Large animal immunology: Coming in from the wilderness

Mark Robinson, Senior PhD Student
Disease Research Laboratory, Otago University, Dunedin, New Zealand

New Zealand has always had a strong agricultural industry based on our ‘clean green’ environment and large amounts of land available for agriculture. New Zealand is seen as an industry leader in many agricultural sectors and prides itself on its forward thinking and innovative agricultural techniques stemming from a Kiwi ‘do-it-yourself’ attitude. Currently the New Zealand government and industry bodies contribute resources for agricultural research to improve efficiency, profitability, welfare and mitigate against the negative environmental impacts of the agricultural sector.

Behind the large traditional agricultural industries of cattle, dairy and sheep is the relatively small New Zealand deer industry. At the forefront of domestic deer breeding and farming worldwide, this young industry, first started in New Zealand in the 1970s, is highly innovative with strong farmer involvement and both national and international markets. It is within this industry that Professor Frank Griffin and the Disease Research Laboratory has worked for the past 20 years. Providing novel disease control research and tools in what has become a very fruitful relationship for the farmers, students and researchers involved.

The lab, commonly referred to as the ‘Deer Research Lab’ or just the ‘DRL’, initially focused on Tuberculosis (TB) in farmed deer, a significant problem in the industry in the 1980s and 1990s. The laboratory built the world’s largest database on TB in deer through ongoing studies of naturally occurring TB and extensive studies using a sensitive experimental infection model that mimics natural infection. The model involves the instillation of low dose virulent Mycobacterium bovis into the mucosal crypt of the tonsil. These studies have elucidated many of the critical parameters involved with TB in cervidae. The model has been used to study TB in US and NZ cattle and African buffalo.

Extensive work has also been carried out over the last 20 years into the optimisation of conventional BCG vaccination against TB in deer. This research established, for the first time, that protection against TB infection and disease is possible providing BCG is given in a prime-boost protocol. These vaccines can be administered in low doses parenterally or onto mucosal surfaces. Current research is exploring possible strategies by which prime-boost vaccination could be achieved with a single shot, delayed-release, adjuvanted vaccine.

Extending on from the studies on TB in farmed deer, the DRL has been involved in a number of projects that have involved...
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**

February was a terrible month for many in Victoria and Queensland. ASI members will have had relatives and friends directly affected by fires and floods. It’s times like this that ‘A for Australasian’ might easily be linked to the ‘A’ in ANZAC.

This issue revives memories of happier times – all the news about a most successful ASI annual meeting in Canberra in December. The science and the socializing were superb, including an evening in the Australian War Memorial Museum. It’s not every night one dines beneath a WWII bomber. Our outgoing President, Allan Baxter, excelled himself with his camera. Indeed, if you would like to run your eye over an extraordinarily large collection of photographs taken in Canberra (and several other meetings as well) check out the website: http://www.jcu.edu.au/cgc/ASI2008Scrapbook/index.html. You will see that the Bursa had a fine old time, too. And the limericks flowed.

Our lead article comes from the Department of Microbiology and Immunology at the University of Otago, the southernmost outpost for immunological research in the world but clearly not a wilderness. Frank Griffin’s Disease Research Laboratory has been tackling immunology in the field for more than 20 years. From bench-to-barnside is no easy task. Mark Davis has warned us against becoming too focused on the mouse. Well, here is an alternative to *Homo sapiens*.

Finally, we welcome a number of new people to executive positions in ASI – a new President, a new Honorary Secretary and some new State Councillors. We look forward to another productive year in immunology in Australasia. May all our ‘H-indices’ soar.

_Margaret Baird
Editor_

**HONORARY SECRETARY’S NEWS**

As you might know, Jose (Villadangos)’s term as Honorary Secretary ended at the end of last year and I have taken on the difficult task to follow in his footsteps.

ASI is defined by its membership and a lot of benefits are available to its members, such as reduced registration rates to the Annual Scientific Meeting and other events organised by the ASI; a free subscription to *Immunology and Cell Biology*, *Nature Immunology* and *Nature Reviews in Immunology*, the quarterly Newsletter and eligibility to apply for our bursaries and travel awards.

As indicated on your renewal form, we have introduced the choice of automatic renewal for full members. For those of you who haven’t chosen this option and for our student members, I’d like to take this opportunity to remind everybody to renew your membership in time. Particularly those who want keep their option to apply for any of the travel awards open, renewal before 1st April is essential. In order to be eligible for postgrad or postdoctoral travel awards, the applicant must have been member in the year prior to application and must have renewed their membership before or on 1st April in the year of application. Naturally, membership must also be active at time of travel.

As in previous years, there will be two rounds of applications for travel awards. Applications for travel in the second half of 2009 will be called in March, applications for travel in the first half of 2010 are called for in October.

To reward more senior members, ASI council has also introduced the Gordon Ada and Jacques Miller Senior Travel awards. These awards are designed as opportunities for mid-career members who want to go overseas, and cover up to $10,000 per award. Please see separate article in this newsletter or the ASI website for more details.

Please remember that the ASI Council is there to run the Society and to support its members. Please do not hesitate to contact us with queries or suggestions that you might have.

_Susanne Heinzel
Honorary Secretary_

**ASI International Travel Awards 2008, 2nd round**

**Post-doctoral**
Applications 6, Awards 2:
- Maria Moeller, Peter MacCallum Cancer Centre, Vic
  2nd Cellular Therapy of Cancer Symposium – $3,000

- Tara Roberts, Queensland Institute of Medical Research
  Keystone Symposia: Pattern Recognition Molecules & Immune Sensors of Pathogens – $3,000

**Post-Graduate**
Applications:10, Awards 3:
- Hollie Peggart, Peter MacCallum Cancer Centre, Vic
  Keystone Symposia: Mobilising Cellular Immunity for Cancer Therapy – $3,000

- Timothy Schluh, University of NSW
  Keystone Symposia: Immunological Memory & Host Defense – $3,000

- Dianne Sika-Paotonu, Malaghan Institute of Medical Research, NZ
  Keystone Symposia: Dendritic Cells and Pattern Recognition Molecules & Immune Sensors of Pathogens Recognition Joint Meeting – $3,000
Large Animal Immunology, cont.

Saudi Arabian oryx and gazelles and South African buffalo, kudu and lions. Data extrapolated from the deer studies have been used to develop new immunodiagnostic methods and improved vaccination for the prevention of TB in wildlife. Back in New Zealand, the development and routine use of antibody-based diagnostic tests for TB in deer allowed the DRL to develop further relationships with deer farmers throughout the country and eventually led to a change in focus for the DRL as new diseases in deer emerged from the backdrop of TB.

In the late 1990s, New Zealand deer farmers began to lose animals to a related mycobacterial disease known as Johne’s disease (Jd) or paratuberculosis. Johne’s disease is caused by the bacterium Mycobacterium avium subspecies paratuberculosis and has been known to interfere with TB control on some New Zealand deer farms. Over time, large outbreaks of Jd began to occur more frequently throughout New Zealand. In a small number of infected herds up to 20% of weaners were dying each year from this chronic enteritis and farmers needed a solution. Anovel ELISA-based test was developed for deer and has been used successfully to control Johne’s disease for the past 10 years reducing reactor rates on some farms to below 5% and completely eliminating clinical disease on these farms.

The aetiology and pathogenesis of Jd in deer may differ from that seen in cattle and sheep and studies are underway to explore how microbial pathogenesis or differences in host phenotype may contribute to different disease manifestations. In collaboration with AgResearch, the DRL developed deer and sheep models for experimental infection that provide predictable infectious outcomes which parallel natural disease. These models are being used to chart pathways of immunity associated with infection, disease or protective immunity. New formulations of vaccine are being trialled in an attempt to generate protective immunity to Jd without the unacceptable side effects found with existing vaccines. Interference between Jd vaccination and routine TB diagnostic testing is also being explored in deer which may become affected by either Jd or TB. Using the deer model the DRL is exploring whether there is any association between heritable resistance to TB and Jd.

