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Meaningful reflections on past events usually demand a considerable passage of time to allow impressions and thoughts to be balanced. However, these reflections are provided almost immediately following the 36th Annual Meeting due to the tight timelines required by the LINKS Task Master, Vincent Valentine. Although some may demur, perhaps it is better done quickly than not done at all!

Let us start with the extraordinary increase in registered delegates to the meeting, which for the first time ever threatened the 4000 mark. The increase was evidenced across a number of disciplines. Quite simply, if you did not take your seat prior to a session, there was often standing room only which serves to emphasise just how interested delegates were in the scientific sessions. It is a far cry from some meetings of the past (Paris comes to mind)! It also illustrates a maturation not only of program committee skills in crafting such an exciting program but the membership in general who now appreciate fully the opportunity of sharing their work amongst peers and contributing to each session with insightful scientific exchange.

Throughout the meeting and at every stage, the imprint of the ISHLT Strategic Plan which had been developed through consultation and external coordination was evident. A blueprint has been devised for the introduction of the Strategic Plan at every phase of ISHLT activities so that as we move towards being a larger and more effective organisation, we operate under better business principles. This is not only to be desired but is necessary particularly in a predominantly volunteer organisation. Perhaps for the first time, specific roles have been delineated and written down and contracts agreed between major players in the organisation. Of course, this has been largely driven by the Board, the outgoing President in particular and a select Executive Council that has worked closely with external Consultants to craft the road ahead. Short term goals and initiatives have been set with medium term plans agreed. It is both the challenge and responsibility of the membership to embrace these goals and to make them a working reality.

Working quietly behind this plan has been the wise counsel of the past President’s Council, whose body of experience has informed a number of the critical decisions. Once humorously described as “The Dead President’s Society”, the past Presidents are now reinvigorated as a potent force within the ISHLT to assist in the development of the way ahead. To borrow from Marshall McLuhan, one might say that “this is marching backwards into the future looking in a rear vision mirror” but it is exactly the opposite in effect. The past Presidents who have such loyalty and experience in the Society are committed as a group to the survival and health of the Society and are a rich source of opinion which can only benefit future planning.
Similarly, in the Pulmonary Council, the Washington meeting saw the first meeting of "The Old Hangers-On Club" i.e. the past Pulmonary Council Presidents who under the direction of John Orens met for lunch to discuss pertinent issues and while not all could be in attendance, the group of Orens, Corris, Hertz, Glanville and Garrity as an adhoc member commenced a dialogue which no doubt will be continued in future meetings.

At the other end of the spectrum, the Junior Faculty Council Mentorship Lunch once again proved a most remarkable initiative in which a large number of Senior Faculty were able to share their considered thoughts regarding how best to serve the Society and work in a meaningful partnership between mentor and mentee to develop productive career structures. It was clear that the Senior Faculty were open and available and willing to assist. That is only right given that the future of the society lies in the hands of our junior members. In the wise words of our ancestors “we are but custodians of the earth” and so are we, of the Society.

Two other aspects of the meeting spring to mind. First, the ongoing success of the Journal under the leadership of Mandeep Mehra who, incidentally, spoke so eloquently in the President’s Debate expressing some of the frustrations that many of us have shared over the years, and the emergence of the I2C2 as a potent force within the Society.

The Journal goes from strength to strength, continues to adapt to a changing electronic environment and now is recognised as the premier journal in transplantation. This is a major step forward for the Society and emphasises the strong work done by so many people over a number of years. It is a just reward.

The I2C2 under leadership and vision of Dr Lori West had a difficult conception (IVF comes to mind!), was beset by first trimester morning sickness and required an assisted delivery but has now produced a healthy neonate. With each initiative the Society is becoming more “I” and now embraces the world, educates broadly and demonstrates respect for local practices and cultures. In fact, through the success of the I2C2, we make the world a smaller place and learn that we have more commonalities than differences with our international colleagues.

Finally, for such an exciting and busy meeting, it is at the same time humbling for many of us to see the exponential growth of knowledge in specialised areas, the eloquence of presentations, the commitment of individuals and the feedback from the International Colleagues.

As a parting question, ask yourself, is there any meeting that you attend where you are more excited, more challenged, more involved, more engaged or more committed to attend next year and the year after?

See you in San Diego, 2017!!!

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Your ISHLT President Reaches Out

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I have just returned home from Washington, D. C. and the largest ISHLT meeting ever. Although I am tired and it will take a few days to recover, I can still feel the energy that was generated by being together to share both scientifically and personally. I would like to congratulate Andy Fisher, Duane Davis and the 2016 Program Committee for all of their efforts (which made the meeting successful beyond belief!). And we all know that the meeting could not occur without the tireless efforts of the ISHLT Staff including Amanda Rowe, Susie Newton, Lisa Edwards, Megan Barrett, Phyllis Glenn and Lee Ann Mills. Please pass on your thanks and appreciation to them as well. As many of you know, I have selected Jeff Teuteberg to be Program Chair for the 2017 Annual Scientific Sessions in San Diego and although the 2016 meeting will be a tough act to follow, with the help of our Councils and Members, we promise to provide you with another great opportunity to learn, grow professionally, and connect with colleagues from around the world.

As you are likely aware (and, for those of you at the Annual Meeting, repeatedly reminded), the ISHLT has been involved in a very important Strategic Planning Process over the past year. The Board has approved a Strategic Framework, as depicted below, and over the next year we will begin to fill in the blanks to move forward the specified ISHLT goals and objectives. As astutely noted by our LINKS Editor, Vincent Valentine, a subtitle for this is “Vision 2020 in order for us to see clearly where we are headed”.

