



April 30, 2016

# DAILY Links

## 36<sup>th</sup> Annual Meeting & Scientific Sessions Marriott Wardman Park, Washington, DC



Photo from twitter.com

And that is why we are here today because of something called precision medicine

- Barack Obama

Led by Lori West and John Dark, a fantastic morning plenary session was well set to challenge our routine practice to reach the dizzy heights of 0% adverse patient safety events whilst introducing us to crowd funding and research by public interest rather than wordy grant applications! It was inspirational to here our future President, Professor Fisher tell us of the pitfalls in multicenter trials and remind us of our responsibility to patients who participate in trials by publishing and discussing results, regardless of outcome. Much can be learnt from failure, just as from success. The UK EVLP experience (DEVELOP-UK study) in this morning's plenary session. It compared EVLP assessed marginal vs. conventional donors. The study illustrated difficulties and challenges conducting multicenter trials looking at new interventions. The primary endpoint of non-inferiority (1 year survival) was not reached due to poor recruitment and a pause for an interim safety review. Significantly higher rates of ECMO use were seen in the EVLP group because of PGD grade 3 at 24 hours.

*'Although we did not achieve what we had hoped, it is our responsibility to our patients, public sponsor and scientific community to accurately and honestly report results.'*

The society owes much to Denny Luan for taking us somewhere we maybe didn't realize existed and remind us that enthusiasm and curiosity is just as important as the dollar bill and doing what the professor thinks is best.

So open your wallet and give \$5 to [www.experiment.com](http://www.experiment.com) today, to see where science could take us all!



*'We owe it to our patient's to push ourselves to improve treatments we know are successful'*

Many congratulations to Simon Messer, Papworth for a great presentation on why the DCD heart programme will no doubt help revive our passion for heart transplantation.

**"Science knows no country, because knowledge belongs to humanity, and is the torch which illuminates the world" - Louis Pasteur**

In the following session (what's new in primary graft dysfunction), Anders Andreason presented further biomarker data from DEVELOP-UK. IL1 $\beta$  levels within EVLP perfusate could predict non-progression to transplant or recipient death. Development of a rapid diagnostic assay was discussed and, if these results validated, could assist with clinical decision-making.

Bronwyn Levvey from the Australian DCD collaborative has reviewed warm ischemic time (WIT) measurements from 227 Australian DCD recipients and reported results this morning. WIT did not correlate with PaO<sub>2</sub>/ FiO<sub>2</sub> ratio at 24 hours. She suggests the data may cautiously support an increase in feasible DCD time window post withdrawal, comments supported by observations from the floor (Dr Cyphel Toronto). This may potentially facilitate higher DCD yield by reducing failure to progress. "Either quantification of WIT is incorrect, or we are well short of the limits of WIT in controlled DCD lungs".

**Infection Reduction – Do or Do Not, There is No Try - Yoda**

**A Review of Sunrise Symposium 6 – The Fly in the Ointment: Nosocomial Infections**



*Photo from starwars.wikia.com*

Jedi Knights willing to wake before the suns rose on Tatooine were rewarded with a thorough review of nosocomial infections. Multidrug-resistant organisms are an increasing cause of infections in thoracic transplant, as well as in MCS recipients. Stewardship Jedi Master Mary Bradbury discussed the components and role of antimicrobial

stewardship programs to optimize antimicrobial use in an effort improve clinical outcomes while addressing the underlying issues of

emerging resistance. Opportunities for research there are as there is very little data in the literature around antimicrobial stewardship and solid organ transplant or MCS. Antimicrobial stewardship is necessary to hinder global resistance practices. CLABSI Vice Chair of the Galactic Senate Valentina Stosor looked at the overall burden of central line associated bloodstream infections (CLASBIs) on the patient and healthcare system including incidence, causes and associated costs. Fear not young Jedi's, most CLABSI's are preventable. Non-tunneled central lines account for the majority of CLABSI's in the ICU. Practice good hand washing you must, as effective hand washing is done in the healthcare setting only 40% of the time on average across the US galaxy on any given day. Admiral Angie Lorts encouraged the Republic to ask, is it infection or is it inflammation with regards to VAD patients. Because inflammation leads to difficulty with anticoagulation, surveillance of inflammatory markers such as Procalcitonin may be helpful in differentiating infection from inflammation. Many centers are now using corticosteroids to help control inflammation post implantation. Barbara Alexander was required to attend meeting with the Emperor, so fellow Senator Cameron Wolfe shared their center experience regarding a mycobacterium abscessus outbreak that occurred with the opening of their new cardiothoracic tower on the Death Star. After extensive testing, they found the water-based bug was found throughout the environment including showerheads and faucets in the patient rooms and OR scrub sinks. Since implementing sterile water protocols for things like oral care and enteral feed tube flushes, as well as not allowing patients to shower or bathe while their battle wounds are healing, there have been no further outbreaks. They also enlisted the help of the Storm Troopers to look at engineering changes to the water system.

