VINCENT'S TWO CENTS

In this issue, we are on the road again to Nice. Before we look ahead, let's look back to the future at the start of our original journey to Nice from the June 2014 issue of the links.

For today in Volume 9, Issue 2, we have brilliantly thought out summaries and recapitulations to close the ISHLT 2017 from Saima Aslam, Adam Cochrane, Evan Kransdorf, Marco Masetti, Juan Alberto Cosquillo Mejía, Michael Pham, Keyur Shah, Erin Wells and simply a few words by yours truly. As we look ahead, our focus will turn to the important developments in science and the renaissance of the English language out of France. We welcome anyone's desire to pen such achievements or any other important notables, which have contributed to what has made France it is today: art, wine, cheese and culinary cabarets come to mind.

It is hoped that we will learn more about France and what we do for the ISHLT as we enlighten ourselves for our patients with another path to ISHLT 2018 in Nice.

Recapitulation of the Opening Plenary Session: San Diego 2017

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The Opening Plenary Session of the 37th Annual Meeting and Scientific Session in San Diego began with Jeff Teuteberg's Program Chair's Report. The number of abstracts submitted in 2006 to 2017 has doubled from just under 800 to 1,633, with nearly 85% accepted this year. The ISHLT continues to have global representation with members from 38 different countries, growth from Asia and South America, and a truly international balance of the Program Committee. The major theme in Teuteberg's report was the clustering of ideas, which generated thematic talks and poster presentations.

Josef Stehlik followed with the Registry Report – the main theme was 200,000. A donation, an award or the number of patients who have undergone cardiothoracic replacement. From the Thoracic Transplant Registry, the focus was allograft ischemic time. In Pediatric Lung Transplantation, although there has been an incremental rise in allograft ischemic time to 6+ hours approaching 50% of transplants, no correlation of treated rejection or BOS with ischemic time was observed. However, there was a difference in survival with a separation beginning in the first three postoperative months. At five years, pediatric lung recipients with ischemic times between 4-6 hours had a 25% better survival than the 6+ hours cohort. In adult lung transplantation, the ischemic time is 0-<6 hours in 90% of single lung recipients, whereas the ischemic time is >6 hours in 40% of bilateral lung recipients. There is an incremental increase in treated rejection events at 1 year in just over 30% patients with ischemic times >6 hours vs 25% and 20% in those with ischemic times 4-<6 hours and 2-<4 hours, respectively. With respect to BOS, there were no clinically relevant differences other than a hint that the >6 hour group had a better BOS-Free Survival, yet no difference in overall survival.

In pediatric heart transplantation, no difference in treated rejection or chronic allograft vasculopathy with respect to ischemic time was observed; however, there was a difference in survival with separation beginning in the first three postoperative months. The hazard ratio for death at one year was at unity and up to 1.5 in the 6+ hour cohort. In adult heart transplantation, although there were more than 20% patients treated in the first year in the 6+ hour cohort vs just over 10% in the 0->2 hour group, $p<0.05$, there was no difference in ischemic time and allograft vasculopathy across all groups. However, there was a difference in survival with a separation beginning in the first three postoperative months across all groups with respect to ischemic time. Also, younger donors had a lower hazard ratio of death in the first year with respect to ischemic times.

Dirk Van Raemdonck presented the report on Donation after Circulatory Death Lung Registry. The 30-day survival in patients with donors after circulatory death (DCD) vs donors after brain death (DBD) were similar; however, three-year survival in the DCD group was 10% better, $p<0.001$.

Anne Dipchand presented the data from the Pediatric Heart Failure Registry. From 16 active centers, 81 patients have been enrolled.

Jim Kirklin presented the 2017 IMACS Registry Report. There are 35 countries represented with 14,062 patients enrolled. According to device strategy, 43% for destination therapy, 29% candidacy to transplant and 28% listed for transplant. The 1 and 2-yr survival for continuous flow LVAD/BiVAD implants is 80% and 70%, respectively. Primary causes of death include: multisystem organ failure (20.5%), right heart failure (20.4%), neurological event (19.1%), withdrawal of support (9.9%) and infection (8.0%). Early and constant hazard risk factors were older age and female gender. Other early hazards included: high BMIs, ventilator or dialysis need within 48 hours of implant, concomitant surgery, and BiVAD. Survival according to age group show >75% survival at four years in those <30 years and 30-49 years. Whereas, 4-yr survival in the 50-69 yr and $\geq$70 yr was roughly 60% and 40%, respectively. The major adverse events were: infection (38%), bleeding (36%), neurological dysfunction (13%), respiratory failure (11%), device malfunction (2%) and arterial non-CNS thromboembolism (1%). The 2017 goals are to increase recruitment of hospitals and collectives, expand IMACS research and increase research proposal submissions.

