



N E W S L E T T E R

Australasian Society for Immunology Incorporated

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June 2007

2007 Day of Immunology

Sunday April 29th, South Australian Museum, Adelaide

Claudine Bonder

On this day, Day of Immunology, we took Adelaidians inside the wonderful world of the immune system. We shared with them the intricacies of a system that has evolved over millions of years to defend the human body against possible infections and destroy harmful organisms that have gained entry into the body. We expressed that the immune system is absolutely essential for a healthy life and failure of the immune system to respond appropriately leads to susceptibility to infections and/or diseases.

We set up a variety of displays in the main foyer of the museum and took them down into the microscope to see the villi of the intestine, the sinusoids of the liver, the cartilage of the knee and the WBC in a drop of blood. They saw a spleen in a jar and pulled apart Boris the plastic human to see where the spleen lives, the intestines fold and the heart pumps. We had young and old asking us all sorts of questions about the live cells in the flask and had them watching videos of neutrophil chemotaxis, wound healing, vaccination and cell trafficking. They read the posters we made on the functions of different WBC. We explained to them that as immunologists, we are trained and driven by the need to understand how the immune system works, why sometimes it doesn't work, and then what we can do to fix it. For the betterment of man-kind. We shared with them that immunologists work in many different areas of biomedical research, healthcare, agriculture and environmental monitoring which combine to impact on many areas of conventional medicine.

We had a full house at our lecture with around 140 people and no standing room left (held in a room just off the main foyer). To the captive audience, four highly trained and extremely

well accomplished scientists and clinicians, world renowned and leaders in their field, shared their areas of expertise.

Dr David Gordon, Head of Microbiology and Infectious Diseases at Flinders Medical Centre, spoke about his work as a clinician and head of a research laboratory to better understand the immune system and how it can be used to prevent illness through vaccination. He shared with the audience the need for continued vaccination and the consequences if you don't. His talk generated many questions and some passionate discussion on the effectiveness of homeopathic vaccination and why children need to be vaccinated so young.

Sue Lester, with over 20 years of experience in immunogenetics and autoimmunity, took us into the crazy world of autoimmune disease, rheumatoid arthritis and Sjogren's syndrome. She cleverly outlined the differences in current treatment for autoimmune diseases and highlighted the extent to which they exist in our community.

Dr Michael Brown spoke next as an oncologist and head of Experimental Therapeutics Laboratory at the IMVS. He enlightened us on his passion to understand how we could find a therapy against cancer by using the body's own immune defense. He had the audience marvelling and in bewilderment at the technology available for cancer cell recognition.

Dr Shilpa Prasad gave a wonderful talk in her capacity as a clinician and PhD student in the Department of Transplantation at the Queen Elizabeth Hospital. Shilpa's ability to transform a complex model into something so entertaining and easy to follow was

phenomenal and was an absolute pleasure to listen to. Her explanation of organ rejection and the efforts by the transplantation group to help those who find themselves with an immune system so hyped up they become untransplantable made us all proud to be South Aussies.

The DoI committee (Erin Curry, Leigh Guerin, Lachlan Moldenhauer, Nick Gorgani, Susanne Heinzl and Claudine Bonder) worked tirelessly to pull this together and with the great response we had from the public we found it immensely rewarding, so much so that we are already looking forward to DoI 2008. We would also like to acknowledge the help of the local branch of the ASMR (Lisa Bailey and Beverly Muhlhauser) for taking time out of their weekend to help us with the displays; we couldn't have done it without them.

See photos page 4

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Website

The ASI web site (www.immunology.org.au) has been fully remodelled and updated. New services include:

- Downloadable forms for ASI awards,
- Positions vacant pages,
- Jobs wanted pages,
- Upcoming conferences listings,

as well as a plethora of links to sites of immunological interest at home and abroad. If you'd like your lab home pages linked to the site, would like to advertise a job or conference, or have a favourite immunology-related site that doesn't currently appear on the ASI site, please email Judy Greer at j.greer@uq.edu.au

Email bulletin board

To subscribe to the ASI bulletin board, send an email to majordomo@explode.unsw.edu.au with the message: subscribe anz-imm.

EDITORIAL

The annual "Day of Immunology" presents an opportunity to inform and educate the public about immunity in health and disease. This year a number of states held activities, which are reported on page 1 and in the reports from Councillors (p.10). These reports indicate the high level of public interest in how the immune system works, and hopefully the success of this will lead to it becoming a regular feature in all states.

As always, the newsletter is happy to publish the reports of some recent travel award recipients (p.13). This is one of the many ways that ASI aims to support its members, and the feedback from members (p.8) seems to indicate that by and large ASI is meeting the needs of members (although suggestions for improvement are always welcome!). A listing of the most recent award recipients is presented on this page. The Honorary Secretary (this page) and President (p.5) report on some minor changes in administration and suggestions for future applicants for the student bursaries (to the ASI annual meeting) and travel awards.

Although it is only June, this is the last newsletter before the deadline for abstracts for the December ASI annual meeting in Sydney, so make sure you submit abstracts, register, and come along to make this a successful event! Finally, news from the *other* ASI publication (ICB) is that they are starting a new journal section on "Outstanding Observations" (p.9). Not to be outdone, the newsletter is breaking new ground and competing with the traditional journals by now publishing immunological methods! On page 16 John Marbrook reports on the resurgence of the double chamber in immunology. We look forward to seeing the citations flow in as this method joins the mainstream. Remember you saw it here first! Please send in any other novel methods you may have developed that are too far ahead of their time to be appreciated by the mainstream journals.

Miles Davenport

HONORARY SECRETARY'S NEWS

International Travel Awards

One of the advantages of being a young ASI member is that you have access to generous funds to support your participation in meetings, and visit laboratories overseas. The most recent offer for International Travel Awards, to travel in the second half of 2007, had once again an enthusiastic reception, and a large number of high-quality applications were submitted. The judges awarded 12 applications totalling \$30,000. The next round, for travel in the first half of 2008, will be announced in October. Planning your travel is an essential part of the application, so do not leave it for the end, consider soon which meeting you would like to attend, and organize your trip accordingly. Please read the President's Column for some recommendations to make your application more competitive.

Below are the applicants who received Travel Awards. Congratulations and enjoy your trip! We look forward to read your meeting report and personal impressions of your travel in future Newsletters.