#### **Sunrise Symposium 04: don't you always get up early with the kids?**

Well thankfully most of us don't have the kids with us in Washington DC, but this was all about size, resistance and compliance. Plenty of delegates made it to this early session with what was 4 fantastic talks on PAH in congenital heart disease. Warren Zuckerman from Columbia used 15 minutes to get the audience engaged with 'Not every hole is created equal: Congenital Shunt Physiology, Classification and the association with pulmonary hypertension. A great job done. Closure was certainly reached by the end of the session. Devices are helpful and may be the answer to improve symptoms but not to reverse PAH. Moving forward we need an evidence based algorithm to guide operability and offer this subset of patients the best in standard of care.

**The best way to predict the future  
is to create it.**

**Whatever you are, be a good one.**

*- Abraham Lincoln*



## **Pimp My Pump!**

### **Review Concurrent Session 21: Novel MCS Design and Management**

Quite a bit of excitement and inquiry was generated from the audience during this session, which presented new ideas in management and treatment of issues in MCS. Kamil Abdullah began the session by discussing the potential importance of utilizing RHC to guide management in ambulatory VAD patients. Jonathan Grinstein suggested that ventricular filling phase slope can be utilized as a non-invasive parameter to predict abnormal hemodynamics in HVAD patients. Carlo Bartoli proposed that certain devices profiles have less traumatic effects on vWF but that each device has a “unique biological footprint”—perhaps this is key area of further study. David Dobarro, from the Freeman group, presented a retrospective study that pointed towards worse outcomes with a closed aortic valve showing that overall LV health may be more of a factor than VAD speed. Jennifer Engelke taught us all about computation fluid dynamics while Behzad Soleimani’s surgically oriented talk showed that it is possible to exchange the HMII for an HVAD in a “minimally invasive” fashion. Based on the research presented during this session it looks like the future is very bright!

## **Just Do What We Say - Whose Fault Is It Anyway?**

### **A Review of Concurrent Session 25 – Beyond Adherence: What’s New Out There?**

There are hosts of system, institutional and patient specific factors that may affect adherence in the transplant population. Historically, patients without insurance have been denied the option of transplant. Sadeer Al-Kindi looked at the impact of early implementation of the Affordable Care Act on heart transplant listings in the US. By reviewing the UNOS registry data pre and post 1-year ACA implementation, they found a significant increase in the percentage of heart listing during that time period. As a result, there was also approximately a 30-day increase in waitlist time for states who adopted the ACA. Mary Amanda Dew looked at the risk for nonadherence long term in the lung transplant population. Through phone interviews with patients and caregivers, they looked at non-adherence in several categories. They showed within this cohort that early non-adherence predicted late term nonadherence; however, there were also new cases of non-adherence late term. Areas with the highest rate of non-adherence were home spirometry and blood pressure monitoring. Risk for late-term nonadherence was increased by greater distance from the transplant center, recent respiratory symptoms and lower posttraumatic growth. Maan Cajita shared findings in the heart transplant population from the Bright Study, which showed adequate health literacy was associated with engaging in sufficient physical activity in their heart transplant cohort. Implications for clinical practice included using individualized patient communication strategies to alleviate the negative impact on inadequate health literacy. Fabienne Dobbles presented the results of the MAESTRO-Tx study, which looked at the efficacy of a theory based, multicomponent, tailored intervention on medication adherence and clinical outcomes in post-transplant patients. Their interventions resulted in a 19% difference in taking and a 22% difference in timing adherence of tacrolimus. Jesus Casida looked at self-

management for the purpose of this study, as a predictor of quality of life in LVAD patients. This study showed higher level of self-efficacy and adherence to LVAD home care regimen results in greater improvement in quality of life. Finally, Linda Bogar will review the results of a multicenter quality of life survey regarding LVAD drivelines, a common dissatisfier in this patient population. Overall, patient satisfaction with the drivelines was good. Top requests from patients were smaller units and longer drive lines.