The Board has adopted the following priority objectives for the first year:

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<th>Strategic Imperative</th>
<th>Objective</th>
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<tr>
<td>Enhance Membership Value</td>
<td>Develop online interactive platform for board and council meetings and educational offerings</td>
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<tr>
<td>Enhance Membership Value</td>
<td>Begin upgrade of website to improve accessibility/connectivity/device independence</td>
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<td>Engage Our Community Worldwide</td>
<td>Collaborate with 3 existing regional/national societies to increase outreach for education in Heart/Lung Disease</td>
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<tr>
<td>Improve Science &amp; Drive Innovation</td>
<td>Establish an ISHLT Research &amp; Quality Innovation Task Force to explore partnerships with outside funding sources</td>
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<tr>
<td>Ensure Organizational Vitality</td>
<td>Develop roles/responsibilities for all organizational units (Board/Committees/Councils) and volunteer positions</td>
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Moving beyond year one, we will be looking to our Councils to bring forward to the Committees and the Board projects that will move us toward achieving the other objectives outlined in the strategic plan, which we will be sharing with you over the next few months. It is important to remember that this is your ISHLT Strategic Plan and we want to continue to involve you in successfully implementing the objectives defined as being important to the Society for the next five years. Your ISHLT Board will also be reviewing the progress made on a regular basis and will likely reach out to members to assist in moving specific areas of the plan forward.

At the Annual Business Meeting held in Washington DC on Friday, April 29, the following ISHLT members were elected to serve as officers and new members of the Board of Directors:

- President-Elect: Andrew Fisher, FRCP
- Secretary-Treasurer: Joseph Rogers, MD
- Director: Jason Christie, MD
- Director: Howard Eisen, MD
- Director: Dirk Van Raemdonck, MD

At the same time, I would be remiss if I did not express our thanks to the following outgoing board members for their contributions to the ISHLT over the last several years:

- Hemann Reichenspurner, MD, PhD
- Stuart Sweet, MD, PhD
- Daniel R. Goldstein, MD
- Myung Park, MD

I would also like to share with you the names of members of the ISHLT Executive Committee who will be working with me and the ISHLT staff over the next year to make your Society even more responsive to your needs and receptive of your ideas. I will be joined on the Executive Committee by Duane Davis, MD, MBA (Past President), Andrew J. Fisher, FRCP, PhD (President Elect), Joseph Rogers, MD (Secretary-Treasurer), and Michael Petty, PhD, RN, CNS (At Large Member appointed by the president). The Executive Committee will meet by teleconference every two weeks to keep the Society moving forward between our Board conference calls and meetings. Although the primary mechanism to move ideas forward will be through your Council or Committee, we are also available to you as well should you have items you wish to discuss.

With your help, we can continue to move the ISHLT forward over the next year! Thanks in advance for your ideas and participation.

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A Few Thoughts…Looking Back at ISHLT 2016

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What a whirlwind! It sure seemed like a very busy ISHLT meeting last week. Was it because there were more interesting sessions than ever before? Did it just feel that way because the attendance was so great and the rooms were full and buzzing with excitement? Maybe both? Whichever it may be, this ISHLT meeting was memorable. Vincent Valentine is after me to put some thoughts on paper for this Links Newsletter: here are some that come to mind:

Thought #1 - Pushing the limits: If I had to think of one phrase to represent this ISHLT meeting, it would be “pushing the limits”. This theme seemed to permeate every session. Can we further prolong the time between death and donation for DCD organs? Can we restore sicker organs using ex vivo perfusion? Can we recruit more centers for larger multi-center trials? ... I could cite many more examples of limits our society is striving for.

Thought #2 - AMR: Headway has been made in AMR, the ‘enfant terrible’ of transplantation. New staining methods are being developed to detect cardiac AMR with greater precision. New guidelines have just been published to unify the lung transplant specialists in AMR terminology.

Thought #3 - CLAD: In lung transplantation, we all knew that more data and a unified terminology is needed for chronic lung allograft dysfunction phenotypes. However, I was still amazed at the number of high-quality presentations and studies on CLAD phenotypes, their diagnosis, and prognosis. Our society is well poised at this time to move forward with defining CLAD sub-types. More than ever, this quest for improved terminology is accompanied by a desperate need to identify better treatments for these CLAD sub-types.

Thought #4 - Basic science and translational research: There has been a global effort to further raise interest and support for basic science within ISHLT over the recent years. It was very rewarding to see high attendance at the main basic science / translational research sessions during the conference. Here is a summary of the BSTR symposia:

- The cell therapy symposium featured Doris Taylor who outlined “how to build a heart or lung, or tissue engineering for dummies”. This was followed by Eduardo Marban showing data on cell therapy for the failing heart. Subsequent talks focused on Cell therapy in transplantation: Joren Madsen focused on regulatory T cells, Angus Thompson on myeloid cells, and Sonja Shrepfer gave us her thoughts on potential cell treatment for chronic allograft rejection. We finished with an uplifting case report of a young girl who underwent combined lung and bone marrow transplantation from the same donor and achieved complete allograft tolerance.
• A symposium on big data and biobanking took place in the afternoon. Peter Heeger stressed the importance of biobanking and how appropriate human sample collection is key towards advancing the science. Jason Christie gave a very realistic and constructive talk about how to set up a multi-center biobank. Octavio Pajaro talked about big data and modeling. The concepts of biobanking and omics were then discussed in the context of heart transplantation by Hendrik Milting and then in the setting of lung transplant by Christophe Pison. Finally, Mario Deng wrapped up the session with a discussion on turning omics into personalized medicine.

