



N E W S L E T T E R

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Burnet ImmunoMonitoring Facility

Associate Professor Rosemary Ffrench

The development of new vaccines and immunotherapies requires assessment of a range of immune parameters, both in pre-clinical studies and in early phase clinical trials. The Burnet ImmunoMonitoring Facility was established in 2008 as a central facility offering a wide range of optimised and validated assays of immune function. It operates as a core facility for internal Burnet Institute vaccine and therapy development projects, but also operates on a fee-for-service basis for external collaborators and commercial projects. The Facility was established by A/Prof Rosemary Ffrench, an immunologist who has had more than 25 years experience in studying viral immunity in human cohort studies and in vaccine development and testing. The ImmunoMonitoring Facility is located at the Burnet Institute, Alfred Hospital campus, on Level 7 of the Alfred Centre Building (Fig 1) in a dedicated laboratory with state-of-the-art equipment (Fig 2) and highly experienced staff, and offers a wide range of immunological analyses. The Facility operates under a quality management system to ensure all assays are rigorously validated and produce high quality data to support vaccine and immunotherapy development projects. In 2010 the ImmunoMonitoring Facility was accredited by NATA under its R&D accreditation program, and complies with the internationally recognised standard ISO/IEC 17025 (2005) interpreted for research using the CITAC Guide CG2 *Quality Assurance for Research and Development and Non-routine Analysis*. It was the first immunological laboratory in Australia to be accredited under this standard.

The ImmunoMonitoring Facility is accredited to undertake the following validated processes and assays: the isolation and cryopreservation



Burnet ImmunoMonitoring Facility staff (2011) (L to R); Jeffrey Smith, Dr Harini de Silva, A/Prof Rosemary Ffrench, Devy Santoso, Dr Amanda Brass, Kylie Goy. (Anne Zhao and Bruce Loveland not present).

of PBMC, plasma and serum, assessment of antibody responses in terms of specificity, titre, isotype and functions including neutralisation and opsonisation, assessment of cellular immune responses including antigen specific stimulation of cytokine production by ELISPOT, and multiplex bead array (BioRad bioplex). We are also able to assay immune functions such as phagocytic function and oxidative burst in neutrophils and monocytes.

We have recently acquired a new BD FACSVerser Flow cytometer, which has high throughput capacity, and so can also perform immunophenotyping, intracellular cytokine staining, and flow-based functional assays.

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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



Our outgoing President (David Tarlington, page 7) has suggested that we think about (and suggest) changes we would like to see within ASI. I would like to specifically extend that invitation and ask you to think about the changes you would like to see with the Newsletter. Over the years, the question of whether the Newsletter should remain in printed-form or become electronic has been raised and I suspect will be raised again at the AGM in December. A change to an electronic-only form of the Newsletter would save the Society around \$20,000 pa: this depends in part on whether the annual renewal receipt and ASI Directory are also electronic only and does not take into consideration any remuneration ASI may earn from advertising flyers included in the envelope. Apart from the cost, I think there are two questions to be addressed: will an electronic copy have the same actual readership; and if we go to an electronic-only version, should we consider a different format completely and utilize a more-interactive form of social media?

I hope you have time to look through the Publication List (page 21), it's a great way to see what's happening within the Society. I will propose to Council that we award "ASI Publications of the Year" awards to highlight some of the interesting work and propose research categories such as Basic, Clinical, Cancer, Autoimmunity, Immunovirology, Vaccinology and, of course, Immunoparasitology (apologies to anyone not covered by these categories, please let me know).

I look forward to seeing many of you in Melbourne in December, as usual it promises to be a first-class meeting.

Simon Apte

2nd Network of Immunology Frontiers Winter School on Advanced Immunology Singapore, 20–25 January 2013

The NIF Winter School, co-organized by the Singapore Immunology Network & Immunology Frontier Research Center, provides a unique training and networking opportunity to young immunologists. Sixteen International Faculty members and 50 young scientists, selected out of 200, participated in the inaugural event at Awaji Island in January 2012. It is intended to organize the School on an annual basis and to alternate the event between Osaka and Singapore.

The second School offers five days of intensive immunology lectures to young researchers in January 2013.

50 participants will be selected on a competitive basis. Participants are required to give poster and short oral presentations.

Travel fellowships will be awarded on a competitive basis. Accommodation will be fully covered. Registration fee (400 SGD) required of accepted participants.

Eligibility:

PhD students and post-doc fellows within 3 years after PhD degree.

**Deadline for Applications:
15th September 2012**

Further information:

<http://ifrec-sign-winterschool.org/index.html>

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Burnet ImmunoMonitoring Facility, cont.



Fig 1: The Burnet ImmunoMonitoring Facility in Melbourne.

An important function of the ImmunoMonitoring Facility is to act as a sample processing laboratory and cell and serum bank for human cohort studies. We are currently involved in major national and international cohort studies in disease groups including HIV, Hepatitis C and influenza. For example the Facility was involved in the processing, banking and assay of samples from a major Australia-wide cohort study of early treatment of Hepatitis C infection with PEG-IFN (ATAHC), as well as several large longitudinal street-based recruitment studies of young injecting drug users in Melbourne, led by collaborators at the Burnet Institute (Networks II, Prof Margaret Hellard; MIX, Prof Paul Dietze).

We have also been involved in six major human clinical trials in the past few years, supporting the development of novel vaccines and immunotherapies by commercial sponsors, including small local biotech companies such as NexVax, who are developing a vaccine for coeliac disease, but also major international pharmaceutical and vaccine companies such as Schering Plough and Bristol Myer Squibb. For external projects we usually need to develop suitable assays that are specific for the vaccine or therapeutic being tested, so have a development and validation phase prior to the human clinical trial itself. Most of our Phase I studies have been first-in-man studies, so there is often only limited information from earlier animal studies to guide the choice of immune functions tested.

The ImmunoMonitoring Facility has also been involved in collaborative research projects with clinicians from the Infectious Diseases Unit at the Alfred Hospital, which included a study of human immune responses



Fig 2: The ImmunoMonitoring Facility has a dedicated laboratory and equipment and is accredited by NATA to perform assays of immunity for pre-clinical studies and clinical trials.

to infection with the pandemic influenza H1N1 strain in 2009, and also testing of vaccine induced immune responses once the monovalent pandemic influenza vaccine became available.

Staff

The success of a Facility such as ours depends on having a team of highly experienced staff. We are very fortunate to have a great team with a broad range of skills. A/Prof Rosemary Ffrench is the Facility Director and provides oversight and input into the development of new assays, the validation stages and conduct of the assays in clinical trials. She

also liaises with project sponsors and deals with contracts and budgets. A/Prof Bruce Loveland, along with his other roles at the Burnet Institute, acts as Quality Manager for the Facility and looks after documentation, production and version control of standard operating procedures, audits and NATA accreditation. Ms Kylie Goy is our super-efficient Facility Co-ordinator who keeps the whole facility running, plays a huge role in the development of new assays and associated documentation, and data analysis and report writing. Dr Amanda Brass also works on new assay development and some of our vaccine research projects. Devy



Fig 3: Kylie Goy working in the lab, while Rose Ffrench and Bruce Loveland pretend to know what's in the flask.



Fig 4: A/Prof Rosemary Ffrench, Facility Director

Santoso looks after samples coming from cohort studies, and performs a wide range of assays for our clinical trials. Anne Zhao is our flow cytometry expert. We also have several casual research assistants who help process the large number of blood samples we receive each day.

A/Prof Rosemary Ffrench has a background in cellular immunity, particularly T cell responses in viral infection. She completed her PhD at Melbourne University with Prof Lorena Brown on influenza, then a post-doc at NIH with Drs Jon Yewdell and Jack Bennick. On her return to Australia she worked in HIV immunity in human cohorts with Prof Graeme Stewart at Westmead in Sydney, followed by work on HIV vaccine development and testing at Sydney Children's Hospital. She then returned to Melbourne and the Burnet Institute at the end of 2004 and has been working on viral immunity in HIV, HCV and influenza infected individuals, and also vaccine development and testing in HIV, HCV and influenza. She established the Burnet ImmunoMonitoring Facility in 2008 during an NHMRC Industry Fellowship while also working on vaccine development with Select Vaccines. She is also involved in teaching immunology to undergraduates at Monash University and is the Education Principal at the Burnet Institute. She has just commenced as Secretary of ASI, after four years as Secretary of the State branch IgV and is co-chair of the local organising committee for the ASI2012 meeting in Melbourne this December.



