N E W S L E T T E R

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Attacking type 1 diabetes from all sides

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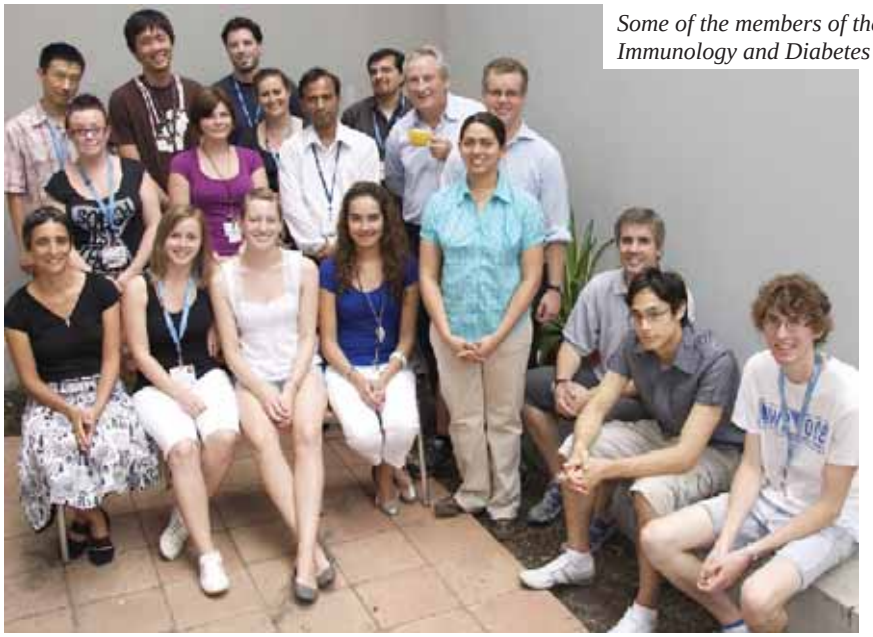
Overview

Type 1 diabetes (T1D) is an autoimmune disease that occurs when the insulin-producing beta cells in the pancreas are destroyed by a T-cell mediated immune response. Unusually for an autoimmune disease, T1D is most common in children and adolescents. The autoimmune destruction of the insulin-producing cells is believed to continue unnoticed until there are insufficient insulin-producing cells to maintain glucose homeostasis. Until Banting and Best discovered insulin, children with T1D died rapidly. The discovery of insulin, and its widespread availability, has allowed millions of people to lead full lives despite having T1D. Although dramatic, insulin treatment is no miracle cure. People with T1D are at increased risk of vascular complications which can lead to kidney disease and blindness for example. Hypoglycemia unawareness is also a potentially fatal complication.

We're interested in understanding and preventing the autoimmune response that leads to T1D. There are many unsolved basic immunology questions highlighted by T1D. For example, why does the immune system turn against the insulin-producing cells in an otherwise perfectly healthy person? This is another manifestation of the long-standing immunological puzzle of self-tolerance. In this case, the loss of self-tolerance is remarkably tissue-specific; only the insulin-producing beta cells, within the islets of Langerhans in the pancreas, are destroyed. Why do some people develop T1D, but not others? It is clear that T1D tends to run in families but genes, while they contribute, are not the full story. The genetic and epidemiological evidence suggests there is an environmental 'missing link', something that conspires with one's genes to precipitate T1D. The identity of this factor, or combination of factors, remains the subject of speculation.



Some of the members of the Immunology and Diabetes Unit

The study of T1D offers the possibility of applying new insights from the study of immune pathogenesis to the development of immune therapies to treat or prevent T1D. Manipulation of the immune system, in the form of vaccination, to prevent infectious disease, has been remarkably successful. To date, autoimmune diseases have not been amenable to antigen-specific immune therapies, similar to microbial vaccination. The ability to detect auto-antibodies and high-risk HLA haplotypes allows clinicians to identify people who are very likely to develop clinical T1D. These individuals are typically healthy, so if the autoimmune process could be blunted, by an antigen-specific therapy akin to vaccination, T1D might be prevented. Some people who already have established T1D can be treated by islet transplantation. This therapy is currently in its infancy, but early results from work at SVI and other centres around the world have shown improved glycaemic control and quality of life in diabetic recipients

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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

Welcome to the first issue of our Newsletter for 2010. You will find that there is an eclectic mix of articles. I would like to highlight 'Thoughts after my first year", a provocative opinion piece from Erika Duan in which she ruminates on her career options after a year as a postgraduate student. The photo says it all.

Three excellent scientists are to visit this year. Just yesterday Jack Bennink visited Dunedin in New Zealand and his presentation included impressive *in vivo* two photon microscopy of cellular movement within the draining lymph node following vaccinia virus infection. There was no accompanying music a la Ron Germain. What could we offer? *Shall I stay or shall I go?* Tricky rhythmically.

The request for input to compile a history of ASI should be drawn to the attention of all readers, particularly 'mature' immunologists. Keven Turner is eager to obtain those old ASI filing boxes so please do rise to the challenge. The origin of the Bursa, described some years ago in an ASI Newsletter, might well rate a mention. Phil Hodgkin (see photo at right) looks a tad threatened by its presence. Just who actually made this icon? Clearly, Jose, in the accompanying picture from the Gold Coast ASI meeting, doesn't have the answer – but then he is far too young to know. It could be fun to have some captions for these pictures for the next newsletter (deadline 1st May).

Margaret Baird

The Emu-nologist (Phil Hodgkin) with the Bursa

Introducing the Court Photographer – former ASI President, Alan Baxter. (Thank you, Alan, for the conference photos.)

Who knows, Jose?

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Contributions sought for the ASI Newsletter

You could win $200 !!

Deadline for the next issue : 1st May 2010

Please email your contributions to the Secretariat by the above date.
asi@21century.com.au

Attacking Type 1 Diabetes, cont.

after islet transplantation. Nonetheless, the development of successful islet transplantation for all those with T1D depends upon basic advances in immunology and islet biology.

As well as a fascination with the mystery of autoimmunity, our group is also interested in the biology of the beta cell. This is a highly specialized factory devoted to the production and secretion of insulin in exactly the right quantities in response to nutritional and neural stimuli. As well as this metabolic function, the beta cell clearly has the machinery to be recognized and destroyed by the immune system. The interaction between the immune system and the beta cell naturally leads to a focus on insulin itself as a likely target of autoimmunity.

The Immunology and Diabetes Unit, headed by Professor Tom Kay, at St Vincent's Institute of Medical Research in Melbourne, comprises five labs all working on different facets of T1D pathogenesis. The following is a brief description of the work undertaken by each lab within the Immunology and Diabetes Unit.

Human T-Cell Lab

Stuart Mannering leads the Human T-cell Group which was established in late 2008. Their work centres on understanding human $CD4^+$ T-cell specificity and function in T1D. $CD4^+$ T cell are well known for their central role in controlling adaptive immune responses. $CD4^+$ T cells are also pivotal to the development of T1D. Broadly speaking, the research program falls into two areas. First, analysis of the target antigens, and epitopes they contain, recognized by pathogenic $CD4^+$ T cells in people with T1D. The second research direction is to develop new assays to investigate the function of islet antigen-specific $CD4^+$ T cells in human blood.

In 2005, Stuart Mannering published the first report of an immune response directed against a modified form of insulin in T1D. The idea that autoimmune responses are directed against parts of self tissue that are modified has been around for a long time, but it has been very difficult to prove whether this applies to human T1D. The Human T-cell lab has continued to search for epitopes formed by post-translational modification. This work relies heavily on the CFSE-based techniques developed by Stuart Mannering that detect proliferation of rare auto-antigen specific T cells and clone these cells. The human autoantigen-specific T cell clones are used to dissect the antigen and epitope specificity of human CD4+ T cell responses in T1D.

The more clinically orientated projects investigate T-cell specificity and function following islet transplantation. The aim of this project is to dissect the immunology of islet rejection in islet transplant recipients. Because all of the recipients have long-standing T1D, the transplanted islets may be exposed to immune-mediated rejection from a recrudescent autoimmune response and/or classical allo-immunity. Advances in this area will guide the management of immunosuppressive therapies in transplant recipients and lead to better graft outcomes.

