, inotropic support and ECMO are often delayed or never utilized in advanced PAH patients. Recently published literature identified significant gaps in the recognition of signs that require adjustment of therapies in PAH management, including usage of parenteral therapies. Therefore, there is a real practice gap that limits their appropriate use in selected patients.
- 2.** The presence of right ventricular dysfunction in the setting of systolic heart failure (PH due to heart failure with reduced ejection fraction, PH-HFrEF) represents a complex challenge for practitioners. The use of advanced support systems such as LVADs in the setting of right heart failure needs very careful consideration, including detailed evaluation of the RV function with noninvasive and invasive tests; heart failure specialists may lack the intricate details of these complicated patients and will benefit from the expertise of our speakers in addressing these challenging and commonly encountered issues. Lastly, PH from left ventricular diastolic dysfunction (PH-HFpEF) is often refractory to currently available therapies and its management is very challenging. Moreover, therapies that are effective for PAH Group 1 have not been carefully evaluated in PH due to left heart disease (PH Group 2). Therefore, a deep understanding of the pathophysiology of PH Group 2 and how it differs (or not) from PAH Group 1 is necessary before making a decision of whether or not to treat.
- 3.** PH due to advanced lung disease (PH Group 3) occurs in the vast majority of patients being evaluated for lung transplant and is associated with increased mortality. Identification of PH, correct determination of PH type and decision whether or not to treat are complex aspects of care of patients with advanced lung disease. Because many patients in this category are being diagnosed when PH is already advanced, there is a clear gap in early recognition of PH Group 3. Assessment of patients with lung disorders such as pulmonary fibrosis, COPD and sarcoidosis for the presence and severity of PH is therefore an important step in improving their management.
- 4.** Annual incidence rates of deep venous thrombosis (DVT) and pulmonary embolism (PE) are approximately 0.5 to 1.0 per 1000 inhabitants and CTEPH develops in approximately 2-15% of patients who had a PE. Therefore, the estimated prevalence of CTEPH is high. Several reports highlight the significant gaps that exist between guidelines and clinical practice in regards diagnostic approaches and management of CTEPH, such as the lack of utilization of the ventilation/perfusion scan for screening and delay or omission of referral to a specialized surgical center for evaluation of operability. Therapies for CTEPH have been recently diversified and include sophisticated surgical approaches such as pulmonary endarterectomy, balloon angioplasty and medical treatment. Therefore, reviewing and clarifying the diagnostic algorithm, as well as different therapeutic approaches will be of great benefit for physicians and allied health care practitioners.

EDUCATIONAL GOALS

The overarching goal is to provide an advanced learning opportunity for specialists in the field of PH on the treatment of PAH Group 1, as well as PH in the setting of advanced left heart and lung disease and in chronic thromboembolic PH; all these entities have very different approaches in regards to management.

TARGET AUDIENCE

Pulmonologists/Respirologists, cardiologists, thoracic surgeons, nurses, physician assistants and allied health professional with experience in PH. The course is intended for health care professionals with primary practice that is focused in PH for at least 5 years or completed the ISHLT core curriculum course on PH.

LEARNING OBJECTIVES

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

1. Initiate advanced therapies for PAH
2. Apply advanced supportive measures in severe right heart failure
3. Manage complex patients with HFpEF and HFrEF complicated with PH
4. Understand pathophysiology, correctly diagnose and manage PH associated with advanced lung disease of different etiologies, such as emphysema, pulmonary fibrosis or sarcoidosis.
5. Correctly define the type and severity of vascular compromise in CTEPH
6. Determine the best therapeutic option in CTEPH, such as surgical eligibility, medical treatment or invasive nonsurgical approaches (balloon angioplasty).

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CREDIT DESIGNATION STATEMENT

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This course is co-provided by Amedco and the International Society for Heart and Lung Transplantation (ISHLT). Maximum of 4.25 contact hours.