Fig 5: A/Prof Bruce Loveland, Quality Manager

A/Prof Bruce Loveland is a cellular immunologist with expertise in immunogenetics, T lymphocyte functions, dendritic cells, cancer and transplantation immunology. After completing his PhD studying and defining the T cells that induce skin allograft rejection in mice (1981) under the supervision of Prof Ian McKenzie, he investigated minor transplantation antigens in London at the MRC Clinical Research Centre with Elizabeth Simpson, and then in Dallas at the Howard Hughes Medical Institute with Kirsten Fischer Lindahl. He returned to Melbourne to study autoimmunity at Monash University (Biochemistry Department, 1989-1990) with Ian Mackay and Merrill Rowley, and in 1990 moved to the Austin Research Institute and worked on xenotransplantation and complement regulation, particularly CD46 and CD55, again with Ian McKenzie and colleagues. His continuing interest in T cell function and immunogenicity also led to work on cancer immunotherapy and the possibility of adapting autologous monocyte-derived Dendritic Cells (an *in vitro* artefact!) for immunotherapy. The Austin Research Institute merged with the Burnet Institute in 2006, providing the opportunity to study persistent Hepatitis C infection with Eric Gowans. The cancer research and clinical trial work (Phase I & II cancer trials) involved major roles in protocol design and clinical trial management, including negotiations with commercial manufacturers for GMP materials and cell processing, technical transfers from the research laboratory to commercial subcontractors, and reporting to regulatory agencies, funding bodies, research institutions and biopharma companies. A major commitment since



Fig 6: Ms Kylie Goy, ImmunoMonitoring Facility Co-ordinator

2008 has been to establish the NATA R&D accredited Burnet ImmunoMonitoring Facility with A/Prof Rosemary Ffrench. His current positions at the Burnet Institute are Head, Research Support and Facilities, co-head of the HCV Immunotherapy Laboratory, and Quality Manager for the ImmunoMonitoring Facility.

Kylie Goy's role at the Burnet IMF involves the optimisation and validation, as well as routine performance, of various immunological assays. When not in the lab she is busy keeping up to date with the administrative and accreditation requirements, which involves writing standard operating procedures and forms for recording details of the lab work and ensuring equipment is maintained and serviced as required. Preparing reports for clients and scheduling work is also a major part of her role. Kylie commenced work at the Burnet as an Honours student in 2005 and she enjoyed moving from being a student working on HCV, to being a research assistant to work on several HCV and influenza projects, and then in the Burnet IMF with the closely knit team in a NATA-accredited Facility where she gets the opportunity to work on many different clinical trials, learning new immunoassay and management skills on the way.

Dr Amanda Brass completed her PhD at Edinburgh University, studying a unique protein (vOx2) in the Kaposi's sarcoma-associated herpesvirus (KSHV) and its immunoregulatory effects on macrophages, under the supervision of Dr S. Talbot. After working for another year in Scotland, she



*Fig 7: Dr Amanda Brass,
Clinical Laboratory Scientist*



*Fig 9: Ms Anne Zhao,
Clinical Laboratory Scientist*

decided it was time to return to Australia and joined the Burnet in 2006 and initially worked on a HCV vaccine project for A/Prof David Anderson in collaboration with A/Prof Rose Ffrench. In 2009 she joined Rose's group to work partly in research (currently a HIV vaccine project) and partly in the ImmunoMonitoring Facility. In the IMF she helps work up assays and on those busy days says, "We all pitch in the lab to ensure the various immunological assays tick along smoothly. We have a strong team with so many members possessing great skills, and work well as a group. Working on clinical trials is not only insightful to how things work once a drug or therapy is being tested, but also where future stages of successful research can lead."

Devy Santoso's research career commenced as an Honours Student in 2008 when she investigated HCV-specific memory B cell responses in injecting drug users. This was a joint project between Rose Ffrench and Dr Campbell Aitken from Burnet's Centre for Population Health. Upon completion, she joined Rose's team as a Research Assistant in 2009 and has been involved since in the ImmunoMonitoring Facility working on several cohort studies and clinical trials. In addition to running the primary ELISpot assay, she has been involved in validating new assays. Flow cytometry for cell surface and intracellular markers, particularly at high throughput scale, is definitely the main star in the lab in 2012 and being validated to anticipate NATA accreditation. Devy expressed

great pleasure to be working with Rose and alongside her colleagues. "I personally think we have really good teamwork!"

Anne Zhao joined the IMF Lab early in 2012 year and found herself working alongside a group of enthusiastic, friendly and experienced scientists in a quick paced and tightly scheduled working environment. Anne noted that as a NATA accredited clinical trial lab, accurate and quality work is of utmost importance, with detailed document recording an essential part of the monitored performance. Her main role in the lab involves Immunophenotyping. Up to 40 antibodies may be used to characterize one sample, posing a significant analytical challenge that she enjoys tackling. She also

carries out routine lab work and performs other immunologic assays as required. After graduating from The University of Melbourne with an MSc, her work primarily focused on vaccine development, spread across several institutes such as the Burnet, The University of Melbourne and the Austin Research Research. Acquiring a broad knowledge base and a wide range of laboratory skill sets over the years, Anne says she is pleased to be able to utilise her experience in the service of a high quality laboratory.

For further information on services offered by the Burnet ImmunoMonitoring Facility please contact Rosemary Ffrench on ffrench@burnet.edu.au.



Fig 8: Ms Devy Santoso, Laboratory Scientist

PRESIDENT'S COLUMN

As I am coming to the end of my term as President of ASI, handing over the mantle to Dale Godfrey in December at the Melbourne meeting, I am reflecting on my two years in this position, contemplating what has been achieved and what has yet to be done.

I do not harbour any illusions of heightened competency and I had modest expectations for what might be done in what is, in reality, a very short period. What does surprise me, however, is that even with these modest expectations, how small the changes are that have occurred. This is not a complaint nor is it to be construed as any form of suggestion that change has been thwarted; quite the opposite. The ASI Executive and Council of the last three years have been and continue to be dedicated completely to the best interests of ASI and its members. In fact, I am certain this is true of every ASI Council, as no one joins Council without a wish to do something for the betterment of our discipline and its adherents.

So what is it then that affects the rate of change in ASI? I think there are two aspects of our organisation that make it hard for Council and Executive to focus on substantive issues and follow them through to a prompt, successful conclusion. The first is the change in the complexity of the world, which clearly has bearing on how ASI can do many of the things it would like to do. Second, following on to some degree from the first, is the capacity of volunteer Councillors to marshal the time and resources to carry the execution of these issues to completion.

The constitution of ASI specifies the roles and responsibilities of the members of ASI Council and how decisions must be made. The constitution, available on the ASI website for all to read, places authority in Council. ASI Executive has been delegated by Council to make decisions that affect the day to day running of the Society, but substantive

matters need to be dealt with by Council. This is completely appropriate and allows the views of all members to be represented in any decision making process. I am not sure, however, that our constitution envisioned the range and scale of activities that ASI now encompasses, nor did it necessarily envision the regulatory requirements that constitute the operating environment for societies like ASI. This is also not a complaint – especially as our constitution can be altered through the processes specified in the constitution itself – but rather a reflection on the amount of time ASI Council has to spend discussing issues that in previous years were probably moot. Our financial resources, for example, are such that we are required to be audited each year. This is a good thing and no sensible person should complain about this. It does mean, however, that a significant amount of time is now spent in and around this process by all Council members. Similarly, changes in the complexity of meeting organisation, of ASI's interactions with other societies and ASI's interaction with the public have also added to the breadth and complexity of the management of ASI.