• Back to basics: Even the 7AM session on basic immunology was well attended, completely baffling all the speakers who thought they would be only speaking to each other. Dan Kreisel talked about the link between innate and adaptive immunity, showing fascinating videos of neutrophils and monocytes migrating through allografts. Stephan Ensminger gave a whirlwind overview of the pathogenesis of chronic cardiac rejection. Lee Borthwick followed with a focus on chronic lung rejection mechanisms.

With this, I invite you to submit some insightful and thought-provoking symposia proposals for the next ISHLT. Looking forward to the 2017 meeting in San Diego!

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ISHLT Summary

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The week in Washington provided outstanding information for heart transplanters starting with Jon Kobashigawa’s Palomar Conference. The 2016 ISHLT meeting produced similarly great content via pre-meeting symposia, the Heart Allocation meeting and the concurrent sessions. This brief review does not cover the Academies.

PALOMAR

The conference can be summarized by the message given in Kathryn Tinckam’s pre-meeting symposium presentation: those choices made regarding thresholds for “avoids”, desensitization and treatment of DSA were decisions not to be made based on a single test result, but should include consideration of:

1. Multiple types of tests.
2. Trends of the test results.
4. Consultation with the HLA lab professionals.

It was noted, both on the pre-meeting survey as well as the consensus session near the end of the conference, that there was a wide spectrum of opinion regarding MFI thresholds to desensitize, which probably reflects the multifactorial decision to desensitize as described by Dr. Tinckam. It was generally accepted that the existence of DSA alone post-transplant was not justification to treat, but factors to treat post-transplant DSA include:

1. Increasing strength of MFI.
2. Recurrent cellular rejection, without AMR but with DSA with graft dysfunction.
3. Graft dysfunction.
4. Epitope spreading (broader DSA).

Additional factoids from the conference include:

1. Recommendation for protocol DSA monitoring at 2 weeks; 1, 3, 6, and 12 months; and annually thereafter. There was discussion about how this frequency might be altered by "high risk" versus "low risk" recipients.
2. The preconference survey revealed that 85% of the participant programs did not check C1q on DSA.
3. Dolly Tyan of Stanford noted that you cannot predict C1q by MFI, and that commercial C1q kits currently are less sensitive than the C1q monitoring at Stanford.
4. Dr. Nancy Reinsmoen reiterated Cedars Sinai JHLT report (Reinsmoen et al, 2016; 35:165-172) that 23% of their transplants had DSA at transplant, but only half of these had a positive flow crossmatch.

5. At Cleveland Clinic C4d and C3 positive biopsy correlates with both DSA and graft dysfunction. We were reminded that Utah has previously shown increased mortality with DSA, and an abstract from Utah on Friday showed that C3 cleared faster than C4d from positive biopsies.

6. Dr. René Rodriguez from Cleveland Clinic noted that it takes an experienced pathologist to diagnose C4d negative AMR by CD68 (macrophages).

7. Dr. Randy Starling stated that "Only 50% of IVUS studies everywhere are really adequate quality, so this compromises studies."

8. Dr. Andreas Zuckermann asked the group, "How do we measure success--survival, all the rest is accessory," and then cited Loupy's 2016 AJT study, which reported failed cardiac grafts commonly showed asymptomatic AMR 4.5 plus or minus 2.5 years before failure.

9. Dr. Zuckermann rhetorically asked, "What MFI threshold to treat--we don't know, there is a very wide spectrum of emotional opinion."

10. Dr. Randy Starling recommended post-transplant "avoiding toxic treatment unless there is graft dysfunction, but if C4d, C3 are positive, then maximize maintenance immunosuppression and monitor carefully." Somewhat in contrast to this, Elaine Reed (UCLA) noted that if you treat DSA early you get a better response. This same comment was made later during the conference regarding the use of Bortezomib ("If it's going to help, use it early").

11. Useful guidance from Dr. Dolly Tyan at Stanford was that they will not transplant over a current C1q positive antibody, and their flow crossmatch must have a mean channel shift less than 200 for both class I and for class II.

PRE-MEETING SYMPOSIA

A few highlights of the outstanding pre-meeting symposium were:

1. Kiran Khush presented a review of the heart allocation section at CEOT, reported her new NIH-funded Donor Heart Study, which will involve 9 OPOs, and reported on the September 2015 European Consensus Conference related to donation/procurement.

2. Excellent preliminary results on DCD heart donation was presented by Dr. Kumud Dhital from Saint Vincent's in Australia. He provided the insightful advice that the ideal planning to develop a DCD heart program should follow 3 stages: Live animals, un-utilized hearts, and finally, marginal hearts. His message was, "This is a big deal, you can't just have a meeting and then start doing them." It was noteworthy that he "expects better results with young DCD than with VAD."

3. Jignesh Patel editorialized that one is best using Rituxan and Velcade together, because "neither works well without the other." Understanding the mechanism of both treatments makes this insight intuitively practical.

4. Kathryn Tinckam said that non-HLA antibody "may not mean as much if not in association with HLA antibody." During Palomar, the non-HLA receiving the most attention was AT1R,
which was cited a number of times as demonstrating synergistic adverse impact in conjunction with anti-HLA antibodies.