Following the Registry Reports, Maryl Johnson delivered her journey to and through the ISHLT Presidency. She began her report with a letter from Dr. John Schroeder from Stanford and a quote from Gloria Steinem, *"The art of life isn't in controlling what happens, which is impossible; it's in using what happens,"* both of which inspired her to pursue a career in heart transplantation. She reviewed and highlighted the progress of the 2016 to 2020 Strategic Framework.

She shared a couple other quotes from an unknown author, *"Volunteers are not paid – not because they are worthless, but because they are priceless,"* and *"If you want to go fast, go alone; if you want to go far, go together."* She finished her address with *"One doesn't discover new lands without consenting to lose sight of the shore for a very long time."* – Andre Gide.

The featured abstract presentation followed beginning with Dr. Carmelo Milano from Duke, who presented the results of the ENDURANCE Supplement Trial. Although the difference in neurological injury at 12 months between the HVAD and control groups were small (2.6%) without meeting the primary endpoint, HVAD was statistically superior with respect to freedom from death, disabling stroke, device exchange or urgent transplant at 12 months. Dr. Daniel Goldstein from Montefiore then presented the results of the Heartmate 3 (Momentum 3) Pivotal Trial. This trial showed improvement in clinical outcomes with the HM3 compared to HMII. Younger age and HM3 vs HMII were independently associated with a greater likelihood of primary endpoint success. However, sex, therapeutic intent (BTT or DT), severity of illness, and race, when adjusted for age, did not influence primary endpoint success.

Dr. Stuart Jamieson closed the 37th Annual Opening Plenary Session as this year's Pioneer Award Recipient with his lecture entitled "Standing on the Shoulders of Giants." He shared and summarized his personal odyssey, which began on a ranch in Rhodesia (now Zimbabwe) where he grew up with a zebra, an ostrich and a giraffe. In 1947, there was no heart surgery, "if you touched the heart it would stop" – to reach the inside of the heart was impossible. There were many giants. First, **F. John**

Lewis – with **hypothermia**, on September 2, 1952, made a bold and innovative move to fix an atrial septal defect in need of repair for the five-year old, Jacqueline Johnson. Second, **C. Walton Lillehei** – with **cross circulation** was able to perform 45 operations on patients with complex congenital heart conditions in a year of which 32 survived (70%).

Stuart went to Medical School at the University of London affiliated with St Mary's Hospital where penicillin was discovered, had strong immunology, andwhere early kidney transplants took place. He described two more giants – **Barnard** and **Shumway**, both of whom studied under Lillehei. By 1968, 101 heart transplants were performed by 64 teams from 22 countries. Then the tragic record of heart transplants was plastered on the cover of Life magazine in September, 1971 – a new report on an era of medical failure. He then shared his publications on the Xenograft hyperacute rejection. A new model from Transplantation, 1974 and Hyperacute rejection of guinea pig to rat cardiac xenografts in the Journal of Pathology, 1975. In response, **Norman Shumway** quips and quotes, *"Xenograft Transplantation is in the future and always will be..."* The giant, **Shumway** continued his pursuit of laboratory work supporting the clinical operation of heart transplantation. Mention of **Matt Paneth** from the Brompton Hospital, who also studied under Lillehei showed interest in Heart Transplantation. The next giant **Jean-Francois Borel** – the wonder drug – cyclosporine (the vial of golden liquid) was the first to report on the immunosppressive qualities of this fungal derivative in 1976. From Shumway's lab, Jamieson reported on the "Survival of Cardiac Allografts in Rats treated with Cyclosporin A," Surgical Forum, 1979. This was followed by "Cardiac Allograft Survival in Primates treated with Cyclosporin A," Lancet 1979, Jamieson et al again out of Shumway's Lab. Then the first human heart transplant to use cyclosporine, July 4, 1979 at age 20, today still with us at age 58.