ASI Council meets twice a year, meaning that major decisions are made twice a year with the carriage of those decisions then falling to those so empowered by Council. This works well where Council decisions can be enacted through relatively simple processes. For example, some years ago ASI Council voted to introduce International Travel Awards (ITAs) for students and post-docs. These have been popular and have helped a large number of early career Australasian Immunologists promote themselves and their work at an international level. The process necessary to enact that decision was quite straightforward; allocate a budget and selection rules. An example from current Council, however, describes the situation where the decision by Council requires many processes to be created and executed

in order for that decision to be fully enacted. This situation concerns updating the ASI Website. Council has approved a commercial makeover of the website that would permit significant improvements in member access to information and in renewing membership and updating member information. Enacting this particular decision, however, is complex and time-consuming meaning that how effectively this is done depends largely on the time and effort available amongst Executive and this is variable. That is, there is no guarantee of continuity of effort making the time line for completion somewhat unpredictable.

In my opinion, one of the important challenges facing ASI Council is how to be efficient and responsive to the changing needs of its members and the changing environment in which it operates. ASI members may wish ASI to continue as is, happy with the rate of change and the number of activities and amenities currently on offer. Alternatively, members may feel that some change is required, that a structure that permits more effective and timely action to follow from decisions made by Council would be an improvement. Such changes, for example, could include greater delegation of responsibility, such as the creation of Councillors for specific purposes and activities, as done by the AAI. Another option would be for ASI to employ a secretary, empowered to organise and enact the processes necessary to implement the decisions of Council. This would be a substantial change for ASI, making it an employer, but providing a continuous source of action.

It's your Society. Let your Councillor know what you think about how ASI is organised.

David Tarlinton

HONORARY SECRETARY'S NEWS

ASI International Travel Awards

Once again there was very strong competition for the postgraduate and post-doctoral International travel awards and the judges had some difficult decisions. The results are given below and congratulations to all those selected. The next round of International travel awards for postgraduates and post-doctoral scientists will be coming up in September, with information and forms available on the ASI website. There will also be a call for postgraduate students and early post-docs for travel bursaries to attend the ASI 2012 annual scientific meeting in Melbourne this December.

Postgraduate Student Awards (\$3000)

- * Ms Kiwi Sun, SA Pathology; ASCIA, September, Wellington, NZ
- * Ms Stephanie Chan, ANU; Keystone Immunological mechanism of vaccination, December, Ontario, Canada
- * Ms Sabine Kuhn, Malaghan Institute, NZ; European Congress of Immunology, September, Glasgow, UK
- * Ms Eleanor Jones, Monash University; European Congress of Immunology, September, Glasgow, UK and European conference on Tetraspanins, September, Nijmegen, The Netherlands

ASI Post-doctoral International Travel Awards (\$3,000)

- * Dr Motoko Koyoma, QIMR; 12th International American Society for Haematology Annual Meeting, December, Atlanta, USA
- * Dr Stephen Daley, ANU; Thymus 2012, November, Florida, USA
- * Dr Gerard Kaiko, University of Newcastle; European Congress of Immunology, September, Glasgow, UK

ASI Gordon Ada CDA International Travel Awards

- * Dr Kate Schroder, University of Queensland (\$6,000); Human Immunity Conference, August, Lisbon, Portugal, and visits to collaborators in Switzerland and UK.
- * Dr John Stambas, Deakin University (\$4,000); American Association of Immunologists Annual meeting, May 2013, Hawaii, USA and visit to collaborators.

ASI Jacques Miller Senior International Travel Award

Not awarded

New FIMSA Councillor

Prof Alan Baxter from James Cook University has been elected as the new ASI FIMSA Council member, and will join A/Prof Guna Karupiah who was elected FIMSA Vice President at the recent FIMSA Council meeting in March 2012, New Dehli.

ASI Council National Meeting Co-ordinator

Dr Susanne Heinzl from WEHI has volunteered to take on the role of national Meeting Co-ordinator. Sincere thanks to Dr Bernadette Saunders who has performed this role for the past three years.

ASI National Day of Immunology Co-ordinator

Dr Claerwen Jones, from the University of Melbourne, has agreed to take on the role of National Day of Immunology Co-ordinator. Claerwen has done a fantastic job with Victorian Day of Immunology events over the past few years, and will be

available for regional councillors and other ASI members to get advice on events that work well (cmj@unimelb.edu.au).

Council Positions

There are a number of voting positions on ASI Council becoming available for nominations in September. This includes Regional Councillor positions for Western Australia, South Australia/NT, and ACT. An ASI Executive position that we will be calling for nominations in September is ASI Treasurer. This is a very important role in the Society, and has been very ably carried out for the past 2½ years by Pablo Silveira from University of Sydney's ANZAC Research Institute. If anyone is interested in finding out more about what the position entails, please contact Pablo, pablo.silveira@sydney.edu.au.

ASI 2012 conference in Melbourne

Registration and abstract submission are now open for the ASI conference, 2-6 December, 2012 at the Melbourne Convention and Exhibition Centre in Melbourne. This spacious new facility will mean we have plenty of room for plenaries, symposia, exhibition, posters and extra concurrent workshop sessions. We have a fantastic line up of international and national speakers (see www.ASI2012.org). Special Interest Groups will hold satellite workshops on Sunday 2nd December, with Tumour Immunology, Mucosal Immunology and Infection and Immunity SIGs also holding their meetings at MCEC. The postgraduate student symposium will be held at AMREP.

Rose Ffrench

Immunology and Cell Biology Publication of the Year Awards 2011

An outstanding group of publications were submitted for consideration for the annual *Immunology and Cell Biology* Publication of the Year Awards. A committee consisting of the ASI President and Executive Council of ASI selected the two most outstanding original research articles based on scientific excellence. I am pleased to announce the recipients of the awards for 2011:

Dr Tara Roberts, Queensland Institute of Medical Research: *Chris and Bhama Parish ICB Publication of the Year Award*

Dr Daniel Andrews, Peter McCallum Research Institute: *Thermo Fisher Scientific Publication Award*

Recipients of the award must be the first authors in one of the following ICB manuscript categories: Original Article, Outstanding Observation, Theoretical Article or Brief Communication. They must also be financial members of the Australasian Society for Immunology Inc. by October of the year in which the article was published. Two awards have been established for outstanding publications. The winner of the Chris and Bhama Parish ICB Publication of the Year Award is awarded an AU\$1000 scholarship provided by the Nature Publishing Group and the runner-up is awarded an AU\$500 scholarship provided by Thermo Fisher Scientific.

The winning paper by Dr Roberts is an Original Article entitled 'B cells do not take up bacterial DNA: an essential role for antigen in exposure of DNA to toll-like receptor-9' published in the May 2011 issue of *Immunology and Cell Biology*.¹ Although it is widely assumed that bacterial CpG DNA is a direct stimulus of B cells, this feature of the B cell response had not been analysed in detail in pure populations of cells. Thus, this study probes the reactivity of purified B cells to the different components of DNA complexes and determines that, in the absence of additional signals, B cells in fact make relatively poor responses to DNA. This work has important implications for determining the formulation of DNA stimulus that is most effective for therapeutic applications.

Dr Roberts completed her PhD in 2005 with Dr Katryn Stacey at The Institute for Molecular Bioscience, University of



Dr Tara Roberts, recipient of the 2011 Chris and Bhama Parish ICB Publication of the Year Award

Queensland, focusing on the biology of toll-like receptor 9-mediated responses to CpG DNA. This led to the very exciting discovery that a family of haematopoietic interferon-inducible nuclear proteins containing a hallmark 200-amino-acid motif (known as HIN-200 proteins) are key players in regulating caspase activation in response to foreign cytoplasmic DNA². In this study, together with her colleagues, Dr Roberts identified AIM2 as the receptor and p202 as an antagonist of inflammasome activation in response to cytosolic double-stranded DNA. This work highlighted that the HIN-200 family of proteins can act as pattern recognition receptors mediating responses to cytoplasmic double-stranded DNA. In 2007, Dr Roberts was awarded a Peter Doherty Fellowship (NHMRC) and relocated to The Queensland Institute of Medical Research to work with Professor Martin Lavin. Her major research interests include continuing to understand the pathways involved in immune responses to cytosolic DNA and, more recently, investigating the role that inflammation has in cancer development and progression. This work focuses in particular on the role that the protein SMG1, a serine/threonine protein kinase, has in regulating inflammation and carcinogenesis.

