

## TRANSPLANTATION SOCIETY OF AUSTRALIA & NEW ZEALAND

# Annual Newsletter 2017

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# **Editorial Comment**

## **Dear TSANZ Members,**

Welcome to the 2017 edition of the Society newsletter.

TSANZ administrative matters, council meetings and annual scientific meetings have been ably handled by Sommer Twycross, the Executive Officer and Nieves Piaggio, the Administration Officer. Council would like to thank them for their contribution and tireless efforts.

The Society produced another successful annual scientific meeting in 2017, held at the Brisbane Convention centre. Congratulations to the convenors Kelli MacDonald and Ross Francis for organizing an excellent meeting, ably supported by SPEC. We had a record-breaking attendance (272) compared with previous few

years, again allaying any concerns that moving the meeting outside of Canberra would be financially detrimental. We also had a full complement of travel grants and young investigator awards, as well as a competitive and much-sought-after President's prize. Darren Lee, Veena Roberts and Siok Tey organized an exciting PGC/Masterclass series that was also very well attended.

We were privileged to host a number of highly regarded international speakers for the ASM, including Shimon Sakaguchi, Bruce Blazar, Christophe Legendre, Elmi Muller, and Lori West, who presented the inaugural Josette Eris Lecture. Peter Cowan presented his muchdeserved 2016 Ian McKenzie award lecture and Lucy Sullivan was the inaugural recipient of the Josette Eris Award. The meeting ended by adding a microbiological flair to the Great Debate. The Society saw an increase in submitted abstract numbers compared to 2016, covering a range of clinical and basic science research. Students/trainee conference attendance remains steady at around 16% and we would continue to encourage senior faculty to promote junior researchers and clinicians to experience the conference and present their research.

The 2018 ASM will be held in Melbourne from April 28th until May 1st, at the Convention Centre. Once again the Masterclass and PGC will be run concurrently. In 2019 there may be a significant change in the scheduling of the ASM, as the World Congress of Nephrology is being held in April. The TSANZ is considering a "timing swap" with ANZSN to avoid a direct clash and conference exhaustion – the Society will let you know as soon as soon as dates are confirmed.

I hope you enjoy this edition of the Society newsletter.

#### Natasha Rogers

# **President's Message**

#### Dear Membership,

As we head towards the end of 2017 the year has been full of many successes in the transplant field in both clinical and research areas across both Australia and New Zealand.

The donor rate continues to increase with activity across the sector and TSANZ has worked closely with OTA in Australia to strengthen the mechanisms of donor identification, retrieval and utilisation to maximise donor rates and head toward the goal of 25 donors per million by 2020.

TSANZ and the subcommittees are strongly aware of the downstream impact of increased activity and are working with OTA and the TLRG, chaired by Steve Chadban, to identify ways to strengthen the capacity of the workforce, to deliver transplantation and also to further enhance living donors and paired kidney transplants. We gratefully acknowledge the work of Ann Smith as acting CEO of OTA and welcome Lucinda Barry's appointment as the new CEO of OTA. We also recognise the appointment of Carol Pollock as Deputy Chair of the OTA board.

The reorganisation of the subcommittees and the work of Iman Ali in assisting Toby Coates and the chairs of the subcommittees have improved the development of national strategies across all the transplant groups. We are sad to report the retirement of Iman Ali and thank him for all his work and counsel over many years and wish him well in the future.

The new council welcomes Chris Russell, Bronwyn Levvey, Natasha Rogers and Toby Coates as President-elect. In recognition of the strong SA flavour, council will meet in Adelaide next year.

Education has been ably led by Dan Chambers and Kelli MacDonald as chairs of SPEC. This year's ASM meeting was an outstanding success in Brisbane and Ross and Kelli organised a superb meeting with increased registrants and presentations and an excellent program. This was supported by the PGC program and Masterclass that preceded it. Next year's ASM meeting currently being organised by Rosemary Masterson and Lucy Sullivan in Melbourne on 28th April-1st May 2018, already looks fantastic with a range of excellent international and local speakers (http://www.tsanz.com.au/meetings/index.asp). Of note is our presence on twitter ably led by Allison Tong.

The council continues to support initiatives to introduce machine perfusion, and to evaluate infectious disease with this work being led by Sarah White. Of special note was the recent indigenous transplant workshop that aimed to address issues to improve indigenous transplant outcomes.

The council has worked over many years to strongly support the women in transplantation initiatives both in Australia and New Zealand as well as participating in TTS initiatives. The awarding of the Josette Eris prize and the various initiatives and meetings to promote this has been highly successful and a constitutional change to guarantee a minimum representation of women on council will come to the next AGM.

There has been great work in transplant science and the new work in stem cell, and xenotransplantation is very exciting as well as new materials and improved organ survival and advances in immunology including the improvements in antibody mediated rejection and this is reflected in the many projects and programs around the 2 countries.

TSANZ is working to strengthen its collaborations with other societies including ANZSN and TTS and again will support the mentor-mentee awards for Madrid. Australia and New Zealand have been major supporters of TTS with several ex-presidents, council members and Chairs of the research committee. We hope to have an Australian-Canadian session at the Madrid meeting to enhance collaboration.

The need to expand the role of transplant in clinical research has led to us reaching out to BEAT-CKD and AKTN to look at promoting clinical research.

Several colleagues have received major recognition including Keryn Williams becoming an honorary member of the Society and Peter MacDonald receiving an Order of Australia, both for their contributions to transplantation.

