Australasian Society for Immunology Inc.

N E W S L E T T E R

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Why the ASI Women's Initiative is important:

Search images (google): 'SCIENCE GRADUATE'

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Women in Science and the ASI Women's Initiative

The Importance of Mentoring

Roslyn Kemp
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Meghan Groome recently defined mentoring as "outsiders becoming insiders"[1]. The support and advice provided by mentors has been shown to have a major effect on the careers of everybody, but particularly for women. The National Research Council, National Academy of Sciences committee in charge of Gender Differences recently showed that female assistant professors with mentors had 68% probability of grant funding versus 93% of women with mentors[2]. Mentored women and men gain higher salaries and more upward mobility than those without mentors[3]. How can we be sure that women receive the mentoring they need?

Informal mentors tend to select mentees that they view as younger versions of themselves …

Informal versus Formal Mentoring

Formal mentoring programs have been adopted by many organizations (including ASI) and are a valuable contribution to providing support to women who lack informal mentoring opportunities. However, these programs are not a replacement for informal mentoring relationships, which are much more difficult for women to obtain in careers dominated by men. Informal mentoring relationships develop spontaneously, and are usually based on mutual identification, perceived competence and interpersonal comfort[4]. People naturally form relationships with people they enjoy both working with, and with whom they enjoy a personal relationship – this is often built around similar hobbies, families or extracurricular activities.

Informal mentors tend to select mentees that they view as younger versions of themselves, and the relationship therefore benefits both participants, as mentors perceive themselves contributing to the next generation of scientists[4]. In turn, informal mentees select mentors who they see as role models[4].

Sponsorship

Mentoring provides support and advice – sponsorship takes this one step further. A mentor provides details of an opportunity to a mentee; a sponsor will provide the opportunity specifically to the mentee. Sponsors tend to be senior scientists with power and influence, and the ability to actively promote their mentee[5]. Women are much less likely to receive sponsors or to have sponsors develop from a mentoring relationship than men. ASI has a female expertise database with a list of women and their specialist subjects. The purpose of this database is to provide an easily searchable list of women who can contribute to conferences, panels or reviews – that is, a potential list of women who could be sponsored.

Actions

1. Organizations must include formal mentoring programs, but also provide advice and training on how to mentor effectively. Organizations need to recognize the benefits of informal mentoring and create situations that allow these relationships to develop. This may involve social interactions with other departments or allowing mentors and mentees to self-select rather than be placed together by a program co-ordinator.

… is important to avoid constantly selecting the same junior scientist for opportunities of career development …

2. Senior scientists and leaders need to value sponsorship and apply it equally across those people in their field. It is important to avoid constantly selecting the same junior scientist for opportunities of career development, but to consider others who may contribute or benefit equally well.

3. Peer mentoring and mentoring circles are also effective – junior scientists and students can instigate their own networks and events, with support from organizations.

Roslyn Kemp has worked at several international institutes and has realised that there aren't many women in them.

4. Online mentoring services exist for those with limited options – become a mentor if you can; acquire mentors from a range of expertise and seniority.

References

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2. Bonetta, L; 2010; Reaching gender equity in science: The importance of role models and mentor; *AAAS Science* (doi: 10.1126/science.opms.r1000084)
3. Willemsen, T; 2011; How mentoring can help women scientists; *SciDevNet* (http://www.scidev.net/global/capacity-building/opinion/how-mentoring-can-help-women-scientists-1.)
4. Ragins, BR; Cotton, JL; 1999; Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships; *Journal of Applied Psychology*; 84(4):529-550
5. Travis, EL; Doty, L; Helitzer, DL; 2013; Sponsorship: a path to the academic medicine c-suite for women faculty?; *Academic Medicine* 88(10) 1414-1417

ASI Women's Initiative – From an Early-Career Researcher

Julia Prier
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Julia Prier is finishing her graduate studies and hopes to begin her post doctoral experience overseas next year.

Gender imbalance within Immunology exists in Australasia despite many attempts to close the gap. Despite this obvious case for merit, only 4/28 of the prestigious Burnett Orations at the Annual ASI Meetings have been given by woman, with Professor Barbara Fazekas de St Groth being the first in the past ten years. To further illustrate this point, in 2014, 63% of all the NHMRC's early career fellowship applications were by women, yet this fell to just 11% for the most senior and experienced fellowships, reflecting the relative lack of females at senior positions within science.