Dr Andrew's study entitled 'Homeostatic defects in interleukin (IL) 18-deficient mice contribute to protection against the lethal effects of endotoxin' was published in the August 2011 issue of *Immunology and*



Dr Daniel Andrews, recipient of the 2011 Thermo Fisher Scientific Publication Award

Cell Biology.³ This work continues along the theme of endeavouring to understand the signals that inflammation and bacterial products such as lipopolysaccharide have in driving the cross-talk that occurs between antigen-presenting cells and natural killer cells. Strikingly, high levels of lipopolysaccharide induced systemic disease and morbidity. This outcome is believed to result from the abundant production of cytokines, particularly interferon-g, but also ILs such as IL-1b and IL-18. Whether these cytokines interact to either drive or amplify the production of the various inflammatory mediators, however, was not known. In this study, Andrews *et al.* identify that IL-18 has a key role in inducing IL17A production from TCRd cells and is important in IL-1b production. In the absence of this pathway, disrupted homeostasis and disease emerges. Thus, this work identifies novel requirements for IL-18 in innate immune cell homeostasis.

Dr Andrews completed his PhD from the University of Western Australia with Professor Mariapia Degli-Esposti in 2004. In these studies, he investigated the interaction of Murine Cytomegalovirus (MCMV) with the innate immune system and discovered how MCMV induced immunosuppression. He also identified functional interactions between dendritic cells and natural killer cells during MCMV infection that had a significant impact on the effective development of adaptive immunity. Dr Andrews was then awarded a Peter Doherty Fellowship (NHMRC) and began his postdoctoral work at the Peter McCallum Cancer Centre with Professor Mark Smyth, in collaboration with

Dr Andrew Brooks and Dr Lucy Catherine-Sullivan (University of Melbourne). In this work he has endeavoured to dissect the molecular and biochemical interactions between major histocompatibility complex molecules and the molecule Ly49 to elucidate novel pathways of natural killer cell activation. He is currently supported by an NHMRC Career Development Fellowship.

The award-winning papers of Dr Roberts and Dr Andrews highlight the very high standard of the work published in *Immunology and Cell Biology*. I offer these awardees my best congratulations on their success. I also thank our sponsors Nature Publishing and Thermo Fisher Scientific for their continued support of outstanding science and scientists. I hope these publications encourage others to submit their cutting-edge research to the journal.

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Based on an Editorial published in *Immunology & Cell Biology*, Volume 90 No. 8, September 2012.

ICB Online Manuscript Submission

Online manuscript submission for *Immunology and Cell Biology* now available via:
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All manuscript submissions to ICB should in future be made online via this web site to speed up the reviewing and acceptance of manuscripts.

Gabrielle Belz, Editor-in-Chief
Immunology and Cell Biology



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42nd ASI Annual Scientific Meeting Update

Planning for the 42nd Annual Meeting of the Australasian Society for Immunology is in the final stages. We are holding the meeting at the Melbourne Convention Centre located in Southbank from 2-6 December. This is a terrific venue that has state of the art facilities and is a short walk from Southgate and associated cafes and restaurants, the CBD and Federation Square. It is also a short walk from Flinders Street and Spencer Street (Southern Cross) stations which makes getting to and from the conference very easy.

A terrific scientific program has been organised with an impressive line up of both international and national speakers (see below). The conference kicks off on the Sunday morning with the Special Interest group meetings (Tumour Immunity, Infection and Immunity and Mucosal Immunity). These will be on site at the convention centre and boast a terrific list of speakers. For those interested, be sure to have a look at the program and register for the SIGs when you register for the meeting.

The postgraduate course is also scheduled for the Sunday and will be held at the Alfred Medical Research and Education Precinct (AMREP, Commercial Road, Melbourne). Keynote speakers include Nobel Laureate Professor Peter Doherty, Professor Pippa Marrack, Professor David Vaux, and Professor Dale Godfrey. There will be a strong emphasis on career development and there will be a panel discussion with opportunity for students to gain insights into various career options open to them.

The conference will begin on Sunday evening with plenary talks from Pippa Marrack and Oliver Lantz.

Other speakers include: **Prof. Xuetao Cao**, Zhejiang University School of Medicine; **Prof. Eicke Latz**, University of Massachusetts, USA; **Prof. Sidonia Fagarasan**, Riken Research Centre for Allergy and Immunology, Japan; **Dr Rafael Casellas**, National Cancer Institute, USA; **Prof. Eric Vivier**,

Centre d'Immunologie de Marseille-Luminy, France; **Prof. John Cambier**, University of Colorado, USA; **Prof. Sarah Rowland-Jones**, Weatherall Institute of Molecular Medicine, UK; **Prof. Jedd Wolchok**, Memorial Sloan-Kettering Cancer Center; **Prof. Miguel Soares**, Instituto Gulbenkian de Ciência and **Prof. Filip Swirski**, Harvard Medical School.

National invited speakers include: **Prue Hart**, Telethon Institute, WA; **Charles Mackay**, Monash University, Vic; **Anthony Kelleher**, The Kirby Institute for Infection and Immunity in Society, NSW; **Kelli MacDonald**, Queensland Institute of Medical Research, Qld; **Bryan Williams**, Monash University, Vic; **Nicole La Gruta**, University of Melbourne, Vic; **Elissa Deenick**, Garvan Institute, NSW; **Denise Doolan**, Queensland Institute of Medical Research, Qld; **Chris Andoniou**, University of Western Australia, WA; **Daniel Andrews**, Peter McCallum Institute of Cancer Research, Vic; **Di Yu**, Monash University, Vic; **Erika Cretney**, Walter and Eliza Hall Institute of Medical Research, Vic; **Anselm Enders**, John Curtin School of Medical Research, ACT; **Sammy Bedoui**, University of Melbourne, Vic; **Franca Ronchese**, Malagan Institute of Medical Research, New Zealand; **Cameron Simmons**, Nossal Institute for Global Health, Vic; **Alex Loukas**, James Cook University, Qld; **Natasha Harvey**, Centre for Cancer Biology, SA; **Mireille Lahoud**, Burnet Institute for Infectious Disease, Vic; **Richard Boyd**, Monash University, Vic; **Rajiv Khanna**, Queensland Institute of Medical Research, Qld and **Greg Woods**, University of Tasmania.



There will be the usual events with the Burnet Oration, ASI Young Investigator, The BD communication prize and, of course, the Lafferty Debate. This year's topic reflects the fact that is actually the 50th Anniversary of Immunology meetings in Australia (the ASI as a society was incorporated seven years later hence this is named the 42nd Annual Meeting; yep, we are as confused as you). The topic of this year's debate is paraphrasing a sentiment expressed by Sir MacFarlane Burnet in the later stages of his career. The topic for debate is: "Most of the really important work had been done, and the new generation are just tidying up loose ends". Team captains are Andrew Lew and Elissa Deenink. Finally, the conference dinner will be held at the MCG this year in the Members' Dining Room and promises to be a fantastic spectacle with terrific views of the city while attendees enjoy 'the various tastes of Melbourne'.

We look forward to seeing you in Melbourne in December.

Follow us on twitter: @ASI2012_Melb

Steve Turner and Rose Ffrench



*Melbourne Convention Centre,
the ASM venue*

5th FIMSA Congress (14-17 March) and Advanced Immunology Training Course on Basic and Translational Immunology (18-20 March), New Delhi, 2012

Guna Karupiah

John Curtin School of Medical Research, ANU

The Federation of Immunological Societies of Asia-Oceania (FIMSA) is a non-profit organization founded in 1992 to advance the science of immunology in the Asia-Pacific region.