New Zealand, well represented by Nick Cross has worked to enhance donor rates with the NZ government building on their current work. Richard Allen is again leading a group to Vietnam to provide education on transplantation which should again be a great success.

The work of the registries including ANZDATA, led by Stephen McDonald, continues to provide crucial data recognised around the world on our patients.

The TSANZ office, with Sommer and Nieves, has done an amazing job with the many initiatives and meetings going on.

This society is here for the transplant patients and their families and the donors and their families and we are working in every way to improve outcomes and provide support. We are grateful for our support from organisations representing patients and their families including Transplant Australia and many other groups.

We also thank our pharmaceutical partners including Astellas and Novartis for their support of the meeting and many of the initiatives of the Society.

We wish all of you well for the upcoming year and welcome everyone to take advantage of the opportunities that TSANZ can offer and to let us know how we can represent you and promote the interests of transplantation.

> **Steve Alexander** *President, TSANZ*

# Secretary's Report

The TSANZ council has acknowledged a changing of the guard, with Steve Alexander (president) and Patrick (Toby) Coates (president-elect) now at the helm. Rob Carroll continues to excel in his fiduciary capacity and the TSANZ remains financially viable. I am equivalent gender pleased to see also representation on TSANZ council, and I would like to acknowledge the work of my predecessor, Karen Dwyer, as a strong advocate for achieving this goal. TSANZ will continue to push for women to actively participate in related committees, such as SPEC.

We have 586 current members, which has increased in the last year. However, less than 10% of members are students or trainees and we would emphasize everyone to encourage junior medical staff and researchers to join. There are a large number of financial incentives associated with TSANZ membership, including travel grants, annual scientific meeting prizes and fellowship awards.

TSANZ continues to promote all aspects of transplantation-related research, including clinical and basic science. The annual scientific meeting provides an important platform for junior investigators to present their research, receive valuable feedback, and develop their research networks throughout Australia and New Zealand. You never know where you might find your next PhD student, postdoctoral fellow, mentor or collaborator.

With the support of Novartis and spearheaded by Karen Dwyer, a new initiative called Women in Transplantation was created in 2016. The purview of the group is to promote inclusivity, gender equity and diversity within TSANZ. I would like to emphasize that this group is not exclusively for women, consultants, or established University faculty, and we would like to welcome anyone interested in joining. An initial workshop was held in Sydney in November 2016 and with continued support from Novartis we are planning to hold another workshop in early 2018. An EOI will be sent around to gauge potential numbers of interested Society members (and non-members who can be encouraged to join) - please check your emails for this announcement.

The annual scientific meeting was held in Brisbane this year, to great success. The highlights from the meeting, including prizewinners, are featured in this newsletter. Additional meetings of interest to society members are also listed in the Newsletter.

Please feel free to contact me with any comments or questions related to TSANZ activities.

**Natasha Rogers** *Honorary Secretary, TSANZ* 

## **Treasurer's Report**

The financial position of TSANZ is stable if not slightly improved of the last 24 months. The current position is \$1.4 million. This is mainly in the form of 4 term deposits spread across the four main banks with interest rates of 2.75%.

We have avoided stock and shares due to market volatility.

The mild improvement in the financial position is more related to improved subscription payments and members paying on time. Please be aware you can now direct debit your annual subscription.

We have set budgets for the ASM in order to try and fix costs and plan for the future. Moving the ASM has also lead to an increase in attendees from 207 in 2015 (Canberra) to 230 in 2016 (Sydney) and 272 in 2017 (Brisbane). This in turn has improved revenue which basically means that the ASM has become "cheaper". The cost of the meeting has fallen from \$240,000 (2015) to \$210,000 (2017).

Hopefully we can maintain costs and attendance for the Melbourne Meeting!

**Rob Carroll** *Treasurer, TSANZ* 

# Advisory Committees & Working Groups

The Advisory Committees and Working Groups continue to move the practice of transplantation forward in all of the craft groups. In the last 12 months there has been significant work accomplished with the help of Iman Ali, who has now retired from the position. The TSANZ Executive is delighted to announce his replacement, Ms Christine Vuletich, who comes to the TSANZ with a wealth of experience from the Cancer Council of New South Wales.

The Advisory Committees & Working Groups continue to work closely with the Transplant Liaison Reference Group (TLRG) to keep clear lines of communication between the transplant sector and the Organ and Tissue Authority. We welcome the appointment of Lucinda Barry as the new CEO of Donate Life who has a wealth of experience in the donation sector.

Since the last report the TSANZ/ANZSN convened a working group chaired by Steve Chadban to develop a new protocol for indigenous kidney transplantation recognising the need to try to improve outcomes. The group met at the South Australian Health and Medical Research Institute (SAHMRI) on the 14<sup>th</sup> of June, 2017. The group discussed a common

protocol with once daily medication that might be implemented as an alternative to the conventional triple therapy regimen prior to return to remote locations. The other determinants of health outcomes including social disadvantage and access to therapeutic drugs was emphasized and potential avenues for intervention were emphasized. The group discussed increasing the use of rural and remote health care nurse practitioners/health workers (especially in WA/SA/NT) to provide education/access to transplant drugs in remote locations. The need to increase transplant knowledge in this group of health care providers was recognised and seen as a positive opportunity.

The TSANZ Council recognises the increasing problem of ethical issues in Transplantation. These include Transplant Tourism and the international efforts to curtail this practice through the Declaration of Istanbul Custodian Group (DICG). The Council strongly endorse the efforts of Dr Dominique Martin (Deakin University) to raise ethical issues on Transplantation in Australia. A recent seminar at Deakin University in October 2017 highlighted such ethical issues on transplantation including issues around living donation, deceased donation ("opt in and opt out" models) and barriers to transplantation within Australia. A new working group to specifically address issues in ethics in transplantation has been proposed for inclusion in our current structure.