Changes to the system of allocations of Student Bursaries for the ASI Annual Meeting

Every year, the ASI provides bursaries to cover the registration and travel costs of students wishing to attend the ASI Annual Meeting in regions different to their own. In previous years, the number of bursaries awarded to each region was proportional to the number of students residing in that region. However, the number of applications submitted from each region did not follow the same proportionality. This was unfair because the regions with fewer students received a small number of bursaries regardless of the number or quality of the applications submitted. To correct this problem, the ASI Council has decided that the bursaries to attend future meetings, starting with Sydney 2007, will be selected from a common pool from all the regions. A selection jury will be set-up by the organizing committee of the annual meeting. The guidelines for submission and evaluation of the applications will be sent to the membership in due course.

Jose Villadangos

Applicant & Institute	Conference	Amount awarded
Post-doctoral		
Sammy Bedoui, WEHI, Vic	ICI 07	\$3,000
Michele Teng, PeterMac, Vic	CRI 15 th Annual Symposium	\$3,000
Glen Ulett, UQ, Qld	ICI 07	\$3,000
Post-Graduate		
Melinda Dean, MMRI, Qld	ICI 07	\$1,500
Marthe D'Ombrian, WEHI, Vic	Royal Soc Med/Trop Med	\$3,000
Kate Gartlan, Burnet Inst, Vic	Tetraspanin Meeting	\$1,500
Kylie Greig, WEHI, Vic	FASEB	\$3,000
Eliana Marino, Garvan, NSW	ICI 07	\$1,500
Ivan Poon, JCSMR, ACT	ICI 07	\$3,000
Isaac Sakala, JCSMR, ACT	ICI 07	\$3,000
Anja Scholzen, Monash, Vic	ICI 07	\$3,000
Zuopeng Wu, JCSMR, ACT	15 th ICC	\$1,500

Erratum

In the report on the 2006 ASI conference by John Fraser in the March issue of the newsletter it was stated that Di Yu was a PhD student at Walter & Eliza Hall Institute of Medical Research. In fact, Di is a PhD student with Dr Carola Vinuesa and Professor Chris Goodnow at the John Curtin School of Medical Research, ANU – and is proud of his school. Di was awarded the New Investigator Award at the 2006 ASI conference. Apologies for this error.



2007 Day of Immunology Sunday April 29th, South Australian Museum, Adelaide



President's Column

World Day of Immunology

The Day of Immunology was held worldwide for the first time this year. Joining the European Immunological Societies, which have held public service and education activities on April 29 for the last two years, were the Societies of Iran, Israel, Japan, Turkey, Brazil, USA, Cuba and (or I wouldn't be writing about it) Australasia.

The events promoted by ASI were organised by volunteer regional coordinators, who varied in their levels of enthusiasm. Public lectures were given in Adelaide, Canberra and Townsville, featuring the efforts of Susan Lester, Shilpa Prasad, Michael Brown, David Gordon, Christopher Parish and myself. Interactive displays were set up in the Foyer of the South Australian Museum, co-ordinated by Claudine Bonder. Claudine has a column elsewhere in this issue of the Newsletter describing their very successful program of activities. The group in Brisbane, chaired by Georgina Clark, drafted a set of teaching materials on vaccination for use in Years 3-4 in junior primary schools, and the ASI web site, which is crafted by Judith Greer, hosted a description of what immunologists do and a quiz on immunology for school students. The on-line quiz will be retained on the web site, and we are keen to receive contributions of additional questions pitched at any level of expertise. Please send old multi-choice test and exam papers and questions of your own invention to Judith who will add them to what we hope will become a significant learning tool.

Attendance at the events was very good – attracting in some sites 0.1% of the population and in all locations resulting in packed venues. We appear to have found a very genuine interest in immunology amongst the public, and I believe that future involvement in the World Day of Immunology can only do the Society, and our profession, good.

The main lesson learned was the extraordinary lead time required to mobilise the media to support this sort of initiative. At least 6-9 months is required to produce a pre-recorded broadcast, for example. In order to be better prepared for next year's event, Claudine Bonder has agreed to chair a subcommittee to develop ideas and initiate collaborations with schools as well as other scientific bodies, such as the Australian Academy of Sciences and the Australian Society for Medical Research. If you are interested in

contributing to local or national events next year, please contact Claudine.

Special Interest Groups

Special Interest Groups (SIG) were originally established to allow the development of sub disciplines, and offered workshops at the Annual Scientific Meeting and financial support in return for an annual report of activities undertaken.

The Council has reviewed the operation of SIGs in response to concerns raised about the scheme that centred on the failure of some SIGs to submit annual reports, and the difficulties and costs imposed on the organising committees of the Annual Scientific Meeting in trying to make available rooms for workshops that were frequently poorly attended, or not even held.

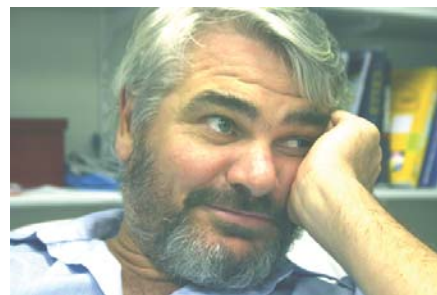
Council resolved unanimously to retain, but alter the status of SIGs. Specifically:

- 1) All existing SIGs, with the exception of the successful Mucosal Immunology and Tumour Immunology groups, have been dissolved by the Council and resubmissions for SIG status are invited.
- 2) SIGs will no longer necessarily have the right to a venue at the Annual Scientific Meeting, but can propose sessions to the local programme committee, and if accepted, help plan them in consultation with the local organising team (see below). As a generalisation, acceptance would be dependent on submission of a suitable number and quality of abstracts.
- 3) SIGs and other groups of Society Members with shared interests are encouraged to organise and hold satellite meetings associated with the Society's Annual Scientific Meeting, involve themselves in the Visiting Speaker Program by contacting Alejandro Lopez to nominate a visiting speaker and to apply to Council through the Honorary Secretary for one of the financial support packages for small meetings introduced earlier this year.

Council has established the following guidelines for satellite meetings held by SIGs at the ASM:

General Principles:

- 1) The approach taken needs to be scalable, applicable to all Annual Scientific Meeting locations (that may also have



few or no members of a special interest group), and applicable to all Special Interest Groups.

- 2) There is no reason why the program organiser of the satellite meeting needs to live locally to the site of the Annual Scientific Meeting.