All immunological societies and associations within the Asia-Pacific region that are members of the International Union of Immunological Societies (IUIS) are eligible to become members of FIMSA. The current members include Australia & New Zealand, China, Taiwan, Hong Kong, India, Iran, Japan, South Korea, Papua New Guinea, Singapore and Thailand.

The FIMSA Congresses and Teaching Workshops, which are usually held on a rotational basis among member countries, contribute to the Aims and Objectives of FIMSA. It was my privilege to be invited to participate in the 5th FIMSA Congress this year as a symposium speaker and as a teaching faculty member in the Advanced Immunology training course, which was held immediately after the Congress. The theme of the Congress was "Translational Immunology in Health and Disease".

The Congress was an intellectually stimulating meeting with an outstanding line up of renowned immunologists from around the world. Attended by close to 500 participants from 32 countries in Asia, Europe, North America, Africa and the Middle East, the conference was truly international. I believe that this level of participation by delegates from across the globe is a sign that FIMSA is emerging as a key player in the IUIS and as a regional Federation. The biggest contingent of participants (384) was from India, followed by the USA (26 participants). I am pleased to note that Australasia, with 18 participants, had the third largest contingent at the Congress.

The ASI has always been very supportive of FIMSA and its activities and this year was no different. ASI sponsored the travel of four members (Cindy Ma, Rose Ffrench, Miles Davenport and Jon Sprent) to participate as

symposium speakers and in the Advanced Immunology Training Course. In addition to the ASI sponsored speakers, FIMSA had sponsored a number of other eminent Australian immunologists (ASI members) to participate in the meeting. Gus Nossal was invited to give the Keynote Address on the first day of the Congress, Jim McCluskey gave one of the Master lectures and Jose Villadangos and Rajiv Khanna were invited as symposium speakers.

FIMSA and IUIS made available several travel bursaries and these were won almost exclusively by graduate students and junior postdocs from the Indian sub-continent. In future I would urge student and junior postdoc members of ASI to apply for these bursaries to attend FIMSA Workshop/Congresses in the coming years (see below). The IUIS has been very supportive of FIMSA and it was indeed great to have the IUIS President, Stefan Kaufmann, and a number of other IUIS Executive members attend and actively participate in the Congress.

An Advanced Immunology training course was held immediately after the Congress at The Institute for Defence Studies and Analyses, New Delhi. There were about 60 students and junior postdocs, mainly from India, who attended the 3-day workshop. There were 10 members of the teaching faculty of which six were from Australia, three from the USA and one from Germany. The six Australians were Cindy Ma, Rose Ffrench, Miles Davenport, Jon Sprent, Nick King and myself. I had great fun at the training course and I believe that the Australian members of faculty had a great time teaching and interacting with these enthusiastic budding immunologists. I was impressed with some of the students who did not hold back when they had questions or if they disagreed with a member of the teaching faculty.

The next FIMSA Advanced Immunology training course will be held in Thailand in 2013 at a date yet to be determined. The 6th FIMSA Congress will be held in Singapore in

2015 during the month of October. We will provide updates for these two events when we have more information.

I've reproduced the Aims and Objectives of FIMSA below for those ASI members who may not be very familiar.

Aims and Objectives of FIMSA

FIMSA aims to promote close contact and interaction between immunological societies of the Asian and Oceania regions and facilitate the exchange of scientific information and personnel in a number of ways. These are generally achieved by:

1. Promoting communication and collaboration between immunologists in the region.
2. Organizing workshops and conferences in the field of immunology.
3. Conducting educational programs, training courses and promoting exchange of scientists for the advancement of Immunology in the region.
4. Facilitating the exchange of technologies and reagents within the region.
5. Supporting the publication of journals, monographs etc.

FIMSA Executive and Council

Over the last few years, I have been very fortunate to have worked with an Executive and Council that was made up of dedicated individuals whose passion was to promote Immunology and interaction between immunological societies in the region and the Federation. I wish to thank Nick King who, during his tenure as President, has guided FIMSA with strong leadership. Under his stewardship, FIMSA has developed rapidly into a much stronger Federation and with increased numbers of member societies joining over the last few years. I know that Nick will continue to play an important role in FIMSA in his current role as Past President. At the FIMSA Council meeting in New Delhi, a new President (Xuentao Cao) and two Vice Presidents were elected to serve until the end of 2015. Since my election to the Vice-Presidency, Alan Baxter



The opening of the 5th FIMSA Congress, New Delhi March 14-17th, 2012

has been elected as the new ASI FIMSA Councillor. I look forward to working with Alan, the new FIMSA Council and ASI not only in achieving the goals of FIMSA but also promoting Australian Immunology in the region. The current make up of the FIMSA Council is as follows:

President

Xuentao Cao (Chinese Society for Immunology)

Secretary-General

Gregory Tsay (Society for Immunology located in Taipei)

Treasurer

Shigeo Koyasu (Japanese Society for Immunology)

Vice Presidents

D Nageshwar Rao (Indian Immunology Society)

Guna Karupiah (Australasian Society for Immunology)

Past President

Nicholas King (Australasian Society for Immunology)

Councillors

Sunil Arora, India

Alan Baxter, Australia

Xuetoa Cao, China

Paola Castagnoli, Singapore

Pak-Leong Lim, Hong Kong

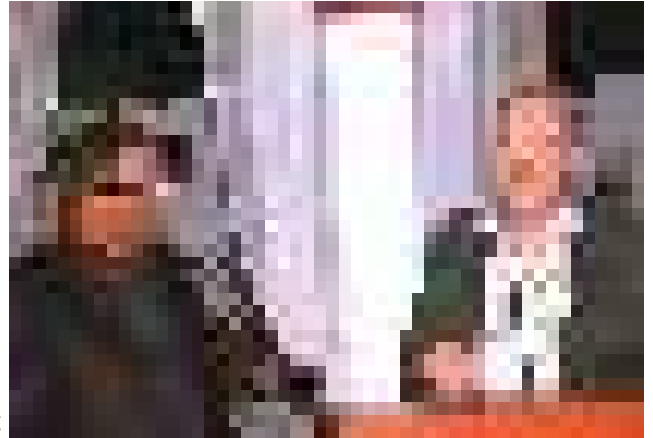
Yosuke Takahama, Japan

Hun-Taeg Chung, Korea

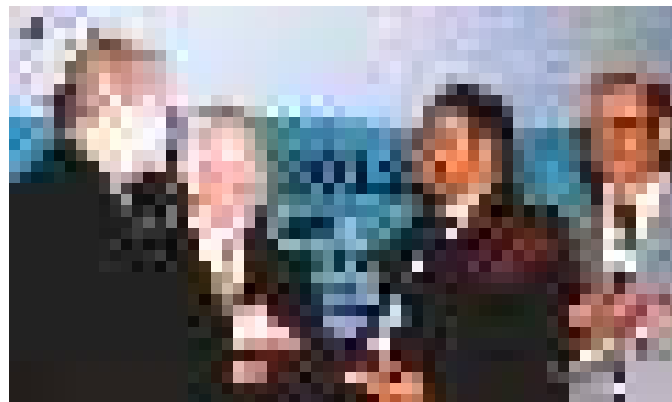
Surasakdi Wongratanacheewin, Thailand

Jiang-Long Huang, Taiwan

Geethani Galagoda, Sri Lanka



Nicholas King and Narinder Mehra, Chair of the 2012 FIMSA Congress



Nick King, Stefan Kaufmann, Narinder Mehra and VM Katoch



Helen Thomas, Nick King, Guna Karupiah and Rose Ffrench

ASI STUDENT NEWS

The ASI conference is fast approaching and your student committee has spent the last couple of months organising this year's student function. We have narrowed down the venues after much (free!) sampling of the menus and will be hosting a trivia night. So be quick to buy your tickets when you register for the conference because places are limited!