The Society emerged with Stanford, University of Virginia and Tucson as the only active programs in heart transplantation. By 1980, 314 heart transplants were performed, 2/3 from Stanford, of 199 cases, 75 remain alive today. By the time of the second meeting of the Society, MGH supported by the NEJM decided against heart transplantation; therefore, no funding by Medicare. The first Official meeting of the Society occurred in San Franscisco, March 1981, the International Society of Heart Transplantation. Animal experiments in the laboratory from Stanford led to the first human heart transplant using cyclosporin. Cyclosporine became available for general use in 1983, then Heart Transplantation became widely practiced.

By 1980, only 38 attempts at lung transplantation were done and only one left the hospital, died within a few months. Clinical efforts in Heart-Lung Transplantation were performed by Cooley, Lillehei and Barnard. It was back to the Stanford Laboratory. On March 9, 1981 with Bruce Reitz, John Wallwork, Stuart Jamieson and Norm Shumway performing the first successful heart-lung transplantation on Mary Gohlke, who had been previously diagnosed with primary pulmonary hypertension.

Then in 1986 to the Midwest, Stuart went to work among his revered giants, Lillehei and Lewis. He brought the first heart-lung and double lung transplant to the Midwest. Stuart moved on to San Diego and brought the first heart-lung, lung, double lung and living-related transplant there, along with the first lung transplantation program to be Medicare certified. In an effort to increase donor supply,

focus was made to minimize heart-lung transplant, use intra-cardiac repair when possible and perform pulmonary endarterectomy for thromboembolic pulmonary hypertension.

Stuart Jamieson shifted gears of his **Pioneer Award Lecture** towards pulmonary endarterectomy. From Lungdahl 1928 with the first description of chronic pulmonary embolism, to the nearly 200 cases described by Hollister and Cull in 1956, the first operation by Blalock in 1948 and the first successful operation by Hufnagel in 1962. Stuart went on to outline the UCSD experience over 40 years with modification of the operation. Instruments were developed, classification proposed and the operation was taught worldwide with Jamieson's seminal works in the Annals of Thoracic Surgery in 2003 on "Pulmonary endarterectomy: experience and lessons learned in 1500 cases."

Stuart concluded this standing room with a standing ovation, "*if we see further it is because we sit upon the shoulders of giants*."

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Heart Failure and Transplantation Council Year in Review and Glance Ahead

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Over the past years, the HFTX Council has been fortunate enough to have benefited from the strong and growing engagement of its members. While the Operating Board is growing and diversifying, international members and surgeons are still under-represented in the Council leadership. Last year, we were thrilled to welcome Hannah Copeland as our Standards and Guidelines Workforce Leader and Alejandro Bertolotti this past April as the I2C2 Workforce Leader. Our Vice-Chair, Jig Patel, hasn't ceased to impress with his wisdom and ability to distill complex information down to a few concise sentences and is probably cringing right now reading this wordy article. Our ever-so-enthusiastic Board Liaison, Howie Eisen, has been our strongest advocate and balances my seriousness with his sense of humor. Currently, we are discussing ways to keep members informed and involved in between the face-to-face Council meetings. This may involve a virtual town hall meeting each October, in which we spend half the time updating our members on the status of Council-initiated projects and the other half soliciting feedback and engaging in discussion.

Education. We relaunched Journal Watch, our online journal club, in January under the leadership of our JFTC Liaison, Marco Masetti. We will continue the format of reviewing the previous month's literature, along with having special themed issues devoted to topics of special interest, such as the March 2017 issue on C1q Antibodies in Thoracic Transplantation. We're always looking for volunteer reviewers, so please reach out to Marco if you are interested in helping out. Similarly, we're in the process of resuscitating our Donor Selection and Management Forum under the leadership of Natasha Altman and Jennifer Cook and in partnership with the JFTC. Every other month, we will post a challenging donor selection or management case, selected from transplant centers around the world, on ISHLTConnect. We will then poll forum members on how they would proceed and provide the results of the voting, along with some follow-up on the case and lessons learned.