Currently the lab consists of three researchers, two diagnostic staff and six post-graduate students. The students are a diverse bunch with three students majoring in Immunology, a medical student from the Dunedin School of Medicine, a Dutch veterinary student and an Australian summer student. While the diagnostic work is run primarily as a commercial enterprise, continuing research is underway to explore novel diagnostic antigens specific to M. paratuberculosis (in collaboration with Dr John Bannantine from the Agricultural Research Service at the USDA) as well as novel carbohydrate and lipid antigens in collaboration with Dr Douwe Bakker from the Institute for Animal Science & Health, Lelystad, The Netherlands.

Current research is based on both the detection of M. paratuberculosis and the immune responses to M. paratuberculosis in deer and cattle. The development of sensitive and robust molecular biological techniques has recently opened up new opportunities in the way we detect M. paratuberculosis and diagnose infected animals. Using M. paratuberculosis-specific DNA sequences, the DRL has developed real time quantitative PCR assays for the detection of fewer than 10 M. paratuberculosis organisms in both faeces and tissue samples to be used alongside the conventional ELISA-based diagnostic techniques. To improve our understanding of the epidemiology of Johne’s disease, work is also being carried out characterising variable number tandem repeat sequences in the M. paratuberculosis genome and designing PCR assays to test these targets. Initial results are looking promising with the ability to distinguish not only the two dominant strains of M. paratuberculosis that affect cattle and sheep respectively, but also sub-populations of these dominant strains which are present in different host species such as deer.

The differing immune responses to M. paratuberculosis infection and Johne’s disease have been of interest for a long time due to the range of different pathological states seen in affected animals. Recently research has shed light on the immunological differences between animals that mount protective responses and while remaining infected, do not develop clinical Johne’s disease and those which rapidly succumb to clinical Johne’s disease. Immunological dogma proposes that Johne’s disease is caused by the development of Type 2 humoral responses which suppress protective Type 1 responses. However the implication that novel cytokines such as IL17 and IL23p19 are associated with the excessive inflammation that occurs during clinical Johne’s disease has lent weight to the idea that clinical Johne’s disease may in fact be a manifestation of an imbalance between the inflammatory and regulatory responses at play in the gut mucosa. This may explain the conflicting experimental results that show strong Type 1 responses are more commonly associated with disease rather than being a predictive marker of protection. It’s the old adage, “everything in moderation”.

The cytokine profiling work has also been linked back to the ongoing diagnostic research. For a long time the DRL has noticed that certain breed lines of deer from...
some of the top deer studs in New Zealand show a greater susceptibility to Johne’s disease. Similarly, male deer likewise show a far greater susceptibility to Johne’s disease possibly due to the higher levels of physiological stress associated with high growth rates. Work is now underway to gain a better understanding of the genetics behind these differences in susceptibility to Johne’s disease. With the stud farmers’ support, co-selection of production traits and disease resistance might be feasible for the commercial deer herds of the future.

The Disease Research Laboratory still has a lot of scope to expand the deer Johne’s disease programme. Important issues such as the ideal protective immune response and the role certain genes play in the susceptibility to Johne’s disease need to be addressed. At the same time, diagnostic techniques are being moved forward to allow better identification of infected animals and possibly also prediction of the disease outcome of certain animals after they have been exposed to *M. paratuberculosis* on a farm. Johne’s disease isn’t solely a deer problem in New Zealand either. Sheep suffer from this disease, however vaccines are available both in New Zealand and Australia to combat serious outbreaks. The dairy industry in New Zealand doesn’t have the same access to vaccines due to cross-reactivity with Tuberculosis testing and the lack of an industry-led response could cause problems heading into the future. The link between Johne’s disease and Crohn’s disease in humans (as tenuous as it is) is also providing new opportunities for collaboration to study the pathology of inflammatory bowel disease in general and should provide some fertile ground for novel research to be carried out!

Finally the DRL would like to acknowledge all the researchers and farmers, without whose support none of the work the DRL carries out would be possible. These projects involve collaboration with researchers at AgResearch (Invermay and Wallaceville) and Massey University. Important key relationships have been formed with the end users who are supporting this programme with co-funding. Dairy industry support from Dairy Insight, deer industry support from DEEResearch, sheep industry through Ovita and deer farming support through JRG, a farmer based organisation. Government support is through the Foundation for Research Science and Technology (FoRST).

Vaxine is an Australian biopharmaceutical company developing a portfolio of novel vaccines, both therapeutic and prophylactic, to treat infectious diseases, allergy, autoimmunity and cancer. These vaccines are underpinned by Vaxine’s novel technologies which include the Advax range of highly effective and non-reactogenic adjuvants plus a number of novel vaccine antigens. Vaxine’s Advax platform technology signifies a major breakthrough in vaccine design in recognition of which its development is being financially supported by the US government. With a vision to be a leader in human vaccine development in Australasia, Europe, North America and Japan, Vaxine has a large vaccines pipeline supported by major funding from the US government through the National Institutes of Health.

Vaxine are currently seeking people interested in joining our company.

**Positions available include;**

**Senior R & D Scientists**
**Senior Production Scientist**
**Research Scientists**

For expressions of Interest submit CV to Nikolai Petrovsky, Vaxine Pty Ltd, PO Box 18, Flinders University, BEDFORD PARK SA 5042 Nikolai.petrovsky@flinders.edu.au, www.vaxine.com.au
PRESIDENT’S COLUMN

The President’s column of the March newsletter is the first ‘visible’ presence of the incoming ASI President, and also an opportunity to introduce myself to many members. My background was studying medicine at Sydney University, interrupted by a D.Phil in immunology at University of Oxford. After returning to Australia I have had stints as a clinician (doing my internship), stay-at-home parent (for the first year of my daughter’s life), university academic (teaching Pathology to medicine and science students) and, more recently, as a research fellow at University of New South Wales (since 2003). I hope this gives me some perspective on the various demands that members juggle in their professional and personal lives. I see the role of ASI as bringing together immunologists from different backgrounds to both support their work and provide a sense of community and common endeavour.

ASI is certainly not a monolithic organization, and it is kept together by a group of volunteers who work hard to make things happen. Conferences, newsletters, scholarships and budgets all take a major commitment by members. Several members of ASI Council have retired this year, and I would like to take the opportunity to thank them for their contributions. Bernadette Saunders is the outgoing NSW Councillor, who also put in an enormous effort in organizing the Sydney 2007 ASI conference. Bernadette is replaced by Stu Tangye. Chris Schmidt is the outgoing Queensland Councillor, who is not quite off the hook yet as he is now organizing the 2009 ASI conference in Queensland. Chris is replaced by Heinrich Korner. Jose Villadangos is retiring from one of the largest roles in ASI – that of Honorary Secretary. Jose has done an excellent job of keeping us all on the straight and narrow, and is also not off the hook, as he is now working on the ASI bid for the 2016 International Immunology Congress. Jose is replaced by Su Heinzel, who is familiar with the workings of Council from her previous role of South Australian Councillor. Finally, Alan Baxter is handing over the reins as President, but will continue to play an important role as Past President in 2009. Alan has presided over a period of increased membership, increased spending on members, and increased impact of the Society journal ICB. Thus, he has handed over a Society in excellent shape and growing strongly, and it is a big role to fill to keep this going (and to match his President’s Columns for both length and content!).

ASI – into the future

The excellent financial shape of the Society as well as the growing membership give Council an opportunity to expand its role and the services provided to members. At the Council meeting last December, a number of new topics were proposed, and all met with warm endorsement by the Council:

ASI Women’s Initiative: One of the most important topics was the idea of an ASI Women’s Initiative. The differences between men’s and women’s careers in Science (and elsewhere) is an area that receives little attention, and yet that is a major factor affecting the lives of many of us. Bernadette Saunders and Barbara Fazekas raised the need for a pro-active stance from ASI to raise awareness of these issues and support women members. Specific moves included: a list of potential women speakers on the website (similar to that on the American Association for Immunologists’ website), encouragement for equal representation of women at conferences, on committees and in funding, and the establishment of a mentoring structure for younger women members. The Council was extremely supportive of this initiative, and I hope members will get behind this move and help it grow from an idea to a set of active policies and a mentoring and support structure for younger members. Facilitating all talented scientists to achieve their maximum potential is an essential factor in keeping Australasian immunology competitive.