Specific Guidelines:

- 1) Initiation of the satellite meeting is the responsibility of the SIG and the local organising committee needs to be approached 10-12 months prior to the Annual Scientific Meeting with an expression of interest.
- 2) The booking of venue and catering needs to be done by someone on site who is part of the organising committee to ensure integration. While it would be preferable for this to be a member of the Special Interest Group, it doesn't necessarily need to be.
- 3) If there is no local member of the SIG who is prepared to help, it is not reasonable to expect the organising committee for the annual meeting to organise the program for a Special Interest Group.
- 4) As speakers are shared between the programs, it is reasonable that the program organiser for the Annual Scientific Meeting at least be informed of, and probably consulted in deciding on, the workshop program.

Advice to a Young Scientist

Although I am a great fan of Peter Medawar's writing, I had not, until recently, read his slim volume *Advice to a Young Scientist*. I was prompted to do so by Peter Doherty, who found it singularly unhelpful when he read it as a young scientist. His main criticism is that the advice Medawar offers has dated terribly (actually what he said was that it was dated when it was published!). For example, Medawar suggests that one avoid "lantern slides illustrating the lecturer's fingerprints or the fracture

patterns of glass". Such comments are of little practical value in these days of Powerpoint. Similarly, his advice that one submit manuscripts routinely by post, rather than deliver them to the editorial office by hand, travels poorly when considered from an antipodean perspective.

But I think there is much of value in Medawar's book. He takes the trouble, as he does in much of his writing, to emphasise the rationale and value of hypothesis-based research. He is able to do this in a format far more accessible than the writings of Karl Popper, who greatly influenced Medawar. Indeed, Medawar himself learned of Popper's view primarily through personal contact.

Popper has played an extraordinary role in developing an understanding of what it is that many successful scientists do. I sometimes try to imagine what scientific life might have been like in Australia if he had, as he wished, immigrated, and we had benefited directly from his philosophical contributions. Although the Professorial Board of the University of Sydney unanimously approved his appointment in 1945, the University Senate excised his name from the appointment list after a stormy debate focussed on his Jewish ancestry – even though his parents had converted to Christianity before he was born. Queenslanders are in no position to scoff, however. Popper's 1938 application to UQ wasn't even short-listed. He received refugee status in New Zealand and finally settled in the UK.

Medawar's book also deals with the perennial issues in science, such as priority, collaboration, honesty and mistakes as well as how to tell if one is even cut out for science (an issue currently plaguing even a few not-so-young scientists). Despite having dated badly, I think the book is still well worth reading.

Peter Doherty's book, *The Beginner's Guide to Winning the Nobel Prize*, is his response to Medawar, and could easily have been published under Medawar's title. Two major differences are Peter's inclusion of a potted history of immunology that puts his own discoveries in context, and his autobiographical comments of life before and after the

prize. This book is extraordinarily valuable for an Australasian scientist. Anyone who wishes to compete internationally here has to cope with the USA – and despite their cultural imperialism, the values that we hold as true and fair differ in many significant respects from those many Americans uphold. Peter straddles both cultures, literally with a foot in each camp, and offers the scientific equivalent of a Lonely Planet guide to survival in international science.

Although I am obviously wrong in the head to attempt to tailgate the advice of two Nobel Prize winners, my suggestion to ASI's young scientists is this: read both books.

See the World, Meet New and Interesting People...

The Society offers a number of travel awards of up to \$3,000 per recipient to support the attendance of productive students and postdoctoral fellows at international meetings. These are awarded twice a year on a competitive basis and while the details of eligibility, application procedure and assessment criteria are posted on the Society's web site, a few general observations are probably appropriate.

The aim of these awards is to develop the careers of junior members, while enhancing the reputation of Australasian Immunology world-wide. As a generalisation, these awards are usually made to individuals who have published at least one scientific manuscript as first (or last) author. The impact of these papers and of the journals in which they were published is taken into consideration when ranking applicants. The level of travel support is reasonably generous and it is anticipated that the applicants will capitalise on this opportunity to visit other laboratories, and attend other workshops or training opportunities. This is an important component of the assessment of the awards and often makes all the difference in competitiveness. The enthusiastic support of the supervisor is also expected - and should be extracted - in a timely manner. Although not strictly a criterion, it is my observation that the assessment panel tend to expect to recognise the supervisor's name through their contributions to the field and the Society.

The Society's Annual Scientific Meeting will be held at the Manly Pacific Sydney, on the North Steyne Beach in Manly from 2 - 6 December 2007. Bernadette Saunders and the rest of the organising committee have

made a fantastic effort to secure a stunning venue and develop a world-class program. There will also be three satellite workshops running on December 2 at the same location - the Tumour Immunology Workshop, the Mucosal Immunology Satellite Meeting and the Postgraduate Training Workshop. Early Member Registration expires September 3, so please plan ahead.

The Society provides several Student Travel Bursaries to support attendance at the Annual Scientific Meeting. The success rate of applications for these awards is very high, largely a result of Council's desire to see as many students attend as possible. I strongly advise all eligible students to apply.

The Kevin Lafferty Debate

Larrakin, raconteur, stirrer, trouble maker and argumentative sod, Kevin Lafferty was an Australian pioneer in transplantation research and contributed greatly to the iconoclastic nature of Australian Immunology. He and his colleague, Stephen Nicholas Emery Egon Fazekas de St Groth, who was a pioneering immunovirologist, had such highly developed debating skills that Frank Macfarlane Burnet would try to avoid speaking at the John Curtin School of Medical Research, where they both worked. If he did speak, Burnet would, as often as not, defer answering any questions until he had returned to the safety of the Walter and Eliza Hall Institute of Medical Research in Melbourne, when he would put his answers down on paper.

It is this very skill – the ability to strike terror in the heart of a Nobel Prize winner – that the Society hopes to foster with the annual Kevin Lafferty Debate at the Annual Scientific Meeting. Each year a topic of staggering banality is debated by, arguably (obviously), the greatest brains assembled in any venue in the history of the world.

This year, Council is seeking from the Society Membership proposals for the topic to be debated. Was the contribution of American Immunology trivial? Is there really a dendritic cell lineage, or are they just very naughty cells? Please email me with your suggestions; the topic chosen for the debate will win its proposer a free ticket to the Conference Dinner aboard the John Cadman III yacht at the Annual Scientific Meeting in Manly.