The contribution of all of the working groups to the ongoing business of Australian transplantation is gratefully acknowledged.

Patrick (Toby) Coates Chair, TSANZ Advisory Committees & Working Groups

# **SPEC Report**

For the second time since 1983 an independent TSANZ ASM was held outside of Canberra – the venue this year was The Brisbane Convention and Exhibition Centre in the vibrant Southbank area of Brisbane. Congratulations to Ross Francis and Kelli MacDonald who convened this year's ASM, Darren Lee who convened the highly successful Masterclass, and Veena Roberts and Siok Tey who convened the Post-Graduate Course (PGC). Overall the meeting was highly successful with a further increase in registrants to 272 from the 230 in Sydney in 2016. These are the highest numbers since 2011 and support the changes in format and location which were instituted in 2015.

This year there were 3 combined and 1 concurrent session for PGC and Masterclass on Saturday pm and Sunday am, an approach was generally successful. which The Masterclass is a new addition to the TSANZ continuing medical education offering and is specifically designed to update nephrologists who care for kidney transplant recipients. Due to the high quality of the speakers and presentations, the Masterclass not only attracted general nephrologists (who had rarely attended TSANZ PGC and/or ASM) but also some experienced transplant nephrologists. Renal advanced trainees also found it highly relevant to their training. We look forward to consolidating this success in 2018.

The shorter ASM format (Sunday pm to Tuesday pm), which was first adopted in 2015, was retained for the 2017 meeting and will again be retained for the Melbourne 2018 meeting. This format is designed to maximise the educational experience and to encourage attendance by clinicians, who may have previously been unable to include the TSANZ ASM in what is an increasingly busy transplant congress schedule. The big changes for 2017 were the saving of trees with the use of electronic program books and the reintroduction of posters to accommodate a significant increase in submitted abstracts (143 in 2017, compared to 110 and 111 in 2016 and 2015 respectively).

A big highlight this year was the inaugural conferral of the Josette Eris award in memory of a much loved and highly esteemed member of Australia's transplant community, and a dear friend to many TSANZ members. The purpose of this biennial award, which is generously supported by Astellas, is 'To encourage early to mid-career female members of the transplant community to remain competitive in their field they balance the challenges and as commitments of work and family and/or those who may have compounding reasons for needing support'. The Josette Eris award recipient for 2017 was Lucy Sullivan.

Amongst a smorgasbord of wonderful scientific content, some of the highlights of the 2017 meeting were Shimon Sakaguchi's talk on '*Tregs–Development and Function*', Elmi Muller's talk on transplantation in HIV+ve individuals, and Lori West's multiple talks on topics as diverse as ABOi transplantation and obtaining Tregs from discarded thymus – from '*Garbage to Gold'*. Once again the ASM concluded with the great debate – this year our teams robustly discussed '*Organ Donors–Bugs Don't Matter*'.

Now Melbourne 2018 beckons. Convened by Rosemary Masterson and Lucy Sullivan, the 2018 ASM will consolidate the new meeting format with relatively few changes. Rosemary and Lucy have already secured very high calibre international speakers: Sandy Feng, Director of Abdominal Transplant Surgery at UCSF; Stanley Jordan, Director of Nephrology & Transplant Immunology at Cedars-Sinai; Vijay Kuchroo, Director of the Evergrande Center for Immunologic Diseases at Harvard and Kathryn Tinckam, Medical Director HLA Laboratory and Transplant Nephrologist, University of Toronto.

Increasingly our Society is looking to Asia for information exchange, educational opportunities and new collaborations and friendships. As part of this outward vision, in 2018 we look forward to welcoming the first recipients of a new travel award for Vietnamese Society of Organ Transplantation members to attend our ASM. See you in Melbourne!

> **Dan Chambers and Kelli MacDonald** Co-Chairs of Spec

# Issues for Women in Transplantation sponsored by Novartis

In 2016, a new initiative "Issues for Women in Transplantation" was headed by Karen Dwyer and supported by Novartis. A half-day workshop was held at Novartis headquarters (Sydney) in November, aimed at developing a vision for women in the TSANZ, building on the SAGE (Science in Australia Gender Equity) program incorporated into academic institutions. Due to logistics we had a limited representation from outside of NSW, and no junior (non-consultant/faculty) staff, something we will look towards amending at subsequent meetings.

As a group we had input from Novartis executives regarding the company's journey towards ensuring women were promoted to leadership positions, and then heard from Karen Dwyer about the various challenges she had encountered in her career path. This led to an open forum discussion of problems all participants had faced (career choices, mentoring opportunities, gender discrimination), generating potential solutions, and incorporating aspects of these into TSANZ.

This meeting has led to recognition that broader diversity, gender distribution and inclusivity are all needed within TSANZ. We hope to approach the goals set in this initial meeting by:-

- having realistic targets for female representation throughout TSANZ

- mentoring junior trainees and encouraging their input,
- celebrating the success of women within the society,

- acknowledging the contribution of women to TSANZ (including the late past-president Josette Eris and executive officer Aviva Rosenfeld)

- facilitating the presence of women at the annual scientific meeting through chairing opportunities, invited speakers, and provision of childcare services.