Upcoming conferences: The 2009 ASI annual Conference is to be held at the Gold Coast, 6-10 December 2009. Those of you who have attended meetings over the years will be well aware of the extremely high quality of the science presented, as well as the vibrant atmosphere amongst attendees. The Gold Coast is shaping up as another exciting venue and program, and I hope to see you there. In addition, ASI will hold a FIMSA training workshop just before the conference. This is a venue to support training of our own junior members, as well as fostering closer links with our regional neighbors, and I hope will be well attended. The last FIMSA training workshop in Adelaide was oversubscribed – so book early, book often. In addition, Council received a report on the progress towards the ASI bid to hold the 2016 International Immunology Conference in Melbourne. Much progress has been made on this bid, and the result will be known in 2010.

ASI travel awards: One of the most rewarding tasks on the ASI Executive is to help judge the ASI travel awards for PhD students and post-docs. The high quality of applications is always impressive, as is the amount of support we are able to give out to junior members (over $30,000 in 2008). The increased costs of travel (and sinking dollar) led the Council to propose increasing the amount of awards to up to $5000 from the next round of applications (aiming to distribute a total of $45,000 per year). So please, make sure you and/or your students are eligible (by being members) and apply for these awards.

One of the gaps in member support has been opportunities for members after the early post-doctoral phase of their careers. Accordingly, Council has established two new travel fellowships for mid-career/senior members, the Gordon Ada and Jacques Miller Travel Awards (more details on the next page). This is not aimed at simply the most senior members, but we hope to receive applications from members across the spectrum. The criteria for judging includes both track record and the level of career benefit that will be provided to the member. In recognition of the prestigious nature of these awards, the recipients will also receive a medal recognizing this at the following ASI annual meeting.
**Career Structure:** The career structure and funding for medical researchers is an area important to all members, and one on which the Past President Alan Baxter was particularly pro-active. Alan is continuing this involvement by leading a committee to investigate workforce issues such as pay rates, family-friendly policies etc. Members interested in getting involved should contact Alan directly.

**Special Interest Groups:** The Council is always keen on finding new ways for members to get together and talk immunology. This happens at the annual meeting, as well as State meetings and Special Interest Group meetings during the year. The first meeting of the new Infection and Immunity SIG was held at the 2008 ASI meeting, and I hope members will get involved and support his group. Keep your eyes open for other new SIGs, which we are expecting to come on board during the year!

**Get Involved!** ASI is always looking for members willing to get involved and help develop the Society and its activities. The World Day of Immunology is coming up on 29 April, and provides a number of different activities to engage the community. Nominations and elections to the various Council positions will be held later in the year but, in the meantime, if you want to get involved, please contact your State Councillor about helping out with the State Committee or conference organization.

The Minutes of the ASI Annual General Meeting are on page 8, and I encourage members to read these and keep up with the activities of the Society. The Council is always interested in new ideas to support members, so please feel free to put forward your suggestions, criticisms, or ideas for how the Society can improve its service.

_Miles P Davenport_

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**ASI Gordon Ada & Jacques Miller Senior Travel Awards**

It is with great pleasure that ASI announces the introduction of two exciting new travel awards.

The awards are designed to support senior/mid career members of ASI who wish to travel overseas for career related travel. The awards are open to anyone who has been a full member of ASI for at least five consecutive years prior to application. To honour two Australian immunologists who have made a major contribution to their discipline they are named the ‘Gordon Ada’ and ‘Jacques Miller’ Senior Travel Awards.

They will provide up to $10,000 each, are not restricted to a particular type or time of travel and may be given for attendance at meetings, sabbaticals, lab visits or any other kind of immunology-related travel.

In their applications, candidates need to state the purpose of travel and explain the benefits they will gain from this award.

Two awards will be presented each year (one Gordon Ada and one Jacques Miller Award). Applications will be called for in March for an April submission deadline. Travel is usually expected to occur between 1st July in the year of the award and 30th June of the following year.

A summary of guidelines for the application for these travel awards is printed below and is also available on the ASI website.

**Guidelines**

**Purpose:**
To support career-beneficial overseas travel by senior/mid-career researchers.

**Eligibility:**
Members who have been full ASI members for at least 5 consecutive years prior to the submission of an application are eligible to apply. The awards can only be received once, therefore previous successful applicants of one of the ASI Gordon Ada or Jacques Miller Senior Travel Awards are not eligible to apply. Current members of ASI Executive are not eligible to apply.

**Application procedure:**
Application forms can be downloaded from the ASI website. Applications are called in March for an April submission deadline. An application consists of a proposal outlining the benefits expected from the travel, the purpose of the travel and a 2-page NIH-style CV.

**Assessment Criteria:**
Excellence of track record relative to opportunity, purpose of travel and career/professional benefit of the proposed travel as judged by the ASI Executive.

**Value:**
Two awards per year for up to $10,000 each. Reimbursement will be made based on receipts for travel expenses.

A medal will also be presented at the annual meeting following the award.
1. Attendance and Apologies
Apologies: Alejandro Lopez, Senga Wittingham

2. Confirmation of Minutes of AGM 2007
Moved: Miles Davenport
Seconded: Tony Basten
Carried unanimously.

3. President’s report (Alan Baxter)
- Overview of the year and situation of the ASI
  As outlined in newsletter, December 2008 President’s Column: “So Long, and Thanks for all the Fish”
- NHMC governance, fellowship scheme and future trends: position of the ASI
  As outlined in newsletter, September 2008 President’s column: “Call to arms”

Alan invited Michael Good to address the NHMRC issues.

Michael stated that a letter send around recently by Phil Robinson contained some inaccuracies. However, it has stimulated discussion. He was concerned that we will be seen as divided. The biggest challenges are:

- No growth trajectory, although previously lots of growth when lobbied
- Less lobbying now for expansion (perception)
- Concerns at mid career and seniors especially in light of plateau trajectory for funding. This wouldn’t occur if funding expanded and called for everyone to lobby

The Prime Minister will be invited to open next ASI meeting

The mood in government circles was asking for more human health translation and we should challenge the idea that nothing has come out of immunology research.

Alan Baxter proposed and it was agreed that ASI members should put forward the top 25 Australian immunology research successes, to use as examples in lobbying. There would be prizes for suggestions. $1000 for best suggestion, $500 for 2nd and $250 for 3rd prize.

The following were also highlighted:

- Establishment of committee to review gender inequalities and maternity leave programs (more below)
- New Gordon Ada and Jacques Miller Travel Fellowships (more below)
- Visiting Speaker’s Program (more below)
- Immunology and Cell Biology (more below)
- ICI 2016 (more below)

Acceptance of President’s report moved
Phil Hodgkin
Seconded by Tony Scalzo
Carried unanimously

Introduction of Gordon Ada and Jacques Miller Travel Fellowships
ASI Council resolved to introduce the Gordon Ada and Jacques Miller Travel Fellowships. These awards are aimed to support mid career/senior members for overseas travel as per guidelines below:

1) Open to anyone who has been member for >5 consecutive years. They can be used for conference/site visit etc. and are worth up to $10,000 each.
2) Application should consist of a 2-page NIH-style CV. plus a statement of career benefit
3) Applications are scored by executive for track record relative to opportunity and career benefit.
4) Applications are to be submitted with other travel awards in April. Awarded to be used from 1 July to 30 June of following year.
5) Current members of Executive ineligible.
6) Award to be “presented” at next ASI meeting after completion of travel

Moved: Stuart Tangye
Seconded: Lynn Corcoran.
Carried unanimously.

4. ICI 2016 BID report (Jose Villadangos)
On the basis of a decision to select either Melbourne or Brisbane (endorsed by AGM 2007), the Selection Committee visited venues, hotels and facilities in February 2008. Based on this, Melbourne was selected as bidding city. The bid was presented to IUIS in writing by ASI President Alan Baxter. A flyer was prepared and distributed at AGM. A new bid committee was formed and promotion strategy to be outlined in the first quarter of 2009.

The committee requests the support and assistance of all ASI members in promoting our bid. Names of IUIS Council members who will make the decision will be provided. Material and recommendations will be distributed (slides, flyers, etc). Decision will be made in during the ICI 2010 in Kobe, Japan.

Zhongdong Pan and Josephine Parra were thanked for organizing the ASI meeting.

The bid preparation committee wishes to thank Mike Pickford (ASN) for his advisory role during the selection process, and both he and Beverley Williamson (Melbourne Convention & Visitors Bureau) for assistance in preparation of the flyer and website.