Immunogenetics Lab

The Immunogenetics Lab is lead by Tom Brodnicki who, with his group, joined SVI in 2009. Their work focuses on how genetic and environmental factors increase one's risk for developing autoimmunity, in particular T1D. It is typically assumed that detrimental genetic variation contributing to disease should be removed by negative selection. However, recent genetic studies suggest that alleles associated with T1D susceptibility are common within the human population. One possible explanation for the relatively high prevalence of some T1D susceptibility alleles is that they confer increased resistance against infectious diseases. On the other hand, the hygiene hypothesis suggests that certain childhood infections may temper the immune system and decrease the risk for developing autoimmunity in genetically at-risk individuals. Studying this dichotomy in humans is difficult due to genetic heterogeneity and tissue availability. Instead, mouse models have been widely used to better understand the overlapping genetics and disease pathology of infection and autoimmunity.

The principal strategy of the Immunogenetics group is to study the genetic interplay between infection and autoimmunity within the nonobese diabetic (NOD) mouse, which spontaneously develops T1D similar to humans. Selective mating of NOD mice with C57BL/6 mice, a non-diabetes-prone mouse strain, has enabled them to begin fine mapping and characterising three different loci linked to T1D. Curiously, the NOD mouse doesn't always harbour a T1D susceptibility allele. Surprisingly, they found that C57BL/6 mice harbour a susceptibility allele for *Idd14*, a T1D locus on chromosome 13, that exacerbates disease when bred onto the NOD genetic background. Furthermore, these so-called congenic NOD mice are more resistant to bacterial infection compared to NOD mice that do not harbour the C57BL/6-derived genomic interval for *Idd14*. The Immunogenetics lab's work aims to identify the underlying genes for these different loci, as well as determine if certain T1D susceptibility alleles confer resistance against infectious disease.

Islet Biology Lab and Autoimmunity Lab

Helen Thomas and Jan Allison head the Unit's program to study the mechanisms of pancreatic beta cell destruction in diabetes. The goal of the Islet Biology Lab lead by Helen Thomas is to understand how the immune effectors of pancreatic beta-cell destruction, $CD8^+$ and $CD4^+$ T cells and macrophages, kill beta cells, and how beta-cell destruction can be prevented. In the NOD mouse model of T1D, and humans, there is good evidence that beta cells are destroyed by apoptosis. Members of the Islet Biology Lab have studied beta-cell apoptosis induced by perforin/granzymes, Fas/FasL and inflammatory cytokines in mouse models and human islets.

Helen Thomas and members of her lab have developed techniques to study primary beta cells by flow cytometry and analyze of beta-cell death in vitro. Isolated mouse and human islets are used as targets for recombinant effector molecules or CTL (cytotoxic T-lymphocytes), and to study the effects of inhibition of beta cell death pathways. They have also developed reporter mice that will be used to study the types of cells responding to pro-inflammatory cytokines *in vivo*, and the timing of this response as T1D develops spontaneously in NOD mice. This is important because cytokines are current targets of clinical trials in diabetes, without exact knowledge of their local and/or systemic role.

Beta-cell apoptosis is also a feature of type 2 diabetes. The Islet Biology Lab has been studying the intracellular signaling pathways

activated in beta cells in response to high concentrations of glucose. In collaboration with Andreas Strasser (WEHI) they have used islets from mice lacking pro-apoptotic molecules in cell-death assays, and discovered a role for Bim, Puma and Bax in glucose-mediated toxicity of islets. Further studies into the role of these molecules in models of type 2 diabetes are planned for 2010. Jan Allison and members of her Autoimmunity Lab have studied the requirement of pro-survival molecules for prevention of beta cell death in response to developmental cues, pro-inflammatory cytokines or cytotoxic drugs.

One of the important aims of the Islet Biology and Autoimmunity Labs is to translate the work to human beta cells using islets isolated by the Tom Mandel Islet Transplant Program. Islet transplantation is a powerful platform on which to test new therapies for prevention of beta-cell death.

The Immunology Lab

Diabetes in NOD mice and probably in humans is mediated by $CD8^+$ CTL. This discovery by several laboratories some years ago was surprising. It has led Tom Kay and his group to dissect how CTL specific for the beta cell develop in the thymus, become activated in the pancreatic lymph node, migrate to the pancreatic islets and kill beta cells. CTL have been identified in NOD mice that recognize epitopes in insulin and several other islet proteins including IGRP and GAD. The lab has addressed the issue of whether one of these antigens is recognized first or whether many antigens in the beta cell are recognized at the same time. Inducing tolerance to proinsulin by transgenic overexpression in antigen-presenting cells prevented diabetes and autoimmune responses to IGRP measured by MHC tetramers. In contrast, tolerance to IGRP neither prevented diabetes nor responses to other beta cell autoantigens. These data are part of the basis for viewing proinsulin as the primary antigen recognized in diabetes in mouse and perhaps in humans.

Another major issue is how antigen presentation by beta cells affects the differentiation of CTL into T cells that kill compared with the role of dendritic cells in the pancreatic lymph node and the islet. The lab has studied the effect of overexpression of SOCS1 in beta cells. SOCS1 protects beta cells from CTL and we have established that this protection is mainly due to reduced MHC class I expression on beta cells. Loss of antigen presentation by beta cells prevents CTL recognition but does not appear to prevent the differentiation of CTL measured by the expression of cytotoxic molecules such as Granzyme B.

The challenge is to apply these insights into how CTL cause diabetes in NOD mice to diabetes in humans particularly in conjunction with the islet transplant program.

The Tom Mandel Islet Transplantation Program

The capability to perform human islet allotransplantation is important in offering Australians with T1D the best available medical treatment and in establishing a platform to apply future developments in beta cell replacement such as xenotransplantation or stem cell based therapies. It is also a valuable opportunity for clinical research both on the transplant recipients and on the excess human islets obtained but not transplanted. Islet isolation from donor pancreata is carried out by a highly skilled team led by Tom Loudovaris. The Tom Mandel Islet Transplant Program (TMITP) is part of the Australian Islet Transplant Consortium which includes Westmead Hospital in Sydney and the Queen Elizabeth Hospital in Adelaide. Funded by the Department of Health and Ageing and administered by the Juvenile Diabetes Research Foundation, the purpose of the TMITP is to advance islet transplantation through translational research and by providing high-quality clinical care. Since December 2007 and up until the start of 2010, the TMITP has successfully performed 10 transplants into six recipients. Three of these recipients are now insulin independent and the others have had a fall in daily insulin usage. Patients with severe hypoglycaemic episodes that do not respond to other therapies such as insulin pumps are eligible for transplantation. All of the transplanted recipients have experienced resolution of this life-threatening problem,

There are continuing limitations to islet transplantation: impaired function and viability of islets prior to and soon after transplantation, later loss of graft function, and the side-effects of immunosuppressive drugs. With appropriate donor consent for research, human islets that are not suitable for transplantation are used for research by our group and 10 other Australian research groups. This has been a highly beneficial side-product of the clinical transplant program. Previously, human islets have been very difficult to obtain in Australia because they do not survive the flight from islet transplantation centres in the United States. Islets isolated by the TMITP have been used for a range of applications, including electron microscopy tomography, clinical immunology and in studies within the Immunology of Diabetes Unit at SVI. Islet biology research originally used immortalised cell-lines, then changed to primary rodent islets; now human islets enable work in the Immunology of Diabetes Unit to come closer to clinical translation.

Conclusion

Further information about the Immunology and Diabetes Unit at St Vincent's Institute, can be found at our website (www.svi.edu.au). Laboratories in the unit are funded by the National Health and Medical Research Council, National Institute of Health, Juvenile Diabetes Research Foundation Federal Department of Health and Ageing and the Diabetes Australia Research Trust. We would also like to acknowledge the contribution of our support staff and collaborators at SVI and elsewhere.