As a early career researcher, it is encouraging to report the ASI Women's Initiative has taken steps to solve this issue by developing a mentorship program that suggests mentors for young female scientists who wish to advance their careers with the support that mentorship provides. A likely advantage of this is the lasting ties back home that it will provide for young female scientists furthering their careers with overseas post doctoral experience. This could aid in the return of our highly trained researchers. Another aspect of the ASI Women's Initiative that I really enjoy is its use as a forum to celebrate the successes of female immunologists within Australasia, of which there are many!

I really enjoy (the) forum to celebrate the successes of female Immunologists within Australasia

The Women's Initiative discussion forum, and the Women's Initiative meeting held at ASI, bring awareness to these issues and provide an open and welcoming environment to discuss them in. Acceptance of the issues is necessary to move forward in promoting equity, which will in turn increase research productivity. As a collaborative effort within the scientific community is needed to achieve this goal, it would be promising to see a more representative crowd at these meetings. The ASI Women's Initiative is a positive step to not only provide early career researchers with inspirational role models, but also to ensure the future representation of female leaders in the field.

Gender Bias in National Health and Medical Research Council (NHMRC) Funding

Barbara Fazekas de St Groth
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Barbara Fazekas de St Groth has been lobbying for an evidence-based approach to gender equity for many years. She was the first to propose a gender equity initiative within ASI in 2008.

The NHMRC recently provided me with de-identified information listing all Project and Fellowship applications submitted in 2010-2014 (n=23416), together with the gender of the Chief Investigator A (CIA), and whether they were funded. The statistical analysis revealed the following sobering results.

Overall, the chance of an application with a female CIA being funded was only 0.85 of the chance of one with a male CIA ($p<0.0001$). The rates for each of the years in this five year period were very similar.

For the different funding schemes, chances of funding for female CIAs were below 0.9 for all schemes except Career Development, with Project Grants at 0.83 and Research Fellowships at 0.87. By broad research area, Public Health and Health Services were 0.98 and 0.96 respectively, while Clinical was 0.79 and Basic Science was 0.86. The proportions of female applicants in the four areas were 0.59, 0.68, 0.20 and 0.23 respectively. So it seems that women are funded at the same rate as men only in research areas in which they constitute the majority of applicants. Where they are in the minority, lower funding rates perpetuate their difficulty in surviving in the workforce. There is one area in which women do better than men: being judged as Not For Further Consideration (NFFC).

…. one area in which women do better than men: being judged as Not For Further Consideration …

I have proposed that the funding rates be scaled so that women have the same chance as men of obtaining funding. The NHMRC already scales between disciplines by funding the same proportion of grants from each panel, irrespective of "excellence". This measure does not require complex decisions about how to weight different gender-related factors - it is based on the simple proposition that men and women are equally good at medical research and that funding rates should reflect this fact. This will not impact on concurrent measures to account for career disruption – but will deal in a practical way

… the simple proposition that men and women are equally good at medical research and that funding rates should reflect this …

with the intrinsic sources of bias that are apparent from the data

(full analysis is available at http://www.nhmrc.gov.au/_files_nhmrc/file/media/events/2015/wihs_scaling_scores_gender_independant_outcomes_fazekas.pdf- but please note that there is a mistake in the upper 95% confidence interval for Standard Projects on slide 4 "Funding by subtype" - it should be of the same magnitude as the lower 95% confidence interval)

More Mums in Science Please

Scott Byrne
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I have a confession to make … I aspire to be an old, white male.

As someone who's been ticking two of those boxes without effort for 40 years, it's only a matter of time before all three aspirations are met. And there's the rub. I don't need to do *anything* to make it into the world's most privileged societal group. Some might say I'm already there.

When I was asked to write this piece my gut reaction was to decline the invitation. My female colleagues won't want to hear from me – what would I know about women in science? But I soon remembered that I am surrounded by intelligent, talented women who I care about. I am a husband, a father to a beautiful little girl, a brother to four sisters, an uncle to nine nieces and a mentor to my immunology students, two thirds of whom are women.

Women have been striving for equal opportunity for far too long. The fact that we still have gender imbalance and inequality in the work place is a disgrace. However, I have come to believe that while equal opportunity is a noble goal, it ignores the

…. equal opportunity is a noble goal (but) it ignores the fact that men and women are different

fact that men and women are different. We each have our strengths, some shared, some unique. Good Science is achievable by each gender in isolation. But we are more than the sum of our parts, and Great Science is done when we work together. I believe it is time to evolve the idea of equal opportunity into "*different opportunity*". This would acknowledge the fact that many women face unique challenges that require tailor-made solutions. By giving up on the idea of trying to make women like men (a backward step if you ask me), we would be free to come up with novel solutions aimed at creating opportunities for everyone in science.