ACPE CREDIT

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SCIENTIFIC PROGRAM SCHEDULE



1:15 PM – 2:00 PM
REGISTRATION AND COFFEE

2:00 PM – 2:15 PM
WELCOME AND INTRODUCTIONS
Myung Park, MD, Houston Methodist,
Houston, TX, USA
Ioana Preston, MD, Tufts Medical Center,
Boston, MA, USA

2:15 PM – 3:15 PM
SMALL GROUP INTERACTIVE
DISCUSSION A: Advanced PAH:
Challenges In Management
Moderator: **Robert Frantz, MD**

2:15 PM Case Scenario: Idiopathic PAH
with Advanced Right Ventricular Failure
Paul Corris, MB FRCP, Freeman Hospital,
Newcastle Upon Tyne, United Kingdom

Teaching/Discussion Points

- Understanding of optimal management strategies for RV failure (diuretics, inotropes, pressors).
- Discuss the role of atrial septostomy and ECMO.
- Timing of lung transplantation and factors impacting outcome.

2:45 PM Case Scenario: PAH with Suboptimal Control on Double Combination Therapy: What Next?
Stephan Rosenkranz, MD, University Heart Center, Cologne, Germany

Teaching/Discussion Points

- Utilization of optimal therapy lags behind guideline recommendations.
- Recognition of disease progression requires sophisticated integration of clinical, imaging and hemodynamic parameters that is insufficiently employed.
- Discussion of when to initiate parenteral therapy and various options available.
- Recognition of practice gaps suggesting that many PAH patients with advanced disease are not initiated on parenteral therapies and discussion of possible factors influencing this outcome.

2:15 PM – 3:15 PM
SMALL GROUP INTERACTIVE
DISCUSSION B: Challenges in PH Due to Left Heart Disease: An Increasingly Recognized Complication
Moderator: **Marco Guazzi, MD, PhD**

2:15 PM Case Scenario: PH Due to Heart Failure with Reduced Ejection Fraction
Ray Benza, MD, Allegheny General Hospital, Pittsburgh, PA, USA

Teaching/Discussion Points

- Hemodynamic definition and its limitations
- Epidemiology and phenotypes. Understanding the role of the right ventricle in HFrEF
- Pathophysiology of PH-HFrEF and the importance of mitral regurgitation
- Discussion of transplant and advanced support in the presence of PH
- Targeting the pulmonary microcirculation; a critical appraisal of current therapies for PH-HFrEF

2:45 PM Case Scenario: PH Due to Heart Failure with Preserved Ejection Fraction
Dario Vizza, MD, University of Rome, Rome, Italy

Teaching/Discussion Points

- Hemodynamic and clinical definitions;
- Epidemiology and phenotypic characteristics.
- Challenging LV filling and diastolic properties: exercise vs fluid loading
- Challenges in the management of patients with HFpEF and significant RV dysfunction. Discussion whether targeting the pulmonary vasculature is effective and safe.

3:20 PM – 4:20 PM
SMALL GROUP INTERACTIVE
DISCUSSION ROTATIONS
A AND B REPEATED

4:20 PM – 4:45 PM
COFFEE BREAK

4:45 PM – 5:45 PM
SMALL GROUP INTERACTIVE
DISCUSSION C: PH Due to Advanced
Lung Disease
Moderator: Steven Nathan, MD

4:45 PM Case Scenario: PH Due to
Combined Chronic Obstructive Lung
Disease and Pulmonary Fibrosis
Fernando Torres, MD, University of Texas
Southwestern Medical Center, Dallas, TX, USA

Teaching/Discussion Points

- Understand the implications of PH in diffuse parenchymal lung disease.
- Epidemiology: advances in screening techniques and diagnostic algorithms.
- Interpretation of hemodynamic testing in the setting of advanced lung disease.
- Challenges in the treatment of advanced pulmonary vascular disease in patients with COPD and IPF.
- Clinical trial conundrums.

