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Editorial

Welcome to another edition of the BMTSAA newsletter. As the locum editor, I am learning that time flies much faster for newsletter editors than for the general population, so this is being prepared in a rush. My apologies for any mistakes or omitted items.

So where is David I hear you all ask? He's recovering from an op. (Get well soon David, from all at the BMTSAA!)

It's almost time for the annual general meeting again. Hopefully many of you will be able to attend & maybe stay around to catch some fabulous Queensland weather.

*Annette Trickett
Locum editor*



President's Report 2000

It has not quite been a year since our last meeting in Hobart, which as David rightly pointed out in the newsletter, has caught a few of us on the hop. This is particularly noticeable with the diminished number of abstracts submitted for the meeting. However, I feel that the Perth organising committee has put together a particularly relevant and interesting scientific program. We were once again fortunate to have the offer of sharing a guest speaker with the TGA, thanks to the Co-operation of Dr Albert Farrugia. Dr Elizabeth Read bring to us valuable information about setting up stem cell processing labs, and shares her experiences with us. We are also grateful to our other guest speakers, Dr Allison Rice and Prof Derek Hart for giving their time to us.

As usual, I would like to acknowledge the efforts of a number of people who have put in time and energy to the organisation. It seems that I am thanking the same people year after year, but these are the people to whom all our members should be grateful. Gail Lazzaro for her wonderful skills as Secretary; Nancy Messino for keeping all the financial considerations under control; Annette Trickett for her valuable input on the executive committee; David Ford for keeping up with the newsletter, even though at times I know he has struggled to get it out to our members and Scott Ragg for doing such a wonderful job in keeping us up to date with the web site. I sincerely thank all the councillors for their input and hope that they felt the teleconference held earlier in the year was of benefit to them and the organisation.

Our annual scientific meeting could not go ahead without the support of our sponsors. This year the funds have been very generous and have allowed us to invite our guest speakers and subsidise the workshops and conference dinner. The sponsors are: GAMBRO, AMRAD, Nat-TECH

Unfortunately, we were notified that AMGEN Australia are unable to continue with the Travel grant. I know that a number of our members (including myself) have been fortunate enough to reap the benefits of their generosity in the past. On behalf of the organisation, I thank AMGEN Australia for their support, and hope that they may be involved with us in the future.

Finally, I want to thank all of the members of the BMTSAA for their continued support and enthusiasm. Knowing that we are facing harder and harder pressures in our workplaces, it is nice to be able to come to the BMTSAA meeting and catch up with old and new friends, and share scientific and social skills.

Last but not least, I must thank the Perth organising committee for all their hard work in organising the meeting and the social events. Although we have not experienced them yet, I'm expecting a gastronomic delight this evening.

Dianne Tucker



BMTSAA
Annual General Meeting
Wednesday 24th October 2001

*Room P5, Brisbane Convention Centre,
 South Bank, Brisbane*
3.15 – 4.30 PM

Followed by the Annual Dinner at “Oxleys on the River”

BMTSAA
Annual Scientific Meeting

Thursday 25th October 2001
Rydges South Bank, Brisbane

- 0730 Registration and Beverages
- 0825 Welcome
- 0830 - 0930 Chair: Annette Trickett**
Speaker: Professor John Gribben
 “Induction of Anergy in Haploidentical Transplants using CTLA-4-Ig.”
- 0930 - 1030 Chair: Dianne Tucker**
Free Communications Session
- 0930 Validation of the Conditions for use of an In-House Clonogenic Assay Control
Judy Bosio, Hilary M^CKibbin, Gail Lazzaro
- 0945 Single versus Dual Platform CD34 Analysis: Practical Considerations Relating to a Change in Laboratory Practice
Carnoutsos SA, Kubala LM, Haring LF, McKenzie JL.
- 1000 Engraftment Following Reinfusion of CD34+ Stem Cells Isolated by Clinimacs
MJ Sturm, R Soares-Mendes, N Egan, P Cannell, RP Herrmann
- 1015 HLA Identical Sibling Bone Marrow Transplant-Cytokines, Cells and Graft Versus Host Disease
Lyanne Weston, John Sullivan & Andrew Geczy
- 1030 Morning Tea