The IUIS arranges insurance and therefore there is minimal risk to the Society. Having the ICI in Australia would enable students and postdocs to be exposed to the best in the world and will bring other students and postdocs to Australia, which could be good for recruitment.

Moved: Miles Davenport proposed the motion to support and congratulate the Bid Committee
Seconded: Andrew Lew
Carried by acclamation

5. Secretary’s report (Jose Villadangos)
Changes to ASI Council:
Outgoing:
Secretary: Jose Villadangos
NSW Councillor: Bernadette Saunders
QLD Councillor: Chris Schmidt

Incoming:
Secretary: Susanne Heinzel
NSW Councillor: Stuart Tangye
QLD Councillor: Heiner Korner

Membership Numbers
ASI has a total of 934 members

Awards
International Travel Awards: 4 Post-doctoral
with a pro 2007/08. Total assets are $601,435.25

Chris presented the accounts for the year

6. Treasurer’s report (Chris Andoniou)

Chris presented the accounts for the year 2007/08. Total assets are $601,435.25 with a profit of $56,566.93 during the last financial year. Expenditure for 2009 is budgeted at $239,618.60 for a predicted loss of $30,918.60.

Moved: Claudine Bonder
Seconded: Geeta Chaudri
Carried unanimously.

Chris Andoniou proposed changes to the financial year. The new beginning of the financial year will be 1st August and will end on 31st July of the following year.

Moved Chris Andoniou
Seconded: Bernadette Saunders
Carried unanimously.

7. Visiting Speaker’s Program (Jose Villadangos for Alejandro Lopez)

ASI sponsored speakers in 2008:
Wayne Yokoyama Washington University School Medicine, St. Louis, MO, USA
Pierre van der Bruggen, Ludwig Institute for Cancer Research, Brussels, Belgium

ASI Invited Speakers in 2008:
Steve Reiner, Abramson Family Cancer Research Institute, University of Pennsylvania
Hans-Georg Rammensee, University of Tubingen, Germany

Proposed and approved for 2009
ASI-Sponsored Speaker Janko Nikolich-Zugich from Oregon Health Sciences University to University of Arizona (USA)

Proposed and approved for 2010
ASI-Sponsored Speaker Jack Bennink from NIH (USA)
Expert on Antigen Presentation
Andrew Lew interjected to ask why we are cost cutting on visiting speakers. In particular, a recent speaker proved more expensive than expected, and costs had to be covered by State committee. Alan Baxter responded that ASI central and branches bear the responsibility of the costs for visiting speakers, in particular, local committees covering local expenses.

8. ASI Women’s initiative Bernadette Saunders

Barbara Fazekas de St Groth and Bernadette Saunders proposed to establish the ASI Women’s Initiative and requested support to set up a formal organization, under the auspices of ASI, to promote gender equity within ASI and the broader immunology community in Australia and New Zealand. An article was published in the ASI newsletter about women in immunology in Australia outlining the reasoning. The aim is to come up with positive proposals to help retain women in immunology and science (such as a list of women scientists), point out problems with promotions, childcare and NHMRC and to call for interest arising from the newsletter article

9. Editor of ICB report (Chris Parish)

Chris announced that the switch to NPG publishing group has been a resounding success. This is evident by:
• The impact factor for ICB has risen from 2.483 in 2006 to 3.033 in 2007, a 22% increase in the last year and the highest impact factor the journal has ever achieved!
• The number of article downloads from the ICB website, hosted on nature.com, has quadrupled since 2006 when Blackwell published the journal
• A 28% increase in the number of unsolicited papers submitted to ICB
• The financial returns to ASI from the journal have been much greater than originally expected.

The total number of manuscripts submitted in 2008 is estimated to be 232, and the acceptance rate for refereed papers was 41% in 2008. The new article type introduced last year, called Outstanding Observation, has begun to attract very high quality papers.

The current NPG publishing agreement expires at the end of 2009. A new, 5-year, agreement with NPG has been negotiated. The new agreement is very similar to the old one with important changes being the length of the agreement (5 years instead of 3), maintenance of subsidised hard copy subscriptions for ASI members ($35/annum) and sufficient funding to accommodate increases in Editorial Office expenses (expected if the journal continues to grow).

No ICB Publication of the Year Award was awarded this year (no eligible first authors).

Chris Parish will be retiring as the Editor-in-Chief of ICB at the end of 2010. It was decided that a Deputy Editor should be appointed, commencing in 2009, who will be groomed to take over the Editor-in-Chief position in 2011. Chris announced that Gabrielle Belz has provisionally agreed to accept the position. The length of her tenure as Editor-in-Chief should be 3 years in the first instance. In order to spread the editorial load a Special Features Editor has also been appointed, commencing in 2009 for a 3 year period.

Franca Ronchese has kindly agreed to accept this position.

Finally, Chris thanked the two News and Commentary Editors, Carola Vinuesa and Stuart Tangye, who have done a great job in 2008 recruiting excellent N&C articles for the journal.

10. FIMSA report (Guna Karupiah)

FIMS training workshop is held as satellite to 2009 conference. This will be a 3½ day training FIMSA/ASI workshop combined with ASI postgrad workshop before the 2009 Gold Coast meeting:

11. Meeting reports

Guna Karupiah reported on the 2008 Canberra meeting:
There were 13 invited international speakers. On 2 December a profit of $2,921 profit was predicted. 504 delegates were registered.

The next meeting will be held at the Gold Coast

12. Other business

Relations with Australian Society for Clinical Immunology and Allergy were discussed:
Ian Mackay urged the ASI membership to consider a closer association with ASCIA. The historical background was that ASI began in 1971, however, around the 1980s a restlessness arose from clinicians, particularly allergists and immunopathologists. They saw no vehicle for good representation of their special issues nor a body to lobby
government. Ian chaired a committee and recommended the clinicians stayed in ASI but this option lost out by one vote. The decision was that clinical immunologists should secede from ASI. The body sought college of allergy endorsement to create ASCIA.

It is distressing to Ian that the two societies have grown apart. Ian thinks that the two societies should not be divergent and that we should strive for a joint meeting. He has determined that it is not feasible to reconnect the two societies formally but suggests that there should be meaningful exchange between councillors which exists in theory but doesn’t really happen and that one sponsored session should be at ASCIA put on by ASI and vice versa.

Miles moved to thank Jose Villadangos and Alan Baxter for all their outstanding work for the Society
Seconded by Phil Hodgkin
Carried unanimously.

The story of the missing Bursa Trophy

Where is the Bursa trophy?

Finally if found what it was looking for ...

Got immersed in alcohol ...

With good company ...

Only to find itself completely trashed the next morning ...

It is CHRIS GOODNOW for

A boy in a bucket went swimmin'
With ideas about warts he was brimmin'
With his balls in the air
eureka was there
So his prick became God's gift to women

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 Australasian 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.
Report on the 38th Annual Scientific Meeting

It is certainly a sign that our Society has come of age when its annual scientific conferences consistently deliver five excellent days each year, packed with great science in a friendly family gathering kind of environment. The 38th meeting held at the National Convention Centre in Canberra in December 2008 was no exception.

As convenor, I must begin by thanking all those who worked hard in putting together various aspects of a successful meeting. The organising committee comprised Chris Parish and Chris Goodnow (Co-Chairs, Scientific Program), Geeta Chaudhri, Charmaine Simeonovic, Carola Vinuesa, David Tscharke, Matthew Cook, Ed Bertram, Gerard Hoyne and Lucy Coupland (Student Representative). The conference secretariat was ASNevents (Mike Pickford), which has been working with ASI for a number of years now and is getting to know ASI and its nuances quite well. Our major sponsors were BD Biosciences, Beckman Coulter, CSL and Techniplast. Thanks to the Committee’s (particularly David) and ASIN’s efforts, trade support was excellent. The use of a single shared space for posters, internet connection, catering, socialising and trade contact was quite effective and there was good feedback from our trade delegates.

On the Sunday, we ran two workshops: the Postgraduate Student Workshop (chaired by Gerard Hoyne) and the Tumor Immunology Workshop (chaired by Chris Parish). The Postgraduate Student Workshop was well attended with over 40 students and postdocs registering. Some of our invited international and local speakers were asked to speak of the major challenges their field of work faces in the 21st century. All the speakers embraced the challenge and there was a diverse range of topics covered including cellular immunity to infections and tumours, transplantation tolerance, autoimmunity, cancer stem cells and vaccine development. The sessions flowed well and the invited speakers were very generous with their time in leading discussions and answering questions. The Tumor Immunology Workshop ran in parallel and was equally well regarded by those who attended. Jonathan Cebon delivered the Ada Oration and the day was packed with superb talks.