Our meeting also heralded a publication in *Transplantation* (PMID 28767533). Link: http://journals.lww.com/transplantjournal/Fullt ext/2017/10000/Gender\_Equity\_in\_Transplant ation\_\_\_\_A\_Report\_from.5.aspx

With the ongoing support of Novartis, we hope to be able to hold a further forum in Sydney in February/March 2018 to capitalize on this start. Expressions of interest will be sent to all TSANZ members. We would strongly encourage all members, trainees, senior faculty, scientists and clinicians to attend.

> Natasha Rogers Honorary Secretary, TSANZ

# Young Adult Clinics and Transition Clinics Visitssupported by Astellas

Many thanks to all those who applied to come to the transition and young adult clinics in Adelaide. There were more than 20 applicants and so it may take some time for all interested parties to attend – as only 1-2 people can attend each clinic. Thanks to Astellas for this initiative and I will report later in the year but feedback so far has been positive.

> **Rob Carroll** *Treasurer, TSANZ*

TSANZ Annual Dinner @ Brisbane City Hall, 64 Adelaide Street, Brisbane Monday 8<sup>th</sup> May 2017



The 2017 International ASM speakers Professor Lori West, Dr Bruce Blazar and Professor Elmi Mueller with retiring TSANZ President Prof. Steve Chadban



Junko Komatsu, Astellas and the retiring TSANZ President Prof Steve Chadban with the inaugural Josette Eris Award Winner, Lucy Sullivan.



Honorary Member Keryn Williams with retiring TSANZ President Prof Steve Chadban



President's Prize winners (above) Karen Keung (Clinical) and (below) Simone Minnie (Basic Science) with TSANZ retiring President Prof. Steve Chadban





KHA winner Allison Tong (Clinical Research) with TSANZ retiring President Prof. Steve Chadban



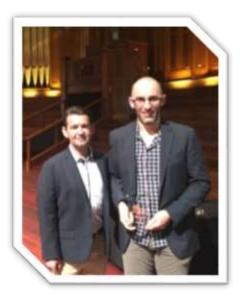
KHA Award winner (Laboratory) Sebastian Stead with TSANZ retiring President Prof. Steve Chadban



YIA Winners - Basic Science with TSANZ retiring President Prof. Steve Chadban



YIA Winners - Clinical Science with TSANZ retiring President Prof. Steve Chadban



Fun Run winners Andy McNally (above) and Karen Dwyer (below) with Transplant Australia representative Monty Summers





TSANZ retiring President Prof. Steve Chadban with Blake Sandery (representing Michael Stormon) the winner of the Mark Cocks Transplant Research Scholarship and Kate Philips, Transplant Australia



TSANZ President Elect Professor Steve Alexander and retiring TSANZ President Prof. Steve Chadban

#### PRIZES AWARDED IN 2017

**President's Prize (Basic Science)** Simone Minnie

**President's Prize (Clinical)** Karen Keung

Mark Cock Tx Research Scholarship Michael Stormon

Josette Eris Memorial Award Lucy Sullivan

**KHA Award (Clinical)** Allison Tong

**KHA Award (Laboratory)** Sebastian Stead

## **YIA Novartis**

Eric Au; Hong Chee Chew; Katerina Flabouris; Ahmer Hameed; Karen Keung; Maleeka Ladhani; Ankit Sharma; Matthew Sypek; Allison Tong; Karen Waller

## YIA TSANZ

Lu Cao; Doreen Fang; Danny Kang; Tony Kwan; Bron Lett; Simone Minnie; Kisha Sivanathan; Sebastian Stead; Andrew Wilkinson; Yuanfei Zhao

**Best Poster Award (Basic Science)** Heather Burns

Best Poster Award (Clinical)

Timothy Sladden

## Membership

Since the last newsletter, TSANZ Council welcomed the following new members:-

## TSANZ

Eric Hoi Kit Au, Heather Burns, Lu Cao, Nicole Louise De La Mata, Chandima Divithotawela, Anne Durkan, Katerina Flabouris, Alexandra Gallagher, Alison Shirley Graver, Imad Haloob, Georgina Laura Irish, Elvira Jimenez Vera, Xinsheng Ju, Kyung (Danny) Kang, Joshua Kausman, Francis Kette, Juewan Kim, Alice Joy Krige, Nicholas George Larkins, Raymond Lin, Katie Lineburg, Sophia Wen-Hui Ma, Karine Estelle Manera, Revathy Manickavasagar, Dominique Martin, Simone Anne Minnie, Alicia Brooke Mitchell, Kavitha Muthiah, Chanel Prestidge, Harish Puttagunta, Andrew Robson, Blake Jessica Sandery, Isuru Sepala Seneviratne, Rashmi Shingde, Pablo Alejandro Silveira, Kenneth Andrew Sinclair, Julian Singer, Timothy Michael Sladden, Jacqueline Soraru, Adam Glenn Steinberg, Matthew Peter Sypek, Paul Lewis Wilcox, Andrew Neil Wilkinson

## ATCA/TSANZ

Courtney Duncan, Rodrigo Fritis-Lamora, Lauren Herd, Georgia Minio, Elyn Montgomery, Christine Maree Ross, Nicola Seifert

## TNA/TSANZ

Katherine Bateman, Rosa Boric, Belinda Jane Bourne, Lesleigh Ann Bruce, Clare Alexandra Fazackerley, Lorraine Hilton, Patricia Mary Leisfield, Karyn Elizabeth Lowe, Jane Mawson, Mike Utsiwegota, Jacqueline Ware