- 1100 - 1230 Chair: Scott Ragg**
BMTSAA Merck Sharp & Dohme Investigator Award Symposium
- 1100 Effect of Washing Procedures on Unrelated Cord Blood Units for Transplantation in Children & Adults: Experience at Westmead Hospital & The Children’s Hospital at Westmead
V Antonenas, KF Bradstock, M Hertzberg, M Bleakley and PJ Shaw
- 1115 High Potency Dendritic Cells from Peripheral Blood Stem Cell Harvests as Potential Cellular Vectors for Idiotype Vaccination
L Barrow, R Brown, A Murray, B Pope, J Gibson, D Joshua
- 1130 The RCPA CD34⁺ Cell QAP: Report of the First Survey
Annabella Chang & David DF Ma
- 1145 Stem Cell Processing in the Twenty First Century: Implementation of the Australian Code Of Good Manufacturing Practice For Human Blood And Tissue.
P. G. Dyson, S. Niutta, P. Harrison, I. Lewis, L.B. To.
- 1200 An Improved Method for the Recovery of Total Nucleated Cells in Cord Blood
Gail Lazzaro , Judy Bosio, Hilary M^CKibbin
- 1215 CD34 Cell Selection at Westmead Hospital: Report on Two Devices
V Antonenas, KF Bradstock, B Kramer, G McCowage, PJ Shaw
- 1230 – 1330 Lunch
- 1330 – 1430 Chair: Dominic Wall**
Speaker: Professor Gordon Keller
 “The Potential of Embryonic Stem Cells for Science and Medicine”
- 1430 – 1530 Chair: Cheryl Hutchins**
 Cryogenics / Open Forum
- 1530 – 1600 Afternoon Tea
- 1600 – 1630 BMT Courier Training conducted by Cheryl Hutchins**
- 1630 – 1730 Chair: Cheryl Hutchins**
 Cryogenics / Open Forum
- 1730 Meeting Close



ISHAGE 2001

For those who are members of ISHAGE you will have seen or will see this article in the ISHAGE newsletter *The Telegraph*. We had already primed ourselves to do an article for our newsletter, however *The Telegraph* editor had someone from our side of the world marked down for some input.



Some of the Australasian delegates at ISHAGE 2001 welcome reception on the top floor of the Hilton that give a complete view of the old city on the St Lawrence. Sue Carnoutsos (Christchurch), Scott Ragg (Hobart), April Goodear and David Ford (Sydney).

ISHAGE 2001 – An Australian and New Zealand Perspective

Quebec City, the capital city of the Province of Quebec, Canada is the cradle of French civilisation in North America and has been designated a world heritage site by UNESCO due to its special character. To a kiwi travelling all the way from Christchurch, New Zealand it is a daunting experience to be faced with the prospect of all that flying and a language barrier at your final destination. Add in the fact that there was a good chance that your luggage would not make it at the same time that you did (at least 5 of us), and you have the ingredients for very grumpy delegates! However the choice of Quebec City was an inspired one as shortly after arrival, all worries were pushed aside - the city is beautiful, the people friendly, the weather fantastic and the conference (socially and professionally) certainly well worth the effort! Our luggage eventually arrived!

The focus of my attendance at the ISHAGE meeting was the FACHT Training Workshop - Preparing your Facility for FACHT Inspection -, which was held prior to the meeting on the 14 June. The delegates included nursing and medical personnel as well as administrators and laboratory scientists. As you are all no doubt aware FACHT standards, inspection and accreditation are gaining worldwide acceptance and our Clinical and Laboratory Transplant Team is keen to investigate the possibility of adopting the programme in this part of the world. This process can take a number of years to complete so is not for the faint-hearted - not to mention the fees in American dollars! The objectives of the workshop were to explain and clarify the accreditation requirements while assisting applicants and potential applicants in organising and preparing their programme for FACHT accreditation. From my viewpoint, the aims were to make contact with the FACHT staff, gain knowledge into the process and assess the feasibility of implementation. The large amount of information that I gained from attendance at the workshop has already been put to good use in both clinical and laboratory areas particularly in the area of documentation and accountability. Possibly the greatest benefit however came from meeting scientists who are undertaking inspection and having that network of colleagues who are but an e-mail away!