HEART ALLOCATION MEETING

Monica Colvin and the Scientific Council leadership convened a meeting on Wednesday and Thursday, divided into 3 workgroups, addressing broader sharing, ECMO, and prioritization statuses of I and II. Highlights of meeting recommendations to UNOS include that broader sharing should be 500 miles but restricted to the highest status, and that ECMO would have a time cap of 7 days as status I and then drop to status III, but they have the option to appeal for extended status I via the "exception" pathway. Special consideration regarding pediatric patients was recommended, so that the new allocation policy would not adversely affect this important and vulnerable population. The importance of PRA was, as usual, acknowledged, but with no practical way of incorporating it to everyone's satisfaction in an evidence-based way could be determined.

ISHLT / CONCURRENT SESSIONS (abstracts)

A few abstracts from the outstanding selection included the following:

1. "Molecular correlates of endothelial mTOR activation in heart transplant recipients," from Paris and Edmonton. (Abstract 25)
2. "The timeline of DSA after cardiac transplantation," from Pittsburgh, showing that 23% developed DSA with 3% class I, approximately 6% class I and class II, and 12% class II, with both class I and class II presenting at approximately 1100 days (about 3-1/2 years). Approximately half of the class II were DQ and half were DR. (Abstract 88)
3. "De Novo DQ donor-specific antibodies are associated with worse outcomes compared to non-DQ DSA following heart transplantation," from Emory. This showed approximately half were DQ and half were non-DQ, with the non-DQ showing benign outcomes but the DQ showing a fivefold increased risk of death or graft dysfunction. (Abstract 91)
4. "Prolonged cardiac allograft donor distance does not impact long-term survival," by Gaffey, et al, from the University of Pennsylvania. This was a UNOS data study. (Abstract 135)
5. "The overall concept of bridging to transplantation by a ventricular assist device in comparison to bridging by conservative treatment--results using the United Network for Organ Sharing database," by Bernhardt, et al, from Hamburg and Columbia, showed better outcomes, including posttransplant survival, in the conservative non-LVAD cohort. (Abstract 139)
6. "Incremental value to coronary angiography by optical coherence tomography for detection and interpretation of cardiac allograft vasculopathy," by Clemmensen, et al, from Denmark and The Netherlands. OCT is a "novel high-resolution intravascular imaging modality" that classified plaques as lipid, calcifications, or layered complex plaques. The study provided "important information on pathogenesis and enables detection of plaque compositions associated with CAD and increasing severity of CAD before detectable by angiography." (Abstract 246)
7. “PU.1 and CD34 immunohistochemistry for the diagnosis of antibody-mediated rejection in the heart,” by Fishbein, et al, from The Brigham. This study noted that macrophages can be seen in a variety of settings, such as "ischemic injury, acute cellular rejection, Quilty effect, and old biopsy sites," and that only macrophages within capillaries and small venules are considered diagnostic of antibody-mediated rejection; however, distinguishing between intra- and extra-vascular location is challenging, and this study used the PU.1 double stained with vascular marker CD34 as a substitute for CD68, with good results. This study received accolades from the room, which included Dr. Elizabeth Hammond and the 2 chairs of the session. During the Palomar conference, Dr. René Rodriguez from Cleveland Clinic noted that macrophages were "scavengers" that showed up late, in AMR and were not of major interest at his center, but he posited that macrophages could be used to diagnose AMR in a C4d/C3 negative biopsy, but only by "a very experienced pathologist." (Abstract 268)

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Bugs, Drugs, and Beyond: Highlights of the 36th Annual Meeting and Scientific Sessions from the Transplant Infectious Diseases Vantage Point

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In contrast to the DC weather that greeted us this year, the ISHLT Annual Meeting was anything but damp and dreary. We were met by a myriad of exciting sessions, which were not only highly relevant to the field of transplant ID, but showcased the incredible worldwide interdisciplinary work undertaken by the ISHLT. This made my current task of summarizing the Meeting’s ID-related highlights an absolute pleasure, but a challenging one. While it is impossible to summarize all of the presentations in a few short paragraphs, there were several permeating themes worthy of recapitulation.

*Mycobacterium abscessus* continues to emerge as a major concern following lung transplantation. The global burden and challenges related to treatment of this pathogen were presented by Fernanda Silviera in the symposium, *The Future is Here: Emerging Issues in Infectious Diseases*, and Orla Morrissey presented a systematic review, including her center’s experience with *M. abscessus*, in *Cardiothoracic Transplantation and MCS Infections: Cracking the Code for Diagnosis, Monitoring, and Treatment*. The management of *M. abscessus* remains extremely challenging at best, though there may be a flicker of light at the end of the proverbial tunnel. Ricardo La Hoz described the successful use of bedaquiline as salvage therapy for *M. abscessus* surgical site and allograft infection in a lung transplant recipient during the *Junior Faculty Clinical Case Reports*, and Audrey Perry and colleagues described the antimicrobial Activity of cysteamine against antibiotic resistant pathogens, including *M. abscessus* isolated from lung transplant recipients, with bactericidal activity noted in 11/12 *M. abscessus* isolates (abstract 1010). The importance of infection prevention and control measures in our transplant recipients was underscored at the Sunrise Symposium, *The Fly in the Ointment: Nosocomial Infections*, when Cameron Wolfe described an *M. abscessus* outbreak and pseudo-outbreak at his center and highlighted his institution’s framework for approaching the issue. Finally, while *M. abscessus* remains a concern in our lung transplant recipients, Jedrek Wosik and colleagues presented a poster describing a fatal left ventricular device obstruction/thrombosis due to *M. abscessus* (abstract 1271).