The main meeting started in the afternoon with two outstanding plenary talks that really set the scene for the conference theme of “Immunological Challenges of the 21st Century”. The first was by Gus Nossal on “Immunological contributions to global health in the twenty-first century” that painted a broad-brush stroke picture of where we are in terms of vaccines and global disease burden. The next was by Mark Davis on “Visualizing T Cell Recognition and the Coming Golden Age of Human Immunology”; again a big picture talk warning us against the use of inbred mice as models for the study of human disease. We took this opportunity to celebrate the 50th anniversary of Gus’s work on one cell-one antibody and the 25th anniversary of Mark’s work on the cloning of the T cell receptor.

We had been warned about the potential of invited speakers pulling out at the last minute, but were very fortunate in our line-up of speakers. Not only did everyone turn up to deliver first-rate talks, but most also enthusiastically participated in discussions, in the Postgraduate Student and Tumour Immunology Workshops, in chairing sessions, judging posters and talks and immersed themselves in the meeting’s social activities, including the Student Function.

The Burnet Oration was delivered in fine tradition by Ian Frazer, informing and entertaining us on “Cervical cancer: its part in my (his) downfall”; certainly a leading example of the impact of basic research leading to clinical translation. Ian also featured in a lead role as a debater on the winning team later on in the week.

This year we organised a public lecture as part of the ASI conference. The public who fund and support our research should know of the exciting work that we immunologists do and the health benefits this brings for our common good. The lecture on Pandemic Influenza was organized in conjunction with the Australian National University and eloquently delivered by Anne Kelso.

The Kevin Lafferty Memorial Debate is certainly one event that many have come to anticipate each year. This year, since the meeting was in Canberra, we were able to invite Kevin’s wife Anne and his son Joseph to attend this fine spectacle arising from the intersection between humour and science. The topic of the debate was that “Basic immunology research does not translate into improved human health”. On the affirmative team we had Miles Davenport, Kathryn Wood and Alan Baxter and on the negative team we had Phil Hodgkin, Ian Frazer and Matthew Cook. Luckily for those of us frantically writing our NHMRC grant applications this year, the winning team was aided enormously by Alan Baxter, our outgoing president and third speaker on the opposing side. The highlight for me was Matt’s tenacity to hold on (and on) to a reasoned argument in the face of ridicule from Alan. The able moderator,
Lynn Corcoran, was able to restrain Alan long enough for a wrap up and awarding of the debate to the Hodgkin, Frazer and Cook team. Anne Lafferty then presented the newly commissioned ASI Lafferty Debate trophy.

All our social functions seem to have been a hit, but the standout from feedback was the Student Function that was held on Tuesday night. This was a resounding success thanks to the effort of Lucy Coupland, who was ably assisted by fellow student Katrina Randall. The function was well attended, with over 100 participants. To maximise the opportunity for interaction between students/post-docs and speakers, Lucy and Katrina assigned two invited speakers per table of 10-12 people, with the rest moving between tables. A trivia quiz was thrown in the mix to initiate discussion. This formula obviously worked like a charm.

One of the final presentations of the meeting was the ASI Rowley Medal to Phil Hodgkin for his significant contributions, in various guises, to the Society. The enthusiasm with which he has embraced the different roles he has played to advance ASI over the years is admirable – you would no doubt agree – an award well deserved.

We believe that ASI2008 continued the tradition of the Society’s annual scientific meetings: there was very good science, exchange of ideas (although sometimes heated), time to catch up with friends and colleagues – and perhaps even setup that new collaboration. I thank everyone who was involved in making it a success and wish the 2009 Committee all the best. Hope to catch up with you at the Gold Coast in December 2009.

Guna Karupiah
Recipients of the Student Travel Bursaries at the Awards Ceremony with outgoing Secretary José Villadangos and outgoing President Alan Baxter.

Deep in discussion at the Student Function.

Everyone had a nice time at the conference dinner held at the Australian War Memorial … some obviously more than others.

Chris Goodnow and Kathryn Wood impart their wisdom at the Student Function.
ASI Councillors’ News

N.Z. News

NZ ASI Meeting 2009 – June 4th & 5th

Registration and abstract submission for the 2009 NZ ASI Branch Meeting opens on March 9th 2009. The meeting, supported by the University of Auckland, University of Otago and the Malaghan Institute, has an exciting line-up of invited speakers: Ethan Shevach, (National Institutes of Health, USA); Wolfgang Weininger (Centenary Institute, Australia); Mariapia Degli-Esposti (Lions Eye Institute, Australia); Ben Marsland and Nicola Harris (ETH, Switzerland). For students, the coveted Immunet “Buck” travel award will be given to the best oral presenter (as well as great prizes for 2nd and 3rd places).

A fantastic buffet dinner at one of Wellington’s premium locations is planned for Thursday June 4th for only $50 per person and registration is free for NZ ASI members.

Please visit www.malaghan.org.nz/newsevents/NZASImeeting/ for more meeting information.

Immunet Medical Sciences Congress 2008

The members of the Research Theme ‘The Immunological Basis of Disease and Protective Immunity (Immunet)’ which is funded by the University of Otago, joined other biomedical scientists to contribute to the Medical Sciences Congress held in Queenstown in December last year. This was an opportunity to explore cross-disciplinary research opportunities. All conference delegates attended the plenary sessions whilst symposia and workshops were more discipline-specific. The theme for immunologists, physiologists, endocrinologists and physicians in related areas was ‘Inflammatory Disease’. There were presentations on the basic biology of inflammation, inflammatory bowel disease, spondarthritic disease, Johne’s Disease, TB vaccines, vaccine delivery systems and even ‘bacterial infection and intestinal permeability in cirrhosis’ (Stephen Riordan, University of Sydney).

In a session dedicated to students, seven people vigorously competed for the Glenn Buchan Student Prize. This was awarded jointly to Anthea Bouwer and Kristy Manning, each from one of two very competitive NZ universities, Otago and Auckland. Paul Coussens from Oregan State University (our invited international Johne’s Disease expert) and Bryce Buddle, Hopkirk Institute, were suitably impartial.

Joint Glenn Buchan Student Prize winners Anthea Bower (above) & Kirsty Manning

International Day of Immunology, April 29th 2009

Planning is underway to hold two events in NZ: The University of Otago in Dunedin and the Malaghan Institute in Wellington are both planning to host public lectures followed by refreshments with displays to celebrate International Day of Immunology. If you would like to be involved with the organisation or help out at the event, please contact: dscarlett@malaghan.org.nz (Wellington) or roslyn.kemp@otago.ac.nz (Dunedin). Please note Roslyn would particularly like students to be involved.

International Day of Immunology, April 29th 2009

Jo Kirman Councillor

N.S.W. News

Happy New Year to all – and congratulations to everyone who was successful in being awarded grants, fellowships and scholarships for 2009. Well done!

In my first report as ASI NSW Councillor, I would like to thank Bernadette Saunders for doing a terrific job over the past three years in this role. I can guarantee Bernie that I will be asking a lot of questions while I am getting the hang of this job! I would also like to thank the members of the ASI NSW Branch committee who will be assisting me with some of the more ambitious plans that we have for Immunology in NSW this year – plans are already underway for a Branch Retreat to be held in August/September in a very tranquil setting outside of Sydney; it will be a great opportunity to relax, get away from the hustle and bustle of Sydney and take in some of the great research that is being done locally. More details to follow – so watch this space.

Other than that, I look forward to working with many of you during my tenure as ASI NSW Councillor; feel free to contact me should you have any burning questions or suggestions for how the needs of ASI members across NSW could be served better by your local representative. All the best for 2009.

Stuart Tangye Councillor

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 around 300–400kb. 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. Thank you for your co-operation.

Jo Kirman Councillor
Queensland News


Pierre van der Bruggen visited Perth and Wellington for ASI as a sponsored speaker, and was very well received in those centres. Also touring for ASI as an invited speaker, Hans-Georg Rammensee (University of Tübingen) talked at the AHMRC on Thursday 20th on the topic “Patient-individual peptide selection for cancer immunotherapy”.