The Meeting itself covered a wide range of cell therapy related topics, including haemopoietic progenitor cell transplantation, adoptive immunotherapy, gene therapy and non-haemopoietic / mesenchymal stem cells uses and transplantation. Technical breakfasts prior to each day's session focussed primarily on issues of particular interest to laboratory based delegates. Topics ranged from viability testing, freezing mixes, overnight storage of HSC and the usefulness of the CFU-GM assay to the

optimum conditions required for retroviral gene transduction. The sessions dedicated to the potential use of mesenchymal stem cells in transplantation were particularly stimulating and thought provoking.

We have selected four quite different presentations to review.

John DiPersio, from the Washington Uni. St Louis group presented a large data set of cytokine mobilization normal peripheral blood (PB) stem cell donors. They observed if an individual's pre mobilised CD34 was less than one per μL in the PB, then mobilization resulted in low CD34 yields. These observations were repeatable with the same individual tested over an extensive time interval. Another observation was that males mobilize to higher levels than females however with increasing age this advantage disappears as CD34 yields decrease. On the other hand, females CD34 yields increase with age and surpass males around the age of 50 yrs plus. These findings have implications in deciding on the use of PBSC v/s BM for matched unrelated donors. The NMDP offer to collect PB stem cells in place of a bone marrow donation has made the decision difficult especially if insufficient CD34 were collected on the first day. If this did occur, the courier costs involved with a second collection practically to an overseas transplant centre would be a factor in the decision of which stem cell source to accept. The general information from St Louis may be of help.

Scott Rowley's presentation of the work carried out in Seattle comparing cryopreservatives 10% DMSO or a mixture of 5% DMSO and 6% HES, required data from well over 100 subjects in each arm of the study. The group observed a one day faster engraftment of granulocytes with the latter cryopreservative mixture. There was no difference in platelet engraftment. This finding however was not carried through in practice in the lab, as the reagent preparation for the cryopreservative mixture was time consuming and implementation over the standard 10% DMSO would result little clinical benefit.

The Tübingen group from Germany, using CliniMacs™ for positive stem selection have shown successful engraftment from allo PBSC donors in the sibling mismatch setting. Mega dose CD34 to values usually above $20 \times 10^6/\text{Kg}$ produced sustained engraftment without significant GvHD. The level of CD3 cells did not approach the threshold level where acute GvHD presents a problem. This was made possible with the very high purity of CD34 in the CliniMacs selection.

The New York Cord Blood Bank presented work on transient warming events (TWE) of cryopreserved cord blood cells. Extensive testing examined the effect of transferring frozen cells out of liquid nitrogen storage for set times and exposures to various temperature points, then re-banking the cells (single and multiple times), back into liquid nitrogen. The manoeuvre produced an additive effect on cell death with repeated transfers and higher cell death with higher temperature and time exposure. However, major cell death did not occur until the frozen unit was treated to extremes to temperature difference. A unit placed in a -40°C bath for 4 min, resulted in a 21% loss in CFU-C. after one cycle of warming. TWE increased to a 50% loss CFU-C after x5 cycles of warming. to -40°C . In contrast only a $<5\%$ of loss CFU-C resulted when the sample cells were warmed to -140°C with 5 repeated cycles. The study has very practical implications. These observations add solace to transplant centres that store cryopreserved stem cells in vapour phase of liquid nitrogen. The small temperature rises that occur to units remaining in a tank when the lid is removed to add or extract units has been a concern.

We certainly recommend attendance to ISHAGE - it is well run and it is nice to have an all inclusive registration fee. I am sure many of us will be looking forward to Barcelona in 2002!

Susan Carnoutsos
David Ford



An evening horse and buggy ride around some tourist spots of the old city was on eof the highlights of the social side of the conference. Chris Hicks, Suzanne Elliott, Brisbane, David Ford and Sue Carnoutsos.