Other Opportunities

This year, four positions on Council will be vacated: the regional representatives for the Australian Capital Territory, Victoria and Tasmania, and New Zealand, as well as the position of President Elect. The Regional representatives are elected for three-year terms and each year, about one third are replaced. The position of President Elect is a four-year term, one as Vice President, two as President and one as Past President. The Society's Honorary Secretary, José Villadangos, will circulate a request for nominations for these positions later in the year. Please consider nominating yourself or a colleague.

Nominations are also sought for the Society's greatest honours: the Sir Macfarlane Burnet Oration (to be delivered by a distinguished immunologist at the Annual Scientific Meeting), the Derek Rowley Medal (for extraordinary service to the Society) and Honorary Life Membership (to acknowledge a career of membership of, and service to, the Society). Please forward your nominations through your Regional Council Members.

The Society has a number of venues for the promotion of upcoming events and meetings, including email bulletins, the website, the newsletter and the fly leaves of *Immunology and Cell Biology*, where we have started publishing an events calendar. If you are interested in having your events promoted via one or more of these mechanisms, please contact a member of the executive with the relevant details.

The perspectives of students, in particular, make pleasant reading and I would like to encourage the younger members to contribute actively to the Society. Avenues for creative expression exist in the newsletter and the web site, so please contact Miles Davenport (m.davenport@unsw.edu.au) and Judith Greer (j.greer@uq.edu.au) respectively if you would like to make written or pictorial contributions.

As always, the Council is keen to hear from members regarding ways in which the Society can help foster the interests of members. Please do not hesitate to contact myself, or your State representative, if there is anything we can do to help.

Alan G Baxter

ICB Online Manuscript Submission

Online manuscript submission for Immunology and Cell Biology now available via:
<http://mc.manuscriptcentral.com/icb>

All manuscript submissions to ICB should in future be made online via this web site to speed up the reviewing and acceptance of manuscripts.

Chris Parish, Editor-in-Chief
Immunology and Cell Biology

For your diary

This year's ASI conference will be held at the Manly Pacific Hotel which overlooks Manly Beach, Sydney, NSW, December 2-6, 2007

Research positions available

Vaxine Pty Ltd, a rapidly growing biotech company based in Adelaide, invites applications from interested scientists for research positions within the company. Vaxine's focus is on vaccine development across many product areas including hepatitis B, influenza, shigella, malaria, allergy, cancer and many more.

We are looking for motivated scientists at PhD, postdoctoral or senior researcher level to join our growing research team. Researchers with experience in human immunology, vaccine clinical trials, animal studies, GMP vaccine manufacturing or any related topic are particularly encouraged to apply.

Vaxine welcomes unsolicited applications from individuals with appropriate scientific background at any time.

For further information contact:

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Comments on ASI from Members

On the Membership Information Update form which accompanies the membership renewal, members are asked to comment on whether ASI meets the member's expectations for a scientific society. This year, a total of 47 comments were received from the 549 who had renewed (not including new members joining this year) at the time of preparing this newsletter. Of these, 18 simply said either Yes or Meets my expectations, or variations on that theme. The more substantive comments are listed below:

ASI 2005 was a fantastic conference.

ASI is a terrific Society!

ASI is a very good society. It gives a lot back to its members.

ASI is doing a great job, although there doesn't seem to be much of a visiting speaker's programme in NZ?

ASI is excellent.

ASI is fine though less visibly professional than is desirable, more aggressive lobbying for research funds, recognisable spokesperson for immunology.

Better links with clinical immunology would be good.

Biannual conferences would be good.

Can I suggest above list [Fields of Interest] include "Human immunology" vs "Murine immunology", and "therapeutics development" and "Biotech" - or something implying commercialization?

Great society!

I am enjoying my time as a Student Representative and also ASI has been valuable in organizing conferences and workshops.

I am happy with ASI as it is.

I was very pleased that ASI supported me to attend the Annual Conference at Auckland last year and I hope that more money would be available for students to travel to conferences.

It would be great to have more ASI training/seminars in the area of Education – University level immunology, share ideas, etc.

Meets expectations. AHMR conference was very good – multidisciplinary – I encourage ASI to continue participation in this conference.

More clinical/applied immunology (human!)

More student focussed events with awards to encourage excellence and presentation of research in young researchers.

Mostly – not enough visiting speakers coming to NZ!

Networking within ASI members should be improved, e.g. by providing ASI.com emailing list so everybody can email members@asi.com, etc. for reagent, communications

No complaints

We need a women's committee! I would be happy to be involved.

Would be useful if I could renew membership online.

Yes – active state committees, good conferences, good newsletters.

Yes it does, it's great.

Yes, ASI does meet my expectations; it's great to have so many guest/invited researchers give seminars in Perth who are supported by ASI.

Yes! Good student involvement and good local society.

Yes. Good job done by many willing and friendly volunteers.

Yes. I would like to see more innate immunity at ASI meetings. Auckland was a good example.

Yes. Switch of publisher of journal to Nature excellent news, as is online access to N.Rev. Imm & Imm. Newsletter always an entertaining read. Interim email news/announcements excellent communication.

UPCOMING LECTURES & CONFERENCES

2nd World Congress on Work-Related & Environmental Allergy/6th International Symposium on Irritant Contact Dermatitis
June 13–16, 2007

Weimar, Germany

Email: woreal@conventus.de

Website: www.conventus.de/woreal

GLYCO 19 – 19th International Symposium on Glycoconjugates

July 15–20, 2007

Cairns, Queensland

Email: pgleeson@unimelb.edu.au

Website: www.glyco19.org

4th IAS Conference on HIV Pathogenesis, Treatment & Prevention

July 22–25, 2007

Sydney, NSW

Email: cammi.webb@ashm.org.au

Website: www.ias2007.org

13th International Congress of Immunology

August 21–25, 2007

Rio de Janeiro, Brazil

ici2007@paradigmaeventos.com.br,

www.immunorio2007.org.br

BIG Retreat – 2007

August 23–24, 2007

Caloundra, Queensland, Australia

rajiv.khanna@qimr.edu.au,

www.qimr.edu.au/big

5th International Antigen Processing & Presentation Workshop

October 7–11, 2007

Dunk Island, Queensland, Australia

http://www.antigenpresentation2007.org/

ASI Annual Scientific Meeting

December 2–6, 2007

Sydney, Australia

b.saunders@centenary.usyd.edu.au,

www.asi2007.org

**The Walter and Eliza Hall
Institute of Medical Research**

WEHI Seminars on the Web:

www.wehi.edu/seminars/

Outstanding Observation – new from ICB

Editorial reprinted from June 2007 Immunology & Cell Biology

Immunology and Cell Biology is pleased to announce a new category of research article that will be published by the journal, starting immediately. The new manuscript category is entitled “**Outstanding Observation**” and intends to capture research articles in immunology which describe striking observations that have extremely important conceptual implications but do not delineate the underlying molecular mechanisms involved. Due to the cutting edge nature of the work, these papers will be expedited through the refereeing process and will be published more rapidly than standard articles. More details about this new manuscript type can be found on the *ICB* web site: <http://www.nature.com/icb/index.html>