#### RESIGNATIONS

Since the last newsletter, Council has accepted the following resignations:

Jamie Louise Brady, Kylie Anne Bragg, Trevor Cherry, Dale Christiansen, Linda Colefax, Amelia Rose Cossart, Dov Degen, Toni East, Joanna Forteath, Hayley Furniss, Elvira Geddes, Russell Hodgson, Cameron Knott, Robyn Langham, Bronwyn Laughlan, Trish Leisfield, Hui Liew, Luis Lim, Shona Mcdonald, Joanne Margaret Middicks-Law, Ranjit Singh Nanra, Allyson Wendy Newman, London Lucien Ooi, Janine Sawyer, Shakira Spiller, Robyn Sutherland, Elizabeth Treasure, Karen Trotter, Emily West, Claire West (nee Baker), Andrew Young

## **Society Awards and Grants**

The Society provides a number of benefits for members, which include support to attend national and international transplantation meetings and reduced fees at meetings sponsored by the society. The eligibility criteria for each award are outlined on the TSANZ website.

## **Travel Grant Award Reports**

## ISHLT (International Society of Heart & Lung Transplantation) 5th - 8th April, 2017 California USA

With gratitude, I was able to attend the International Society of Heart and Lung Transplantation (ISHLT): Annual Scientific Meeting which took place in San Diego, USA in April this year. The meeting paid emphasis to heart and lung transplantation, and this year's program showed particular interest in the areas of mechanical circulatory support and ex-vivo donor organ management. Furthermore, there was a dedicated DCD heart session to discuss the progress and growing interest within the area.

In regards to DCD heart transplantation worldwide, at the time of the conference, only 3 centers were performing cardiac transplantation using DCD hearts. The presentation of -9 - November 2017 individual center experience, differences in practice and outcomes were invaluable for the broader application and use of DCD hearts internationally. One of the key issues that was heavily discussed was the relevance of lactate as a marker for transplantation. Despite current guidelines by Transmedic **OCSTM** in management of BD hearts, in the DCD setting, it appears that lactate is a marker of viability which does not necessarily correlate to cardiac function. This is evident by higher rates of early graft dysfunction in the DCD cohort requiring immediately ECMO support posttransplantation. Despite the higher rate of ECMO/MCS, all hearts return to normal function after a short period of mechanical support. Based on current limited experience worldwide, the consensus is to establish a guideline which can be more broadly applied. It also echoes the need for a more reliable biomarker which better reflects the functional status of the DCD heart.

During the conference, I had the opportunity to present our clinical DCD heart transplantation outcome at St Vincent's Hospital, Sydney in the form of a mini-oral presentation.

Hong Chew

## CMV (6th International Congenital CMV Conference / 16th International CMV/betaherpesvirus Workshop) 30th April - 4th May, 2017 The Netherlands

Thanks to the generous support of TSANZ for the travel grant, I was able to attend the combined 6th International Congenital CMV Conference and 16th International CMV/betaherpesvirus Workshop on the 30th April to 4th May, 2017 in the Netherlands. This year's committee compiled an interesting scientific program able to bring together basic science and clinical expertise in the scope of cytomegalovirus (CMV)

I presented work which I have been developing during my PhD. The data focused on looking at CMV reactivation in the context of bone marrow transplantation, and the role of antibodies responses on protection from reactivation. I was able to discuss my work and receive invaluable feedback from international experts during the breaks. The keynote and invited speakers were internationally respected leaders in their fields of study of CMV. The plenary sessions focused on topics ranging from epidemiology and burden of disease, to virus and host interactions, and clinical practice and treatment of CMV. The keynote talk by Peter Barry on non-human primate models of CMV to inform clinical prevention and therapeutic interventions was particularly interesting, and relevant to my work.

There was and extensive list of oral and poster presentations. Some highlights for me were talks by Paul Moss who discussed the mechanisms and management of CMV-driven immunosenesce. Daniele Lilleri spoke about Antibody and T cells driven design for a protective HCMV vaccine.

The CMV conference was highly relevant to my work in studying CMV reactivation in transplantation and as such attendance provided me with excellent opportunity to, not only present my work at an international stage but also to interact with peers and experts from around the world. Thank you again to TSANZ for this worthwhile opportunity.

#### **Paulo Martins**

## 15th Transplantation Science Symposium (TSS) 24th - 26th May 2017 Victoria BC, Canada

Thanks to generous support of TSANZ for my travel to attend 15th Transplantation Science Symposium at Victoria BC, Canada from May 24 to 26, 2017. I had the great opportunity to learn about the recent developments in transplantation research. Sadly, I had to miss the session "Virtual Global Transplant Lab on biomarker validation and implementation" on 24th morning due to the Ferry service cancellation from Seattle to Victoria. However, I could make it on time to attend the Welcome address. The scientific program packed with informative sessions by excellent international and local speakers on a wide variety of topics that are of major interest in clinical and experimental transplantation.

I presented my poster entitled "Human CD4+CD25+CD127loFOXP3+Treg activation by IL-4 and alloantigen induces activated Treg

that do not express CD45RA and express the IL-5 receptor alpha" in Poster Session I 'Fundamentals in T, B and NK cells'. Our lab had two more presentations, oral presentation by Paul Wilcox on CD4+CD8+Treg in 'Regulatory T-Cells' session, which was also awarded Mentee-Mentor award and another poster entitled 'IL-5 treatment prevents chronic allograft rejection by promoting IL-5 receptor expressing CD4+CD25+ T regulatory Ts2 cells' in 'Poster Session 6 - Rejection'. Our work was well received and the conference provided me opportunity to interact with other the researchers and exchange ideas.