Preparation for next year's Core Competencies Course on Heart Failure and Cardiac Transplant Medicine is already underway and led by our Academy Chair, Shelley Hall, and Co-Chairs, Lavanya Bellumkonda and Eric Epailly. At our Council Meeting in San Diego, we discussed the need to offer advanced training in heart transplantation. Topics such as immunology, donor and recipient matching, and antibody-mediated rejection are more conducive to in-depth discussion in an interactive small group setting, and the Council will be working on an application for a Master Class in Heart Transplantation as part of a future ISHLT Academy.

Our Education Workforce has grown every year. This year, our WF includes 42 members from 7 countries, and we have a balanced distribution of members representing the full spectrum of career length, from trainees to those who have been in practice for over 15 years. Our WF members are

working hard to come up with symposium proposals for next year's meeting, helping each other develop ideas, and providing thoughtful feedback to proposals generated from other Councils. Before leaving the area of education, I'd like to acknowledge Daniel Kim as the best Education WF Leader and most thoughtful colleague any Chair could ever hope to work with. He deserves a medal for the incredible amount of work he's put into the symposium development process, but I think I'll just buy him a fancy drink in Nice.

Standards and guidelines. Hannah Copeland started running as soon as her feet touched the ground last year. A writing group has already been formed to work on an ISHLT Consensus Document on the Evaluation and Procurement of Heart and Lung Allografts, and we anticipate that a final draft will be ready for review by expert reviewers prior to next year's ISHLT meeting in Nice. The ISHLT Board of Directors also approved a separate Consensus Statement on Donor Heart Selection. Preparatory work for this document will include an ISHLT member survey of international donor selection practices, which will go out in the next month.

Speaking of guidelines, can you believe that the ISHLT Guidelines for the Care of Heart Transplant Recipients are already 7 years old? The guidelines have been cited over 300 times since they were published in 2010, and they are due for a refresh. Our Council will be working on a focused update in the next year to reflect new data and current best practices in the management of heart transplant recipients.

Engagement of our worldwide community. The HFTX Council worked with I2C2, the Pulmonary Transplantation Council, and the Brazilian Association of Organ Transplantation (ABTO) to co-sponsor an ABTO/ISHLT Joint Symposium on Management Dilemmas and Practical Insights in Thoracic Transplantation and Mechanical Support. The joint symposium will be held at the 16th Brazilian Meeting of Transplantation on October 20, 2017 and will address some thought-provoking issues around donor/recipient management and thoracic organ replacement. The Council has also been working with our colleagues from the Colombian Society of Cardiology and Cardiovascular Surgery to plan a joint session at the XXVII Colombian Congress of Cardiology and Cardiovascular Surgery in 2018. There is palpable excitement in further developing our relationships with advanced heart failure programs in Southeast Asia, and we hope that a proposal to highlight the opportunities and challenges with transplantation and MCS in India will make its way to one of the symposium slots for the 2018 meeting.

We look forward with excitement and anticipation to all that the next year will bring.

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ISHLT Meeting in San Diego: A History of Science, Networking and Sun!

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As usual, last ISHLT Meeting was full of new information and interesting sessions to be listened and actively participated, despite the interest for the sessions acutely conflicted with the pleasant weather of San Diego, and the sound of the ocean's waves clashed with the sound of science.

One novelty of this Meeting as compared with previous years was that Symposia were distributed among different days, thus potentially allowing an increased participation.

The great enthusiasm about mechanical circulatory support devices is growing, with the new device Heartmate III achieving interest in the overall scenario of MCS, given its particularly favorable profile regarding pump thrombosis. Dr Schmitto presented the results at 2-years of the CE Mark Trial, that confirmed high survival rates (74%), and no events of hemolysis, pump thrombosis or pump malfunction (identified by the new concept of hemocompatibility) with a rate of other adverse events per patient year comparable to the other devices actually available. Other interesting results were shown by the analysis of the ENDURANCE destination therapy trial, showing a comparable 2-year survival of patients in INTERMACS 1-2 vs 3-4 classes, but with patients in class 4 experiencing a higher rate of arrhythmias and bleeding.