5:15 PM Case Scenario: PH Associated
with Sarcoidosis
Oksana Shlobin, MD, Inova Fairfax Hospital,
Falls Church, VA, USA

Teaching/Discussion Points

- Is PH complicating sarcoidosis different to the PH of other forms of diffuse parenchymal lung disease?
- What factors are unique to sarcoidosis? If PH in sarcoidosis similar to PAH Group 1?
- Epidemiology: the role of PH screening in sarcoidosis.
- Implications with regards to transplantation.
- Treatment options, limitations of current therapies.

4:45 PM – 5:45 PM
SMALL GROUP INTERACTIVE
DISCUSSION D: CTEPH
Moderator: Manreet Kanwar, MD

4:45 PM Case Scenario: CTEPH with
Mixed Type 3 and Type 4 Disease
Irene Lang, MD, Medical University of
Vienna, Vienna, Austria

Teaching/Discussion Points

- Distal disease: What is the right therapeutic approach?
- Is there a role for combined surgical (PTE) and medical (BPA) approach in type 3/4 combined disease?
- Surgical challenges in patients with distal disease.
- Optimizing patient selection for surgical candidacy in patients with high pulmonary vascular resistance and distal disease.

5:15 PM Case Scenario: CTEPH with
Discordant Diagnostic Results Between
Imaging, Hemodynamics and Clot
Burden

William Auger, MD, University of California
San Diego Medical Center, San Diego, CA, USA

Teaching/Discussion Points

- Patient selection for optimal therapeutic options for CTEPH.
- Predicting surgical outcomes from pre-op data.
- Diseases that mimic CTEPH.
- Identifying patients with likely post PTE persistent PH.

5:50 PM – 6:50 PM
SMALL GROUP INTERACTIVE
DISCUSSION ROTATIONS
C AND D REPEATED

6:50 PM – 7:00 PM
CLOSING REMARKS

Myung Park, MD, Houston Methodist,
Houston, TX, USA
Ioana Preston, MD, Tufts Medical Center,
Boston, MA, USA

20
17

REGISTRATION POLICIES/INSTRUCTIONS FOR COMPLETING THE REGISTRATION FORM

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION
THIRTY-SEVENTH ANNUAL MEETING AND SCIENTIFIC SESSIONS
APRIL 5-8, 2017

1. The Annual Meeting registration fee includes attendance at all scientific sessions, exhibit hall receptions, and coffee breaks.
2. For those whose registration is received prior to February 23, 2017 the non-member registration fee includes membership in the Society from the date of registration through December 31, 2017. 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 RECEIVED by March 17, 2017 must register on-site.** Registration fees are determined by the date when **payment in full is received.** 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 received 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: phyllis.glenn@ishlt.org. For written cancellation notices **RECEIVED by February 22, 2017**, a full refund of the scientific session fees paid will be given, less a \$100 handling fee. **For written cancellation notices received after February 22, 2017, no refund of any fees will be given. All cancellation refunds will be issued approximately 15 days after the meeting.**
6. **The Physician/Surgeon 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 healthcare provider. **Individuals who meet this definition may not register under any other category.**
8. **The Allied Health/Non-Physician rate** is available 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 should select this rate. Non-member allied health registrants must include with their registration forms a letter signed by the chief/dean of their transplant 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) should select this rate. 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 17, 2017. 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 Lee Ann Mills: 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 17, 2017.** After this date, there will be a \$25 fee for each name change/replacement.
14. Age Restriction: Children 12 and under are not permitted in sessions and must be accompanied by an adult at all times. Children under the age of 12 are not permitted in the Exhibit Hall at any time. A Guest registration or a President's Cocktail Reception ticket must be purchased for children attending the President's Cocktail Reception.

QUESTIONS?

CALL THE ISHLT

HEADQUARTERS

OFFICE AT

972-490-9495

EMAIL US AT

MEETINGS@ISHLT.ORG

OR FAX US AT

972-490-9499.