We believe that there is a worrying trend amongst scientific journals to refuse to publish novel findings if they do not contain a detailed description of molecular mechanism, even when the observations reported obviously have far reaching implications for the field. In many cases it is difficult to provide in-depth mechanistic data, particularly with paradigm shifting discoveries. This results in the publication

of important findings being delayed for many months and, in some cases, for years. Clearly such a situation seriously delays the dissemination of scientific knowledge and consequently retards scientific progress.

Let us give a specific example in the field of immunology to illustrate this point. In 1974 Zinkernagel and Doherty published a paper describing the phenomenon of MHC-restriction,¹ a paradigm shifting finding that revolutionized immunology and resulted in them being awarded the Nobel Prize in 1996. Despite the importance of the observations described in their 1974 paper Zinkernagel and Doherty had no idea of the molecular basis of MHC-restriction. In fact, it took another 11 years before it was shown that peptide-MHC complexes are recognized by T cells.² If the current editorial attitudes towards paradigm shifting observations had existed in 1974, Zinkernagel and Doherty would have undoubtedly experienced great difficulty in publishing their original findings, an outcome that would have seriously inhibited progress in our understanding of the immune response to infectious diseases.

We have introduced “**Outstanding Observation**” as a new manuscripts category in *Immunology and Cell Biology* in response to this unsatisfactory state of affairs. We encourage all *Immunology and Cell Biology* readers to consider participating in this new innovation in scientific publishing.

1. Zinkernagel RM, Doherty PC. Restriction of in vitro T cell-mediated cytotoxicity in lymphocytic choriomeningitis within a syngeneic or semiallogeneic system. *Nature* 1974; **248**: 701-702.
2. Townsend AR, Gotch FM, Davey J. Cytotoxic T cells recognize fragments of the influenza nucleoprotein. *Cell* 1985; **42**:457-467.

Christopher R Parish
Editor-in-Chief
Immunology and Cell Biology

Carola Vinuesa
News and Commentary Editor
Immunology and Cell Biology

5th International Antigen Processing and Presentation Workshop Dunk Island, Queensland 7–11 October, 2007

Abstract Submission and Registration are now open

Speakers include:

Kwanseog Ahn, Sebastian Amigorena, Facundo Batista, *Frank Carbone*, Vincenzo Cerundolo, Peter Cresswell, Laurence Eisenlohr, Gunter Hammerling, *Bill Heath*, Ann Hill, Max Krummel, Jean Langhorne, *Eugene Maraskovsky*, *Jim McCluskey*, Betsy Mellins, Ira Mellman, *Chris Norbury*, Hidde Ploegh, Ken Rock, Jamie Rossjohn, Andrea Sant, Nilab Shastri, Ken Shortman, Jon Sprent, Emil Unanue, Peter van Endert, *Jose Villadangos*, Colin Watts, Ian Wilson and Jon Yewdell.

To commemorate the 20th anniversary of the publication of the crystal structure of HLA-A2, this year the meeting will have **Jack Strominger** as the **Keynote Speaker**.

With a **maximum forum of 120 people** (including speakers), this is a unique opportunity to meet many of the most advanced scientist in the field. Submit your abstract and register now at:

<http://www.antigenpresentation2007.org/>

The organising committee:
Jose Villadangos, Bill Heath and Jim McCluskey

ASI Councillors' News

Queensland News

The World Day of Immunology was celebrated in Queensland for the first time this year. We just missed capitalising on the publicity surrounding the first of approximately 84,000 Queensland secondary schoolgirls to receive free vaccinations with Gardasil on April 17. As detailed in the President's column, Georgina Clark (Mater Medical Research Institute) co-ordinated activities in Brisbane, and future support is likely to be strong.

The MMRI is well known for its pioneering work in dendritic cell research, and the Institute has successfully hosted eight annual DC Symposia to date. This year's symposium will be held on June 21 – 22 at the MMRI in Brisbane, as a satellite of the 13th Annual Meeting of the International Society for Cellular Therapy in Sydney (June 24-27), and is focussed on 'DC immunotherapy'. The workshop-style format of the symposium helps to encourage scientific interaction, discussion and an opportunity to create future collaborations through short presentations within themed sessions (<http://www.mmri.mater.org.au/Pages/symposium.htm>). This year, the programme features a number of international speakers, including Franca Ronchese, Jim Young, Carl Figdor, Eckhart Kaempgen, Zwi Berneman, and Matt Collin. Registration for the symposium is free.

Also coming up soon is the BIG Annual Retreat (<http://www.qimr.edu.au/big>), at the Pelican Waters Resort, Caloundra (Aug. 23-24, 2007). This year, Prof. Hans Schreiber, University of Chicago (Illinois, US) will be the keynote speaker, and the "Jonathan Sprent Oration" will be delivered by Prof Jim McCluskey. BIG attracts a wide audience of immunologists from Queensland and interstate, and ASI members receive a discounted registration.

Finally, a couple of institutes with strong ASI memberships benefited in the recent Federal budget: QIMR received \$55m towards their projected new building, and the Diamantina Institute of the University of Queensland received \$100 million

towards their new integrated research and development facility. Now, if we can just find some more money to do the science!

*Chris Schmidt
Councillor*

Victorian News



As part of the ASI visiting speaker program, Victoria recently hosted Ron Germain from the National Institutes of Health, USA, who presented at both the Peter Mac and WEHI. Ron gave tremendous insight into using a multiscale approach involving biochemical studies, computer modelling and intravital multiphoton microscopy for better understanding of the adaptive immune response. As a new initiative, the IgV committee organised an informal discussion group session with Ron and several IgV student members, which was a great success. The committee plans to organize more of these interactive sessions between the student members and upcoming visiting international speakers.