CMV remains at the forefront of ID-related concerns in our heart and lung transplant recipients. *It’s All in Translation: CMV from Bedside to Bench and Back Again* highlighted the impact of CMV on the heart and lung allografts, our current antiviral armamentarium, and potential new agents on the horizon. We also caught a glimpse of potential markers of CMV-specific immunity, including Laurie Snyder’s exciting work with polyfunctional CMV-specific immunity in lung transplant recipients receiving valganciclovir prophylaxis. In *Cardiothoracic Transplantation and MCS Infections: Cracking the Code for Diagnosis, Monitoring, and Treatment*, Glen Westall presented an interim analysis of QuantiFERON-CMV-directed CMV prophylaxis versus standard of care, which
showed that the QuantiFERON-CMV-directed approach reduces late CMV viremia in lung transplant recipients. Similarly, at the Junior Faculty Case Reports, Gregor Poglajen and colleagues presented data preliminarily demonstrating that the QuantiFERON-CMV assay may assist in guiding the management of resistant CMV in heart transplant recipients [abstract 1248]. There will certainly be much more to come on CMV and immune monitoring at future meetings, so stay tuned!

As indicated by the symposium title, infectious complications remain the Achilles Heel of MCS. Shashank Desai, Barbara Cagliostro, Stanley Martin, and Saima Aslam updated us on the scope of the issue, the role of driveline dressings and infectious risk, imaging modalities for diagnosing MCS infections, and the management of MCS recipients with bloodstream infections. The session closed with a colorful debate between Nader Moazami and Stephan Schueler regarding the link (or lack thereof) between device infection, thrombosis and CVA. In Cardiothoracic Transplantation and MCS Infections: Cracking the Code for Diagnosis, Monitoring, and Treatment, Erika Feller presented data suggesting that PET-CT may accurately assist with the diagnosis of ventricular assist device infection, and Sarah Taimur presented two posters (Successful Heart Transplantation in Patients with Total Artificial Heart infections [abstract 1012] and Successful Heart Transplantation in Patients with Active Staphylococcus Bloodstream Infection and Suspected Mechanical Circulatory Support Device Infection [abstract 1016]), suggesting that heart transplantation may be successfully performed in the context of device infection.

Finally, we received a fascinating update in donor-derived infections across the globe, as well as a framework for evaluating donors with possible encephalitis, and an approach to increased risk donors in Hanging in the Balance: Minimizing Risk and Maximizing Benefit with Donor Derived Infections. Joanna Schaenman also reviewed donor derived disease transmission events in thoracic organ transplantation (abstract 0846).

The presentations at this year’s ISHLT Annual Meeting and Scientific Sessions highlighted the clinical dilemmas we face on a daily basis, served as a springboard for ongoing research, and led the groundwork for new and novel collaborations. I am truly grateful to have met with colleagues from around the world, all of whom contribute so greatly to patient care and outcomes and who teach me so much. I left the meeting even more excited about the future of heart and lung transplantation and with an increased sense of “this is why I do what I do.” As an aside, I also learned a thing or two about the world of non-medicine, such as the fact that David Bowie and Elvis Presley had the same birthday (thanks to Allan Glanville).

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Summary of ISHLT 2016 JFTC Focus

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The 36th ISHLT meeting was success in diversity of presenters discussing their work. The major themes from this year sessions focused on LVAD complications. An enormous recognition went to those adverse events that affect outcomes, particularly stroke, right heart failure and device infections. Between both types of LVAD currently on the market (HeartMate and HeartWare), both continue to show high rates of stroke associated with high mortality from hemorrhagic CVA. Even though technology today is far better than earlier devices of yesterday, the drivers for these events are still unclear. Regarding right heart failure (RHF), a new concept was introduce quantifying the spectrum of RHF risk based on duration of inotropic support and its relationship to outcomes. Those with prolonged inotropic support (≥ 21 days) or unplanned RVAD had an increased mortality at 3 and 6 months. This knowledge further contributes to the struggle of risk stratifying the moving target of RHF pre and post-implant with more studies needed to safely predict RHF. However, a consistent theme showed that markers of overall severity of illness including end organ dysfunction, unstable hemodynamics and prior sternotomy continue to predict the need for biventricular support. On the other hand, LVAD Infections were seen as a frequent cause of readmission over time and had a significant reduction in functional performance as noted by the Mayo and ENDURANCE study groups.

The impact of these adverse outcomes did not however effect Quality of life (QOL). Several discussants presented their work on improvements in functional status and QOL on LVAD therapy. Data from the ENDURANCE trial, INTERMACS and ROADMAP trial confirmed this knowledge. Depression and anxiety improved significantly after LVAD implant, and caregiver burden post-LVAD was less than expected. The latter was a great point of discussion among attendees with many expressing their patient experience to be different.

During the sessions, there were many council meetings advocating for ISHLT member participation and collaborate with others to expand the society’s mission. Of particular interest, the I2C2 council discussed working with ISHLT members from Latin America to increase their presence in future meetings by helping to establish a registry for future studies. Many Latin America members were present and expressed their eagerness to participate and create coalitions with other Latin countries to fulfill the I2C2’s goal.

On a final note, I am proud to say that many junior faculty were chairing sessions this year. This was a testament of the JFTC (Junior Faculty Training Council) active contribution to the sessions. If you are interested to participate, please step forward or please stand up!

Washington was an excellent host to this year meeting and a great city that offers the diversity and culture that equally reflects the status of ISHLT members. I eagerly await for next year’s program in San Diego (shameless plug since I live here) where not only new research and approach to patient
care will be discussed but also you’ll get a chance to experience the California warmth we offer on this side of the globe from the other side of the United States. See you in Sunny San Diego!