Without discounting the importance of the other challenges, perhaps the number one challenge women face is this: "Woman in Science" wants to be "Mum in Science". Everyone agrees we must support women in science who want a family. No-one argues with the notion that women should

Scott Byrne is an ageing white male teaching and research academic at The University of Sydney. He is most grateful to his female colleagues for their constructive feedback on this piece

cont. next page

No-one argues with the notion that women should feel secure knowing that starting a family and becoming a mother does not jeopardise their career

feel secure knowing that starting a family and becoming a mother does not jeopardise their career. The reality is that women are not supported and they do not feel secure. The evidence suggests that their careers do suffer as a result of starting a family.

Here are three ideas:

1. Require fellowship and grant reviewers to document in a *minimum* of 500 words **how they have taken into account the applicant's career disruption**.

2. Remove restrictions such as "age" and/or "years post PhD" from eligibility criteria for fellowships and awards/honours (particularly for those claiming a career disruption).

3. Introduce a **"Mums in Science" competitive fellowship scheme** through either the ARC, NHMRC or both. One suggestion: $1 million guaranteed funding over five years available to applicants who are about to take leave to have a baby. The applicant's ***current track record*** would be the primary criteria for determining success. Successful applicants would be permitted to pause, re-start and extend the fellowship as circumstances require (e.g. a second baby). This would give women in science a "different opportunity". Those with an upward career trajectory at the time of applying would be supported and feel secure knowing that they don't have to sacrifice their scientific careers to have a family.

While I am in no position to share the frustration and anger at the appalling situation faced by women in science, I must be part of the solution. We all know there is a problem. No more time can be wasted. These women are our wives, our daughters, our sisters, our nieces, our students, our friends. We must design and implement concrete strategies that begin to address the lack of opportunity.

GET $200 FOR THE BEST SUBMITTED ARTICLE TO THE NEWSLETTER EACH YEAR

We invite all ASI members to contribute copy that is
* interesting or historical
* useful or thought provoking
* what the student membership care about.

NEXT EDITION DEADLINE: FEBRUARY 1ST 2016 FOR MARCH PUBLICATION

email
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joanna.roberts@gmail.com

Editorial

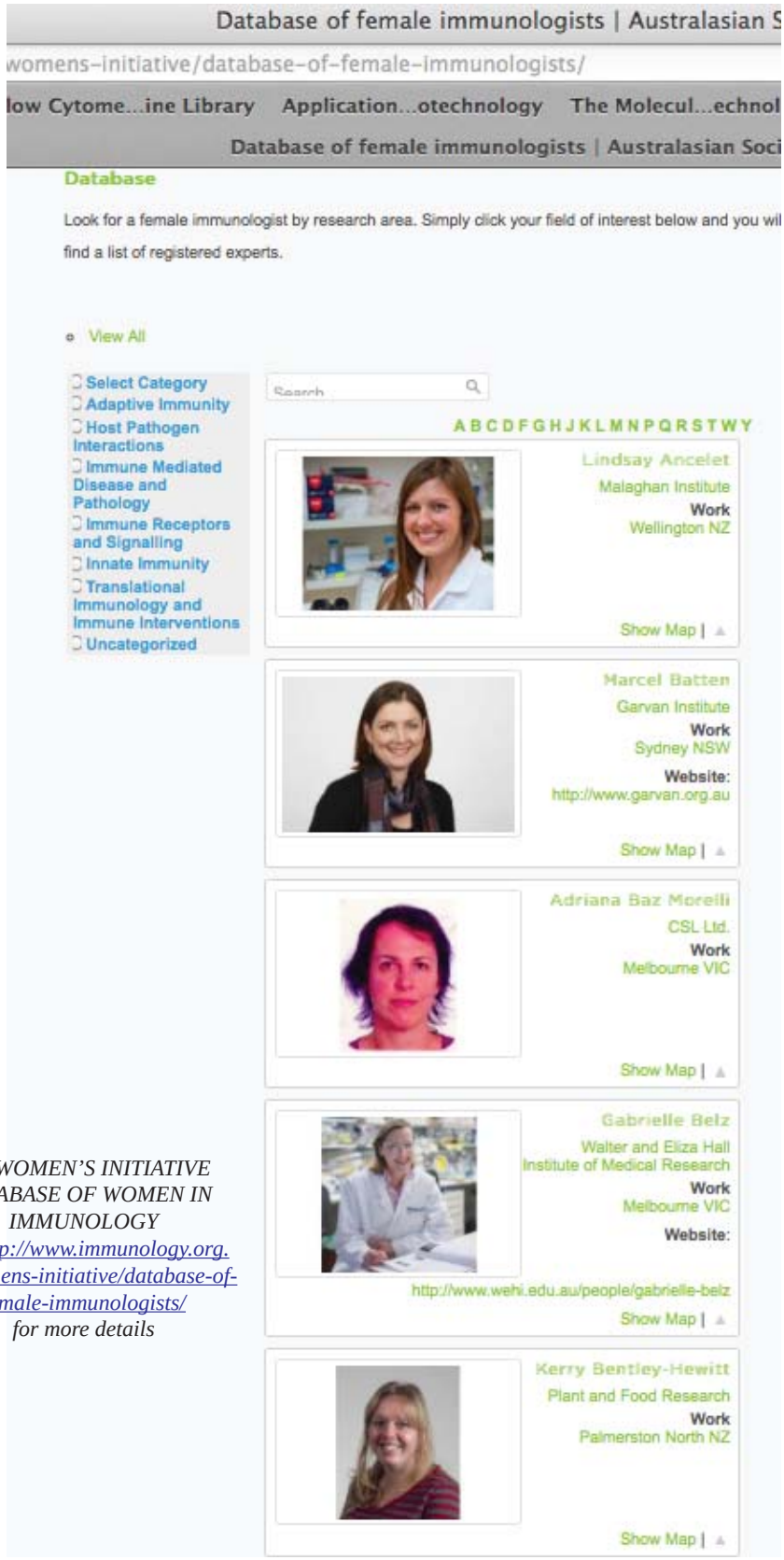
Men make excellent mentors for young scientists through the ASI Women's Initiative. As do women.