Given the high number of transplanted patients with an LVAD, the attention focused also on the impact of MCS on pre-transplant allosensitization and on the waiting list and post-transplant outcomes. Particularly, in a great symposium session moderated by Andreas Zuckermann and Jon Kobashigawa it was shown that patients bridged to transplant with MCS can develop more frequently antibodies pre-transplant and early post-transplant, but their appearance doesn't seem to significantly affect post-transplant outcome: this concept supports the hypothesis that MCS-driven HLA antibodies may not represent the outcome of truly sensitizing events. In addition, MCS patients were not at a higher risk of developing de novo DSA late after HT.

However, Dr Patel showed that sensitized patients may experience longer waiting times, with higher mortality on the waiting list and a higher probability of delisting, while having an increased risk of rejection (although not affecting survival) after transplant. These considerations strongly underscore the importance of desensitization strategies pre-transplant. In Cedars Sinai experience, bortezomib associated with plasmapheresis appears to be effective in reducing alllosensitization and eculizumab may block complement-mediated injury induced by DSA, allowing successful transplantation with good outcomes and also highly sensitized candidates.

Primary graft dysfunction was another important issue addressed during symposia sessions. It was shown that ISHLT Classification for PGD can predict survival, having patients with severe PGD the

lower 1-year survival rate; however, the usefulness of mild PGD vs no PGD in predicting prognosis is less certain. Another point of novelty was the actually recognized important role of post-operative vasoplegia (that can be more frequent in patients bridged with MCS) in determining PGD. Sometimes the two conditions are different to distinguish, with uncertainty to understand if they are the same rather than different entities.

The search for holy grail of non-invasive detection of rejection has been revived by the intriguing data of the donor-derived cell free DNA assay in predicting medium term outcomes; initial results from INTERHEART study suggests that a molecular-based approach may improve the diagnosis of rejection and can correlate with phenotypes of cardiac dysfunction.

Therefore, as discussed in the wonderful symposium "Let's Get Personal! Precision Diagnostics in Thoracic Transplantation," an individual assessment of rejection risk profile and monitoring through genetic and immunological assays seems to be the way to have in the future a "precision"-based personalized transplant medicine

Two symposia were dedicated to less known cardiomyopathies, like Chagas' cardiomyopathy and HIV-cardiomyopathy, and one symposium to pregnancy in transplanted women. The talks in these symposia started to abolish some historical barriers of the transplant community: the fear of transplanting an HIV+ patient, as well as of managing immunosuppression in a pregnant transplanted woman. However, these fears reflect also a lack of knowledge of these problems. Some of these diseases (like Chagas or HIV myocarditis) have a different prevalence around different parts of the world, between low and high income countries; the choice of the Symposium Committee of talk about them reflects the intention of ISHLT to be a real international society. Thus, it appears desirable also to have more involvement of international and young members from all parts of the world to enhance the intrinsic international mission of the Society.

Data from ISHLT Registry shows substantially stable outcomes after transplant, with older patients having low comorbidities and good, long term graft related outcomes comparable to young patients, due to their lower immunological reactivity; MCS increases the spectrum of candidates, allowing transplant in a formerly not eligible population without affecting post-transplant survival; patients with rare diseases can also be considered for transplant. Thus, the need for heart transplantation is continuously increasing, and we need to expand the availability of donors: in this sense, the results from the use of DCD donors are interesting. Dr Messer showed good results with 22 patients transplanted from DCD hearts: 5% in hospital mortality, suggesting that early outcomes of DCD hearts transplants are at least comparable with DBD counterparts.

Finally, beside real science, from a networking point of view, the Cheese and Wine Meetings of some scientific Councils, like Heart Failure and Heart Transplantation, and Junior Faculty and Trainee, were good occasions for people to better know each other and to share opinions and projects for the Society.

We are now waiting for the next Meeting in France (Nice) that could probably provide even better cheese and wine, hoping that it will also give even more science and international networking than the last successful Meeting in the beautiful San Diego.

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The Wonderful World of ID

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This was a fantastic year for ID! We started the meeting with the pre-meeting ISHLT Academy: Core Competencies in Infectious Diseases in Thoracic Organ Transplantation and MCS, which was very well put together by Martha Mooney and Shahid Husain. The Academy ran an entire gamut of lectures from surgical complications, fungal and viral infections, to prevention and management of MCS infections. Its excellent attendance bodes well for future ID Academies (fingers crossed...).