The sessions I enjoyed the most were Imaging in transplantation, Regulatory T-Cells, Tolerance and Big Data Science. In Imaging Session, a general overview by Stephen Juvet discussing what imaging can offer in the area of transplantation was very informative. Also, the talk by Bettina Weigelin on cytotoxic CD8+T cells immunotherapy in melanoma by intravital multiphoton microscopy explaining how imaging tools can help answer many of the how and why questions in the area of transplantation. It was exciting to watch transferred cytotoxic cells cooperating in killing tumour cells and how imaging can help assess the effect of activating antibody to enhance the function of these cells.

Regulatory T-Cell session was of special interest to me and it was very informative and relevant to our work. Carole Guillonneau reported a new natural regulatory T cell population CD8+CD45RClo Treg that efficiently inhibit anti-donor immune response and characterized the antigen activating them. The talk "Migration capacity of thymic regulatory cells can be tuned by expansion in cytokine-enriched culture conditions' by Romy Hoeppli was very interesting. It showed effect of culture conditions on homing capacity of Tregs to direct them towards specific tissue or sites of inflammation to achieve optimal targeting for in vivo therapy without panimmunosuppression effect associated with polyclonal Treg administration. This study was of interest as it had the same vision for inducing Treg with specific suppression. Another study of interest was presented by Rafael Correa-Rocha describing Thymus derived Treg infusion to prevent graft rejection in hearttransplanted children as a potential source of Treg for therapy.

The study showing promise of short-term anti-CD45RC therapy as an efficient innovative strategy without any other immunosuppression to induce donor specific tolerance through potentiation of Tregs by Severine Bezie was very interesting. The keynote lecture on Cell death in Immunity was delivered by Mark Anderson showing beautifully how tolerance develops in thymus.

In the Big data science session, the talk by Ryan Brinkman was particularly interesting as he outlined automated algorithms for flow data for a multinational project and described importance of automated gating in multi-centre studies

I enjoyed the documentary film "The nature of Things" by Niobe Thompson, very emotional and a must-watch for every transplant researchers to recognize their great contribution in transplant research towards the ultimate goal to prevent graft rejection so the organ donation is more rewarding for the donor/donor-family.

In the poster sessions, a number of studies were relevant to our work. Particularly, IFN-gamma secreting T regulatory cells from Turnquist's Group as we have also demonstrated IFN-g expression by Treg with increased suppressive capacity. Other interesting studies included expansion, function and clonotype analysis of human alloreactive Treg by Hong Zhang demonstrating DC as superior candidate for functional Treg expansion; development of GMP compatible protocols for thymus derived Treg expansion by Katherine MacDonald, which described a potential off-shelf therapy to treat GVHD by activation of thymus derived Treg with GMP compatible antibody tetramer complexes. The group is yet to demonstrate the functional capacity of these cells but it is the first group to pursue clinical application using allogeneic thymic Tregs. In Poster Sessions on Biomarkers, studies demonstrating potential of blood or urine-based biomarkers predicting rejection for non-invasive monitoring of rejection were interesting. Study on combining flow analysis and cell proliferation assay as novel way to update detection of immune cell proliferation in MLR assay seems a promising

clinically feasible approach to standardize clinical investigation of immune responses.

Overall, attending this Symposium was a great experience to listen presentations by leading scientists and provided me the opportunity to share knowledge with others in the field. On a personal note, the Leisure time on second day afternoon was well appreciated as I could visit Butchart Garden, full of vibrant colour flowers. I enjoyed visiting Canada, experiencing the beauty of Victoria Island and having a glimpse of Niagara Falls, a breathtaking view.

Thanks TSANZ for providing me the wonderful opportunity and helping my research.

Nirupama Verma

## IPITA (International Pancreas and Islet Transplant Association) 20th - 23rd June, 2017 Oxford, UK

I would like to thank the TSANZ for providing me with a travel grant to participate as an oral presenter at the 16th International Congress for the international pancreas and islet transplant association in Oxford, from the 20th till the 23rd June 2017.

The conference kicked off with a pre symposium "the challenges of ischemia and hypoxia in whole pancreas and isolated islet transplantation". This was very informative on continuing challenges of hypoxic insults during transplantation and it was especially nice to see a lot of my own work presented in the overview talks.

presentation entitled "Y1 My receptor antagonism enhances insulin secretion and improves islet transplantation efficiency" and was presented in the "Experimental islet transplantation" session. It included evidence for a novel role of manipulating the Y1R signalling pathway to enhance  $\beta$ -cell function in situations where islet mass is limited. Only short-term blockade of Y1 signalling in islet transplantation was required to improve insulin secretion and normalize glucose homeostasis and furthermore transplanted islets that show poor function can be rescued with Y1R blockade. There were many great talks in this session including work done by A. Langlois et al on improving islet survival, function and angiogenesis by targeting prolylhydrolases and work by H. Scholz et al on improving islet transplant survival in vitro and functionality in vivo by inhibiting GPR44 to name a few.

The level of science presented at IPITA this year was outstanding. Highlight sessions for me included "Alternative islet sources" where the science is going ahead in leaps and bounds with K. Sivanathan et al presenting data involving making pancreatic endoderm precursors from human urinary stem cells and T. Roberts et al reporting on Beta cell maturation in human stem cell-derived implants a year out from the commencement on the study.