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ISHLT 2016 Re-cap: Looking Back, Peering Forwards

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"The Best Ever Meeting" – Stephan Schueler
"The Very Best Society" – Hermann Reichenspurner

Quotes from two ex-Presidents, encapsulating what many thought about 2016, Washington and the ISHLT. The Programme Chair and Committee built on previous experience, but used the site, a bit more money and a lot of imagination to put together an event of unparalleled splendor.

Great plenaries, with a good mixture of science, politics and entertainment. Well-chosen and well-paced sessions; there was always something good to see and hear. And a huge audience, approaching 4000 registrants, a clear record for the Society. Lots of posters, maybe not all receiving the attention they deserved, but it gets people through the doors, backsides on seats. The result was a constant buzz- old friends, new ideas, fresh views; innovations at every turn.

To (almost) round it off, the Natural History Museum was an inspired choice for the Friday night Reception. Friends you had missed all week appearing from behind a hairy mammoth, new collaborations spawned underneath a giant walrus.

Much, inevitably, was incremental. VADs with lower thrombosis rates, more (and apparently cheaper) ambulatory ECMO, better drug combinations and even yoga in pulmonary hypertension. We heard a lot about frailty, a new buzz-word, and the issues of lung transplants in the over seventies. The yes/no debate enlivened by positive data from using older donors. And some things never change – infection and DSA, although we know more about both, are unavoidable, like death and income tax. Some might put tissue engineering in the same category, but there are suddenly real prospects for men as well as mice.

Then, when we thought it was great but just more of last year, the unexpected hit us. DCD heart transplants, in the Friday plenary, clearly work, and at a stroke, might increase activity by 30%. The haunting picture of Louis Washkansky looking back from almost half a century ago, saying “I told you so…”

We finished, in most ways, with a sparkling debate; Mandeep Mehra trying to extrapolate everything from Autobahn mortality rates, Joseph Rodgers quoting Donald Trump as his debating coach. The two left us with that enduring image of “Make the ISHLT Great Again” But it’s superfluous – the ISHLT is Great already!

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Comments on the Pediatric Sessions of ISHLT 2016

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The Pediatric program at the 2016 scientific session remains memorable for its high interests with standing room only space in some of the sessions. Plenty of delegates made it to the pediatric heart transplant outcome session on Thursday morning. There the Edmonton group presented their study investigating quality of life after pediatric heart transplantation (pHTx). While the authors found that the quality of life assessed by the parents in children was not only lower compared to children without chronic conditions it was surprisingly also lower when compared to congenital heart disease (CHD) patients and patients after single ventricle palliation. Simon Urschel presented on behalf of the same group that days spent on ICU was the strongest predictor for worse neurocognitive outcome after transplantation. Matthew Bock presented a data analyses form the PHTS on cancer recurrence for anthracycline cardiomyopathy; the investigators did not find an increased recurrence rate or inferior survival. Likewise post-transplant outcome is not negatively influenced by the number of organ donor refusals as shown by David Morales. Finally, Tahmina Samad investigated coronary stenting as a prognostic indicator finding that long-term survival of these patients remains poor with 52% survival at 5 years after diagnosis. In the Wednesday morning session focusing on challenges from the surgeon’s perspective the talk given by Jonathan Chen on complex connections in adult CHD recipients was remarkable.

During the whole meeting one could tell the increased interest in pediatric lung transplantation as well as the increased use of ventricular assist devices in patients suffering from CHD. The take home message of the pulmonary hypertension in CHD sunrise symposia was that devices might be helpful to improve symptoms but will not reserve pulmonary hypertension. In the pediatric MCS session the impressive largest series of implanted cf-VAD in children (> 150!) was presented by Jennifer Conway with comparable outcome to adults. Further we learned from Angela Lorts that the utilization of temporary VADs in pediatrics are expanding with favorable outcome.

Of course the new US heart transplant listing criteria have been debated in the pediatric community; there was a very good Pro/Con debate given by Drs.Crossland and Ross debating if VAD in Patients with CHD should get priority organ allocation.

I could not agree more with Jennifer Cowger chairing the session: “you get out what you put in” Saturday morning commenting after a great talk given by Leigh Readron presenting experimental work on MCS in the Fontan circulation: “…this is the research we really need in MCS…”. Likewise Mike tree shared with us the experience of his group with a “failing fontan model” using partial support in different settings; to find the way to the “holy grail in CHD MCS” as Christina VanderPluym called it.
In the MCS core competency and other MCS sessions a bulk of questions addressed VAD therapy in the pediatric and “failing fontan” as well as adult CHD patients. We can certainly look forward to the FIRST Pediatric MCS Academy at the annual ISHLT scientific meeting taking place in San Diego next April to get some answers!

Disclosure statement: The author has no conflicts of interest to disclose.
The 2016 ISHLT Scientific Sessions were a virtual ‘tour de force’ encompassing essentially all diagnostic categories of PH. Kicking off the sessions were two pre-meeting symposia on PH in interstitial lung disease and PH in left heart disease, culminating in a lively debate regarding the utility of the diastolic pulmonary gradient to assess for pulmonary vasculopathy in left heart-related PH.

New this year was an entire symposium on the physiology of inflammation and inflammatory cytokines in PAH and the impact of metabolic and neurohormonal alterations on right heart function. This reopened a debate on the potential benefits of neurohormonal modulation with beta-adrenergic blockers in PAH.