It's officially the weekend, but don't leave us just yet!

### **Coming Attractions**

#### **It's time to rethink! (Sunrise Symposium 08)**

Just to keep us engaged, we look at lost causes, lesson's learned and high risk cardiac surgery in the treatment of vavular disease. Chaired by Richard Cheung and David Taylor, get to Maryland for 7am to hear Stephan Ensminger tell us what to do when severe left ventricular dysfunction in aortic valve disease without contractile reserve is ripe for replacement or ripe for MCS/transplant. Ivan Knezevic knows that we know we never forget the tricuspid? Yes? Well this talk looks at the significance of tricuspid regurgitation as a predictor of poor outcome and how we should assess tricuspid to best serve our patients. The session closes with the more familiar mitral valve and Hermann Reichenspurner who helps us to decide when the risk of the operation is just worth it for the patient.

#### **Can You Shake Your Grove Thing on ECMO?**

#### **Ambulatory ECMO in Adults: We Like to Move It, Move It (Sunrise Symposium 10)**

Christian Benden will look at what lessons that can be learned from the pediatric ECMO population. Enrique Diaz Guzman Zavala will discuss medical considerations of ambulating ECMO patients, included length of therapy, benefits and impact on HLA related issues. Bryan Boiling will provide a nursing prospective on practical considerations regarding safety, procedures and needed resources to have a successful ambulatory ECMO program. Kate Hayes will address the physical benefits and specific complications related to ECMO patients requiring immobility. The session will conclude with a panel discussion from these groovy speakers!

#### **Who will win the Battle? (Concurrent Session 47)**

They saved the best for last! A variety of topics related to right heart failure will be covered in this Saturday morning session which begins with Dr. Morales presenting the worldwide experience of total artificial heart implantation in congenital patients. Outcomes of aortic and mitral regurgitation on LVAD patients will be discussed by Dr.



Stulak, while Dr. Grandin will discuss mitral regurgitation after LVAD. A talk on percutaneous RVAD/ECMO in RV Failure by Dr. Siddique should be quite fascinating. The session ends with two studies about outcomes patients with pulmonary hypertension. Dr. Ashrith will describe results in LVAD patients with elevated TPG and Dr. Schumer will discuss post-transplant survival—spoiler—(survival seems to be worse in pulmonary hypertensives).

### **Survival of the Fittest – The MCS MacDaddy’s (Concurrent Session 48)**

Peggy Blood will present survey results looking at the use of palliative care services within MCS programs around the country. Michael Koeckert will share their center’s work around identifying features of successful patient-caregiver relationships and their impact on post implant outcomes. Rebecca Cogswell will discuss pre-operative predictors for admission to a rehabilitation facility after LVAD implantation and the impact on long-term survival. Colleen McIlvennan will discuss assessment strategies of cognitive function pre and post LVAD implementation. Matthew Lander will share how modification of driveline dressing protocols can result in substantial reductions of infection rates. Sarah Walter will conclude the session looking at the relationship between socioeconomic status on survival and thrombotic events in LVAD patients.

### **What Becomes of the broken hearted? Who’d have a heart transplant? (Concurrent Session 49)**

Ivan Knezevic and Javier Segovia steer us through PGD as we unravel the enigma of vasoplegia post transplant with Fardad Esmailian. Brian Lima is planning to look at the ISHLT criteria for PGD and the risk factors and outcome from a high volume centre at Baylor. Maryjane Farr from Columbia compares donor and recipient risk factors associated with PGD requiring temporary mechanical support less than 24 hours post transplant. Finally Yu Xia brings us to close with ECMO and its application in PGD. With Montefiore medical centre’s experience in successfully supporting patients to recovery in two thirds of their experience who suffer PGD, try to revive our love of fixing broken hearts with transplantation.