A plenary session entitled "Xeno-Islets for Transplantation" was also extremely interesting as I myself am heading back into the world of neonatal pig islet like cell clusters after many years away from it so it was great to see Greg Korbutt's and Phil O'Connell's latest update on their xeno endeavours.

Whilst I was there I was also able to catch up with old collaborators and foster new collaborative relationships. To have the opportunity to attend this conference has been invaluable. Thank you TSANZ.

## **Stacey Walters**

I would like to thank TSANZ for awarding me an International Travel Grant. The award allowed me to attend the IPITA 16th International Congress in Oxford, UK.

At the congress I presented my latest work titled "Suppression of inflammation by A20 in murine and porcine islets facilitates their survival when transplanted into mice". I had the opportunity to discuss my work with leaders of the islet transplantation field, which lead to a number of research collaborations that will help propel my current research. In addition I had the privilege to participate in a public engagement event organised by the IPITA young investigator committee with the DRWF (Diabetes Research and Wellness Foundation).

There were many great talks at the IPITA 2017 congress, which informed me on the current status of pancreas and islet transplantation and the current basic research efforts happening globally. Two highlight plenary sessions were the 'Stem Cell-Derived Islets for Transplantation' and 'Xeno-Islets for Transplantation' sessions that gave an overview and analysis of the status of each field and challenges remaining for clinical translation. Another presentation I found interesting was a talk titled 'Creating pancreatic endoderm precursors from human urinary stem cells'. This was fascinating to me as stem cell derived beta cells has the potential to provide an autologous and unlimited source of replacement beta cells for the treatment of T1D. This study described how urinary stem cells may be used as the cell type in which to derive the autologous replacement cells, which would be a completely non-invasive procedure! Lastly Professor Hiro Nakauchi gave a fascinating talk titled 'Human-Animal Chimeric donors' that described novel technologies that have the potential to revolutionise the beta cell replacement field. This included a detailed description of how his laboratory grew functional human pancreas in pigs, as described in his 2017 Nature paper "Interspecies organogenesis generates autologous functional islets". Overall the presentations I attended at the congress taught me a lot and left me with great enthusiasm to tackle my own research projects.

Thank you TSANZ for this invaluable and fruitful opportunity

Nathan Zammit

## ISODP (14th Congress of Inter. Society for Organ Donation & Procurement) 6th-9th Sept, 2017 Geneva, Switzerland

I am grateful for the opportunity afforded to me by TSANZ to travel to Geneva, Switzerland, to attend the 14th Congress of the International Society for Organ Donation and Procurement. Within the extensive program for the meeting, there were a number of sessions that aligned with my research interests, which include psychosocial issues in living kidney donor transplantation. As a PhD student, I was eager to hear talks from international experts, whose work has encouraged my interest in living kidney donor transplantation.

I attended the ISODP 2017 Congress to present our study on 'Clinician's attitudes and approaches to evaluating the potential living kidney donor-recipient relationship". We interviewed 54 transplant clinicians from 32 transplant centres across nine countries. Our study found that clinicians regarded assessing the legitimacy and vulnerabilities of the donorrecipient relationship as a key component of living kidney donation however, were faced with various challenged including disentangling altruism and voluntariness from potential pressures of familial and societal duty. My oral presentation was in an interesting session that reflected the international focus of the meeting with presenters from Poland, Bosnia and Herzegovina and Belgium. A highlight of this session was an Ethiopian team's presentation on the programmatic aspects of initiating kidney transplantation in Ethiopia.

Other highlights of the conference included a talk by Geir Mjøen on the long term outcomes of live organ donors where he systematically outlined the available data on potential long term risks faced by kidney donors. He emphasised limitations of the data, stressing the importance of following up donors for more than one decade post donation. Dominique Martin also gave a very interesting talk outlining a new program of advanced donation that is being trialled in the US to combat the problem of "chronological incompatibility". In this program, an individual whose kidney is not currently required for transplantation in a specific recipient can donate to the paired exchange programme and receive a "voucher". The "voucher" enables the specific recipient priority access for a living donor transplant in the paired exchange program, when or if the need arises in the future.

Attendance at this conference has provided me a greater understanding of the psychosocial and ethical issues in kidney donation worldwide and a number of research ideas. In addition to an extensive educational program, Geneva was an exciting city to explore in the evenings. Thank you again to TSANZ for this worthwhile opportunity

## **Angelique Ralph**

## IXA (14th Congress of Inter. Xenotransplantation Association) 20th-23rd Sept, 2017 Baltimore, USA

The generous travel grant awarded to me by TSANZ provided the opportunity to attend and present at the 14th Congress of the International Xenotransplantation Association, held September 20-23, 2017 in Baltimore, USA.

Immediately prior to the Congress, I attended Hyper-immunised/ABOi symposium, the which was one of three satellite symposia. The basic science session explained the complex immunological mechanisms involved with allotransplantation. Later presentations by Professors West, Tanabe and Platt discussed tolerance protocols and outcomes of ABOi transplants. The concluding session examined the diagnostic features of allograft rejection with an emphasis on the hyperimmunised patient and considered new agents and options for the prevention and treatment of antibody mediated rejection. Professor Tector explained allografts and xenografts can be rejected by processes. antibody mediated Whilst genetically modified pig organs can overcome many xenobarriers, he stressed that, as in the allotransplantation setting, there may be a need to test human recipients for preformed anti-pig antibodies and cross match for SLA/MHC prior to xenotransplantation.

The FDA-IXA and theological symposia outlined the recent advances and challenges associated with Xenotransplantation and implications at regulatory and ethical levels. These pre-Congress symposia created enthusiasm by suggesting xenotransplantation is close to becoming a clinical reality.