We started the actual meeting on Wednesday, with a joint ISHLT/ECSMID Symposium on "Ongoing Challenges in Transplant Infectious Diseases." This symposium had excellent speakers with Barb Alexander discussing non-cultural methods for diagnosis of invasive fungal infections, Benoit Guery discussing the role of inhaled antimicrobials and Nicolas Mueller discussing infection in patients on ECMO. Shirish Huprikar shared his experience of thoracic organ transplantation and MCS in HIV patients, and lastly, we heard about EBV and Anellovirus viremia as markers of risk of infection in LTRs by Jose Aguado. The afternoon involved a talk on "Cutting Edge Updates in ID" and provided oral abstract presentations that included a multi-center study on the clinical risk factors for invasive aspergillosis in LTRs, the use of aspergillus galatactomannan in exhaled breath condensate for the diagnosis of IA in LTRs, the impact of CMV, invasive *M abscessus* infections in heart transplant recipients, clinical and microbiologic characteristics of LVAD infections and finally, a study describing posaconazole sequestration in the ECMO circuit. We had a lovely wine and cheese reception with the ID posters... always welcomed and a way to mingle...

Thursday brought some more goodies our way – we started the morning with a sunrise symposium bemoaning "those darn CARVs" and their effect on lung transplant recipients including epidemiology and clinical data by Erika Lease. Additionally, the effects on CLAD by Tereza Martinu, and potential treatment strategies by Allan Glanville were discussed. We then went "around the world" with a symposium that focused on infectious challenges in different areas of the world: Silvia Campos from Peru gave us her on-the-ground report of Zika virus, Emily Blumberg discussed hepatitis B, Subramanian Swaminathan from India discussed latent TB in India and elsewhere, Amparo Sole from Spain talked about treatment of TB and finally, Stephanie Pouch gave us advice on how to keep patients (and us) safe when travelling abroad. In the afternoon, we learned how to "tame the shrew," none other than *M abscessus...* Cameron Wolfe discussed epidemiology and modes of transmission, Orla Morrissey talked about clinical manifestations and diagnosis and Fernanda Silveira taught us how to manage the shrew in the pre-transplant period. We heard about current and novel treatment agents from Patricia Ging and had a (very) lively and "shrewish" debate that pitted the British (Paul Corris) *vs* the Australians (Gregory Snell) regarding transplantation in patients with *M abscessus*.

There was myriad other ID content scattered throughout the program including a series of abstracts from the IMACs registry detailing rate and type of infections in an international MCS registry as well as the pharmaceutical challenge of transplant in HIV patients.

It was an excellent year and Nice can only be better! I mean the ID content of course...

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From the Desk of the JFTC Chair and Vice Chair

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The year can be defined in several different ways depending on the markers that are used, such as the "calendar" year (January to December), the "academic" year (July to June) and the "fiscal" year (October to September). But as members of the Junior Faculty and Trainee Council, we live according to the ISHLT year – May of one year to April of the next. This May 2016 to April 2017 was a very successful one, and we will highlight these accomplishments here.

The ISHLT year opened with a frenzy of symposium development for next year's ISHLT. Under the superb leadership of Martin Schweiger, the Education Workforce Leader, 62 proposals were submitted with JFTC support of which 28 (42%) were accepted.

As the year progressed, several JFTC projects took shape. Colleen McIlvennan in the newly created position of Nursing, Health Science and Allied Health Council Liaison, worked to connect with the leadership of the American Association of Heart Failure Nurses (AAHFN). Together, they developed a joint sponsored symposium for the 2018 AAHFN meeting. We hope to continue to foster this important relationship in the future.

As the JFTC Workforce representative on the Standards and Guidelines Committee, Jose N. Nativi-Nicolau (J Triple-N) worked closely with Society leadership to standardize a process to ensure Junior Faculty involvement on ISHLT projects. Under Jose's guidance, numerous junior faculty members are participating on workgroups and consensus documents formalized through this committee.

Hirsch Mehta (I2C2 Liaison) and Darko Vucicevic (International Liaison) worked closely with Evan Kransdorf (Vice Chair) to analyze and present data to better-understand global participation at the Society annual meeting. Specifically, they sought to identify barriers of participation for junior faculty.