ISHAGE 2001 Quebec City, Canada.

The 7th Annual ISHAGE Symposium was held in Quebec City, Canada from June 14-17 and was attended by a considerable Australasian contingent given the travelling distance from Australia and New Zealand. Quebec City is a unique and amazing place, the last remaining bastion of the French colonists in North America and still fighting to retain its separate identity in an increasingly “americanised” continent. The Old City is still surrounded by the stone fortress walls that date back to the French occupation of the 17th century with many buildings from this era still preserved and occupied. A wonderful and very friendly city to host a conference.

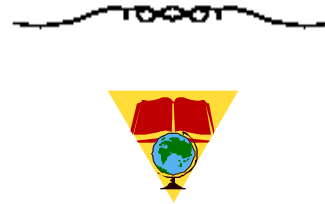
The ISHAGE Symposium was very much aimed at the scientific, regulatory and laboratory aspects of stem cell transplantation and catered for both scientists relatively new to the field as well as those looking to explore the cutting edge. The Symposium was preceded by a full-day FAHCT training workshop that provided invaluable information about preparing for an accreditation inspection and also a half day workshop on applications of flow cytometry in graft assessment and engineering.

Each day of the Symposium started with a series of Technical Breakfasts covering topics such as Storage and Cryopreservation of Stem Cells, CD34 Enumeration Troubleshooting, cGMP Facility Design, *In Vitro* Progenitor Assays, Rare Cell and CD34 Enrichment Techniques to name a few. These were immensely popular and well attended despite the 0700 start. The sessions I attended (CD34 Troubleshooting, *In Vitro* Assays and Cryopreservation) were very interactive and informative with single platform flow cytometry still appearing to cause a number of labs some difficulty (the biggest tip for young punters – don’t set the threshold using forward scatter as the beads will be excluded – use CD45 instead). All of these sessions provided the chance to discuss specific issues with experts and were invaluable both in terms of information provided and as a “refresher” on procedures that we tend to perform automatically in our own labs.

One of the “hot” areas at the Conference was advances in non-haematopoietic stem cell (or mesenchymal stem cell) biology and transplantation. These cells show great promise in animal models to facilitate engraftment of haematopoietic stem cells, as cell therapy for genetic disorders of non-haematopoietic tissues, and also as vehicles for delivery of therapeutic proteins in gene therapy trials. Whilst the debate as to whether bulk marrow stromal cells are mesenchymal stem cells continued at this meeting, there were several presentations regarding the ontogeny, *ex vivo* expansion and plasticity of MSC as precursors to clinical trials. Armand Keating (Toronto) presented data from his phase 1 clinical trial which examined the potential of marrow stromal cells to support haemopoiesis post autoBMT, particularly in hypoplastic patients. Marrow stromal cells were gene-tagged, *ex vivo* expanded and reinfused into patients between 40-110 days post auto BMT. Whilst phase 1 trials are only to ensure safety rather than efficacy, there was PCR-detectable engraftment of stromal cells up to 9 months post-infusion with few side effects. This area of graft engineering and transplantation looks set to explode in the next few years if positive effects upon engraftment and haemopoiesis can be demonstrated.

Overall, the ISHAGE Symposium was an excellent scientific meeting that catered for the full range of professional interests. The next meeting is in Barcelona in May 2002, followed by Arizona in May-June 2003

Scott Ragg



Off the Web

www.bloodline.net

This site contains an e-journal, haematology conference calendar, conference reviews, book reviews, and access to full text articles in “Biology of blood and marrow transplantation”, “Laboratory hematology” and “Blood and marrow transplantation reviews”.

www.cyto.purdue.edu

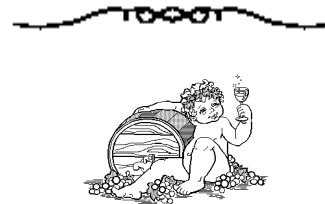
Heaps of flow cytometry stuff. Protocols, teaching material, courses, links to reagent manufacturers etc. An excellent site.

www.elsevier.com/homepage/alert/?mode=direct

Register with Contents Direct to get the table of contents for selected journals (including Experimental Hematology) e-mailed directed to you.

www.liebertpub.com/JHT/TOC/default1.asp

Browse the table of contents for journals such as the Journal of Hematotherapy & Stem Cell Research.