The IgV branch will host Professor Hans Schreiber from the Department of Pathology, University of Chicago Illinois in August and Dr Jacques Banchereau from Baylor Institute for Immunology Research, Dallas, Texas in October. Information regarding their talks and potential interaction will be emailed to members as they become available. We encourage all members to support this worthwhile program.

The committee has put a lot of time and effort into planning of the Beechworth meeting which will be held from October 28–30. A great list of guest speakers has been confirmed for this meeting which includes Charles Surh from The Scripps Research Institute, USA. There will also be a number of timeslots available for students to present their work and a chance for students to interact with senior scientists during the meeting. One of the highlights will also include the Richard Boyd trivia night which is not to be missed. The flyer and registration form and further updates on the meeting are available on our website: <http://www.microbiol.unimelb.edu.au/IgV>

As another new initiative, the committee will be inviting special guest speakers to present their work followed by a wine and cheese session. The first speaker will be Chris Goodnow and details of this lecture will be emailed to members shortly.

As a reminder, the 37th Annual Scientific Meeting will be held this year in Sydney from December 2-6. Abstract and Early Bird deadline is September 3. More details about this year's conference is available on the ASI website: <http://www.wehi.edu.au/collegiate/ASI/>

*Phillip Darcy
Councillor*

N.S.W. News

The ASI NSW branch was fortunate to recently host Prof. Ron Germain from the NIH on his recent visit through Australia and New Zealand. Ron's presentation was a tour-de-force through an array of exciting research ongoing within his laboratory. We are also looking forward to hosting our next ASI visiting speaker, Prof. Jacques Banchereau, from the Bayer Institute for Immunology Research in Dallas, late in October.

The first few months of 2007 have seen our branch busy with organization issues for the upcoming annual meeting in Manly this December, which is shaping up to be a great conference. Beautiful Manly beach will provide the backdrop for our meeting, we have some fantastic speakers confirmed and importantly, registrations are now open. This year our conference dinner will see us cruising around beautiful Sydney Harbour, places are strictly limited so book early.

My thanks to all those who have been, and continue to work so tirelessly behind the scenes to help with the meeting organization. We look forward to welcoming everyone to Sydney this December.

*Bernadette Saunders
Councillor*

ASI Speakers Program

We encourage all members to propose candidates for the ASI Speakers Program in either of the two categories: (a) ASI Visiting Speaker, a prominent immunologist coming from overseas and (b) ASI Sponsored Speaker, already in Australia/New Zealand. The deadlines for applications are May 15 and November 15 each year. Alternatively, contact the State ASI Councillor, the ASI website or the co-ordinator of the Program J A Lopez (alejl@qimr.edu.au) for further information.

Please contact the local ASI Councillor for further details on the seminars planned.



Professor Hans Schreiber
Department of Pathology,
University of Chicago, Illinois, USA

Townsville, August 11–13
Canberra, August 14
Melbourne, August 15 and 16
Adelaide, August 17
Perth, August 18–22
BIG meeting in the Sunshine Coast,
August 23, 24



Doctor Jacques Banchereau
Baylor Institute for Immunology
Research, Dallas, TX, USA

Brisbane, October 10–13
Perth, October 13–17
Melbourne, October 17–21
Adelaide, October 20–23
Sydney, October 23–26

Sustaining Membership

ASI Inc acknowledges the support of the following sustaining member:

- Jomar Diagnostics

An invitation and a request to all ASI members

to contribute copy that they think might be interesting, useful, historical, humorous or thought provoking.

- We invite our student membership to voice their views on issues that interest or directly concern them.
- It's our newsletter, so let's support it and strive to make it even better.
- The ASI newsletter comes out 4 times a year and we welcome your contributions.
- **AND NOW YOU COULD WIN \$100 FOR THE BEST ARTICLE PUBLISHED IN THE NEWSLETTER!**

Contributions sought for the ASI online immunology quiz

As part of the recent World Day of Immunology, we have developed an online immunology quiz (see <http://www.immunology.org.au/immquiz1.html>) on the ASI website. This quiz is targeted at the general public, but it would be good to add a few more questions (especially some with an Australian flavour), and maybe even add an “Advanced Level”, with questions that undergrad students might find useful for revising for exams. All that's needed now are the questions and answers.

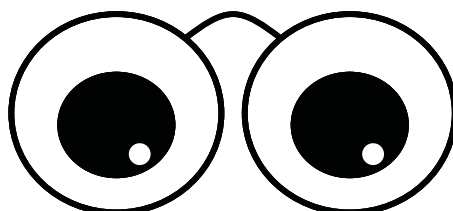
If you would like to contribute any multiple choice questions for either the general quiz or an advanced version, please send them to Judith Greer at j.greer@uq.edu.au.

Submission of photos with articles

When submitting articles, reports, etc. to the newsletter, please do not embed the photos in the Word article, but always send as separate jpeg files - preferably no larger than around 200kb. Embedded photos/graphics cannot be imported into the desktop publishing program nor edited if required and delays occur in requesting photographs to be re-sent. High resolution jpeg files are not necessary and only take extra time to download.

Thank you for your co-operation.

Are you fed up with having papers describing important immunological discoveries rejected on mechanistic grounds?



 ***Outstanding***  ***Observation: A new and faster way to publish your ground-breaking findings***

- ***Do you think you have made an observation that breaks the paradigm?***
- ***Do you think your observations have fundamental implications into the way we understand the immune system?***
- ***Do you want to be remembered as the scientist that made this observation?***

If you are nodding your head, don't waste another minute and submit your findings in the form of an "**Outstanding Observation**" article to *Immunology and Cell Biology*.

Outstanding Observation articles describe reproducible striking observations obtained *in vivo* or under physiological conditions *in vitro*, that in themselves have important conceptual implications and change the way we understand the immune system. Such articles should report a clearly important immunological phenomenon in some detail but the molecular mechanism underlying the findings need not be fully elucidated. Due to the cutting edge nature of the work, papers are expedited through the refereeing process and are published more rapidly than standard articles. Manuscripts should follow the format of 'Original Articles' or 'Short Communications' in *Immunology and Cell Biology*.