President's Column

Last December saw another great annual meeting, very well attended and full of great presentations. The standard of the annual conference keeps getting better and better, as feedback from members demonstrated. The venue was positioned to allow a swim before the first session for the adventurous. Luck was with us and the weather was fine for the memorable outdoor conference dinner. I hope the great experience will encourage a good attendance at the Perth meeting this December.

The ASI Council reported on a number of new initiatives in 2009 to provide increased opportunities for members (covered in the AGM minutes opposite and the Secretary's report on page 9). One of the major projects in the pipeline is a bid to host the 2016 International Immunology Congress in Melbourne. This has been put together through the efforts of Jose Villadangos at WEHI, with the support of his bid committee. The outcome of this will be decided at the 2010 International Immunology Congress in Japan in August. If successful it will be a major opportunity to showcase Australian Immunology to the world.

Finally, the Council thanked the departing Councillors for their efforts over the last three years, and welcomed new arrivals – including the Vice-President for 2010 (and President-Elect for 2011-2012), David Tarlington of WEHI, Melbourne. I hope all members will make 2010 a year to get involved in ASI activities – in local branches, the International Day of Immunology, and at the upcoming annual meeting.

Miles Davenport

The committee of the XI International Congress of Reproductive Immunology are pleased to announce that abstract and registration submission is now open. The congress will be held in Palm Cove, near Cairns in Queensland, Australia, from August 15 to August 19, 2010.

The committee has assembled a world-class scientific program that will highlight cutting-edge topics in basic and clinical reproductive immunology. The program will include immunology of pregnancy, the placenta and the fetus; female and male gamete development and embryogenesis, infectious disease and mucosal immunology; inflammation and autoimmunity; developmental immunology; and translational research in infertility and pathologies of pregnancy, and vaccines for STIs and fertility control. There are travel grants, and awards for best oral and poster presentations, for student and trainee delegates.

To register and submit your abstract, please visit the web site:

www.icri2010.org

Abstract and Registration – Closing Date 31st May 2010

We look forward to seeing you in Palm Cove.

Sarah Robertson
Chair, Local Organising Committee XI ICRI 2010

MINUTES – ASI ANNUAL GENERAL MEETING

8 December 2009, Conrad Jupiters, Gold Coast, Queensland

1. ATTENDANCE AND APOLOGIES

Attendance: 63 (at start of meeting)

Apologies: Senga Wittingham, Tony Cunningham, Ian Mackay

2. CONFIRMATION OF MINUTES AGM 2008

Moved: Anne Kelso, Seconded: Judith Greer, Carried.

3. RECEIPT AND APPROVAL OF REPORTS FROM COUNCIL

3.1. President's Report (Miles Davenport)

2009 has been an extremely exciting year on a number of fronts: Firstly, we have crossed the threshold of 1,000 members for the first time. This is a tribute to the efforts of the past and present Councillors and their committees in organizing local events and speakers to make ASI an 'all year around' part of the immunology scene. I think the strength of the science presented at the annual meeting has also been a major contributor, and our thanks should go to the organizers of these meetings over the last few years who have put so much effort into making it a truly world class meeting.

On the meetings theme, 2009 has been an exciting year with FIMSA, ASI Annual Meeting, and ICI 2016 all on the agenda. The annual meeting organizers have chosen a wonderful venue – and given that the 2007 Sydney meeting was also beachside, this seems to be becoming a 'surf and science' theme [of which I would be an enthusiastic supporter]. I am looking forward to a very stimulating and enjoyable session.

The FIMSA conference caused a little stir at last year's Council meeting, when we were called upon to organize it at 12 months notice. We were extremely fortunate that Simon Apte and his team were undaunted by this challenge, and put in an enormous effort to put together a spectacular program. The enthusiasm of members is shown by the fact it was oversubscribed, and I have heard great reports of its success.

Finally, preparation of a proposal for an Australasian bid for ICI-2016 has been underway behind the scenes, with Jose Villadangos and his team collecting information to present to Council. This is an exciting challenge for ASI, as it is an enormous enterprise with a budget of around $5 million. I look forward to further discussions on this during this meeting.

During the year the Council has developed a number of new initiatives to support members. These include:

Senior travel awards

It has long been noted at Council that although there are lots of travel grants and bursaries for junior members, there is little opportunity for members beyond their first few post-doctoral years. At last year's Council meeting it was agreed to establish two senior travel awards to support mid-career or established members valued at up to $10,000. Both the Gordon Ada and Jacques Miller awards were given in 2009, to Mark Smyth and Stephen Nutt respectively. Members are encouraged to apply for these, and in particular note that they are targeting mid-career as well as established members

ASI session at AAI

At the mid-year Council meeting it was decided to investigate other options to support travel by more mid-career and senior members. Three people were asked to put in proposals for an ASI session at the American Association of Immunologists (AAI) Congress in Seattle in May. Jose Villadangos submitted a proposal for a session on "Dendritic cell specializations from bench to bedside", which was selected by executive as bid to put forward to AAI 2010 organisers. This was approved by AAI 2010 committee. The Council will await reports on this and, if it is successful, call for interest to organise another session in 2011.

Post-doc travel awards to annual meeting

It was noted at the last Council meeting that although there were international travel awards for post-docs to attend conferences overseas, there were no similar awards to ASI meetings. This was corrected this year, and Chris Schmidt and his committee made two awards post-docs to attend the ASI annual meeting. It is hoped numbers will increase as members become aware of this scheme.

Women in Immunology Breakfast

At last year's meeting there was a call for action to support women members, particularly through mentoring by more senior members. Judith Greer has been very pro-active on this, organizing the inaugural "ASI Women in Immunology Breakfast" on Tuesday. ASI Council enthusiastically supports this initiative. Reports suggest that the breakfast was a great success and unfortunately was oversubscribed so some missed out.

3.2. Secretary's Report (Susanne Heinzel)

Total membership: 1046

Incoming and outgoing councillors are show in table below.

Travel Awards:

Two Senior Travel Fellowships (Gordon Ada and Jacques Miller Travel Awards)

International Travel Awards: Postdoc: 4, Postgrad: 6

Travel bursaries to attend annual meeting: 24 Postgrads and 2 Postdocs

Student bursaries to attend FIMSA training course: 28

3.3. Treasurer's Report (Chris Andoniou)

Chris presented the accounts for the year 2008/09. Total assets are $585,000 with a loss of $38,000 during the last financial year with $53,000 outstanding as meeting loans, which are likely to be repaid. Expenditure for 2010 is budgeted at $225,000 for a predicted loss of $25,000.

	Position	Outgoing	Incoming
Executive	Past President	Alan Baxter	
	Vice President		David Tarlinton
	Treasurer	Chris Andoniou	Pablo Silveira
Voting Council	SA/NT Councillor	Claudine Bonder	Michele Grimbaldeston
	ACT Councillor	Gerard Hoyne	Stephen Daley
	WA Councillor	Delia Nelson	Alec Redwood
Non-voting council		Phil Hodgkin	
	Meeting Coordinator		Bernadette Saunders
	Incoming DoI Coordinator	Geeta Chaudri	Delia Nelson
	Student Representative	Imogen Gillions	TBA
	FIMSA Representatives	Guna Karupiah (confirmed as ASI rep on council)	

Moved: Miles Davenport, Seconded: Alan Baxter, Carried.

3.4 ICB Report (Chris Parish)

- The impact factor 3.859 for 2009 (rise of 27% from 3.033 in 2007). ICB is now ranked 28th out of a total of 121 immunology journals, jumping from 47th in the previous year.
- There has been a 28% increase in the number of unsolicited papers submitted to ICB in 2009, this increase mainly occurring since the increased impact factor was announced mid year.
- The newly introduced article type 'Outstanding Observations' is going extremely well.
- The acceptance rate for refereed papers was 32%; the national content is approx. 25%.
- The 'Special Features' have continued to be very successful during 2009 and will be continued during 2010. At this stage, three Special Features have been planned for 2010, which are as follows:

January– Innate immune activation in gouty arthritis
March-April – What drives Th2 immunity?
May-June – Understanding the biology and function of Langerhans cells.