The Grapevine

I thought others would be interested in this question I asked Scott Ragg about the BMTSAA mail site (//home.vicnet.net.au/~bonemarrow/). Users of this service could you take Scott’s suggestion in mind when asking a question. In our work there could be a lot of different views to most technical questions. If these answers are not posted the role of the subscription list will not serve members to it’s full potential.

David Ford

Question: Scott, what is the chance of doing the email list something similar to ISHAGE in the discussion forum page. With the present set up if someone asks a question subscribers do not see the response from that question.

Answer: The ISHAGE forum page is beyond my primitive HTML skills. I agree that there is a problem with not seeing the responses and to this end I have asked people posting the questions to post a summary email once they have their answers. I usually email the person posting the question and ask them to do so but the compliance is 0%. I asked Vicnet if we could have all replies going back to the group (rather than just the posting emailer) and they said it would not do it (some problem with “reply-to” headers). But they said if we want everyone to see the response then we should reply to the group address rather than the individual address. I think the “summary email” would be the best approach and added this in bold to the Open Forum page on the www at the last update in March. Hopefully someone will do a summary if both of us ask them to do so. Sorry I could not be of more help.

Scott Ragg
Web Apprentice





Tech Talk

Formation of an Expert Advisory Panel for CD34 QAP

The CD34 QAP would like to have input from experts to advise on various issues, the most urgent of which is to define acceptable limits for results submitted in the CD34 QAP.

Council of the BMTSAA has agreed to the formation of an Expert Advisory Panel within the society, and to endorse the panel's decision. As to the criteria to be used for selection of the panel, how would everyone feel about the following:

- Members of the expert panel need to have strong laboratory and/or clinical background in blood and marrow transplantation and/or flow cytometry.
- Those with appropriate skills may volunteer, or be nominated, with the final panel selected by the Council of the BMTSAA in Brisbane, in October 2001.
- The number of people on the panel would depend on the number of nominees, but probably between 5 and 6.
- One member could represent, and report back to the BMTSAA.
- One member could represent, and report back to the AFCG.
- One member could be a clinician involved in stem cell transplantation.

Please pass on this information to your colleagues.

If you have ideas relevant to the above, or you would like to volunteer or nominate someone, please let me know.

Annabella Chang
RCPA CD34⁺ QAP Coordinator

COLONY ASSAY WORKSHOP - ANYONE INTERESTED???

We have approached StemCell Technologies as to the possibility of running Colony Assay Workshops in Australia, probably in March/April next year. The response from Dr. Emer Clarke, Head of Training at SCT, was most positive but would be dependent upon obtaining sufficient enrolments to make the trip worthwhile for her from Canada. We've agreed to poll our members in order to gauge the approximate number of people who would be interested in attending such a workshop to see if there is the demand to advance discussions with SCT to the next stage.

The usual format of SCT workshops is a full-day workshop with a small class size (4-6 people) with a series of workshops being run to cater for the number of people who wish to participate. Topics covered include types of media for specific colony growth, setting up and optimising cultures, colony identification and classification, and quality assurance. Dr. Clarke informs us that her workshops are very "hands-on" with considerable one-on-one tuition and plenty of time for questions and discussion.

At this stage, the (very early) plans are to run the workshops in Melbourne at the Royal Childrens Hospital with participants flying in to attend. Preliminary talks with equipment suppliers have indicated they would be willing to sponsor the workshops in terms of providing loan equipment (microscopes etc) and funding.

At this stage we would like any members who would consider attending such a Colony Assay Workshop to contact either Scott Ragg or Di Tucker on the numbers below, or see us at the BMTSAA Meeting in Brisbane in October. If you are interested, please make the effort to let us know.