### **It’s not over until the lady from Arkansas sings! (Concurrent Session 50)**

Don’t fly home yet! The meeting concludes this afternoon with a diverse symposium covering a range of topics. The common theme is identifying and modifying factors, which can impact on adverse outcome for our patients. The Hanover group will start by exploring the relevance of de-novo isolation of multi-drug resistant organisms immediately after transplant. They follow on by sharing their experience of early donor specific antibody (DSA) and results of a treatment protocol (rituximab / IVIG) universally applied. The Houston group will look at de-novo DSA from a different angle – correlating with acute cellular rejection episodes. Continuing the humoral theme will be the Washington group who have examined their AMR cases and stratified for presence or absence of a positive C4D stain. What bearing does this test have on prognosis? Finally, a European collaborative lead by Hanover has collated their patients undergoing lung transplant following allogeneic stem cell transplant and will present results. Do their results show higher rates of infection or malignancy as previously suspected?

# Ch Ch Changes

## ISHLT's 2016 to 2020 Strategic Framework

### OUR MISSION:

We are a 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.



### OUR GUIDING PRINCIPLES:

We value our members and will offer a high value proposition.

Being international is core to who we are. We must create value to members all over the world.

We embrace multi-disciplinary integration while respecting the autonomy of individual specialties within our membership.

Strategy will drive our decision-making.

## Radioactive

*We're waking up. We feel it in our bones. Enough to make our system blow. Welcome to the new age... It's **radioactive**...*

*- Imagine Dragons*



Olivia Valentine  
ISHLT 2002  
Washington, DC



Olivia 14 years later



Tyler Deuse  
ISHLT 2014  
Washington DC



14 years later???

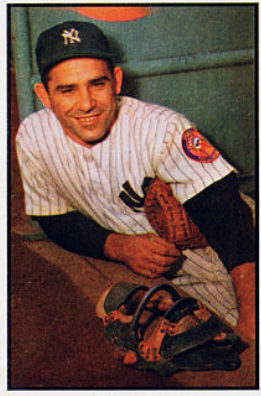
**Leadership and learning are indispensable to each other**  
- John F. Kennedy

### Lessons on Good Leadership

- Great things can happen when you don't care who gets the credit
- Thrive on an insatiable hunger for learning and new information
- Some of the best leaders learn from their mistakes.



## Erratum



**It ain't over til it's over!**

**When you come to a fork in the road, take it! – Yogi Berra**

Thursday Morning's Presidential Address was inspired by the great New York Yankee #8 Yogi Berra, not Yogi Bear (although that Yogi is still 'smarter than your average bear.'")



**It's been *Monumental*. See you next year on the other side.**

# A BIG THANK YOU

To the crack team of Roving Reporters for 2016 for their dedication, knowledge of music, and sense of humor. Their hard work and contributions are very much appreciated!



*Pictured from left to right: Erin Wells, Karen Booth, Zewdi Asfaw and Michael Trotter*

**Newsletter Editor:**

Vincent Valentine, MD

**Newsletter Coordinators:**

Lauren Daniels and Naomi Rios

**Roving Reporters:**

**Mechanical Circulatory Support:**

**Zewditu Asfaw, MD**

University of Chicago, Chicago, IL, USA

**Heart Failure and Transplantation:**

**Karen Booth, MBChB, MSc**

Freeman Hospital, Newcastle upon Tyne, UK

**Lung Failure and Transplantation:**

**Michael A. Trotter, MBChB, FRACP**

The Prince Charles Hospital, Brisbane, Australia

**Nursing, Allied Health, PH, Infectious Diseases, Misc:**

**Erin Wells, BSN, RN, CCTC**

Cincinnati Children's Hospital, Cincinnati, OH, USA

### **For Want of a Nail - proverb**

- *For want of a nail the shoe was lost.*
- *For want of a shoe the horse was lost.*
- *For want of a horse the rider was lost.*
- *For want of a rider the message was lost.*
- *For want of a message the battle was lost.*
- *For want of a battle the kingdom was lost.*
- *And all for the want of a horseshoe nail.*



*Disclaimer: Any opinion, conclusion or recommendation published by the Links is the sole expression of the writer(s) and does not necessarily reflect the views of the ISHLT.*