We thought since the Olympics took place this year; why not make up some events for Laboratory Olympics? There will be plenty of time to train during incubations.

1. Biohazard bag race: Pretty self-explanatory really. Be prepared for the obligatory "Are you taking the trash out?" remark from a fellow student.
2. Discus: Use the lid from a biohazard bucket to see who can throw one over the longest distance.
3. Relay tip box filling: To ensure you aren't the only one to get stuck filling them. Bonus points if you can do this three-armed lab coat style (two people in one lab coat).
4. Javelin: Use a long pipette to see who can throw it the greatest distance.
5. Archery: Most accurate tip ejection into the tip discard.
6. Sprint: Fastest filling of a 96-well plate with a single channel pipette.
7. Volley-esky: Easy, replace a ball with an empty esky and volley away!
8. Synchronised rowing: With your lab chairs.
9. Gymnastics: Biohazard waste bag ribbon twirling. Extra points for the most creative ribbon.
10. Fencing: See pic for a demonstration.



Laboratory Olympics fencing. Thanks to Eleanor Jones for agreeing to model.

In training for trivia, we have also prepared these anagrams (some of which make no sense but hey, what can you do?) for you to unscramble to form words/phrases related to immunology. To make it slightly easier, the numbers in brackets correspond to the number of words once unscrambled. Good Luck!

I'm loony mug (1)	agar chop eM (1)	Maroon Brew (2)	geophyslciSt twin (2)	unlike Inert (1)
they compLy (1)	toAdy bin (1)	so eMu (1)	aITer once (1)	a combine intRo (1)
Comet towel Fry (2)	triple uh No (1)	circleD lid net (2)	interseCt a sponsor (2)	insult Ciao tom (1)
broW nettles (2)	dAytime vitamin up (2)	a enemy Insistent mum (3)	A centre spleen glinting (3)	cArtilage core nil (2)
a glyceRol turtle (3)	tiny Coke (1)	central reGimen (2)	gotcha is so sPy (1)	rePtilian roof (1)

Maria Demaria & Julia Marchingo

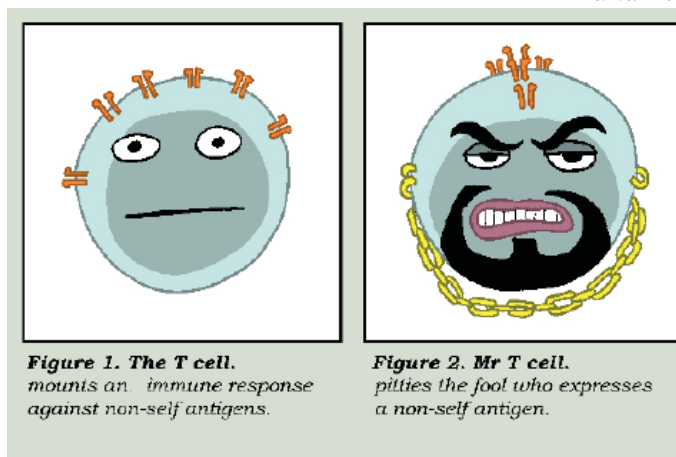


Figure 1. The T cell. mounts an immune response against non-self antigens.

Figure 2. Mr T cell. pities the fool who expresses a non-self antigen.

Mr T cell by ~Velica

This cartoon used with permission from ~Velica (via deviantART). ©2011-2012 ~Velica.

Disclaimer: We do not endorse any actual participation in these events. The event shown was performed under controlled conditions by (bored) trained professionals and should never be attempted under any circumstances. Remember to always wear your PPE and abide by laboratory regulations.

Anagram answers in no particular order:

Flow cytometry, tolerance, mouse, dendritic cell, germinal centre, immunology, costimulation, interleukin, allergic reaction, proliferation, macrophage, neutrophil, lymphocyte, western blot, innate immune system, adaptive immunity, regulatory T cell, cytokine, antibody, bone marrow, isotype switching, cross presentation, antigen presenting cell, phagocytosis, recombination.

Coming soon...

Clinical & Translational Immunology

Nature Publishing Group and the Australasian Society of Immunology are proud to announce the upcoming launch of their newest title **Clinical & Translational Immunology**, which will extend their publishing partnership as they already co-publish the prestigious and well-established journal *Immunology & Cell Biology*.

Topics of particular interest will be:

- cutting edge approaches including in vivo models of human disease that shed light on the mechanisms of immunity
- clinical studies with relevance to autoimmunity, transplantation and tumor immunotherapy
- cutting edge immunoassays for monitoring clinical trials/patient responses
- infection and immunity – correlates of protection
- immunotherapies in relation to autoimmunity, primary and secondary immunodeficiencies, complement disorders and allergies
- pathogenesis and correlates of protection for autoimmune and endocrine disorders, infectious disease, malignancy and transplantation

CTI will publish Original Articles, Reviews and Case Reports and will begin accepting submissions in July 2012.

The CTI editorial team is to be led by Editor in Chief Dr. Gabrielle Delz together with Deputy Editors Dr. Adrian Liston and Dr. Stuart Tangye. An editorial board of distinguished physicians and immunology researchers from across the globe will provide their experience and expertise to support the journal and the editorial team.

Clinical & Translational Immunology will be an open access, on-line-only journal covering basic, translational, and clinical studies in all aspects of human immunology, including experimental models specific to human diseases.

Why not consider sending your next excellent paper to CTI!



ASI Councillors' News

N.S.W. News

NSW continues to enjoy some excellent speakers from the ASI Visiting Speakers Program. We are very pleased to have hosted Dr Pam Schwartzberg, giving a fantastic seminar about X-linked Lymphoproliferative Disease in August. Upcoming speakers to put into your diary are:

Prof. Hidde Ploegh (mid October, dates to be confirmed)

Current interests in the Ploegh Laboratory include studies of the various tactics that viruses employ to evade immune responses, and the ways in which the immune system – both innate and adaptive – distinguishes friend from foe. Hidde Ploegh has received multiple prizes, including the Avery-Landsteiner Prize, the Havinga Medal and the Meritorious Career Award of the American Association of Immunologists.

A/Prof. John Wherry (February 1st 2013)

John Wherry studies CD8⁺ T cells responses during chronic infections. John has made a number of significant contributions to our understanding of T cell responses during infections, including early work examining the functional differences between central and effector memory cells. John's work has been central for understanding CD8⁺ T cell 'exhaustion', including discovery of the roles of inhibitory receptors such as PD-1 and LAG-3.

The 2012 combined NSW/ACT Branch Retreat is being held on the Thursday/Friday 23/24 August and we look forward to updating you on all the details and news from that in the next issue.

All the best until next time,

*Marcel Batten
Councillor*

Sustaining Membership

ASI Inc acknowledges the support of the following sustaining member:

- Jomar Bioscience

N.Z. News

NZASI 2012 Summary

On 28-29 June 2012 the annual NZ ASI branch meeting was held in Dunedin and hosted by the University of Otago. The meeting featured keynote lectures from distinguished immunologists **Troy Randall** from the University of Alabama, Birmingham, USA; **Richard Vile**, from the Mayo Clinic, USA; and **Anne Kelso** from the WHO Collaborating Centre for Reference and Research on Influenza, Melbourne, Australia. Over 100 scientists from across New Zealand braved the coldest week of the year in Dunedin to give presentations on topics such as tumour immunology, fish immunology, infectious disease, vaccine delivery and molecular immunology.

Every year, NZASI recognizes the ASI Women's Initiative and this year it was part of a welcome event for all delegates – a quiz night the evening before the conference began. This was successfully organised by Imogen Roth, Farah Al-Barwani and Emily Waugh, and featured questions on general knowledge, sports, pop culture and a special round on female immunologists.