Marco Masseti (Heart Failure-Transplant Liaison) and Natasha Altman resuscitated the *Heart Failure Journal Watch* and the *Heart Donor Forum*. Feras Khaliel continues to flog life into *What's New in MCS* newsletter, and Simon Pecha has been a valiant steward of the kind of widely circulated *BSTR Bright Lights*.

Finally, April arrived and ISHLT 2017. Jorge Silva Enciso and Claire Irving put together a very well attended Mentor Lunch. The JFTC Networking reception was lovely and well received.

Additionally, the JFTC continues to maintain the International Fellowship Database, promote the ISHLT Mentor-Mentee Program and foster mentored writing opportunities in the JHLT.

In summary, the JFTC continues to be one of the most active councils in the society, advocating for and representing trainee and junior faculty members of the Society. There is always a need for persons who want to contribute, so please contact one of the JFTC council members if you are interested.

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Back to the Future

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The Nursing, Health Science and Allied Health Council had another exciting year. Lead by Chair Kevin Carney and Vice Chair Pam Combs, the Council had multiple project accomplishments this past year. The Council revamped the mission statement to more clearly define its multidisciplinary membership and continue focus on collaboration. In addition to a refreshed mission statement, the Council provided mentorship and consultation around the annual meeting proposals, reviewed and revised objectives and membership of the workforces to increase participation and cross Council collaboration. Additionally, the Council created new liaison positions to enhance communication with other councils, actively participated in the Links newsletter with nine article submissions from our Council members and developed a comprehensive membership survey. The Council members were principle authors on the *Practice Guideline Document for Strategies to Prevent and Manage Infections Related to Mechanical Circulatory Support*. *The Many Faces of e-Health and its Application in End-Stage Organ Failure and Transplantation* was also created and launched. Upcoming plans for this next year include planning of a Master Academy for the 2019 Annual Meeting, working on consensus document for around the Psychosocial Assessment in Pre Transplant/MCS patients as well as a staffing model for ambulatory care in thoracic transplant. The Council is also working on a joint proposal with the American Association of Heart Failure Nurses for both Societies' annual meetings.

Don't forget to get those symposium and plenary proposals in by the June 1st deadline. If you need any help putting a proposal together, pulling in other councils or coming up with possible speakers, or just want to get more involved in the Council, please reach out to any board member for help. All of our contact information can be found on the Council web page: http://ishlt.org/councils/nursing.asp.

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2017 Annual Pharmacy Update: Continuing Progress and Forging Ahead

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As I take over as Chair of the Pharmacy and Pharmacology Council, I am happy to see where we stand from where we started, with both events (the start of the council and taking over as Chair) occurring in San Diego. The council has grown and the council's involvement within the society has grown and continues to grow.

This year's Meeting in San Diego was amazing as the Pharmacy and Pharmacology Council sponsored talk on the Highs and Lows of Marijuana had over 200 people in the room, and the moderators were the only ones able to take care of their munchies during the session. We also sponsored a Lifecycle symposium covering the highs and lows of thrombosis in MCS – which really are mostly lows... Again, this year pharmacists were able to obtain CE at the meeting with a maximum of 18.5 hours available. The pharmacology CE will also count for APNs in the United States, and nurses who are renewing Certified Clinical Transplant Coordinator credentials. Additionally, the pharmacy council has secured ACPE CE credit for the next 10 years. When looking around the meeting, we are seeing members of our council as moderators and speakers in other council's symposia, which is gratifying to see our council's growth and inclusion within the Society.

Mike Shullo and Robert Page are leading an effort to further call attention to standards pertaining to the practice of Thoracic Transplant Pharmacy, which highlights our core competencies document (which is available on the council's webpage) and is an informative read for practices that don't have a pharmacist as part of their team, or regions of the world that want to implement pharmacist involvement in their clinical practice.

With no definitive document discussing immunosuppressant use in heart or lung transplantation – considerations of generics, approved vs. accepted use in U.S. and globally, and considerations of payment (insurance and national formulary considerations) - the Pharmacy and Pharmacology Council has taken the lead in creating a consensus document on immunomodulating agents in thoracic transplantation. The working groups met and started work in San Diego and are working toward a document that will be completed and available in the beginning of 2018. I would like to thank all the people across the Society that have volunteered and worked on this project.