The Congress program was filled with back- toback presentations and poster sessions. The highlights of the conference were progress in genetically modified pig islet and solid organ xenotransplantation models.

Generation of genetically modified pigs using CRISPR/Cas9 technology dominated the field. Dr David Ayers discussed generation of genetically modified pigs with genes that have the potential to protect the graft from thrombotic microangiopathy. The approach taken by his group involved using two expression constructs, each containing two thromboprotective genes separated by 2A, and CRISPR/Cas9 technology to knock the genes into the  $\alpha$ Gal gene. Professor Heiner Niemann and young investigator, Beate Rieblinger from Germany took an alternate approach and presented work on addition of multiple genes by gene stacking into a "safe and inert" site to generate multi-transgenic pigs at a single insertion site for co-inheritance.

The State-of-the-Art sessions examined the progress of solid organ and islet non-human primate xenotransplantation models. Substantial increases in survival times were observed for genetically modified pig organs:

(1) Hearts (945 days for heterotopic hearts Mohuiddin et al, and 57 days for orthotropic – McGregor et al),

(2) Kidneys have been reported to survive over 400 days (Tector et al),

(3) Lungs -Professor Pierson indicated that GKO-Neu5GKO-hTBM-hEPCR-hHLA-E-hvWF pig lungs survive in vivo beyond 4 days.

There were numerous sessions dedicated to islet xenotransplantation models. The presentation by Professor Wayne Hawthorne describing greater than 12 months function of GKO-CD55-59 porcine islets transplanted in diabetic nonhuman primates was well received.

As xenotransplantation moves closer to the clinic, considerable attention was placed on potential zoonosis. Drs Tonjes and Scobie requirements discussed FDA regarding assessment of zoonosis and infectious risks associated with xenotransplantation. More specifically, Dr Andrea Bahr described the establishment of a porcine CMV free pig herd in a designated pathogen free facility for xenotransplantation. Sensitive PCR based tests to detect viruses in the donor and recipient were presented by Dr Denner. Dr Klymiuk discussed the strategy of eliminating PERV-C provirus by gene-editing using CRISPR/Cas9 to remove the possibility of de novo recombination events that may lead to an increased risk of PERV infection.

Inflammation appears to be the next barrier for xenotransplantation with emphasis placed on

platelet and neutrophil activation and trafficking and the role of sialic acids.

The closing plenary session was dedicated to new and alternative technologies with thought provoking presentations by Professor Juan Carlos Belmonte on the use of pluripotent stem cells to generate human organs in pigs. Dr Harald Ott discussed the possibility of transplanting porcine organ scaffolds reconstituted with human stems cells.

It was evident from the high quality of work presented the Congress that xenotransplantation research has made substantial advances towards human clinical trials. This sentiment was reinforced further by IXA President, Professor Peter Cowan in his presidential address.

On a social level, the welcome reception, Women in Transplantation breakfast and Congress dinner presented the opportunity to meet or establish new collaborators in a less formal environment.

I thank the TSANZ and I am very grateful for support provided to attend and present my paper, "Generation of antiCD2 expressing GGTA1 knock-in pigs using a high fidelity CRISPR/Cas9 system" at this international congress.

**Evelyn Salvaris** 

# CALENDAR OF EVENTS 2017 Meetings

# 26th Transplant Nurses' Association National Conference

15th - 17th November Rydges Hotel, Melbourne Australia For further information go to: http://tnaconference.com.au/

# 27th Annual Congress of the Association of thoracic and Cardiovascular Surgeons of

Asia (ATCSA 2017) 16th - 19th November Melbourne Convention and Exhibition Centre, Australia For further information go to: http://www.atcsa2017.com/

## 15th Congress of the Asian Society of Transplantation (CAST)

27th - 30th November Radisson Blu Hotel Cebu City, Philippines For further information go to: <u>http://www.cast2017philippines.org/</u>

## 46th Annual Scientific Meeting of the Australasian Society for Immunology 2017

27th November - 1st December Brisbane Convention and Exhibition Centre For further information go to: http://asi2017.org/

#### 59th Annual American Society of Haematology 9th - 12th December Atlanta, USA For further information go to: http://www.hematology.org/Annual-Meeting/

# 2018 Meetings

#### International Society of Heart & Lung Transplantation (ISHLT)

11th – 14th April Nice, France For further information go to www.ishlt.org

## TSANZ PGC, MASTERCLASS AND ASM

28th April - 1st May Melbourne Convention Centre For further information go to http://www.tsanz.com.au/

## ISCT Annual Meeting

2nd - 5th May Montreal, Canada For further information go to http://www.celltherapysociety.org/?page=Ann ualMeeting

#### **Royal Australian College of Surgeons ASM** (**RACS**) 7th - 11th May

Sydney, Australia For further information go to https://www.surgeons.org/

#### American Thoracic Society (ATS) International Conference 18th - 23rd May San Diego, California For further information go to https://www.emedevents.com/conferenceview/u nited-states-of-america/california/sandiego/medical-conferences-2017/americanthoracic-society-ats-international-conference-2018-30707

## American Transplant Congress (ATC)

2nd – 6th June Seattle, USA For further information go to http://atcmeeting.org/

# XXVII International Congress of The

**Transplantation Society (TTS 2018)** 30th June - 5th July Madrid, Spain For further information go to www.tts2018.org/

*European Society of Organ Transplantation (ESOT) Not available For further information go to www.esot.org/* 

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