Special thanks go to Franca Ronchese as Special Features editor.

Editorial: Chris Parish will be retiring as Editor-in-Chief of ICB at the end of 2010. Gabrielle Belz became the Deputy Editor of the journal and will take over the Editor-in-Chief position in 2011. Franca Ronchese became the Special Features Editor. Carola Vinuesa and Stuart Tangye continued to perform a wonderful job in recruiting excellent N&C articles for the journal. The term for current Editorial Board members ends in December 2009 and, with the help of Gabrielle Belz, a substantially changed Editorial Board of 48 members has been assembled, their duties commencing in January 2010.

Tony Basten commended Chris Parish for ICB and its success.

3.1. FIMSA Report (Nick King)

The 10th FIMSA Advanced Immunology Training Course held at Tangalooma prior to the ASI meeting, 3–6 December was a great success (the best one Nick K has ever attended). The course was oversubscribed. Special thanks go to Simon Apte, Denis Doolan, Stephanie Yerkovich and many others. Eight FIMSA scholarships were given to overseas students to attend the training course. FIMSA's efforts now are to support ICI2010 in Japan.

3.2. IUIS Report

No items discussed

3.3. Meeting Reports

2009 Gold Coast (Chris Schmidt)

More than 600 delegates attended making it the largest ASI meeting outside the international meeting held in Melbourne. The meeting will run with a financial profit. Chris thanked Chris Engwerda's program committee, Maher Gandhi (treasurer) and everybody else on the organising committee for an extraordinary job. The AGM voted to thank Chris Schmidt for a fantastic meeting.

2010 Perth (Chris Andoniou)

To be held at the Perth Convention Centre 5–9 December.
Satellite Meetings: Tumour immunology, Infection and Immunity, Student workshop
Organising Committee: Chris Andoniou (Chair), Tony Scalzo, Prue Hart, Delia Nelson, Jane Allan, Andrew Currie, Deborah Strickland, Matt Wikstrom, Meri Tulic
Confirmed Speakers:
James Allison, Memorial Sloan-Kettering – tumour immunology
Rachel Caspi, NIH – autoimmunity/uveitis
Tracy Hussel, Imperial Collage – lung inflammation/innate immunity
Dan Littman, New York University – T cell differentiation/HIV
Andrew Luster, Harvard University – Lymphocyte migration
Bernard Malissen, INSERM – T cell responses/DC
Eleanor Riley, London School of Hygiene and Tropical Medicine – NK cells/malaria
Ralph Steinman, Rockefeller University – DCs/cancer
Brigitta Stockinger, NIMR, London – Th17 differentiation
Burnet Oration – Chris Goodnow

Future Annual Scientific Meetings

2011 SA/NT: Adelaide Convention Centre, 11–15 December. Organising Committee formed, with Claudine Bonder as Chair.

Next meetings:
2012 Vic/Tas, 2013 NZ

4. RECEIPT AND APPROVAL OF FINANCIAL STATEMENTS

Proposed resolution: That the AGM approves the 2008–2009 reports from Council.
Moved: Lindsay Dent, Seconded Chris Parish, Carried.

SPECIAL BUSINESS

5. SPECIAL RESOLUTIONS TO AMEND THE RULES OF THE AUSTRALASIAN SOCIETY FOR IMMUNOLOGY INC.

Special resolution 1: *That clause 40 of the Rules of the Society be replaced by:*
Notices
40.(1) Notwithstanding any other provision in the Rules, any notice by or to the Society (or any officer of the Society) may be delivered, posted, faxed, sent by electronic communication or given in any other manner authorised by law.
40.(2) A notice includes but is not limited to nomination of a person for membership, a ballot and any communication that is required to be in writing.
40.(3) The Electronic Transactions (Victoria) Act 2000 applies to electronic communications.
40.(4) If a member has more than one address, it will be sufficient if a notice is sent to any of the addresses.
Proposed: Chris Andoniou, Seconded: Andrew Lew, Carried.

Special resolution 2: *That clause 25(1)(c) of the Rules of the Society be replaced by:*
25(1)(b) the ordinary members of Council being; one Representative of NSW, Victoria, Queensland, Western Australia, the Australian Capital Territory, one joint representative from South Australia and the Northern Territory, one joint representative from Victoria and Tasmania, and one Representative of New Zealand
Proposed: Andrew Lew, Seconded: Bernie Saunders, Carried.

Special resolution 3: *That clause 25(2) of the Rules of the Society be replaced by:*
25(2) The position of each of the Representatives shall be filled by election as set out in these Rules for a period to run until immediately after an Annual General Meeting which is the third Annual General Meeting after the Annual General Meeting after which he or she attained office.
Proposed: Alan Baxter, Seconded: Alejandro Lopez, Carried.

6. OTHER BUSINESS

6.1. ICI2016 Bid update (Jose Villadangos)

Jose presented an overview of the progress and the essentials of the bid document to be submitted to the IUIS to hold the ICI 2016 in Melbourne Australia.

- Selected venue: MCEC which can hold up to 10,000 delegates comfortably
- Collaborating societies: FOCIS (1 day clinical workshop) and ASCIA
- ASI membership per capita is much higher compared to other societies (equal to Japan, UK, 2 x USA, or Germany, 5x Canada, 15 x Brazil)
- Sufficient accommodation nearby conference venue (5,400 rooms in walking distance)
- PCO listed on bid document: Arinex (strong track record and positive feedback from other meeting organisers)
- $300,000 seed funding from MCVB and $300,000 from Victorian State Government secured
- Lobbied at the ECI 2009 meeting in Berlin with a function hosted by the Australian Ambassador to Germany, Switzerland and Lichtenstein
- Predicted registration fees: $875 (full) or $460 (student)
- Breakeven number is approx 2000 delegates (a local Melbourne meeting can draw 1000 delegates). Predicted profit for 4000 delegates: $230,000. Worst case scenario: $350,000 loss
- Supporting letter from IUIS president Peter Doherty received.

Two ways of running the conference if bid is won:

- Option 1: Set up a shelf company to run ICI2016 with $100,000 seed loan from ASI. Maximum total loss to ASI: $100,000. Shelf company enters agreement with PCO, IUIS, MCVB.
- Option 2: ASI runs the meeting. All agreements are with ASI.

Responses to questions from floor:

- Seeding funds do not have to be paid back if the bid is not won.
- There are no tax implications whether congress is run by company or ASI.
- No annual ASI meeting would be held if ICI2016 was to be in Australia. The meeting roster would be moved back for one year.
- The PCO and MCVB have extensive experience in promotion of such events.
- The meeting would be held in second half of August 2016.

Miles Davenport thanked JV and his team for putting together the bid.

7. OTHER BUSINESS

Special thanks to all outgoing councillors: Alan Baxter, Chris Andoniou, Gerard Hoyne, Delia Nelson, Phil Hodgkin, Imogen Gillions.

8. MEETING CLOSE

1.40pm

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.

Honorary Secretary's News

2009 has been an exciting and eventful year for ASI.

ASI has decided to put in a bid to hold the International Congress for Immunology (ICI) 2016 in Australia. Melbourne was chosen as the host city should we win the bid. A bidding committee led by Jose Villadangos has put together an excellent bidding document, which was submitted to the IUIS in December '09. Watch this space for news on this exciting development.

The new Gordon Ada and Jacques Miller Senior Travel Awards were given out for the first time in 2009. These awards are designed as opportunities for mid-career members who want to go overseas and are worth up to $10,000 per award. The next round for applications will be called for in March for travel within July 2010 to June 2011. We greatly encourage our mid-career members to consider this exciting opportunity for travel planned later this year or early 2011. Don't be shy about putting in an application!

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), free online subscription to our Society journal, *Immunology and Cell Biology* (with its ever increasing impact factor) along with access to *Nature Immunology* and *Nature Reviews in Immunology*, a free quarterly Newsletter and (most importantly for some) eligibility to apply for our bursaries and travel awards.

I'd like to take this opportunity to remind everybody to renew their membership in time, particularly those who want keep their options open to apply for any of the travel awards. For these people, renewal before 1st April is essential. In order to be eligible for postgrad or postdoctoral travel awards, the applicant must have been a full 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 2010 will be called in March and applications for travel in the first half of 2011 will be called for in October.