Unexamined bias is a dangerous thing. But we're surrounded by it, and we dish it out, all of us. Bias gets in the way of doing good science. We all know that conscious biases can be lethal when looking at a data set if we don't deliberately assign them to the sin bin when considering our results. Our UNCONSCIOUS biases are more dangerous. They affect how we perceive one another and this can influence for better or worse the impact we have on our colleagues.

Think about the study (*Sex Roles, Vol. 41, Nos. 7/8, 1999*) that showed that men and women were both likely to prefer a female candidate's CV with a male name over the same CV where the name was a woman's. This is just a little bit terrifying. We must acknowledge the potential for our own biases to influence our judgements of our colleagues and act to overcome them.

We as people are not distinguished from one another in our ability to do good science based on our sex. Despite this, figures presented by Barbara Fazekas de St Groth (see article page 4 this issue of the Newsletter) show that male applicants to Australia's National Health and Medical Research Council are more likely to be funded than female applicants. This suggests a problem. I have been worrying that this might mean that candidate A, who is 98% awesome (and a woman) would lose out to candidate B who is 94% awesome but a man. Could this be true? This would be terrible in terms of fairness and equity but, more to the point, we want to fund the most worthy projects and this would mean we were not doing that, which is bad for all of us. This funding discrepancy could be partly affected by the applicants' ability to *prove* their track record of awesomeness. If women are taking time out of their careers to give birth, breastfeed, and care for their progeny, this can affect a CV but women should not be penalised. I am enthusiastic about Scott Byrne's suggestions for ways to respond to this in his contribution to this issue (see page 6).

The ASI continues to impress this year with its commitment to the Women's Initiative, set up by Roslyn Kemp, which positively affects the science and career of people like Julia Prier (both contribute in this issue, see pages 3 and 4). A new position on Council has been created for the Women's Initiative and the new appointment of Vanessa Bryant to this role bodes well.



ASI WOMEN'S INITIATIVE DATABASE OF WOMEN IN IMMUNOLOGY
See http://www.immunology.org.au/womens-initiative/database-of-female-immunologists/ for more details

Read the articles about the ASI Women's initiative in this issue. They will open your eyes to why mentoring and exposure are so important.