Combination therapy has been the focus of a major paradigm shift in the treatment of PAH, but there remain many nuances regarding specific combinations of drugs, and the timing of their initiation. This formed the locus for another session and we were reminded by Dr. Paul Corris that in many countries, combination therapy is in essence sequential as directed by governmental payors.

With regards to bridging strategies for PAH patients to lung transplantation, Erika Rosenzweig described the implantation of “Sport Model” VA ECMO in PAH patients requiring bridging to lung transplant. This cannulation strategy from the jugular vein and subclavian artery has allowed a number of PAH patients at Columbia University to be extubated and ambulate while on VA ECMO, avoiding complications of muscular deconditioning and mechanical ventilation while awaiting lung transplantation.

Perhaps most memorably, Dr. Richard Channick presented an analysis from the GRIPHON trial, assessing the impact of anticoagulation with vitamin K antagonists on the combined morbidity/mortality endpoint in the largest PAH clinical trial to date. Though there was no effect of vitamin K antagonists in this analysis, the effect of the presentation on the audience was “markedly positive” as Dr. Channick presented his entire lecture, completely ‘off the cuff’ as his slides were not loaded due to a technical issue – a true scholar!

Thanks again for a memorable meeting and see you next year in sunny San Diego!

Disclosure statement: The author has no conflicts of interest to disclose.
Call for ISHLT 2017 Symposium Proposals

Jeff Teuteberg, MD
ISHLT 2017 Scientific Program Chair

Although the 36th Annual Meeting in Washington DC has just finished, it is already time to start developing content for the ISHLT 37th Annual Meeting & Scientific Sessions to be held in sunny San Diego, April 5-8, 2017.

As program chair for the 2017 meeting, I just wanted to follow up on my brief presentation at the council meetings and encourage you to submit ideas for pre-meeting and sunrise symposia and/or invited Plenary talks. Although well-worked, complete symposium proposals are preferred, we also welcome suggestions for potential plenary speakers from outside the transplant community who might give an engaging talk that brings perspectives, insights or experiences with widespread appeal to members.

Your input into this process is critical to the Symposium Planning Committee since the majority of the invited scientific content for the Annual Meeting originates from proposals submitted by ISHLT Members through the Scientific Councils.

Below are links to the symposium proposal submission site and the plenary lecture proposal form:

- 2017 Symposium Proposal Submission Site
- 2017 Plenary Lecture Proposal Form

You are strongly encouraged to consult with the Education Workforce Chair(s) and Council Chair(s) appropriate to your topic before submitting a proposal. They will provide guidance regarding educational areas identified as priorities for the Annual Meeting. You are also encouraged to develop proposals that will encourage collaboration among the different ISHLT councils. The list of current committees and councils can be found at www.ishlt.org under the "Boards and Committees" and "Councils" tabs. Ideally the symposia proposals should have a diversity in the institutions, geography, expertise, and gender for the speakers and chairs, and offer opportunities for both senior and junior members of the society.

The deadline for receipt of proposals is Thursday, June 2, 2016.

All proposals will be reviewed by program committee representatives from the relevant discipline areas. The final development of invited scientific content will take place during the Symposium Planning Committee meeting in July.

If you have any questions about the submission process, please contact Susie Newton (susie.newton@ishlt.org) at the ISHLT office.

Please accept my thanks in advance for your valuable input. I look forward to seeing you at ISHLT 2017 in San Diego!

Disclosure Statement: The author has no conflicts of interest to disclose.
2016 Annual Meeting: Daily Links

For those who missed the meeting, are looking for a recap or just want to refresh your memory, the Daily Links can be a valuable source. View the articles written by our Roving Reporters, Michael Trotter, Karen Booth, Erin Wells and Zewditu Asfaw, and put together by Vincent Valentine, Lauren Daniels and Naomi Rios for an up to date guide on the daily happenings of the 36th ISHLT Annual Meeting and Scientific Sessions.

Below are the links to both the original PDFs and web versions of each day’s Links Newsletter.

Wednesday, April 27 Newsletter
Wednesday, April 27 Newsletter (PDF)

Thursday, April 28 Newsletter
Thursday, April 28 Newsletter (PDF)

Friday, April 29 Newsletter
Friday, April 29 Newsletter (PDF)

Saturday, April 30 Newsletter
Saturday, April 30 Newsletter (PDF)
ISHLT Award Winners & Grant Recipients

Congratulations to all of our Award Winners, including Sir Roy Calne who received the ISHLT Pioneer Award, and Adrian & Jean Kantrowitz, who received the ISHLT Lifetime Achievement Award. We would also like to extend congratulations to the winners of the abstract awards, grants & scholarships, and travel awards that were announced during the Saturday Plenary Session. Below you will see a complete list of the award winners from this presentation.