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

Susanne Heinzel
Honorary Secretary

The ASI Visiting Speaker Program

February/March 2010

Professor Jean-Laurent CASANOVA
Rockefeller University, New York, USA
Laboratory of Human Genetics of Infectious Diseases, Rockefeller University
University Paris René Descartes, *Hôpital Necker – Enfants Malades*

Professor Jean-Laurent Casanova is an extraordinary paediatrician and immunologist who identified genetic mutations predisposing individuals to specific pathogens, a finding that has both challenged and brought together divergent theories.

Prof. Casanova has been invited by the Royal College of Pathologist of Australia and was kindly made available for presentations for immunologists: **"**From Paediatric Infectious Diseases to Inborn Errors of Immunity: Immunology *in Natura*"**.**

They will take place:
Friday, February 26, 1pm at the WEHI, Melbourne (Phil Hodgkin; hodgkin@wehi.edu.au)
Tuesday, March 2, 10am at the QIMR, Brisbane (J. Alejandro López; alejL@qimr.edu.au)

In addition, during his visit to Brisbane Prof. Casanova will attend following meetings to which all ASI members are welcome:

Tuesday 2 March
8-10am – Visit to Qld Health Laboratories (RB&WH)
11am - 1:30pm – Talking to QIMR Immunologists (including lunch)
1:30-5pm – Case reviews at the Royal Children's Hospital
7pm – ASCIA dinner (ASI members welcome). Sponsored by Abbott

Wednesday 3 March
7:45-9am – Paediatrics Grand Round at the Royal Children's Hospital (RCH 5 floor) teleconferenced around Qld – general paediatricians and trainees – breakfast afterwards.

Dr Jack BENNINK
Chief, Viral Immunology Section, Laboratory of Viral Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, (MD), USA

Dr Jack R Bennink is a Senior Investigator and Chief, of the Viral Immunology Section in the Laboratory of Viral Diseases in the National Institute of Allergy and Infectious Diseases at the National Institutes of Health in Bethesda, Maryland. His research program has a long-standing interest in understanding the basic cell biology and cellular immunology of the MHC class I-TCD8+ system of immune recognition and anti-viral immunity. There are three main areas of interest including: studies of the cell biology of MHC class I associated antigen processing pathways, and the folding, trafficking, and assembly of viral proteins, particularly influenza A virus (IAV) hemagglutinin (HA) and PB1-F2; cellular immunology studies examining the activation, repertoire, and function of anti-viral TCD8+ and other immune cells; and studies examining influenza virus biology including IAV antigenic variation and pathogenicity.

ASI Presentations
I. Intravital imaging of the anti-viral immune response
II. Antigenic drift: Mechanisms of influenza A virus hemagglutinin immune escape

The first half of the seminar will cover intravital visualization of virus infection and the immune response. It will focus on imaging of the initial *in vivo* events in infection of a lymph node including localization of naive CD8+ T cells to an area we have defined as the peripheral interfollicular region where they are activated though interaction with dendritic cells. Work in progress on imaging of CD8 + T cell responses in the periphery will also be presented

The second half will describe our studies that have led to the establishment of a new model for influenza A virus antigenic drift. These studies have demonstrated that mouse polyclonal antibody responses select for HA with increased receptor avidity, and that virus reverts to wild type HA avidity in naive mice. They further show that mutations throughout the globular domain affect receptor avidity leading to the important conclusion that sequence variation in HA results from both epitope escape and receptor avidity modulation.

February 23 – Dunedin
February 25 – Sydney
Feb 26 - Mar 1 – Melbourne
March 2 – Adelaide
March 3 & 4 – Canberra
March 4 & 5 – Brisbane

The visit is being co-ordinated by Dr Guna Karupiah from the ANU, Canberra (Guna.Karupiah@anu.edu.au)

Janko Nikolich-Zugich MD, PhD
University of Arizona, Department 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 of his lab focus is the selection, recognition, function, and homeostasis of cytotoxic T lymphocytes. They 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 his approach is on following and manipulating the CTL response in vivo. This allows him 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.

March 16, **Sydney**
Victor Chang Institute, **11am-12 noon**
"Population biology of aging T-cells in health and infection". (contact person Stu Tangye; s.tangye@garvan.org.au)

March 17, **Brisbane**
Queensland Institute of Medical Research, Westpac Auditorium, **1pm**
"CD8+ T-cell response to Herpesvirus infection in aging" (contact person Rajiv Khanna; RajivK.qimr.edu.au)

March 22, **Melbourne**
WEHI Lecture Theatre, 7th level, **2–3pm**
"Discrete age-related proliferation and differentiation defects in CD8 T-cell immunity against the West Nile virus" (contact persons: Katherine Kedzierska; kkedz@unimelb.edu.au or Gabrielle Belz; belz@wehi.edu.au)

Other visits planned in the year:
August 15 – 19
Professor Chen Dong
Professor of Immunology and Director, Center for Inflammation and Cancer, MD Anderson Cancer Center, University of Texas. USA
Host: A/Prof Sarah A Robertson, University of Adelaide (sarah.robertson@adelaide.edu.au)

November 23 – December 4
Dr Gregory Bancroft
Immunology Unit, Department of Infectious & Tropical Diseases, London School of Hygiene and Tropical Medicine, UK
Host: Natkunam Ketheesan, School of Veterinary and Biomedical Sciences & School of Medicine, James Cook University, Townsville Queensland (n.ketheesan@jcu.edu.au)

The History of the ASI

I have been asked by the Committee to produce a history of the ASI, a task which will require input from several members, especially those few still remaining who were involved in the formation of our very successful Society. Please therefore feel free to send me any information you may have which falls within the following format.

1. The period leading up to the formation of the ASI, i.e. the informal meetings which Derek Rowley initiated in the late 1950s and early 1960s when just a handful of immunologists (I was fortunate in being one of these) met once or twice a year in either Adelaide, Melbourne or Canberra. These were informal, unstructured gatherings
2. The period of nearly 10 years following the above period when the mantle was spread to incorporate new immunologists in Sydney, Perth and Brisbane
3. The period when Gus Nossal advised the annual meeting held in Perth in December 1971 that, if the ASI wished to become incorporated into full membership of the recently formed IUIS and its graduate students become eligible for the award of traveling scholarships from that body, our Society must become formalized with its own constitution.
4. The early days of the ASI Inc. with its structure, constitution and scientific meetings
5. The 'middle years' from the late 1970s to early 1990s
6. The 'mature years' of which I know very little since I retired at the end of 1992.

I repeat, if you have any relevant information, material such as old minutes, notices, correspondence, etc., or any suggestions re the format which could fit into the story of the ASI, please send it to me to ensure that the history as it is written does justice to our Society. I would like to complete the task by mid-year at the latest.

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The People Who Are ASI

Steve Turner – Victoria/Tasmania Councillor

My major research interest is in understanding factors that impact the quality of cellular immunity in response to infection. In particular, my research focuses on the cytotoxic T cell response, although we also examine the response of other T cell subsets. This includes understanding molecular interactions of T cell recognition, factors that influence the acquisition and maintenance of lineage specific T cell function and the development of T cell memory.

My interest in this area stems from my PhD studies with Professor Frank Carbone at Monash University where I studied factors that influenced T cell receptor repertoire diversity in response to herpes simplex virus infection. During my initial postdoctoral training, with Dr Janet Ruby at the Department of Microbiology and Immunology, The University of Melbourne, I developed an interesting viral pathogensis after working on virus-host interactions using ectromelia infection of mice. However, it was during my second postdoctoral position, with Professor Peter Doherty at St Jude Children's Research Hospital in Memphis, Tennessee, that my current research interests were established. While in Memphis, I learnt the influenza A virus infection model of infection and used it to probe various aspects of cytotoxic T cell response. This included the development of a single cell PCR strategy for determining gene expression profiles from individual, virus specific T cells. We used this strategy to examine T cell receptor and effector gene expression at a single cell level.