Travel Award Conference Reports

Keystone Symposia: Immunological Intervention in Human Disease Cindy Ma

The Keystone Symposia: Immunological Intervention in Human Disease was held from 6–11 January 2007 at Big Sky, Montana. It took three flights (you know it's a small plane when the co-pilot is reading you the emergency exit procedures), countless hours in transit (Gallatin Fields airport does exist!), and a coach ride up the mountain. The conference was relatively small, with only 150 attendees. However, this did not by any means dampen the quality of the science, as all presentations were of an extremely high standard. In fact the size of the conference was an advantage as this meant there was only one plenary/workshop session at any one time, making it possible to attend all talks. Furthermore, there were only 30 posters in each poster session, which provided for an excellent environment for scientific discussions.

One of the highlights was the last session of the conference on the humanized mouse models or "Humice" as they are commonly referred to. This plenary started with a talk from the chair, Karolina Palucka from the Baylor Institute. Karolina gave a good introduction into Humice models and the advantages of these mice over conventional *in vivo* mice models—the main reason being, the use of humanised mice would eliminate any species differences that exist between humans and mice. Thus results obtained from Humice would (in theory) be more readily extrapolated to humans. This was followed by an interesting talk from VelocImmune. This company has used a new technique they referred to as "VelociGene" to replace large portions of the mouse genome (~6 mega bases of genomic sequence), to generate mice capable of making potent human monoclonal antibodies (HuMAb). While other mouse models used to generate HuMAbs exist, problems such as a decrease in B cell numbers, a decrease in circulating Abs and a failure to generate a robust immune response, have arisen. These VelocImmune mice promise to be a more reliable source of potent, fully humanised monoclonal Abs.

The majority of the audience were extremely impressed with this presentation and excited about the potential that this tool has for advancing the field of immunology. However, the atmosphere in the room quickly

changed following the sole question asked by Ralph Steinman about the availability of these mice to basic scientists. VelocImmune's response was that basic scientists would not be able to afford these mice. The point then made by Ralph Steinman was that it was selfish and irresponsible of the company not to make the mice readily available given that it was knowledge from decades of research by scientists that made the generation of these mice possible. This raised the topic of making reagents readily available to all scientists. It is particularly controversial when associated with commercial companies, as they have utilised knowledge obtained through basic research to manufacture products, but at the end of the day, it seems the need for these companies to be financially viable may have higher priority over the advances these tools could provide to basic research.

Other highlights included a presentation from Andrew Chan, detailing results from current clinical trials being undertaken at Genentech. This included the use of Rituximab (anti-CD20 mAb), used to treat rheumatoid arthritis, in the treatment of systemic lupus erythematosus (SLE), multiple sclerosis (MS) and antibody-associated vasculitis (AAV), as well as combination therapies using Rituximab and LymphoStat (anti-BAFF mAb). A student from Jean-Laurent Casanova's group from Necker medical school also gave an interesting presentation describing the first cases of a primary immunodeficiency resulting from mutations in MyD88.

This symposium was unlike other conferences, which have "human disease" in their titles but the majority of the talks

are based on studies performed in mice. Immunological Intervention in Human Disease had a strong emphasis on human-based research; in fact the only mention of mice studies was associated with the Humice. This meant there was a lot of work presented on clinical trials – it was quite refreshing to hear about the clinical applications of research and the promise that these drugs hold for the treatment and prevention of human disease.

This was the first time a conference of this type has been included into the Keystone Symposias. The organisers – Jacques Banchereau, Federica Sallusto and Bob Coffman – did a fantastic job in putting the program together. So much so that during the closing remarks, it was confirmed that "Immunological Intervention in Human Disease" will be an addition to the Keystone Symposias: Jacques Banchereau has already put together a preliminary program for a similar conference to be held in 2008 and 2009 evolving around the topics of cancer and transplantation, and primary immunodeficiencies and autoimmunity, respectively. These conferences promise to be as exciting and intellectually stimulating as the first one.

Finally I'd like to thank ASI for their continued financial support through their postdoctoral and postgraduate travel awards; without these awards most junior scientists would struggle to find sufficient funds to attend international conferences which are an important part of scientific research.



Wildlife in Yellowstone Park, Montana

**4th International NKT Cell and CD1
Workshop**
Margaret Jordan

When I first decided to apply for the ASI International travel grant, I didn't think I had much chance of receiving it, but decided that if I didn't apply I'd never know. The 4th International NKT Cell and CD1 Workshop was to be in Italy this time round and, working directly in the field of NKT cells and having attended and found the previous workshop one of the most informative meetings for my work, I really wanted to attend this one. However, with it being in such a remote destination, there was no way I'd have any chance of attending it without some funding towards the trip. Having asked my supervisor if he would support me in my application, I put my doubts aside and filled in the form. It was with great delight that I found out just a few short weeks later that I was one of the lucky recipients of the award. Plans for the trip were then in full swing. I would fly first to Rome and with one day to recover from the plane trip, I would attend the workshop at the Abbey of Spineto in the Tuscan valley for the following five days. From there I was to visit Jean-Francois Bach's lab at Hôpital Necker in Paris and then on to the UK, where I would visit Lynn Poulton at the Sir William Dunn School of Pathology at the University of Oxford, and Paul Lyons group at the MRC Rosalind Franklin Centre for Genomics Research in Cambridge.

I had never been to Europe before, so this trip was very exciting both from a personal as well as a professional point of view. I wanted to see as much as possible in the various places, both what other labs in the world were like and how they functioned as well as trying to see a few historical sites along the way. So on the free day I had in Rome before boarding the train to the Tuscan valley, I donned my sandshoes and tackled the cobblestone streets and more steps than I could ever have imagined, and spent the day sightseeing. It was amazing to see the Colossus, St Peter's Square and the Sistine Chapel. There were so many beautiful buildings in among the numerous historical ruins. The streets were quaint and narrow, beautiful, yet dangerous. I've never seen as many vehicles on the streets, and crossing roads was like taking your life in your

hands, but it was exciting and interesting at the same time.

The conference sessions were set in a hall in the abbey, while we were accommodated in many farm houses scattered over the abbey's more than 2500 acres. Each farmhouse accommodated about 18 registrants and breakfasts were held in the separate houses. This had advantages and disadvantages as although you were able to get to know and interact with the people in your own farmhouse, it was more difficult to interact with people from the other houses. The days were long with little free time in between sessions, other than tea or dinner breaks, and with everyone so scattered and needing lifts to accommodation, there was no time after sessions finished to relax and meet other scientists. However, the programme was full and interesting with some lovely talks given during all sessions by many senior scientists in the field from all over the world. There are too many good talks to mention them all so I will just give you a taste of them.