Scott Ragg **03 6222 8396,** *scott.ragg@utas.edu.au*
Di Tucker **03 9345 5832** *tuckerd@cryptic.rch.unimelb.edu.au*
Kerrie Jones

Newsletter Mail-Out

We are currently aiming to rationalise the number of copies of this newsletter that get mailed out. Please could all members let us know how you would like to receive your copy:

- I wish to receive my own individual copy.
- One copy per Departmental site is sufficient.
- Inform me by e-mail that a new edition has been posted on the website ([//home.vicnet.net.au/~bonemarrow](http://home.vicnet.net.au/~bonemarrow)).

Please reply to:
Gail Lazzaro
Secretary
BMTSAA
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GPO Box P1239
Perth, WA 6001
Fax (08) 9310-7001
GLazzaro@arcbs.redcross.org.au

THERAPEUTIC PRODUCTS

Innovation vs Quality

5th and 6th October, 2001

Presented by the Division of Haematology,
Institute of Medical and Veterinary Science

A forum regarding issues associated in maintaining
innovation whilst operating within an efficient and cost
effective regulatory environment.



ROYAL ADELAIDE HOSPITAL

PROGRAM DETAILS

Friday Afternoon October 5

Session 1: Friday 1-3pm
Meeting Regulatory Requirements

Albert Farrugia (TGA):

Risk assessment in biotechnology applications

Tony Rowland (Pharmasystems):

A Practical Approach to GMP Documentation

Chris Murray (IMVS):

The Microbial Challenge

Shane Marsland (Temtrol Technologies):

Logging and Monitoring Processes within Regulatory Environments

Session 2: Friday 3.30-5.30pm

Achieving quality in a patient driven Environment

Elizabeth Read (NIH):

Training and Documentation in GMP Biotherapeutic Production

Pam Dyson (IMVS):

Stem Cell Processing in the 21st Century

Sophia Hague (IMVS):

Quality Systems in a Hospital Transfusion Service

Sue Opie (ReproMed):

Quality Systems in a Unique Patient Environment

Saturday Morning October 6

Session 3: Saturday 8.30-10-15am
Maintaining innovation in a regulated environment

Ross Savvas (ARCBS) :

Innovations: The Australian Red Cross Blood Service Perspective

Chris Goddard (Groppe Pty Ltd):

From Colostrum to GMP Manufacturing

Albert Farrugia (TGA):

Innovation vs Regulation: research and development in a regulatory environment

Panel Discussion:

"Room To Move" - Does Regulation Compromise Innovation?

Session 4: Saturday 10.45- 1pm

Future Directions / Innovative technologies

Chris Juttner (Bresagen):

Lessons from Embryonic Stem Cells: is this the future of Cell Therapy

Elizabeth Read (NIH):

Isolation and Transplantation of Pancreatic Islet Cells in Type I Diabetes

Speaker (TBA):

Future Applications of Cellular Therapy

Rick Tocchetti (IMVS):

Autologous Fibrin Sealant and Platelet Gel: the future

Ian Lewis (IMVS):

Manipulation of Haemopoietic Cells: Progress and Prospects

DETAILS

Cocktail Party

A cocktail party will be held at close of session on Friday afternoon in the area adjacent to the Robson Theatre. Following this, there will be the opportunity to inspect the newly constructed Therapeutic Product Facility in the Division of Haematology, IMVS.

Registration Fees

A registration fee of \$100 per person must accompany the registration form.

Enquiries

Mrs Pam Dyson, ph: (08) 8222 3453, e-mail: pamela.dyson@imvs.sa.gov.au

REGISTRATION

Title:..... Family Name:..... Given Name:.....

Company Name.....

Address:.....

.....

Phone Number:..... Fax Number:.....

Email Address:.....

Please return this registration form together with payment by September 21th to Pam Dyson, Therapeutic Product Facility, Haematology Division, IMVS, Frome Road, Adelaide 5000.
Please make cheques payable to Therapeutic Products Conference.

Tax Invoice IMVS ABN 35-302-506-443

VENUE

**Robson Theatre
Eleanor Harrald Building, Royal Adelaide Hospital
Frome Road, Adelaide**