In mid 2002, I returned with Peter to the Department of Microbiology and Immunology, The University of Melbourne, and together with Nicole La Gruta and Katherine Kedzierska, we set up a research program that focused on work that I had carried out in Memphis. In that time, our group has grown from 3 to 15 people with myself, Nicole and Katherine all heading up independent research interests.

We have an extended lab group of approximately 20 people. My immediate lab currently consists of a talented team of two postdoctoral fellows (Matthew Olson and Brendan Russ), four PhD students (Alice Denton, Bridie Day, Lauren Hatton and Hayley Croom), one honours student (Ly Thai) and a technician (Sze-Chi Freidnack), with recent departures including John Stambas (faculty position at Deakin University), Carole Guillonneau (faculty position at University of Nantes, France) and Justine Mintern (postdoctoral fellow at WEHI).

My main research interests are the molecular interactions that determine T cell specificity for antigen. This is done in collaboration with Jamie Rossjohn (Monash University) and Tony Purcell (Bio21, Uni of Melb) and uses a combination of structural biology and ectopic expression of T cell receptors in mice to map functional consequences of T cell receptor diversity. I have long had an interest in factors that influence cytotoxic T cell effector gene expression, work done in collaboration with Joe Trapani (Peter Mac Institute) and Phil Bird (Monash University). This has now been extended to understanding how epigenetic modifications within the T cell genome influence acquisition and maintenance of lineage specific T cell function. This work is done in collaboration with Sudha Rao (JCSMR, ANU), Steve Reiner (University of Pennyslvania, USA), Jonathan Kaye (Cedar Sinai Medical Centre, LA, USA) and Terry Speed (WEHI). While our major interest is virus-specific cytotoxic T cells, we have recently extended this analysis to other cell types including NK cells, CD4 T cells (in collaboration with Andrew Brooks, Uni of Melb) and NKT cell subsets (in collaboration with Sumone Chakravarti and Dale Godfrey).

Finally, a major area of interest is understanding the role of cellular immunity to influenza infection with a view toward developing novel vaccine strategies. I am part of an NHMRC

Front row, LtoR: *John Stambas (ex postdoc, now faculty at Deakin University); Bridie Day (PhD student, Turner lab); Nicole La Gruta (Research Fellow, Dept of Micro & Immunol), Teresa Rispoli (personal assistant to PD); Lauren Hatton (PhD, Turner Lab), Stephen Turner, Anne Kelso, Peter Doherty, Matthew Olson (postdoc, Turner lab).*
Back row, LtoR: *Tania Cukalac (PhD student, La Gruta lab), Alice Denton (PhD student, Turner lab), Brendan Russ (post doc, Turner lab), Natasha Swan (research assistant, La Gruta, Kedzierska labs), Hayley Croom (PhD student, Turner lab), Katherine Kedzierska (Research Fellow, Dept of Micro & Immunol), Sophie Valkenburg (PhD student, Kedzierska Lab), Kim Charlton (research assistant, Kelso lab), Brian Liddicoat (ex honours student, Turner lab), Francesca Mecuri (laboratory manager, Turner, La Gruta, Kedzierska labs)*

program grant headed by Peter Doherty and working with Anne Kelso (WHO Collaborating Centre for Reference and Research on Influenza), Lorena Brown and Dave Jackson (both Department of Microbiology and Immunology, The University of Melbourne) and Weisan Chen (Ludwig Institute).

I have been a member of ASI since I started my PhD and a member of the IgV committee since my return in 2002. The ASI (and its branches) is a terrific organization with those involved working hard to promote an intellectually stimulating and professionally supportive environment. I was elected to the ASI Council as the Vic/Tas representative in 2008. In that time, I have seen first hand just how hard individuals work to ensure that ASI is a continuing success. This is true at both the national and state level. I think of particular importance is the ASI Visiting Speaker Program, a terrific initiative that has been going for some time now and brings world leaders in the field to Australia so they can interact and connect with researchers here. I also think the programs that aid in career development for young scientists (PhD students and postdocs) are also a high priority. It is during this formative stage that most support is needed. An area that perhaps needs addressing is further support for mid-career scientists, those who are about to or have recently established independent research programs. In a competitive environment, perhaps more can be done to support the career of such people, particularly in terms of mentoring from senior, and established, researchers.

Of course, ASI (both nationally and state level) is always looking for new members and new suggestions/improvements for the programs it has. For those of you in Victoria/Tasmania, don't hesitate to contact me if you have ideas or suggestions. Finally, I have found my involvement with ASI highly rewarding, and very enlightening. As such, I would encourage you to consider getting involved, whether at a state branch level, or as a councillor.

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.

ASI Councillors' News

W.A. News

This is my first year as the Western Australian ASI Councillor and, as such, my first ASI Councillors News Report. So I thought I would take this opportunity to introduce myself and say that I am looking forward, with some trepidation, to supporting immunology and the ASI in Perth for the next three years. The local branch will be continuing with a committee structure this year and thanks for those who have stayed on for another year to help organise events in WA. Also a big thank you to those who have left the committee, to either concentrate on organising the Annual Scientific Meeting or who have left the State for other opportunities. In particular I would like to thank Delia Nelson for her work over the past few years as WA Councillor. We will also be trialling a student sub-committee idea to help organise events in WA. Many on this committee will carry on from organising the successful social events at last year's early career workshop, others will be new and have yet to be found. If you want to be found, please give me a call. The first job of the committee will be to help the new ASI student rep, Baca Chan, organise the student event at the Annual Scientific Meeting in Perth this year.

Preparations for the ASI Annual Scientific Meeting are well underway. The meeting will be held from 5th - 9th December 2010 at the Perth Convention and Exhibition Centre, Perth, Western Australia. The convention centre is located in the heart of the city with restaurants and other activities within walking distance. Confirmed keynote speakers include: James Allison, Rachel Caspi, Tracy Hussel, Foo Yew Liew, Dan Littman, Andrew Luster, Bernard Malissen, Eleanor Riley, Ralph Steinman, Brigitta Stockinger, with the Burnet Oration to be presented by Chris Goodnow. Thanks go to the organising committee and the chair of the Committee, Christopher Andoniou.

Further details regarding the meeting are available at: http://www.asi2010.com/
We look forward to see you all in Perth in December.

Alec Redwood
Councillor

N.Z. News

NZ ASI/Immunet Meeting 2010
Anne La Flamme and I have been busy making plans for our meeting this year, to be held on July 1st and 2nd. We are delighted to have Ed Pearce and Erika Pearce from the Trudeau Institute, NY, and our former ASI President, Alan Baxter, as well as Carola Garcia de Vinuesa as our confirmed invited speakers.

We are once again anticipating fierce competition for our student speaker competition and this year, driven by Roslyn Kemp, we will establish roundtable discussions as part of the ASI Women's Initiative.

Day of Immunology, April 29
We are extremely excited that Ian Frazer has kindly agreed to do a public seminar in Wellington in the evening for the Day of Immunology, which will be held at the Pipitea Campus of Victoria University. Plans are underfoot by Roslyn Kemp, in Dunedin, to host a public event that incorporates basic science and clinical perspectives on a topical immunological event.

ASI Visiting speakers
Unfortunately the visit to Auckland and Dunedin by Jean-Laurent Casanova was cancelled; however by the time of publication, Jack Bennink will have visited Dunedin in February. There are plans to host Gregory Bancroft in Wellington in December.

Joanna Kirman
Councillor

N.S.W. News

Happy new year to all! Several events have been planned for immunologists of NSW for 2010.

1. ASI International Visiting Speakers
So far there are three international speakers who will be visiting Sydney as part of the ASI-sponsored Visiting Speaker Program.

On Thursday February 25, Prof Jack Bennick from the NIH will be giving a seminar at Garvan Institute. Jack is an expert in the areas of host/viral interactions and anti-viral immune responses.

In August, Chen Dong from MD Anderson Cancer/University of Texas will be giving a seminar at Garvan Institute. The exact date and time is to be confirmed, but it will be between August 9 and 13. Chen Dong is an extraordinarily prolific immunologist and has made major contributions to our understanding of CD4 T cell differentiation/lineages.