Joanna Roberts

Immunology & Cell Biology

Immunology & Cell Biology **Impact Factor 4.147**

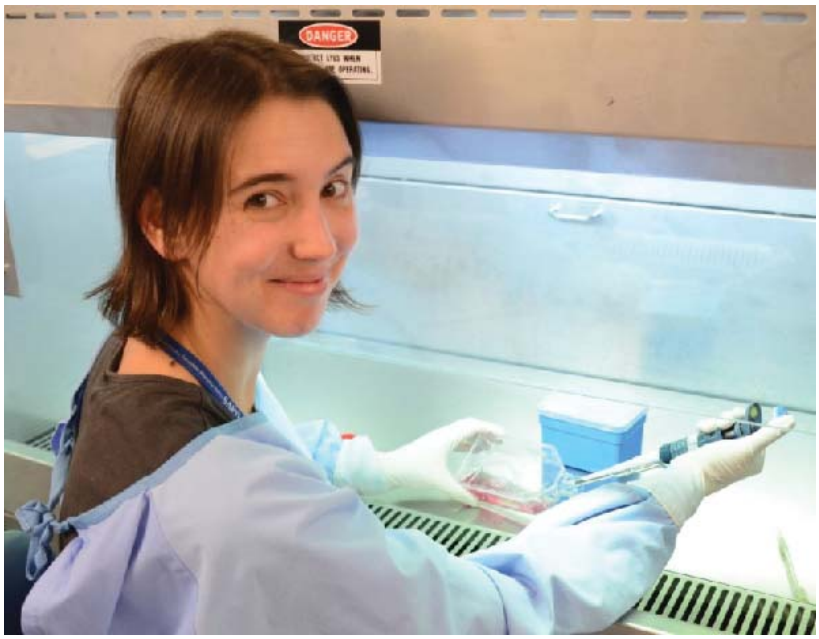
Immunology & Cell Biology Publication of the Year Award Announced

Congratulations to the Chris and Bharma Parish *Immunology & Cell Biology* **Winner** Article of the Year 2015 award: **Dr Yuka Harata-Lee**, University of Adelaide, Chemokine Biology Laboratory.

Dr Yuka Harata-Lee

Harata-Lee Y, Turvey ME, Brazzatti JA, Gregor CE, Brown MP, Smyth MJ et al. **The atypical chemokine receptor CCX-CKR regulates metastasis of mammary carcinoma via an effect on EMT.** Immunol Cell Biol 2014; 92: 815–824.

Congratulations to the Thermo Fisher Scientific *Immunology & Cell Biology* **Runner-Up** Article of the Year 2015 award: **Dr Tessa Gargett**, Experimental Therapeutics Laboratory, Royal Adelaide Hospital.



Dr Tessa Gargett

Gargett T, Grubor-Bauk B, Garrod TJ, Yu W, Miller D, Major L et al. **Induction of antigen- positive cell death by the expression of Perforin, but not DTa, from a DNA vaccine enhances the immune response.** Immunol Cell Biol 2014; 92: 359–367.

With thanks to *Immunology & Cell Biology*.
Please see Editorial published in *Immunology & Cell Biology* Volume 93 No. 10, the November/December 2015 issue for full details.

President's Column

Momentum is really gathering for the world's immunologists to converge on Melbourne next August. Your Society is the host of the International Congress of Immunology, for the first time since the mid-1970s. We all stand to benefit, and now is the time to plan how each of us will take advantage of this once-in-a-lifetime opportunity.

First off, you'll never be able to attend an International Congress with less jet-lag, shorter travel time, and lower travel costs. If you plan on attending one of these extraordinary gatherings of the worldwide clan at any time in your career, this is the one.

The ICI speaker program is continuing to take shape. We all will benefit from an extraordinary mega-lineup of international visitors and speakers coming to Australia. We would all like to have that international talent on display alongside every single one of our amazing Australian immunologists speaking. But the reality is that the International Congress has to strike a balance among speakers from all over the world and, as hosts, some of us Australians will need to give our speaking time to our visitors. Please see it that way. It would be a bit of a shame if some of us were to take the view, "I haven't been asked to speak, so I won't come".

Finally, the ICI2016 meeting will be in lieu of our usual annual gathering next year, so the next opportunity to network with Australian colleagues at this scale and breadth is 26-30 November 2017 in Brisbane (put those dates in your diary – the Brisbane 2017 team led by Antje Blumenthal is putting together a great meeting).

For our regular annual meeting, ASI members normally benefit from a big discount on registration costs, and we will soon announce how the Society will deliver an equivalent benefit to all ASI members registering for ICI2016. ASI can't do this by the normal process of discounted registration, because one of the rules of the International Union of Immunological Societies is that all registrants should be charged the same up-front fee. So we are currently investigating how we can provide a rebate to all members who register. Rest assured that we'll do whatever it takes to ensure that each of you benefit from your loyal support of the Society when you take advantage of ICI coming to our shores.