One of the major objectives of the NZ ASI meeting is to highlight student and trainee research through speaker awards and this year these four hotly contested awards were won by the following researchers:

1. "Buck Award" for best student presentation: **Cam Field** (Malaghan Institute) – "Feeling hungry? mTOR, memory, melanoma and metabolic manipulation of the immune system"
2. Award for best Pecha Kucha 20/20 student presentation (20 slides/20 seconds per slide): **Farah Al-Barwani** (University of Otago) "Glycosylation of RHDV VLP"
3. Heslop Award for best post-doctoral fellow presentation: **Lisa Connor** (Malaghan Institute) "Early dysregulation of the memory CD8⁺ T cell repertoire leads to compromised immunity to secondary viral infection"
4. Marbrook Award for best research staff presentation: **Michelle Wilson** (University of Otago) "Glow and tell: using fluorescence to investigate virus like particles".

I would like to thank the University of Otago, the University of Auckland, the Malaghan Institute and the Maurice and Phyllis Paykel Trust for supporting the meeting. Additionally, support from the following major sponsors was essential in make this conference possible: Beckman Coulter, Olympus, Hunting Tree, Norrie Biotech, Becton Dickinson, Life Technologies, Pharmaco, Abacus, Medica Pacifica, Custom Science, Raylabs, Vital Diagnostics, Sapphire Bioscience and the University Bookshop.

*Roslyn Kemp
Meeting Convenor*

Queensland News

Report on the Brisbane Immunology Group Meeting 2012

The Brisbane Immunology Group, led by Rajiv Khanna (QIMR), held its annual meeting in Kingscliff, New South Wales, on August 16–17. Despite being held in NSW, this Queensland meeting was deemed a success by all! Pam Schwartzberg (NIH, USA), an ASI-sponsored overseas Visiting Speaker, gave a wonderful opening plenary lecture on the role of SAP and SLAM-family members in controlling T and B cell interactions. The subsequent postgraduate session fizzed with effervescent talent, with Patricia Illing from Melbourne University, winning the ASI-sponsored postgraduate prize for her fascinating account of how the drug, abacavir, lodges itself within the binding cleft of certain MHC molecules, skews the peptide which bind, and thus triggers immune self-reactivity. The early-career session was keenly attended as always, with many availing themselves of the ample ASI-sponsored refreshments at the later poster session.

The highlight of the day for many was, of course, the Jonathan Sprent Oration, given by none other than Professor Mark Smyth. Indeed, Mark will soon be taking up residence at QIMR, Brisbane, and I'm sure that Queensland immunologists eagerly await the arrival of this 'pillar' of Australian immunological research. After a bounteous conference dinner, the following day was a wash with high quality talks from Fabienne Mackay, Patrick Bertolino, Mike McGuckin, Don McManus, Simon Barry, Sammy Bedoui, Kelli MacDonald, Jim Coward and

Matt Sweet. With such a packed schedule under their belts, conference attendants were glad to applaud Patricia Illing, Motoko Koyama and Melanie Shakespear for their ASI prizes before heading off into the NSW sunset. We all look forward to the 14th annual BIG meeting next year.

In other news, the Queensland ASI is establishing a sub-committee to help run branch affairs. Their first meeting will be early in September (at QIMR), and we all look forward to hearing how this group of Queensland ASI members will shape immunological activities in the State.

Ashrafal Haque
Councillor

Victorian News



Preparations for the ASI Annual Scientific meeting are now well advanced. The meeting will be held at the Melbourne Convention and Exhibition Centre from December 2-6 and you should check the website (www.asi2012.org) for details about the scientific program and all the satellite events and functions. One highlight is sure to be the conference dinner to be held this year at the Melbourne Cricket Ground. Will Richard Boyd be tempted, I wonder, to add his name to the long list of streakers who have graced the famous ground?

Over the past few months IgV and ASI have hosted several visitors. Pam Schwartzberg spoke at WEHI and the Burnet Institute about the regulation of lymphocyte interactions in X-linked lymphoproliferative disease. Pam was a guest of ASI through the sponsorship of the ASI Visiting Speakers Program. ASI is sponsoring several more visitors to Australia through this program over the few months so please keep an eye out for details.

IgV has been busy even though the normally annual IgV retreat will not be held this year due to the ASI meeting being in Victoria. The IgV Winter seminar featured Professor Mariapia Degli-Esposti speaking about Natural Killer cells in anti-viral immunity and the IgV Masterclass was once more a great success with over a hundred people listening to talks from experts in different areas of Immunology. IgV has also been running a competition to design a new logo for IgV with the winner receiving free registration to the meeting. It's a great prize so get out the Derwents (or Powerpoint) and let your creativity run wild.

Remember to register for the ASI meeting and to encourage your work colleagues to sign up for ASI membership to get cheaper registration to the meeting and become eligible for a series of awards and bursaries that are open to ASI members. All details about membership are on the soon to be updated ASI website (<http://www.immunology.org.au/>).

Stuart Berzins
Councillor

S.A./N.T. News

The 8th Adelaide Immunology Retreat (AIR) for PhD students, Honours students and research assistants will be held at the Clare Comfort Inn in September (7th-8th). Professor Lynn Corcoran (WEHI) is our invited national speaker and our invited 'local' is Dr Gabriela Minigo (Menzies School of Health Research, Darwin). A full report of the event will come out in the next edition of the newsletter.

I would like to thank the AIR 8 organising committee members – Cara Fraser, Erin Lousberg, Susan Christo, Dave Yip, Natasha Kolesnikoff, Houg Taing, Yuka Harata-Lee, Nicole Christie and Iain Comerford – for all of their hard work and enthusiasm for the meeting. Also a BIG thank you to all of our sponsors: Qiagen, Jomar, Miltenyi, Australian Bioscience, Carl Zeiss, BioRad, Sapphire Bioscience, UniSA, Adelaide Uni, Geneworks, Life Technologies, Epitope Technologies, Beckman Coulter, Enzo, BD Biosciences, Roche Diagnostics and Genesearch. Without their generous financial support, the event could not be held.

Michele Grimbaldeston
Councillor

Contributions sought for the ASI online immunology quiz

As part of World Day of Immunology events, we have developed an online immunology quiz (see <http://www.immunology.org.au/immquiz1.html>)

on the ASI website. This quiz is targeted at the general public, but it would be good to add a few more questions (especially some with an Australian flavour), and maybe even add an "Advanced Level", with questions that undergrad students might find useful for revising for exams. All that's needed now are the questions and answers.

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

6th Australian Health and Medical Research Congress
25th - 28th November 2012
Adelaide Convention Centre

Promoting new, multidisciplinary approaches to health and medical research™

Congress welcomes our 2012 partners

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 Australian Society for Microbiology
 Australian Society for Parasitology
 Australian Society for Plant Pathology
 Australian Society for Virology
 Australian Society for Zoonoses
 Australian Society for Food Safety and Food Quality
 Australian Society for Food Preservation
 Australian Society for Food Packaging
 Australian Society for Food Storage
 Australian Society for Food Safety and Food Quality
 Australian Society for Food Preservation
 Australian Society for Food Packaging
 Australian Society for Food Storage

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THE ASI VISITING SPEAKER PROGRAM 2012

The ASI VSP brings leading immunologists to your own backyard and it is perceived as one of the important contributions of the Society to its members. We have a stellar list of immunologists planned but will be very keen in hearing from you. Should you wish to embark in a collaboration with a prominent immunologist with whom you have some contact, this is a great opportunity to have them visit Australia and to discuss in more detail your research and potential or existing collaborations. In addition, the visiting speaker would also benefit from the interaction with your group and others in establishing future research projects.

We do look forward to hearing from your proposals. For details on the process visit the ASI website.

Planned visits

Professor Hidde Ploegh

Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology (MIT), Boston, USA

Hosted by Jose Villadangos, University of Melbourne

This visit is now likely to take place in January 2013. Details of the tour will be provided by local Councillors.

February 2013

A/Prof. E. John Wherry

University of Pennsylvania, Department of Microbiology, Philadelphia, PA, USA



Hosted by Scott Mueller, University of Melbourne

Sydney – February 1

Brisbane – February 4/5

Melbourne – February 7/8

Auckland – February 11.

