Report on the 7th World Congress on Tissue Banking

12th - 14th May, 2014, Melbourne, Australia

The 7th World Meeting on Tissue Banking took place at the Novotel @ Collins in Melbourne, Australia from the 12th to the 14th of May 2014. The meeting, hosted by the Biotherapeutics Association of Australasia (BAA, formerly ATBF - Australasian Tissue & Biotherapeutics Forum) closed the circle of successful world meetings that have taken place since 1996 - the 1st WCTB being at the Gold Coast, Australia, followed by Congresses held in Poland (Warsaw 1999), USA (Boston 2002), Brazil (Rio de Janeiro 2005), Malaysia (Kuala Lumpur 2008) and Spain (Barcelona 2011).

This time 125 national and international participants were in attendance from Argentina, Australia, Belgium, Brazil, Canada, Hong Kong (Republic of China), Indonesia, Italy, Korea, Malaysia, Mexico, New Zealand, Poland, Spain, Taiwan (Republic of China), The Netherlands, United Kingdom and the United States. And as in previous World Congresses, the worldwide representation provided for the unique opportunity of a true ‘international’ update and grasp on the similar and different challenges faced, and solutions provided, by the tissue banking sector globally. The 3 day scientific program was all encompassing and included 6 invited key note lectures, 39 presentations, 1 panel discussion, 3 workshops and 4 tissue-specific concurrent sessions (skin, musculoskeletal, cardiovascular and cellular therapies). Over 40 posters and oral papers were submitted for presentation.

Day 1

The first day aimed at establishing the global hot issues faced by the regions in tissue donation, banking and transplantation. Increasing sophistication in biotherapeutics, advances in tissue banking and the encroachment of profitable enterprise into the space have elicited the need to formally acknowledge the ethical complexities to ensure equitable access to safe products derived from altruistic tissue and cell donation.

The morning was privileged to be opened with the inaugural presentation (via Skype) by Luc Noel from the World Health Organization, providing an overview of WHO’s recent initiatives in relation to organ, tissue and cell donation and transplantation. This included: increasing the engagement of
member states into a dialogue on the ethical issues surrounding cell and tissue transplantation considering their unique origin and the principles of altruism; the need to implement appropriate biovigilance mechanisms; and complexities and peculiarities to ensure ethical and fair access to Medical Products of Human Origin (MPHO). This presentation was followed by updates from the Association’s representatives, drawing a map of commonalities and specific issues faced in the various regions within the realm of donation, processing and banking, transplantation and regulatory oversight.

Before lunch, updates were provided on global cell therapies (John Rasko), global eye tissue transplantation (Graeme Pollock), donor serology and molecular screening (William Rawlinson) and on diverse initiatives towards increased tissue donation (Yael Cass on the work of the DonateLife network in Australia, Oscar Schwint on initiatives by the INCUCAI in Argentina, Jacinto Ibanez on European programs and Mathias Haun on the increased interaction with Coroner’s and positive outcomes in Canada).

Lunch was the opportunity to gather around Scott Brubaker and participate in the first of the three successful lunch workshops – “Donor screening and acceptance - challenging cases”, a traditional favourite. Difficult decision-making cases were presented, viewpoints discussed in small groups, and conclusions presented to the larger forum.

The afternoon sessions started with the presentations by Dominique Martin (MPHOs and their special nature requiring differentiated regulation and management) and Marisa Herson (describing, on behalf of ANVISA – Brazil, the details on the dismantling of a fraudulent bone banking operation and followed by the description of several possible scenarios, from donation to transplantation, where attitudes and outcomes could have tainted the principles of altruistic donation of tissue and cells). These presentations culminated in an informative panel discussion on identified issues in the international movement of tissue grafts.

Still within the tone of increased awareness of the value and importance of tissue donation and transplantation, the afternoon was closed with a round of presentations on global tissue and cell therapy quality assurance, traceability and biovigilance initiatives. Invited speakers described the recent launch of the Council of Europe’s tissue specific guidelines on tissues and cells (Esteve Trias), the EU biovigilance program SoHo V&S (Deirdre Fehily), the potential contributions of a tissue registry based on the Australian experience (Kylie Hurst), the ISBT 128 initiative for MPHO coding (Paul Ashford), and tissue coding advances in the USA (Scott Brubaker).

After the long working day, the participants were treated to the Welcome Reception at Victoria’s Government House, a rare opportunity to meet and greet with the Governor of the State of Victoria in the superb surroundings of his official state home.
Day 2

The day’s activities kicked off by setting the emerging scene provided by the combined presentations of plastic surgeons Angela Webb on her experience in the transplantation of vascularized composite tissue grafts, and the outstanding presentation by Vijay Gorantla (USA, via Skype) on the avenues being opened by further immunomodulation of composite vascularized grafts and the availability of bioengineered tissue substitution alternatives which harness the advantages of combined biological, synthetic or biosynthetic matrices and cultured cells.

The complexity of these initiatives highlighted the need for increasing awareness levels towards the importance of quality and safety in tissue and cell transplantation, paving the way to the following morning presentations on the regulatory framework and associated issues. The scheduled presentations aimed to recognise difficulties establishing an appropriate balance between setting the rules on one side (the regulators) and maintaining compliance on the other (tissue banks). Katherine Clark (TGA, Australia) presented some of the challenges faced by regulators and representatives of the tissue banks (Arthur Kaminski, Joyleen Winter and Nichalas Nuttall) discussed the hardships in coping with regulations that sometimes hinder practice or generate such operational costs that render a transplant or service unviable resulting in reduced or ironically unregulated access to transplantable grafts that offer significant benefits to patients.