Chris Goodnow

ASI is now on Facebook & Twitter

For up-to-date information on all things ASI, including conferences, travel scholarships, prizes, visiting speakers and general immunology news, follow at:

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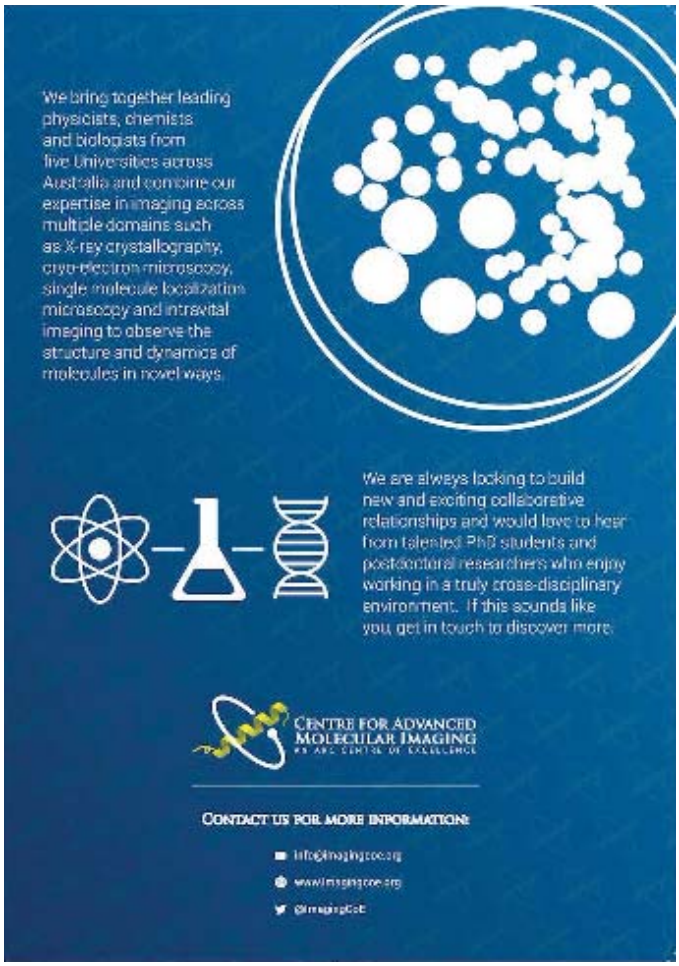
And for even more immunology news:
https://twitter.com/DayofImmunology

Accounts managed by ASI member, Gabriela Khoury



Honorary Secretary's News

Results of Ballots for Vacant ASI Council Positions

Thanks to the members of ASI who nominated to fill vacancies on ASI Council. The positions open for nominations this year were Vice President, Branch Councillors for ACT, SA/NT and WA, the inaugural Women's Initiative Councillor and ASI representatives for IUIS and FIMSA. The results of the ballots were announced in earlier correspondence, but I would like to formally congratulate and welcome the new members of ASI Council, who will take up their positions on Tuesday December 1, 2015 at the ASI AGM held during the Annual Scientific Meeting in Canberra.

The new Vice President is Su Heinzel *(right)*. Su will spend 2016 as Vice President and will serve as ASI President from 2017-2018 and then one year as Past President in 2018 to assist in the transition between Presidents of the Society.

Ian Cockburn takes over from Anselm Enders as Branch Councillor for ACT.

Iain Comerford replaces Cara Fraser as Branch Councillor for SA/NT.

Connie Jackaman is the new Branch Councillor for WA, replacing Andrew Currie.

Vanessa Bryant has been elected as Co-ordinator of the Women's Initiative. This is a new position on ASI Council and reflects the importance ASI places on gender equality, including the mentoring program on the ASI website for women in science and policies to ensure appropriate female representation as invited speakers at our meetings. These and other initiatives were championed by Ros Kemp who worked in this area in addition to her official role as NZ Branch Councillor and deserves the thanks of the Society for her efforts in raising the profile of the Women's Initiative and highlighting the need for a dedicated Council position.

Alejandro Lopez is the new IUIS representative and Laura Mackay is the incoming FIMSA representative. Both positions were held by Alan Baxter, who deserves special thanks for his role in working with both organizations in preparation for Australia's hosting of the upcoming ICI meeting in Melbourne.

A new ASI Meeting Co-ordinator is needed following Su Heinzel's election as ASI Vice President. A formal call for nominations will soon be made, but feel free to contact ASI (or me) for more information if you are interested in taking on the role.

Thank you to all the retiring and incoming Councillors for their contributions to running the Society and providing services and benefits to its members.

ASI International Travel Awards

Awards of $3000 each will soon be awarded to ASI members for international travel to attend conferences and/or institutes. These are highly competitive awards that are funded through member registrations so please sign up when the reminders appear in your email in the next few weeks because eligibility requires applicants to hold ASI membership in the year they apply and the previous year.