Grace Chojnowski, the Australasian Flow Cytometry Group (AFCG) president informs that the 32nd annual AFCG meeting will be held November 1st–4th 2009 at the Brisbane Convention and Exhibition Centre. For more details, please contact grace.chojnowski@qimr.edu.au or go to http://www.afcg.org.au/home.asp There will be a workshop at QIMR before the meeting and operators in the South East Asian region are invited to participate.

2009 promises to become a busy year for the Queensland ASI branch. We will host the 2009 ASI meeting at the Gold Coast (6–10 December) and in the days leading up to this meeting (3–6 December) there will be the 10th FIMSA Advanced Training Course at the Tangalooma Island resort. Have a look at the webpages (link through the ASI webpage).

Heinrich Korner
Councillor
A.C.T. News

The New Year will begin with the world Day of Immunology celebrations which will be held on April 29th. There will be a one day workshop to be held at the John Curtin School of Medical Research for high school students in Year 11 and 12 from all around Canberra. The purpose of the workshop is to highlight the important immunology research that goes on in Canberra and will include both basic science as well as insights into clinical immunology. The end of the day will see a public lecture to be held at the Finkel Lecture Theatre at the John Curtin School of Medical of Medical Research which will be given by the Director of the Queensland Institute of Medical Research, Prof. Michael Good. Further details for the lecture will be made available closer to the day.

This year we are looking at having a joint ACT and NSW ASI retreat which is in the planning stages. The tentative date for this occasion is September. This is to encourage closeness with our ASI colleagues in NSW so as to help foster collaborations in the future.

We are also looking at having one day themed workshops to promote further activities for the Society outside the normal local seminars.

Gerard Hoyne
Councillor

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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!

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S.A./N.T. News

2009 looks to be even better than ever for ASI members in SA/NT with even more cash in the kitty and a wonderfully vibrant scientific community ready for all the ASI events ahead. We are looking forward to the ASI speaker program this year but may have to take them for an extended time to the wine regions just outside Adelaide as our ‘mighty’ Torrens River has just been completely drained. This comes just days before tens of thousands of international and national guests are to arrive to enjoy our musical, art, fringe and motor sport festivities. Oh dear! Our thoughts are with our Victorian colleagues at this time and I will leave you with a reminder about Day of Immunology coming to a city near you!

Day of Immunology in Australasia

April 29 is Immunology Day, first celebrated in 2005 in more than 30 European states with great success strengthening public awareness of immunology as a basis for individual health and well-being. Since 2007, Day of Immunology has been a global event with Australian capital cities contributing significantly and beginning what promises to be the start of many immunological celebrations to come. As ASI, we embrace clinical and experimental immunology for the betterment of man-kind and look to share our knowledge with our fellow Australians on Day of Immunology.

I am very proud to say that over 750 people visited our stalls and attended our talks Australia-wide in 2008 which is a great testament to the organising committees in each of the states and territories (thank you!) and to the general public for showing interest in their own health and well being. We have photos of the events that took place linked to the ASI website (www.immunology.org). Information on the day’s events in Argentina, Australia, Brazil, Croatia, The Czech Republic, Finland, Germany, Greece, Hungary, Italy, Japan, Lithuania, Norway, Portugal, Serbia, Slovak Republic, Sweden, Turkey and the United Kingdom can also be found at the European Day of Immunology website (www.dayofimmunology.org).

Since 2007 this event has become bigger and bigger for us and I am happy to announce that 2009 will see New Zealand joining the cause with two major cities participating, Wellington and Dunedin. Stay tuned for more details and I look forward to seeing you at an ASI event somewhere soon.

Claudine Bonder
ASI Councillor for SA/NT and DoI Co-ordinator

ASI Visiting Speaker Program

Sponsored Speaker Visiting Australia in November, 2009

Janko Nikolich-Zugich MD, PhD, University of Arizona, Dept of Immunobiology, Tucson, USA

His laboratory is interested in the biology of cytotoxic T lymphocytes (CTL) in health, infection and aging. Much of the studies are performed in the context of the relationship between immunity and pathogens over the lifespan of the organism, with a specific emphasis upon the age-related defects in immunity and defects in homeostasis of the immune system.

Diagnosis of the most critical, primary defects in innate and adaptive immunity of the old age is being followed by studies to repair or modulate those defects by immune intervention as well as by tailored, rational vaccine design. His studies are often pursued by vertical model integration – using broad and fundamental studies in rodents to crystallize questions to be asked and verified in non-human primates, leading to final and most relevant studies in humans. The main virus targets of these studies are herpesviruses (HSV and CMV) and flaviviruses (chiefly the West Nile virus – WNV), although the research has more recently been broadened to bacteria (Listeria and Francisella).

One main topic of research in his lab is the selection, recognition, function, and homeostasis of cytotoxic T lymphocytes. We employ a combination of structural, molecular, transgenic, and functional approaches, using crystallographic modeling, TCR sequence and CDR3 length analysis, soluble and cell-bound TCR:peptide:MHC interactions, transgenesis and site-directed mutagenesis, and functional immunological assays. The emphasis of this approach is on following and manipulating the CTL response in vivo. This allows to precisely dissect the CTL recognition, CTL repertoire and CTL activation in a setting where CTLs combat natural pathogens or cancer in the course of a lifespan of an organism.
Australasian Society for Immunology
Annual Scientific Meeting
2009

Conrad Jupiters, Gold Coast
6th – 10th December

Confirmed Invited Speakers Include:

Shimon Sakaguchi, Institute for Frontier Medical Sciences, Kyoto University
Jason Cyster, University of California, San Francisco
Frederic Geissmann, Necker Childrens Hospital, Paris
Miriam Merad, Mount Sinai School of Medicine, New York
Bali Pulendran, Emory Vaccine Centre, Atlanta
Paul Kaye, Centre for Immunology and Infection, York University
Stefan Kaufmann, Max Planck Institute for Infection Biology, Berlin
Jürg Tschopp, Dept Biochemistry, University of Lausanne
Laurence Zitvogel, Institut Gustave Roussy, Paris
Fiona Powrie, Sir William Dunn School of Pathology, Oxford
Drew Pardoll, Johns Hopkins University, Baltimore

Organising Committee:

Chris Schmidt (Chair), Shayna Street (Secretary)
Christian Engwerda (Chair, Program subcommittee)
Maher Gandhi (Sponsor Inquiries)
Ken Beagley (Mucosal Immunology Workshop)
J. Alejandro López, (Tumour Immunology Workshop)

Held in conjunction with:

ASI Mucosal Immunology Workshop, 6th December
ASI Tumour Immunology Workshop, 6th December
ASI Infection and Immunity Workshop, 6th December
The ASI Postdoctoral Travel Award allowed me to attend the Annual meeting of the European Academy of Allergy, Asthma and Clinical Immunology (EAACI) in Barcelona, Spain, and to visit two German research institutes and present my data there.

The EAACI conference was attended by most leading experts in European allergy research and invited speakers from all over the world. The opening ceremony was an introduction to Catalan culture with guitar music, dance performances and food for the about 7000 participants. Getting up for the first “Meet the expert” session starting at 7:30 the next morning wasn’t that easy but worth it! The small morning sessions provided an historical overview and presentation of current findings by an expert in that particular area and allowed lots of interaction. This was followed by two plenary sessions (basic and clinical) after which the participants split up into smaller symposia, workshops, oral abstract and poster discussion sessions. A few sessions dealt with quite similar topics and maybe could have been combined in a more condensed program.

In addition to the regular poster presentations at the conference, the Junior Members of the EAACI (under 35) organise a poster session with dinner for Junior members only which took place on the second night and was great for meeting other young researchers. The regular poster sessions were held during lunchtime (with a sandwich lunch being provided) and were larger, but subdivided into several topics. A “poster walk” was chaired by two experts in the respective field of allergy research. My research interest is in mechanism of allergic reactions and immunotherapy. I presented my poster with the title “The T cell response to allergens is counter-regulated by the induction of regulatory T cells” and won the poster prize in my session. A highlight of the conference was Vijay Kuchroo’s talk who was invited to speak at the business meeting of the EAACI ImmunoLOGY Interest Group. He gave a great overview on recent findings regarding the development of Th17 cells. The conference was also great for catching up with former colleagues and collaborators.