And on Friday 26 November, Dr Greg Bancroft from the London School of Hygiene and Tropical Medicine will be giving a seminar at Centenary Institute. Greg's research interests lie in understanding host-pathogen interactions.

2. ASI-NSW Sponsored National Visiting Speaker Program
Starting this year, ASI NSW will be inviting several notable national immunologists to come to Sydney to give seminars. These seminars will be held at the Garvan Institute. The schedule for this program is as follows:

Tuesday June 15: Prof Dale Godfrey, University of Melbourne (NKT cells)

Monday July 19: Prof Joe Trapani, Peter MacCallum Cancer Centre, Melbourne (Structure and function of perforin)

Monday September 27: Dr Steve Nutt, Walter & Eliza Hall Institute, Melbourne (Transcriptional regulation of lymphocyte development and effector function)

Monday November 1: Dr Gabrielle Belz, Walter & Eliza Hall Institute, Melbourne (CD8 T cell differentiation and anti-viral immunity).

For this series, the invited speakers will be at Garvan for most of the day so will be available to meet with fellow immunologists.

3. ASI NSW Scientific Retreat

Following the success of the joint ASI NSW/ACT retreat held in September in Bowral, we will be staging this event again. The location will be the same (Craigieburn Resort and Conference Centre) and the dates are Thursday 9 and Friday 10 September, 2010. The meeting will follow a similar format as last year, however we hope to have more presentations by early career scientists this time around. Watch this space for more details at the date draws closer and make a note of these dates in your diaries.

All the best for 2010

Stuart Tangye
Councillor

Victorian News

The Immunology Group of Victoria
A branch of the Australasian Society for Immunology

Just a quick reminder that with the New Year well and truly underway, it is already time to start penciling in dates for things. First and foremost is the IgV annual conference. Look for a possible change in dates this year with a move towards the middle of the year. This is in response to the fact that there are significant meetings that include the IUIS Congress in Kobe, Japan (August), Influenza Options Meeting in Hong Kong (September), the ASMR biennial conference in Melbourne (November) and, of course, ASI in Perth at the start of December. The IgV committee has it first meeting at the end of February and planning will start straight away, so look out for details soon.

Also a reminder that there a number of ASI sponsored visitors coming to Melbourne in the next few weeks that include Jack Bennink (NIH, US), Jean-Laurent Casanova (Rockefeller University, US) (26 February) and Janko Nikolic-Zugic (University of Arizona, USA) (22 March). You will have received details regarding their respective seminars by email.

Also, I would like to congratulate IgV member, Bridie Day (Dept of Microbiology and Immunology, The University of Melbourne) who received the ASI New Investigator award for 2009. Also congratulations to all those IgV members who were awarded travel bursaries and poster prizes at the meeting.

Finally, just a reminder to those of you so inclined, the IgV committee is always looking for new members and suggestions for how it can better serve Victorian ASI members. All enquires can be addressed to myself (sjturn@unimelb.edu.au), Dave Tarlinton (tarlinto@wehi.edu.au) or Rose Ffrench (ffrench@burnet.edu.au).

Steve Turner
Councillor

Ms Bridie Day, ASI New Investigator of the Year (2009) and IgV member

2009 ASI Conference Report

ASI GOLD COAST 2009

The 2009 Annual Meeting of the ASI lived up to the reputation expected from our premier event of the year, a dazzling display of science mixed with a friendly atmosphere. The Gold Coast provided an attractive location, and the weather was wonderful – a great relief given that the well-attended conference dinner was by the pool.

The meeting was one of the largest yet for ASI, with 631 attendants, including 262 students! Feedback from delegates was very favourable, 90% rating the program as 'very good' or excellent, a view echoed in the responses from many of the speakers. My feeling was that we had a critical mass of enthusiastic scientists that brought out the best in the meeting – there was always a buzz of excitement around the posters, and the sessions were well attended throughout the course of the meeting.

The conference was preceded by three workshops in Mucosal Immunology (organised by Ken Beagley), Tumour Immunology (Alejandro Lopez), and (for the first time) Infection and Immunity (Matt Sweet and Ash Mansell). These workshops provide the opportunity for more open and extended discussions of specialist topics, and were very popular, as always. The Tumour Immunology Workshop Gordon Ada Orator was Chris Parish, a truly original thinker who has contributed to every facet of the ASI meetings over the last few years. Prizes for the best student and post doc presentations at the Infection and Immunity workshop were awarded to Socorro Miranda-Hernandez (JCU) and Nick Gorgani (Uni Adelaide), and the Graham Jackson Memorial Award for Mucosal Immunology was shared by Elizabeth Forbes (Malaghan) and Shen Foo (Uni Newcastle).

The conference opened with lucid plenary talks from Chris Goodnow and Shimon Sakaguchi, who unravelled some of the complex tapestry of immune interactions with important implications for self tolerance. The high standard they set was maintained throughout the meeting. Standout presentations from invited speakers that I found memorable included some extraordinary clinical results being obtained on the basis of some basic scientific observations, presented by Jörg Tschopp; and Gary Nolan's tour de force introducing the technique of "mass cytometry" (as if flow cytometers weren't big enough already!).

The tradition of selecting an outstanding Australasian immunologist as the Burnet Orator was maintained in 2009. Jim McCluskey gave an elegant description of

the physical basis of T cell recognition, to which his group has contributed over many years.

This year the Lafferty Debate concerned "In the immune system, the importance of a cell type is inversely proportional to its frequency", which is the immunological parallel of the popular hypothesis that size matters. Men and women traditionally hold opposing views on this topic, as reflected in the composition of the teams. In the end, Dale Godfrey, Ian van Driel and Jose Villadangos held off the attack from Ranjeny Thomas, Delia Nelson and Sarah Oracki. Alan Baxter chaired the debate (i.e. worked the crowd) brilliantly to help make this one of the most entertaining and memorable Lafferty Debates in living memory.

One of the major roles ASI plays in the immunological community is the support of students. Twenty-four students from interstate and North Queensland won travel bursaries to attend the meeting and for the first time this year, two awards were made to support post docs. The Immunology and Cell Biology & ASI prizes for the best Student Posters were awarded to Annie Xin (WEHI), Vivian Turner (Garvan), and Lauren McKnight (Centenary). Lauren also won the BD Science Communication Award. There was a closely fought contest for the ASI New Investigator Award, won by E. Bridie Day (Uni Melbourne). ASI has also recognised the particular difficulties faced by women in science, and the inaugural "Women in Immunology" breakfast, organised by Judith Greer, was a great success.

Convening this meeting was a rewarding experience, and I must pay tribute to the other members of the organising committee who efficiently shared the load of selecting and inviting speakers, talking to sponsors, and attending to the many challenges that conferences offer. Thanks also to the many who efficiently scored abstracts, judged posters and chaired sessions. And, of course, thanks to our sponsors BD, CSL, ICB, and all of the supporters and exhibitors. Their support defrays a considerable portion of the cost of the conference. Mike Pickford and ASN Events were professional and responsive in their management of the conference, and provided a corporate memory that made the job of the organising committee so much easier. But, in the end, the success of the meeting came down to the enthusiasm of the delegates, generous in giving their time to present their data at the meeting, asking questions, and contributing to the life of the Society.

The organising committee for ASI 2009 was:
Chris Schmidt (Chair), Shayna Street (Secretary), Christian Engwerda (Chair, Program Subcommittee), Maher Gandhi (Treasurer), Ken Beagley, J. Alejandro López (Travel Bursary Co-ordinator); Matt Sweet, Imogen Gillions (Student Function Co-ordinator), Judith Greer (Co-ordinator of the ASI New Investigator Award & Women in Immunology Breakfast), Ray Steptoe (BD Communication Award Co-ordinator), Alan Baxter, Allan Cripps, Denise Doolan; and Raj Eri.