Stuart Berzins

Immunology & Cell Biology

Immunology & Cell Biology **Impact Factor 4.147**

Welcome to your new ICB Deputy Editors

It is a great pleasure to welcome **Anne La Flamme** (Malaghan Institute, New Zealand) and **Sammy Bedoui** (Peter Doherty Institute, Melbourne) as new Deputy Editors to the editorial team at ICB. This injection of new blood – and indeed some from across the ditch – to further support and inspire the development of the journal.

Anne La Flamme, PhD. Anne received her BSc in Life Sciences from the Massachusetts Institute of Technology (MIT) followed by an MSc in Molecular Parasitology and PhD in Immunoparasitology from the University of Washington, Seattle. After receiving her doctorate, Anne spent several years at Cornell University studying how schistosome worms alter the host's immune response and cause immune-mediated pathology. From this work, she developed a research program in Th2 responses regulation by macrophages and their involvement in pro-inflammatory diseases such as multiple sclerosis. She is currently an Associate Professor in the School of Biological Sciences at Victoria University of Wellington and the Malaghan Institute of Medical Research where she leads the Multiple Sclerosis Research Programme.

Dr Sammy Bedoui has a medical degree from the Hannover Medical School in Germany, gained his MD for neuroimmunological studies on leukocyte migration and holds a tenured Teaching & Research position in the Department of Microbiology & Immunology at The University of Melbourne located in the Doherty Institute for Infection & Immunity. Sammy has previously held positions at the Walter & Eliza Hall Institute in Melbourne, the National Institute of Neuroscience in Tokyo and the Hannover Medical School. His research has been supported by fellowships from the German Research Council and the NHMRC and is currently funded by NHMRC projects grants and The University of Melbourne. Sammy's research examines how dendritic cells and T cells interact *in vivo* during infections, with a particular interest in deciphering how specific innate signals and pattern recognition receptors shape these interactions. Sammy teaches Immunology to students of Medicine, Biomedicine and Science, fulfills several academic roles and leads an International Research Training Group that brings together The University of Melbourne and the University of Bonn in Germany.

Please introduce yourselves to our new Deputy Editors and feel free to touch base with them on any ideas you might have for developments for the future of the journal or suggestions for Special Feature Issues.

Gabrielle Belz

Introducing 2014 New Investigator Award Winner: Julia Marchingo

I have just finished my PhD in the Hodgkin lab at the Walter and Eliza Hall Institute of Medical Research under the joint supervision of Prof. Phil Hodgkin and Dr Susanne Heinzel. My work has focused on understanding how T cells integrate multiple signals in order to regulate T cell fate, in particular response magnitude. We approach this question by combining 'wet-lab' experimental data, collected from controlled *in vitro* proliferation assays and *in vivo* infection models, with 'dry-lab' quantitative data analysis techniques and computational modelling. This multifaceted approach not only provides novel insights into the biological regulation of the immune response, but also the power to accurately predict response outcomes in response to changes in stimulation.

It has been a fantastic time of discovery and development during my PhD, a journey I'm looking forward continuing when I move to the laboratory of Prof. Doreen Cantrell at the University of Dundee, Scotland mid-next year to work on protein signalling during the immune response.

In the Hodgkin lab we do a lot of discussing and theorising on whiteboards, glass walls, paper … pretty much any surface we can find to draw on. On the next page is a selection of some of the recent hypotheses and results from my work investigating how T cells integrate multiple signals to regulate response magnitude.

Interested in learning more about this work? Further results and discussion have been published in:
Marchingo JM. *et al*. Antigen affinity, costimulation and cytokine inputs sum linearly to amplify T cell expansion, (2014), *Science*, 346:1123-1127