2017

REGISTRATION FORM

(FORMS THAT ARE FAXED/MAILED IN MUST BE LEGIBLE IN ORDER FOR US TO PROCESS.)

INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION THIRTY-SEVENTH ANNUAL MEETING AND SCIENTIFIC SESSIONS & ISHLT ACADEMY COURSES • APRIL 4-8, 2017, SAN DIEGO, CA, USA

IMPORTANT: This is a TWO-SIDED FORM. Side A and Side B

Please see page 86 for instructions, rate descriptions and refund/registration policies.

ON-LINE REGISTRATION IS ENCOURAGED AND IS AVAILABLE ON THE ISHLT WEBSITE:

<http://www.isHLT.org/meetings/registrationHousingAndTourForms.asp>

LAST NAME: _____ FIRST NAME: _____ MIDDLE INITIAL: _____

CREDENTIAL (MD, RN, FRCS, ETC.): _____ INSTITUTION/ORGANIZATION NAME: _____

Preferred Mailing Address: This MUST be the valid mailing address of the individual being registered. Travel agencies and sponsoring company addresses will not be accepted.)

Please indicated if address is home or business: Home: _____ Business: _____

Mailing Address: _____

City: _____ State: _____ Post Code: _____ Country: _____

Telephone: _____ Fax: _____ Email: _____

(Mandatory: Confirmation will be sent to this email only)

DELEGATE BADGE:

(please print clearly below the details for your badge)

FIRST _____ LAST _____, DEGREE _____

INSTITUTION / ORGANIZATION _____

CITY _____ STATE (if applicable) _____

COUNTRY _____

PROFESSIONAL CLASSIFICATION: (check one box only) Mandatory that you choose one

- | | | |
|---|---|--|
| <input type="checkbox"/> Anesthesiology | <input type="checkbox"/> Pathology | <input type="checkbox"/> Pulmonology |
| <input type="checkbox"/> Cardiac Surgery | <input type="checkbox"/> Pediatric Cardiology | <input type="checkbox"/> Research |
| <input type="checkbox"/> Cardiology | <input type="checkbox"/> Pediatric Pulmonology | <input type="checkbox"/> Social Science |
| <input type="checkbox"/> Cardio-Thoracic/
Vascular Surgery | <input type="checkbox"/> Pediatric Transplant Surgery | <input type="checkbox"/> Thoracic Surgery |
| <input type="checkbox"/> Immunology | <input type="checkbox"/> Perfusion | <input type="checkbox"/> Transplant Coordination |
| <input type="checkbox"/> Infectious Diseases | <input type="checkbox"/> Pharmacy/Pharmacology | <input type="checkbox"/> VAD Coordinator |
| <input type="checkbox"/> Nursing | <input type="checkbox"/> Physician Assistant | <input type="checkbox"/> Other: _____ |

ANNUAL MEETING SCIENTIFIC SESSIONS:

	Received on or before February 22	Received between February 22-March 17++	TOTAL
Industry Member**	\$ 1020	\$ 1170	\$ _____
Industry Non-Member**	\$ 1355	\$ 1505	\$ _____
Physician/Surgeon Member <i>(industry employees may not register for this category and must register in the Industry category)</i>	\$ 795	\$ 945	\$ _____
Physician/Surgeon Non-Member* <i>(industry employees may not register for this category and must register in the Industry category)</i>	\$ 1130	\$ 1280	\$ _____
Allied Health/Non-Physician Member <i>(industry employees may not register for this category and must register in the Industry category)</i>	\$ 465	\$ 615	\$ _____
Allied Health/Non-Physician Non-Member* <i>(industry employees may not register for this category and must register in the Industry category)</i>	\$ 800	\$ 950	\$ _____
Student/Trainee Member <i>(industry employees may not register for this category and must register in the Industry category)</i>	\$ 355	\$ 505	\$ _____
Student/Trainee Non-Member* <i>(industry employees may not register for this category and must register in the Industry category)</i>	\$ 520	\$ 670	\$ _____