Before travelling to Barcelona, I presented my data on induction of regulatory T cells and the modulation of the immune response to allergens by microbial contamination of pollen in a seminar at the Research Center Borstel in Northern Germany near Hamburg. The research group Molecular and Cellular Clinical Allergology headed by Dr. Wolf-Meinhard Becker is studying the properties of grass pollen as well as peanut allergens. Prof. Arnd Petersen is furthermore interested in the interaction of the grass pollen allergen Phl p 1 with epithelial cells. Contamination with LPS and other microbial products is likely to affect such processes as well as adaptive T cell responses. Other research groups studied the type of microbes growing on the pollen or are interested in the effects of LPS in general, so I received interesting feedback on my data.

The day after the conference I visited Freiburg in Southern Germany to present my results at a joint seminar of the Allergy/ Dermatology Research Group of the University Hospital and the Max Planck Institute for Immunobiology. I very much enjoyed discussing my data with researchers, in particular from Prof. Thilo Jakob’s group who are also interested in grass pollen allergy and immune modulation.

The Grainau Town Hall was the site for the talks, which accommodated the 500 attendees of the conference quite comfortably. All sessions were held at this venue, which was in the middle of this quaint little town with friendly faces and lots of tourists enjoying their summer holidays. The conference participants spent lots of time walking through the woods to get from conference venue to Hotel am Badersee, where the meals and poster sessions were held.

The Poxvirus 2008 conference was an adventure in long haul travel. The trip from Canberra to Frankfurt airport took nearly 21 hours, after which followed a 3-hour train journey to Munich, where we were met by the conference organizers at Munich Flughafen. Despite the apparent tiredness, it was nice to see many familiar faces of poxvirus biologists. We were then ferried by coach to the conference venue, high up in the German Alps in the little village Grainau. As it was getting dark, we did not appreciate the beauty of the surroundings till the next morning.

We reached the village just in time to check in and attend the opening ceremony, which had traditional German music in the background and of course, very decent German wheat and dark beers. The hosts were kind to the German participants and accommodated their nation’s passion by televising live the opening match of Euro2008 on three large screens around the hotel. Fortunately, Germany won.

The Annex of the hotel was close to the hotel and very comfortable. All sessions were held at this venue, which was in the middle of this quaint little town with friendly faces and lots of tourists enjoying their summer holidays. The conference participants spent lots of time walking through the woods to get from conference venue to Hotel am Badersee, where the meals and poster sessions were held.
The conference opened with a session on viral entry, which was fittingly chaired by the current “boss of poxvirology”, Bernie Moss from the NIH. There were various other sessions on a diverse array of poxvirus biology, including viral biology and genome structure, virion assembly, virus-host interaction and signalling, immunomodulation and pathogenesis, viral vectors, vaccines and therapeutics. The sessions most relevant to me were those that explored the area of immunomodulation and pathogenesis and the immune response to vaccines. Mark Buller gave a stimulating account of how expression of IL-4 by poxviruses overcame host genetic resistance by inducing an anergic state in CD4 and CD8 T cells. Stuart Isaacs underlined the importance of complement control proteins expressed by vaccinia virus in protection from complement attack. Linda Wyatt from NIH described various methods of enhancing recombinant MVA vaccines. George Gastegier, from Ingo Drexler’s lab in Munich reported different modes of antigen presentation and how these influence antigen requirements for poxvirus vectors. David Tscharké from Canberra presented interesting data on how we often overestimate the immunogenicity of vaccines by using inbred models of vaccination. Kevin Karem and Inge Damon from CDC, Atlanta gave very compelling data on monkeypox immunity and variola neutralization, respectively. Rafi Behnia from Shane Crotty’s lab showed evidence of the plasticity and redundancy of neutralizing antibody responses to the smallpox vaccine. There were many other interesting talks which stimulated much discussion between participants.

There were lots of informal interactions and it was great to catch up with some of our collaborators and exchange information and plan new approaches to fresh problems, etc. It was obvious that the field was expanding quite rapidly. Many groups were now actively involved in pursuing the immune response to poxviruses, in attempts to design better vaccines against poxviruses. In this respect, the question that came up time and again was “Which was the best surrogate animal model for smallpox?” This matter remained contentious.

After four literally full (0815-1830) days of talks, which ended with poster sessions at night, we were taken to the summit of Germany’s highest mountain, Zugspitz, for the conference dinner. This was an absolute feast – we were served lovely Bavarian cuisine which was washed down with their wheat beers, served in kegs which key people from different laboratories took turns to drink. At night, we were taken to the summit of Zugspitz, the highest peak in Germany. The conference dinner. This was an absolute feast – we were served lovely Bavarian cuisine which was washed down with their wheat beers, served in kegs which key people from different laboratories took turns to drink. Again, this was a concept that was revisited many times during the meeting. These talks were highlights and served as a fitting introduction to the high quality presentations and active audience discussion that followed in the days to come.

In October 2008, I attended the 10th International Symposium on Dendritic Cells (DC) in Kobe. This was my first trip to Japan so I decided to check out Tokyo before heading to the conference. Unfortunately, for most of my visit Tokyo was being drenched with typhoon rain that I had to fend off with a rather pathetic umbrella. I was somewhat consoled by the temperature controlled toilet seats. Two days later the bullet train deposited me in Kobe where I managed to dry out and attend what proved to be an excellent scientific meeting.

The Kobe DC meeting spanned five days and covered an extensive range of research from basic DC biology through to the application of DC in immunotherapeutic settings. Concurrent sessions were not held and as such, the program was limited to an impressive line up of speakers. Australia’s excellent contribution to DC research was obvious as we were highly represented amongst the speakers, session chairs and our publications were cited in numerous presentations.

The opening session left no doubt this would be an exciting meeting. Michel Nussenweig (The Rockefeller University) presented interesting, but contentious, research regarding regulation of DC development and the identity of the DC precursor. He provoked considerable discussion and heated comments from the audience, with the identity of the DC precursor remaining a hot topic throughout the meeting. Controversy reigned the following day with Ira Mellman (Genetech) claiming that DC can process and present antigen regardless of their maturation state. Again, this was a concept that was revisited many times during the meeting. These talks were highlights and served as a fitting introduction to the high quality presentations and active audience discussion that followed in the days to come.

The complexity of DC subsets was a major theme of the meeting. Currently, this is an exciting time for this research, given the availability of useful mouse models that greatly facilitate the analysis. Bernard Malissen (Center d’Immunologie de Marseille-Luminy) discussed elegant experiments utilizing the langerin-GFP and langerin-DTR-GFP mice. He also provided a cautionary message regarding the commonly used YAE antibody. Miriam Merad (Mount Sinai School of Medicine) described
developmental pathways contributing to DC subset complexity and William Heath (The University of Melbourne) provided functional insight into the contribution of specific DC subsets during viral infection. Finally, Wu Li (Walter and Eliza Hall Institute) described a thymic DC subset that is implicated in regulatory T cell development. This theme proved to be highly interesting as the complexity of DC subsets is now beginning to be unraveled.

Targeting DCs via surface receptors as a means to elicit immunotherapy was another theme of the meeting that generated considerable interest. Speakers described a variety of novel strategies for DC targeting. An exciting advance to this field is the identification of the ligands that bind DC target receptors. Intriguing evidence provided by Irene Caminisichi (Walter and Eliza Hall Institute), Caetano Reis E Sousa (London Research Institute) and Sho Yamasaki (RIKEN Research Center for Allergy and Immunology) implicated components of dying cells as the ligands responsible. A further advance was the work described by Sanskon Oh (Baylor Institute for Immunology Research). He targeted the same DC but via different receptors, to generate DCs that could evoke distinct functional outcomes in T cells. Finally, Derek Hart (Mater Medical Research Institute) outlined a DC targeting strategy via CD83 that showed great potential as an effective immunosuppressant.

The 10th International Symposium on Dendritic Cells showcased the excitement of current DC research. It was a meeting of excellent quality and high interest. I am very grateful to the ASI for facilitating my attendance at this meeting.