The next session dwelled on issues in maintaining compliance to increasing regulatory requirements, from design of long lasting and compliant facilities (Stefan Poniatowski), to validating a containment pod into a compliant clean room (Ben Stewart), and presentations on the sometimes diverging viewpoints of regulators, tissue banking, and cell therapy service providers on ‘where to set the bar’ (Katherine King, Sharon Bryce and Janet Macpherson).

More “Quality” during the lunch break for those participating in the Quality and Biovigilance Workshop led by Deirdre Fehily. In a similar format to the previous day, attendees were divided into smaller groups to discuss their views on quality related real case scenarios.

The afternoon presentations focussed on clinical outcome data from heart valve decellularization (Francisco Costa), the validation of irradiation sterilization processes both at the irradiation facility and at the tissue banks (Monica Mathor), and the presentation of selected submitted oral papers on management of quality systems from an Islamic perspective (Rahaman et al.), antithrombogenic effect of endothelial cells on decellularized human umbilical vein (Jehner et al.) and gene expression profiles of deciduous teeth stem cell cultures on glycerol preserved amnion (Hamid et al.).

Afternoon tea was followed by a session of submitted oral papers on microbiology describing the Canadian Blood Services bioburden reduction program (Haun et al.), the experience of the La Coruna
Tissue Establishment in microbiological donor screening (Ibanez et al.), microbiological contamination of human heart valves (Gribben et al.) and the validation of antibiotic solutions in heart valve de-contamination (Schwint et al.).

The evening networking opportunities continued with a brisk walk to the Old Melbourne Gaol where the Gala Dinner was held. The former gaol is now an iconic venue and museum and its almost surreal and dim atmosphere was the perfect background for Associate Professor David Ranson from the Victorian Institute of Forensic Medicine to tell of the forensic investigation into Melbourne Gaol’s controversial inmate Ned Kelly who was put to death there in a bygone era.

**Day 3**

The activities started with the first 2 of the 4 concurrent speciality sessions planned for the morning: ‘Skin Tissue’ and ‘Cell and Tissue Engineering’; followed by ‘Musculoskeletal Tissue’ and ‘Cardiovascular Tissue’. The content and presentations were carefully planned by the chairpersons (Skin - Oscar Schwint; Cell and Tissue Engineering – Janet Macpherson; Musculoskeletal – Arthur Kaminsky; and Cardiovascular – Ramadan Jashari) to cover clinical and manufacturing issues. Feedback from participants confirmed these small and focussed forums can be quite successful, a result of the high standard of the presentations and the openness to learn and share from all participants.

The lunch break was highlighted by the third and last workshop on Tissue and Cell Coding, sponsored by ICCBBA. The presentations brought an update to where tissue coding is at the moment (Pat Distler) and the challenges in developing global eye tissue coding (Louise Moffat), the ‘pains and gains’ in implementing ISBT128 in a Cell Therapy Bank (Janice Fogarty) and issues preventing or complicating the implementation of ISBT128 (Stefan Poniatowski).

The last formal session evolved around the theme of education for the sector. Presentations on what has so far been available (TPM – Melania Istrate; AATB – Frank Wilton; European initiatives - Esteve Trias ; and Delivery of education needs to regulators – Deirdre Fehily); a presentation on a ‘need mapping exercise’ carried out in Australia; followed by a discussion of what is still needed and possible global and regional initiatives.

Since the establishment of the World Union of Tissue Banking Associations (WUTBA) in 2005, world meetings have become a key opportunity to come face to face with a larger number representatives
of the international tissue banking community, and a singular opportunity to better understand current global issues, and realign the Association goals and proposed actions accordingly. The 7th WCTB was not an exception. The Executive Committee comprised of assigned representatives of the 5 main international associations first met to review the current WUTBA position, confirm its aims, and poll interest to maintain WUTBA to fulfil its role as a convenor of the international tissue banking associations. Pending actions were discussed and it was a consensus that renewed energy will be drawn upon the increasing interest of WHO in promoting ethical processes and international biovigilance in cell and tissue donation and transplantation, including the proposal for WUTBA to establish a relationship with WHO. Scott Brubaker, WUTBA’s Coordinator and Secretary since its inception voiced the need to step down from his position. Scott has had a key role in keeping the momentum of the Association, acknowledged by all members. Scott has generously committed to continue supporting the elected Secretary General, Marisa Herson. The outcomes of the executive committee meeting were shared with the larger audience before closure of the WCTB7 Scott Brubaker’s contributions were noted and thanked by all present.

The prize for Best Oral Presentation was assigned to “Gene expression profiles of deciduous teeth stem cells cultured on glycerol preserved human amniotic membrane” by Suzina et al., while two Posters Presentations received Best Poster awards: “Validating Microbiology QA Sampling Processes – Detecting the Invisible Invaders” by Hamilton et al. and the poster on “Histological Analysis of Amnion Stored in Glycerol sterilised with Different Doses of Ionizing Radiation” by Soares et al. The prizes were a certificate and a copy of the book “Guide to the Quality and Safety of Tissues and Cells for Human Application” generously donated by the Council of Europe (EDQM).

The WCTB was formally closed at this point. A BAA Special General Meeting (BAA Members only) followed.

The success of a meeting is always a direct result of the many hands and minds put together to deliver the best possible scientific and social program, with the important support of the sponsors. WCTB7 was not an exception to this rule and certainly, the greatest contributor to its success was the attendance, engagement and enjoyment of the attendees. The feedback has been so far quite positive.

More details on the program, activities and photos can be seen at www.wctb2014.com and we are certainly looking forward to the next World Congress in 2017 due to take place in the USA and be convened by the AATB.

The Organizing Committee