The meeting kicked-off with the keynote lecture given by Mitch Kronenberg who spoke about innate recognition of bacteria by NKT cells. Dale Godfrey then opened the session on development and homeostasis with the presentation of his work on the development of NKT cell subsets. He presented evidence demonstrating the developmental progression of NKT cells from the immature NK1.1-ve to NK1.1 +ve subset being under the control of CD1d in the thymus and the periphery. He showed

results indicating that NK1.1- NKT cells in the periphery of adult mice are not immature precursors and that most NK1.1+ NKT cells in the thymus are long term thymic resident cells that are functionally distinct from NK1.1+NKT cells in the periphery. H Robson MacDonald spoke on the development and selection of NKT cells where he presented his group's findings that the V β domain plays an important role in glycolipid recognition and thymic selection of NKT cells. He said that whereas the V β 8.2 domain confers higher avidity than V β 7 for binding of the semi-invariant TCR to the artificial glycolipid agonist α -galactosylceramide, V β 7 confers higher avidity binding to naturally occurring endogenous CD1d-associated glycolipids (such as isoglobotrihexosylceramide) during positive selection of NKT cells in the thymus. He concluded that this limited variability of TCR V β domains thus allows for fine discrimination of glycolipids by NKT cells, thereby influencing positive selection.

The cellular and molecular pathways of NKT lineage differentiation as well as the signal transduction pathways regulating NKT cell ontogeny and function were discussed by Albert Bendelac and Laurent Gapin among others. Gapin's group explored the developmental program of mouse V α 14 iNKT cells. The primary rearrangement of the α chain is between J α 61 and J α 45, with secondary rearrangements between J α 45 and J α 1. He pointed out that the first detectable V α 14J α 18 rearrangement is at d20, thereby giving an explanation for why NKT cells are not detectable at birth. He mentioned how



Finlay McNab from Melbourne University and Margaret Jordan next to the Elio bridge, in front of the original structure of the fortress of Castel St Angelo in Rome, nowadays known as Ponte Sant'Angelo.

T-bet is a transcription factor that directly regulates expression of INF γ , CD122 and CXCR3 in T-cells (and likely in NKT cells) and how it concomitantly affects function during the maturation of NKT cells. The structural basis and transcriptional regulation of CD1 was discussed by many, including Dirk Zajonic and Branch Moody. Zajonic discussed the structural differences they have identified among the CD1 binding grooves that confer antigen binding specificity in humans. He observed that whereas only a few specific polar interactions are observed between the glycolipid headgroups exposed for TCR recognition, bound to either CD1a or CD1b, a specific hydrogen bond network is found in CD1d which orients and stabilizes different classes of CD1d ligands, such as the highly stimulatory α -GalCer, various sulfatides or more complex phosphatidylinositol mannosides (PIMs).

Paul Savage from Albert Bendelac's group spoke on the key role played by glycolipid trafficking in determining the types of glycolipids presented to NKT cells and how glycolipid structures influence how these compounds are trafficked within cells and possibly among antigen presenting cells. There were also sessions on antigen processing and presentation, and the relevance of NKT cells to disease. Regulatory mechanisms mediated by NKT cells were discussed by Agnes Leheun and Masaru Taniguchi, while tumour immunosurveillance was discussed by Jay Berzofsky and Dale Godfrey on behalf of Mark Smyth who was unable to attend the meeting at the last minute. iNKT cells involvement in the pathogenesis of arthritis and the regulation of insulinitis and diabetes were also discussed. The meeting finished with a session on immuno-regulatory function with talks given by Steve Porcelli, Luc van

Kaer and Terri Delovitch among others. All in all the meeting was informative and well worth attending.

Visiting the labs in Paris and the UK was interesting and the seminars on our work were well received. Seeing the labs there and hearing about their work reinforced the impression I already had that our laboratories and the work we do here in Australia is certainly at least on an equal footing with others in the rest of the world. The trip as a whole was a wonderful experience and although I suffered terribly from jet lag, I would recommend to others in my position to give it a go. Apply for the scholarship as you will never know if you will be successful if you never try.



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The Resurgence of the Double Chamber in Immunology

John Marbrook

This year is the 40th anniversary of the time when attention was drawn to the ease and advantages of growing lymphoid cells in double, or even triple, chambers (*Lancet* 1967). Much has developed in the period since 1967 and the situation today could be summarised by saying, "We know a whole range of things that *could* happen in and between cells in immunity, but ... when and how much of that *really does* happen normally?"

As a result, there is a move back to the analysis of events *in vivo* to resolve the question above. With the obvious difficulties involved in doing this, it is quite likely that there will be a resurgence in the use of double chambers when attention is drawn to mouse oracles or Gbekre of the Baule society of West Africa. An example of such an oracle is shown below. A shelf partitions the vessel into two distinct chambers, connected by a hole in that shelf.



Mice are placed in the lower chamber and the upper chamber contains ten small sticks, or bats' bones coated with flour and attached to the wall by fine fibres. Fasted mice ascend to the top chamber and rearrange the sticks as they snuffle around. The person consulting the oracle places the forefinger on the upper rim and in posing the question to be answered, taps the vessel. The rearrangement of the sticks provide signs that may be interpreted by the diviner. Evidently, the specialists spend several years mastering this divination technique



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(somewhat longer than the average length of time spent on undergraduate and graduate studies hereabouts).

I have yet to convince any of my friends or ex-colleagues to test this method. It clearly has a vital potential, particularly for those investigators who really wish to confirm results that they already suspect to be so, a wish that is often difficult to attain with orthodox experimentation. Additionally, from the design in the illustration, it is obvious how the figure on the side of the oracle can be changed to readily personalise the chamber. Compiling a Divination Atlas that covers some of the basic patterns will have to be held over until the method has been in use for a while. Already, the bilateral symmetry of the bat skeleton is being used and the pairs of bones (dextral

and sinistral) may be the preferred way of obtaining quantitative results according to a binary system.

Of course, it is expected that the use of this approach will meet some resistance in being accepted by funding bodies. Traditionally, getting absolutely novel techniques funded by orthodox pathways has always been met with inertia, although we seem to have moved on from the time when, within assessing committees, one could hear the view, "I don't think we should put money where the mouse is." Considering the use of this technique by the Baule people however, some validation must be accepted for it to have survived for so long, with constant peer review.

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**Deadline for the next issue :
1st August 2007**

**Please email your contributions to the Secretariat
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