4th Congress of the Federation of Immunology Societies of Asia-Oceania
Taipei, October 17–20, 2008
Yuekang Xu
Walter & Eliza Hall Institute of Medical Research, Melbourne

Sponsored by ASI International Postdoctoral Travel Award and FIMSA Travel Bursaries, I attended the 4th Congress of the Federation of Immunology Societies of Asia-Oceania (FIMSA), held in the beautiful city of Taipei, Taiwan from October 17–20, 2008. The congress was made up of 16 symposia and 13 special lectures, which covered a broad scientific programme in Innate Immunity, Immune Synapse & Costimulatory Molecules, Cell Survival & Programmed Cell Death, Dendritic Cell Biology, Cellular Receptors & Signaling, Cytokines, Chemokines, & Inflammation, Regulatory T cell, Developmental Immunology & Immunodeficiency, Immunogenetics, T Cell Activation, Memory & Tolerance, Autoimmune Diseases, Allergy, Tumor Immunology, Immune Response in Infectious Diseases, Vaccination & Immunotherapy, as well as Transplantation Immunology.

Two hundred and twenty-three papers were presented. There were 1100 participants and over 35 invited speakers attended the congress. Leading experts included Nobel Laureate Professor Peter Doherty who presented recent advances in immunology entitled: “Killer T cells and immunodominance hierarchies”.

I found that the Keynote Lecture series at the beginning of each section were very helpful. They were delivered by famous experts in the fields allowing me catch up with the latest development in immunobiological sciences. Prof. Shizuo Akira (Japan) reported on the role of pathogen recognition in innate immunity. They identified a population of CD11c<sup>hi</sup>CD11b<sup>hi</sup> TLR5+/LP dendritic cells (LPDCs) in intestine which has unique abilities to activate various immune responses. Prof. Phillipa Marrack (USA) presented interesting data on recognition of MHC by T cell receptors and confirmed the theory that TCRs have been selected from the diversity of TCR repertoire. They showed that natural Tregs, Foxp3 physically interacts with AML1/Runx1, the activator of IL-2 and IFN-γ gene expression in conventional CD4<sup>+</sup> T cells, thereby conferring suppressive activity, while Prof. Alexander Rudensky (USA) highlighted the multiple means utilized by Treg to limit distinct types of immune responses.

Twenty-two Australians participated in this conference, including Prof. Steve Gerondakis (Burnet Institute) who gave a talk on the roles of NF-kB transcription factors in the development of specific thymocyte subsets; Prof. Nicholas J C King (The University of Sydney) on paradoxical roles of peripheral blood monocytes in West Nile Virus Encephalitis; and Assoc. Prof. Andrew Lew (WEHI) on “functional suicide of cross-presenting dendritic cells in vivo: a model for quantifying cross-presentation?” Their invited talks were very well received.

My oral presentation in the Dendritic Cell Biology section was directly after Andrew’s. Nine of my ten minutes presentation time was used to outline my research and highlight the main findings, leaving only one minute for a couple of quick questions. Time did fly during the talk! The most unforgettable moment during the conference was the time when I, together with five other lucky winners of FIMSA Travel Bursaries from other countries, attend the Award Presentation Ceremony. Each of us was presented with a bank cheque of 1000 US dollars.

Apart from the scientific knowledge gained at the conference, I also made good use of the time between the breaks in the conference to tour the beautiful Taiwan, a precious island that I have wanted to see since I was a child. I visited the National Museum of Taipei where I saw a lot of ancient treasures that I failed to see in the Forbidden City of Beijing. The Ali Mountain and Sun-Moon Lake are the best known scenic spots in Mainland, China, which impressed me greatly. I visited what was claimed to be the tallest building in Asia, the 101 building. The bird’s eye-view of the whole of Taipei at night from the top floor was sensational!
In general, I had a fantastic time during the conference, both scientifically and socially. I would like to thank ASI for supporting my attendance at this splendid scientific congress. This experience has been extremely motivational and has enabled me to become acquainted with some prominent immunologists in the world, which certainly laid a solid foundation for me to build up future scientific networks around the world.

ASSI Student Page

HANDY HINTS 101 for Immunology Students

It is early in the year where memories of holidays, beaches, great parties etc still fill our student heads. Thus, it seems best to slowly lead your immunology student research prowess via less cognitive and more visual medium, with a series of ‘Handy Hints’ images.

Look and remember the following ‘Handy Hints’, because in the words the American scientist, Dr Carl Sagan:

_Somewhere, something incredible is waiting to be known._

HANDY HINTS 101:

1. Never trust your experiment
2. Be kind ... NO ... be VERY kind to your supervisor!
3. Camouflage your geekiness
4. Be prepared to diversify

“You’ve broken down my immune system.”

Sustaining Membership

ASI Inc acknowledges the support of the following sustaining members:
- Freehills Patent & Trade Mark Attorneys
- Jomar Diagnostics

The Walter and Eliza Hall Institute of Medical Research

WEHI Seminars on the Web:
www.wehi.edu/seminars/

[Copyright approval has been obtained for use of all cartoons used in the Student Page]
So fellow students, throughout 2009, work hard, work happy……and you could just discover that something incredible!

Imogen Gillions
ASI Student Representative 2009

5. Avoid being a workaholic

6. Revere the source of your research funds

While experts remain at odds over the issue of when life begins, most agree it’s sometime after work.

"This is Doctor Bagshaw, discoverer of the infinitely expanding research grant."

7. Finally, always remember: No matter what happens in the lab there is that one person who will still love you ......

Areas of Strategic Research Investment (ASRI) Immune Strategies

Cutting Edge Vaccines for the 21st Century Forum
12th and 13th March 2009
Flinders University Conference Centre, Flinders University
Adelaide, South Australia

Register Free for the opportunity to network with experts at the forefront of vaccine development and research.

International and interstate guest speakers will include such names and topics as:

- Dr Geert Vanden Bossche, The Gates Foundation USA – Gates Vaccine Funding Initiatives.
- A/Prof Naresh Verma, Australian National University – Novel Shigella Vaccines.
- Dr Mario Lobig, Australian National University – Adjuvanted Japanese Encephalitis Vaccines.
- A/Prof Christine Wells, Griffiths University – Novel mechanisms of Innate Immune Regulation
- Prof Nikolai Petrovsky Flinders University – Breakthroughs in Vaccine Adjuvant Development

Please contact Bridgit McAteer-Carr (Bridgit.McAteer-Carr@health.sa.gov.au) for further information and registration.

Sponsored by vaxine
The Short-listed Limericks

Hoosen has made as his mission
Blockade of HIV transmission
Breast milk could be best
Since it passes the test
But the girls recommend circumcision.
Anon

To win in science the rules are quite few
Listen now while I tell them to you
Make your own work sound great
Publish ere it’s too late
And then earnestly hope it is true.
Steve Galli

Mice with a warm inner glow
Have worms in their ears you know
They’re re-writing the rules
with invertebrate tools
for our New Zealand guru, Le Gros.
Helen, Bernie and Aude

A young scientist from the wilds of St Paul
Flew Qantas in Minnesota in Fall
To Canberra he flew
To learn something new
But ran into the Fazekas wall.
Mark Jenkins (self described as young – nice going Mark)

The question nagging our soul
Is whether the Kiwis’ real goal
With the gift of the gab
Was the bursa to nab
As revenge for the underarm bowl.
Margaret Cooley + fellow diners

As a student I enjoyed science keenly
At ASI my ego took a beating
My supervisor is freaking
The mice are not mutating
Perhaps I will write limericks
for a living?
Erika Duan (maybe not Erika)

WIN $1,000 WITH AUSTRALASIA’S TOP 25

ASI is providing you an opportunity to win up to $1,000 by naming Australasia’s best immunological research in the last 25 years.

In 30 words or less, tell us:

What Australasian immunological research has led to demonstrable improvements in human health in the last 25 years?

The competition is open to current ASI members, and any number of entries may be submitted. Entries must arrive at the Secretariat by Friday 1 May 2009 and can be submitted by email to asi@21century.com.au with the subject line “AUSTRALASIA’S TOP 25.”

Submissions will be ranked by a hand picked panel of judges, who are excluded from entering.

The person who submits the best entry will be awarded $1,000.
Second prize is $500 and third prize is $250.
Where multiple people submit a winning answer, the prize will be divided between the winners.

The judges’ decision will be final and no further correspondence will be entered into.