John Wherry studies CD8⁺ T cells responses during chronic infections, with a focus on understanding the mechanisms of dysfunctional responses that contribute to an inability to clear the host of many chronic pathogens. John has made a number of significant contributions to our understanding of T cell responses during infections, including early work examining the functional differences between central and effector memory cells. John's work has been central for demonstrating that virus-specific CD8⁺ T cells often lose effector functions, and fail to become memory cells or survive independently of antigen during chronic infection. Termed 'exhaustion', this is a common feature of many chronic infections, including HIV and hepatitis viruses. Dr Wherry has also contributed significantly to our understanding of the mechanisms involved in T cell exhaustion, including discovery of the roles of inhibitory receptors such as PD-1 and LAG-3.

John's laboratory is also examining the effects of co-infection with multiple pathogens, including influenza viruses, on T cell responses and memory. Recent work has also elucidated differences in T cell function and memory formation in aged mice, which has important implication for vaccination of humans.

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TRAVEL AWARD CONFERENCE REPORTS

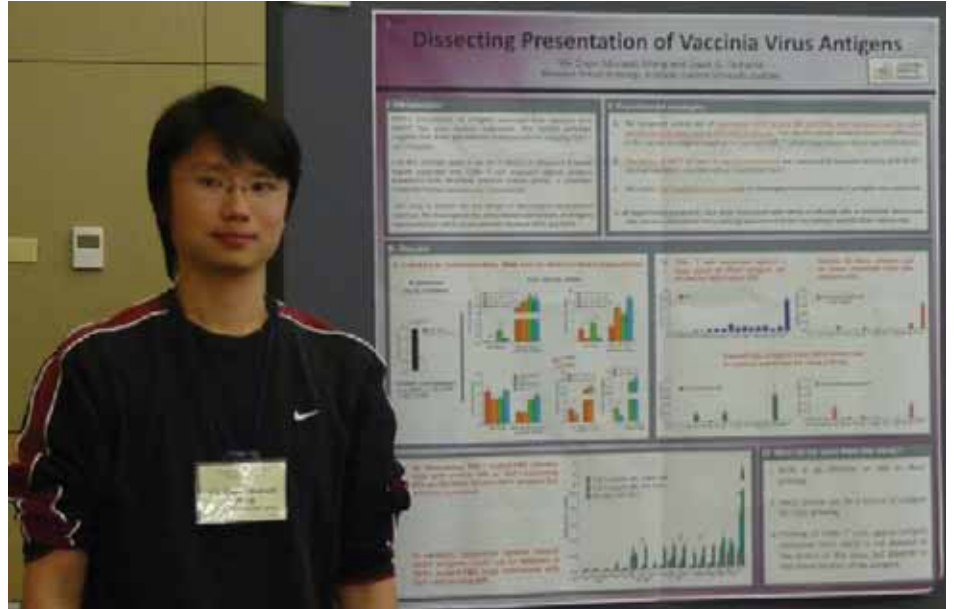
Keystone Symposium, Viral Immunity and Host Gene Influence

Yik Chun (Michael) Wong

Australian National University, Canberra

I was very honoured to receive an ASI Postgraduate Travel Award to attend a Keystone Symposia conference, *Viral Immunity and Host Gene Influence* (21–26 March 2012), which was held in Keystone, Colorado, USA. This meeting was organised together with another conference called *HIV Vaccines*. There were around one hundred talks and even more posters presented by over 500 scientists from different parts of the world.

The talks were all scheduled before dinners, followed by poster sessions which allowed us to talk to people in a more casual atmosphere. I learned a lot from the talks and poster sessions from both meetings. Particularly, there were several talks and posters that caught my attention. Dr Béhazine Combadière (France) gave a short talk and a poster presentation on her interesting findings which demonstrated that neutrophils captured modified vaccinia Ankara, a recombinant vaccine vector candidate, from the infection site in the skin and then travelled to the bone marrow to provide antigens for priming CD8+ T cells. Another interesting talk by Prof. Laurence Eisenlohr (USA) showed us that rather than relying on extracellular antigens for MHC-II presentation (the classical pathway), peptides presented on MHC-II could also be sourced from viral antigens expressed endogenously within the virus-infected cells. Both talks challenged our current understandings about antigen presentation mechanisms.



I presented a poster about my work on the mechanisms involved in eliciting CD8+ T cell responses by different vaccinia virus strains. This gave me a great opportunity to discuss my research with many experts in the field. I received much valuable feedback and helpful suggestions.

After the meeting, I continued my journey to the east coast of the US to visit two labs. The two labs I visited were Dr Luis Sigal's lab in the Fox Chase Cancer Center, Philadelphia, and Drs Jon Yewdell and Jack Bennick's lab in NIH, Bethesda. Afterwards I went to Hong

Kong, my home city, and visited Dr Ming Chiu Fung's lab in the Chinese University of Hong Kong and Prof Yu Lung Lau's lab in the University of Hong Kong. Each lab I visited was very beneficial to my future career. It gave me the opportunity to interact with different people and gain new insight into the field of viral immunology.

Overall, my journey was eye-opening and I have learned a lot from all the great researchers I have talked to. I would like to thank ASI for supporting this trip. Thanks, ASI.

John Wherry selected publications, cont.

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Keystone Symposium, Viral Immunity and Host Gene Influence

Kimberley Jones

Queensland Institute of Medical Research

With the assistance of an ASI Travel Award, I was able to attend the Keystone Symposium on Viral Immunity and Host Gene Influence in Keystone, Colorado. This was a joint conference with the HIV Vaccines symposium. The five days of the conference were packed with an impressive line up of speakers focusing on virus-host interactions. Highlights included Robert Seder's talk on results of adenoviral vector vaccines in non-human primates, David Price's talk on the clonotypic basis of T-cell immunity, Stephen Turner's talk on the epigenetics of T-cell differentiation and a fascinating show of intravital imaging of CD8+ T-cells after viral infection given by Heather Hickman. The most relevant talk to my own work was given by Patrick Ramer who discussed some interesting and novel results using the EBV infection humanised mouse model. The talks were conveniently scheduled with large breaks in the middle of the day which permitted a few hours of excellent spring skiing at Arapahoe Basin and Keystone ski resorts.

In addition to the talks, poster sessions were held in the evenings, with more than 700 posters presented for the combined viral immunity and HIV vaccines sessions. I had previously been told that Keystone Symposia poster sessions are highly interactive and that

it is unusual to see anyone standing alone at their poster. I was sceptical, especially considering I was presenting EBV work to primarily HIV and HCV researchers. However, the poster sessions lived up to their reputation and I was losing my voice and exhausted from explaining my work by the end of the night.

I would highly recommend attending this conference to anyone interested in viral immunity. It was well organised and permitted a great opportunity to hear about the latest work in the field as well as some great social events. The location was beautiful and the skiing was a definite bonus!

After the conference, I spent a few days learning additional flow cytometry analysis techniques and working on a collaborative project with Pratip Chattopadhyay in Mario Roederer's lab at the Vaccine Research Centre, NIH. Following this, I headed to Boston to visit the lab of Darrell Irvine at the Koch Institute, MIT, where I gave a talk about our work and learned more about the brilliant work they are doing to enhance adoptive immunotherapies.

Thank you to ASI for giving me the opportunity to have these invaluable experiences.



UPCOMING CONFERENCES

15th Biennial Meeting of the European Society for Immunodeficiencies
October 3–6, 2012
Florence, Italy
www.kenes.com/esid2012

Immuno 2013,
March 11–12, 2013
Barcelona, Spain
<http://www2.kenes.com>

15th International Congress of Immunology
August 22–27, 2013
Rome, Italy
ici2013@triumphgroup.it
www.ici2013.org

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!**

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Publications List

*Congratulations to ASI members who have published their following work in the last three months
(articles with an ePub date between April and June 2012)*

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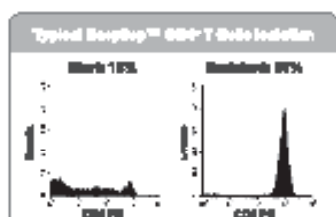
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