It is my privilege to serve as chair of this council, and I look forward to the next two years as such. I believe that the above projects are only the start of the larger impact this council can have on and within the Society.

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EDITOR'S CORNER: The Evolution of Heart Transplantation in Latin America: The ISHLT Knows No Boundaries

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Five years ago under the Florida sun in the city of Tampa, physicians and the most diverse health professionals across Latin America met for the first time to talk specifically about heart transplantation and mechanical circulatory assistance. It was the first Pan American Workshop for Mechanical Circulatory Support and Heart Transplant. The event was the beginning of a fruitful relationship between Latin America and the International Society for Heart and Lung Transplantation (ISHLT). The meetings of this group were held at the ISHLT annual congresses: San Diego (2014), Nice (2015), Washington (2016), and finally in April 2017 again in San Diego.

This last meeting in San Diego was very rich. In addition, relevant facts have shown the progress in the different Latin American countries. From Colombia and Chile, we have received the good news of the recently won changes in the organ and tissue donation laws, which have become mandatory. The move will surely bring more organ donations to transplants and help reduce the long waiting list.

The novelties of Mexico showed the beginning of the use of mechanical circulatory assistance as a bridge for transplantation in paediatric patients. From Mexico came the good news that temporary devices manufactured by the local industry began to be used in patients with acute heart failure.

In Peru, the cardiac transplant program of the Heart Institute of Lima was consolidated, and the use of temporary devices as a bridge for transplants was started.

Argentines deserve a special mention: they have been able to gather all data from intra-thoracic transplants performed in their country through the National Transplant Center (INCUCAI) and are until now, the only ones in the region that have been able to send this data in a systematic way to the ISHLT Registry.

The Uruguayans are also to be congratulated for having just completed the 100th heart transplant and, like the Argentines, are excited to send this information to the ISHLT Registry.

In Brazil, despite the economic and political crisis, we can still present positive results in the number of cardiac transplant procedures. We highlight the creation of a national program for the multidisciplinary training of health centers in various regions of the country in the area of heart transplants: The Tutorial Transplantation Project of Messejana Hospital, in Fortaleza, Ceará. At the end of a theoretical and practical training, lasting 18 months, these centers will already be able to transplant.

The available data about heart failure is very scarce in Latin American countries, and several studies suggest inequity of access to evidence-based HF care among them, specifically reduced access to treatments like transplantation and MCS.

Among the goals that emerged in San Diego are: to create partnerships between regional societies and ISHLT, to facilitate training actions that improve the level of cardiac and pulmonary transplantation services in Latin America. Additionally, the need to create a specific registry for patients transplanted with Chagas disease, which in Brazil, for example, represent about 20% of the total number of transplanted patients. The need for the creation of a Latin American registry on the use of mechanical circulatory assistance devices, since the data available so far are only those from the manufacturers' records. One of the possibilities would be the adhesion to IMACS.

An important statement made by ISHLT registry director Josef Stehlik, was that in view of the resumption of the increase in the number of transplants globally, even with the stabilization of numbers of these procedures in Europe and the US, Real growth corresponds to regions outside this axis, among them Latin America. However, despite this growth, it is estimated that of the total number of transplants performed in Latin America, only 30% are reported; therefore, creative and practical actions to stimulate the sending of such data are equally urgent. For this reason, news that was received with enthusiasm by all of us was that the official documents generated by the ISHLT would be translated into Spanish and Portuguese.

Finally, according to a poll conducted by an ISHLT cardiologist and ambassador to Colombia, Adriana Torres, listening to Latin American participants at the Washington congress in 2016, there would be a strong demand for a greater opening of the ISHLT to our region. This could translate into practical and political actions to facilitate access to event programming. The Latin American session was organized by I2C2, under the direction of Howard J. Eisen, with the collaboration of Andreas Zuckermann. The speakers were Paulo Pego-Fernandes and Juan Mejía (Brazil), Alejandro Bertolotti (Argentina), Adriana Torres and Leonardo Salazar (Colombia) and Douglas Greig (Chile).

Our expectation now, is for the first the ISHLT / Latino-America Joint Meeting to be held on October 20th, 2017 in the city of Foz do Iguaçú, state of Paraná, southern Brazil, during the XV Congress of ABTO (Brazilian Association of Transplants of Organs). See you in Foz!

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