Chris Schmidt

Organising committee: Imogen Gillions, Alan Baxter, Matt Sweet, Denise Doolan, Judith Greer, Alejandro López, Ray Steptoe, Chris Engwerda, Chris Schmidt, Ken Beagley

Former President, Phil Hodgkin catches up on news of the burgeoning careers of former students Cindy Ma & Elissa Deenick, both now at the Garvan

A girl from Oz and a boy from Godzone – the human face of ASI. Hon. Secretary Su Heinzel with Alex McLellan, University of Otago, NZ

Lafferty debate: The backs of Sarah Oracki, Dale Godfrey, Ranjeny Thomas, Ian van Driel, Delia Nelson, & Jose Villadangos ...

... and their fronts: Villadangos, Thomas, Godfrey, Nelson, van Driel, Oracki

Mr Cool – Robert Brink, Garvan Institute

The relief of a job well done: Chris Engwerda, Alejandro Lopez & Chris Schmidt

Thoughts after my First Year

Erika Duan

Beginning with the quote '*Science is a wonderful thing if one does not have to earn one's living at it,*' is probably not going to make me sound like the most optimistic PhD student in the world, or even a mildly optimistic one. But the person who first said this was actually Albert Einstein, and maybe if I agree with one of the smartest men on Earth, then other people might think that I am smart too. Then again, maybe not.

In all honesty, I did start my Honours degree as blissfully optimistic as you could get. Finding cures for emphysema! Discovering early biomarkers for the diagnosis of lung cancer! Saving the world one animal model at a time! Ten months then passed and with Honours completed and eye bags a permanent feature of my face, one might imagine that I would have started to see things a bit differently. But oh no. 'Finding cures for emphysema,' read my PhD candidature. 'Discovering early biomarkers for the diagnosis of lung cancer! Saving the world one animal model at a time!'

So has anything now changed? I still think science is a wonderful thing. I survive decently on my living stipend. And yet, if Albert Einstein came up to me and told me that science is a wonderful thing if one does not have to earn one's living at it, I would gladly high five him and weep some tears of bittersweet commiseration.

Perhaps it is because I have finally witnessed the excruciating pain and effort that my supervisors undergo when writing their NHMRC grants. Self-flagellation must be a picnic in the park compared to all the writing, data reshuffling, re-writing, formatting, peer-reviewing and 'novel and potentially therapeutic' research idea proposing that must go on in the months of January and February. Except now I realise that it does not just stop there. Because then is the torturously long wait until November, when the list of successful NHMRC grants are publicly released and I can gauge whether it is a good time to suggest a series of monoclonal antibody treatment experiments or simply stick with my FACS.

Of course, it is not the necessity of grant winning and how pivotal it has become to the survival of a research laboratory that has me slightly disheartened. It is what leads down from it and what perpetuates it that disillusions me. I am talking about the 'publish or perish' syndrome. Once, in more innocent times, I used to think that an idea was an idea and a research paper the mere manifestation of an elegantly and completely explored one. And whilst publishing would one day be a career necessity, much like how paying overdue bills is a monthly necessity, the most important thing would be to always only conduct the experiments which I believed in. Choosing to explore scientific questions because I felt that they were interesting or important ones, and not because I needed to maintain my position in some metaphorical rat race. See what I now mean when I told you that I started out as blissfully optimistic – not to mention idealistic – as imaginably possible? Don't worry though; attendance at a research career workshop last year, where I was informed that all successful fellowship awardees publish in *Nature* and preferably more than once, has cured me of all my youthful idealism. Success now sounds like something one can only achieve if one has the fortuitous chance of publishing in *Nature* four times in a row whilst blindfolded, standing on one leg and maimed in your pipetting arm.

Attempted witticisms aside, there is something that I am really quite scared of. I am scared that people in the scientific community will one day forget that I am an incredibly stupid human being who makes a lot of mistakes. I can understand why we would desire nothing but constant faultlessness from our medical doctors; each decision they make directly impacts on the quality of an individual's life. But to expect the same from our researchers (and PhD students) just does not seem quite fair. Sometimes, failure and stupidity are just a whisper away from the touch of scientific serendipity.

Approaching the end of my first PhD year, I am no longer sure exactly where

I will eventually end up. To be honest, I do not think I am hardworking enough or consistently good enough to excel in a research career. My brain seems to work only properly for a maximum of two hours a day. But when I start to imagine three different Erikas roaming around in three different parallel worlds, where one listened to her father and applied to Medicine, one listened to her mother and applied to Dentistry and one lured a rich boyfriend and is now travelling around Europe eating French macarons and hoarding Louise Vuitton, I really believe that I am at my happiest exactly right here. For me, nothing would be more wonderful than to have a good piece of translatable research, one day come out of my research degree and then have a career path. That is what truly keeps me going, although I suppose, my thoughts may change again by next year in April.

ASI Student Page

I voluntarily chose a career in science, yet I'm still in denial about the necessity of being an eloquent writer. After staring intently at a blank screen, and checking every email account I have, multiple times, I finally realise, there will be no epiphany. The perfect first line will not come while I'm compulsively refreshing the cricket score. I will have to start putting words on digital paper, even if incoherent, because apparently, you can't edit a blank page. This is one of the first lessons I have learnt since embarking on the quest known as a PhD.

I have just completed the second year of my PhD, which of course means I am in my third and final year, but that is slightly terrifying to admit and I can feel tiny palpitations just thinking of it. Asking someone how far into their PhD they are is just as touchy a question as asking someone their age. Remember, round up the answer.

I live in the beautiful city of Perth, the host city for this year's ASI conference. We would love to see all of you venturing west this year. This side of Australia is definitely well worth checking out, if not for the numerous beaches with perfect conditions and the endless sunny days, then for the disorientating feeling of "wait, if I'm heading north, shouldn't the ocean be on the other side?", which certainly freaked me out when I travelled east for the Gold Coast ASI conference last year.

Our student committee is currently brainstorming ideas for the student function and we greatly welcome your input. If there is something in particular you guys are keen for or ideas about how the night should be organised, drop me a line baca.chan@grs.uwa.edu.au. I am currently obsessed with a 'speed networking' layout to encourage the initial interaction between students and the 'very important people who are doubly important because we need them to give us jobs, more conventionally known as' invited speakers. Students – 60 seconds, highlight your strengths, outline your interests and put out there what you're looking for. Invited speakers – 60 seconds, their research focus, how their labs are run, how much money they have to spend, especially for fun things like conference romps. Early days yet, idea may need refining.

Better save some writing juice for my annual report – 'Progress made? "Why, of course! Oh, you want details…"'

Happy productive researching for 2010!

Baca Chan
ASI Student Representative 2010

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 $200 FOR THE BEST ARTICLE PUBLISHED IN THE NEWSLETTER!**

Upcoming Lectures & Conferences

World Congress of Virus and Infections 2010 (WCVI-2010) – Voice of Virologists
July 31–August 3, 2010
Busan, South Korea
http://www.bitlifesciences.com/wcvi2010/

XI International Congress in Reproductive Immunology: Reproductive Immunobiology at the Great Barrier Reef
August 15–19, 2010
Cairns, Queensland
www.icri2010.org
Chair of local organising committee:
sarah.robertson@adelaide.edu.au

4th International Conference on B cells and Autoimmunity
Satellite meeting to 14th International Congress of Immunology
August 19–21, 2010
Nara, Japan
http://web.rcai.riken.jp/bcellevent/index.html

40th Annual Meeting of the German Society of Immunology (DGfI)
September 22–25, 2010
Leipzig, Germany
immunologie2010@conventus.de
www.immunologie2010.de

2010 Australasian Sexual Health Conference
October 18–20, 2010
Sydney, New South Wales
www.sexualhealthconference.com.au

ASHM Australasian HIV/AIDS Conference 2010
October 20–22, 2010
Sydney, New South Wales
www.hivaidsconference.com.au

8th Asia Pacific Congress of Allergy, Asthma and Clinical Immunology 2010 (APCAACI 2010) – From Bench to Bedside: Evidence-based Practice
November 6–9, 2010
Singapore
admin@apcaaci2010.org
http://www.apcaaci2010.org/

10th World Congress on Inflammation
June 25–29, 2011
Paris, France
www.inflammation2011.com