**Norman E Shumway Career Development Award**

Stephen Juvet, MD, PhD, FRCPC  
University Health Network  
Toronto, Ontario, Canada

**Research Fellowship Grant Award**

Hsi-Min Hsiao, PhD  
Washington University in St. Louis  
St. Louis, MO, USA  
Nikolas Skartsis, MD, PhD  
University of California San Francisco  
San Francisco, CA, USA  
Corey Tabit, MD, MBA, MPH  
The University of Chicago  
Chicago, IL, USA

**2016 ISHLT/O.H. Frazier Award in MCS Translational Research Sponsored by HeartWare**

Todd Dardas, MD, MS  
University of Washington  
Seattle, WA, USA

**Philip K. Caves Award**

Corey E. Tabit, MD  
The University of Chicago Medical Center  
Chicago, IL, USA

**JFTC Clinical Case Dilemmas: The Best of the Best Presentation Award**

Yasufumi Goda, MD  
Kyoto University  
Kyoto, Japan

**ISHLT International Traveling Scholarship Award**
August 2015
- Oisin O’Connell, MD, MRCPI
- Lucas Van Aelst, MD, PhD
- Arezu Aliabadi, MD
- Timothy Sladden, MBBS, BVSc

December 2015
- Bao Tran, MD
- L G Satharishi, MD, DM
- Allison Carroll, MD
- Akshay Pendyal, MD
- Stefania Paolillo, MD, PhD
- Soumitra Sinha Roy, MD

Leach-Abramsom-Imhoff Links Travel Awards

Writer of the Year

Kyle Dawson, PharmD, MBA, BCPS
Houston Methodist, Houston, TX, USA

First Runner-Ups

Adam Cochrane, PharmD, BCPS
Inova Fairfax Hospital, Falls Church, VA, USA

Christa Kirk
Seattle Children's Hospital, Seattle, WA, USA

Honorable Mention

Angela Velleca, RN, BSN, CCTC
Cedars Sinai Heart Institute, Los Angeles, CA, USA

Erin Wells, RN, BSN, CPN
Cincinnati Children's Hospital Medical Center, Cincinnati, OH, USA

ISHLT Annual Scientific Meeting Travel Grant

- Min Zhu, MD, PhD
- Katharine Miller, PhD
- Colleen Juricek, RN, BSN
- Stephanie Yerkovich, PhD
- Vincent van Suylen, BSc
- Anh Vu, PharmD
- Colleen McIlvennan, DNP, MS, BSN
- Mike Tree, BS
- Ibrahim Adam, BSc Hons, MSc
- Nathalie Duerinckx
- Ei Miyamoto
- Amit Iyengar, MS
- Ilker Iskender, MD
- Evan Adams, BA
- Miae Kim, PharmD
- Jesus Casida, PhD, RN, APN-C
- Roxana Ghashghaei, MD
- Joshua Wong, MD
- James Walsh, BPhty, PhD
- Teruhiko Imamura, MD, PhD
Transplant Registry Early Career Award

Sai Bhagra, MBBS, MRCP (UK)
Toronto General Hospital
Toronto, Ontario, Canada

Forum Kamdar, MD
Cleveland Clinic
Cleveland, OH, USA

Marco Masetti, MD, PhD
University of Bologna
Bologna, Italy

Joshua Mooney, MD
Stanford University
Stanford, CA, USA

Edit Nagy, MD, PhD
Karolinska University Hospital, Karolinska Institute
Stockholm, Sweden

ISHLT Nursing, Health Sciences & Allied Health Research Grant Award

Mohammad Arawashdeh, BSN, MSN
University of Pittsburgh
Pittsburgh, PA, USA

ISHLT Nursing, Health Sciences & Allied Health Research Grant Award Co-Funded by Enduring Hearts

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

ISHLT Nursing, Health Sciences & Allied Health Excellence in Research Award

Fabienne Dobbels, MSc, PhD
KU Leuven
Leuven, Belgium

Again, congratulations to all of our award winners! If you would like to view the PDF of the slides presented during the ceremony, please click here.
EDITOR’S CORNER: The Day the Music Died

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It was Don McLean, who...“A long long time ago...” immortlalized the words for the title of this piece for all who know the lyrics, a recapitulation of the early Rock and Roll movement in America.

It’s my new friend and co-writer of this piece, Maryanne Chrisant – Director of Pediatric Cardiac Transplant, Heart Failure and Cardiomyopathy at the Heart Institute at Joe DiMaggio Children’s Hospital in Hollywood, Florida, who summoned my subconscious to provide you these thoughts. All attendees of the ISHLT 2016 may have noticed the sprinkling words from David Bowie and Prince.

Maryanne’s family listens to David Bowie a fair bit, including his new and last album, Blackstar. As she wrote, reflecting on Blackstar:

I think about pain and suffering - death and dying. David Bowie was weak and frail, though looking at the video and photos of his final days he doesn't look like a man dying of liver cancer. I can't help but think his vanity or his pain lead him to off himself before he suffered too much, physically and mentally. I can't help but think he was awaiting one of his other personas to take his place.

"...Something happened on the day he died
    Spirit rose a metre and stepped aside
    Somebody else took his place and bravely cried
    I'm a Blackstar...I'm a Blackstar..."

My son, Alex came to the same conclusion.

It is strange that all those aging rockers took a left and landed in heaven from cancer. Bowie, George Harrison, and in the last year, Leslie Gore and Joe Cocker. See this website: https://en.wikipedia.org/wiki/List_of_deaths_in_rock_and_roll

Looking closely, but not so closely to say we’ve studied this, the younger rockers are more likely to die of a drug related death, an accidental death (plane or car crash), or homicide/suicide. The older rockers are more likely to succumb to cancer or heart failure. Some are equivocal, but likely drug or lifestyle related, such as the 38 year old rocker who died of heart failure or Elvis whose cause of
death is listed as a heart attack. Some are outliers, like the 34 year old who died of lung cancer. A more in depth analysis would likely support the view that the life of a rocker is a hard life. We can’t help but wonder if those who made it through their crazed twenties and thirties, living a Bacchanalian (and more than just wine) life, set themselves up for health issues that would, after much pain and suffering, finally bring them to their rest. Their songs are sung, in memoriam.

Life is ephemeral. Art endures.

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