GUEST AND SOCIAL ACTIVITIES REGISTRATION:

GUEST ACTIVITY REGISTRATION+

Without President's Cocktail Reception \$ 50 \$ 75 \$ _____

With President's Cocktail Reception \$ 100 \$ 125 \$ _____

(must be purchased in advance and will not be sold on-site)

Guest Name for Badge: _____

PRESIDENT'S COCKTAIL RECEPTION

(Not included with Scientific Session registration; must be purchased in advance; will not be sold on-site)

Industry Registrant \$ 100 \$ 125 \$ _____

Physician/Surgeon/Registrant \$ 50 \$ 75 \$ _____

Student/Trainee/Allied Health Registrant \$ 25 \$ 35 \$ _____

SUBTOTAL SIDE A *(This side of Form)* \$ _____

SUBTOTAL FROM SIDE A \$ _____

ISHLT ACADEMY COURSES:

(please check box for the Academies you wish to register for; Core Competency Courses include a box lunch.)

- Core Competency course in Pediatric Mechanical Circulatory Support Tuesday, April 4 (full day)
- Core Competency course in Mechanical Circulatory Support Tuesday, April 4 (full day)
- Core Competency course in Infectious Diseases Tuesday, April 4 (full day)
- Master Class in Mechanical Circulatory Support Tuesday, April 4 (8 am – 1 pm)
- Master Class in Mechanical Circulatory Support Tuesday, April 4 (2 pm – 7 pm) (repeat of morning class)
- Master Class in Pulmonary Hypertension Tuesday, April 4 (2 pm – 7 pm)

CORE OR MASTERS ACADEMY COURSE (ISHLT Member): \$ 250 \$ 300 \$ _____

CORE OR MASTERS ACADEMY COURSE (Non-member): \$ 400 \$ 450 \$ _____

SYMBOLS:

- * Includes membership in the Society through December 31, 2017 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. Individuals who meet this definition may not register under any other category.
- + Includes access to the plenary sessions, exhibit hall, wine and cheese receptions. Guest MUST be accompanying a registrant in one of the other categories. Please see instruction #14 regarding age restrictions for children.
- ++ Registrations postmarked after March 17 will not be processed before the meeting and therefore these registrants must go to on-site registration desk to register. Registration fees for forms postmarked after March 17 will be considered on-site registrations and are subject to the on-site registration fees which are \$300 more than the early bird registration fees. 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 March 17 and for on-site academy registration are \$100 more than the 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 also registered for the meeting. \$ 15 \$ 15 \$ _____

ONLINE RECORDED SESSIONS:

MEMBER PRICING: New for 2017: All ISHLT members will receive **COMPLIMENTARY** access to online recorded sessions for both the Annual Meeting and Core Competency Course Academies. Therefore, ISHLT members do not need to register for the online recorded sessions.

NON-MEMBER PRICING (Prices below are valid only for non-members also registering for the Annual Meeting)

Entire Annual Meeting: \$ 125 \$ _____

Entire Annual Meeting (Allied Health pricing) \$ 75 \$ _____

Entire Annual Meeting (Trainee pricing) \$ 50 \$ _____

TOTAL DUE (SIDE A and B) 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: _____ Expiration Date: _____ CSC Code:* _____

*CSC: CREDIT CARD SECURITY CODE IS THE 3-DIGIT CODE ON THE BACK OF MC/VISA CARDS AND THE 4-DIGIT CODE ON FRONT OF AMEX CARD)

Card Holder Signature: _____

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

We'll see you

in...

SAN DIEGO





THIRTY-SEVENTH
ANNUAL MEETING AND SCIENTIFIC SESSIONS
SAN DIEGO, CALIFORNIA, USA
APRIL 5-8, 2017



INTERNATIONAL SOCIETY FOR HEART AND LUNG TRANSPLANTATION
14673 Midway Road, Suite 200, Addison, Texas 75001