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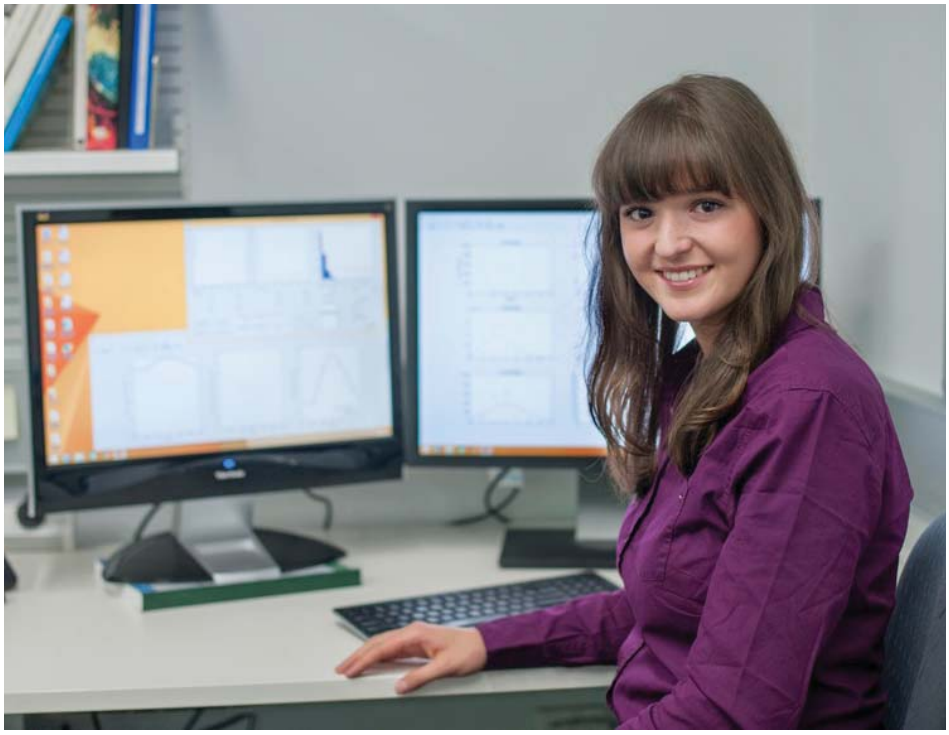


Figure Legend:
1) To investigate how different signals integrated we first wanted to know what was the main method by which different T cell stimuli regulate response size. We compared the proliferation and survival kinetics of T cells stimulated with a TCR stimulus (Signal 1) alone (black) compared to T cells receiving additional costimulation from cell-contact associated costimulatory molecules (Signal 2) and cytokines (Signal 3) (purple). We determined that the number of divisions cells performed before reverting to a quiescent state, termed the cells division destiny (depicted in the right panel), was the main parameter that was increased by T cell stimuli to amplify response size.

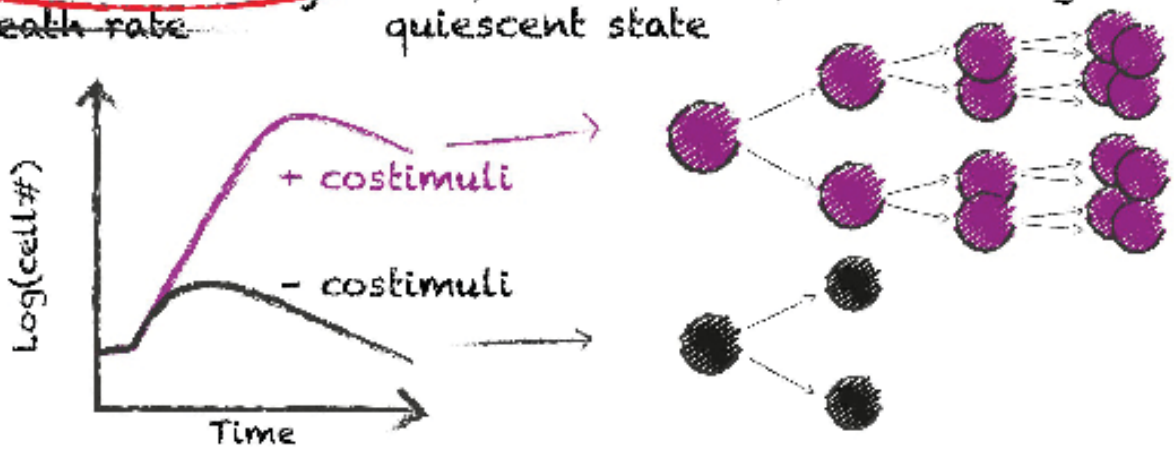
2) We then wanted to know if there was some quantitative, predictable rule by which the effects of different stimuli integrated together to regulate division destiny. The left panel shows the different hypotheses we had for what could happen when multiple T cell signals were combined. This plot shows the cell number *vs.* mean division number, with the arrows representing the effect each individual signal (1, 2a, 2b and 3a) had on T cell population mean division destiny. The black dotted lines show the division destiny for the different possibilities hypothesised: one of the signals could have been dominant, the effects could have added together or they could have synergised. The right panels shows the data that we observed. The effects of the combine signals on mean division destiny added.

Thus, we revealed a quantitative framework of T cell signal integration, where the effects of individual stimuli on division destiny add together to amplify T cell response magnitude (bottom panel).

How do multiple signals integrate to determine T cell response size?

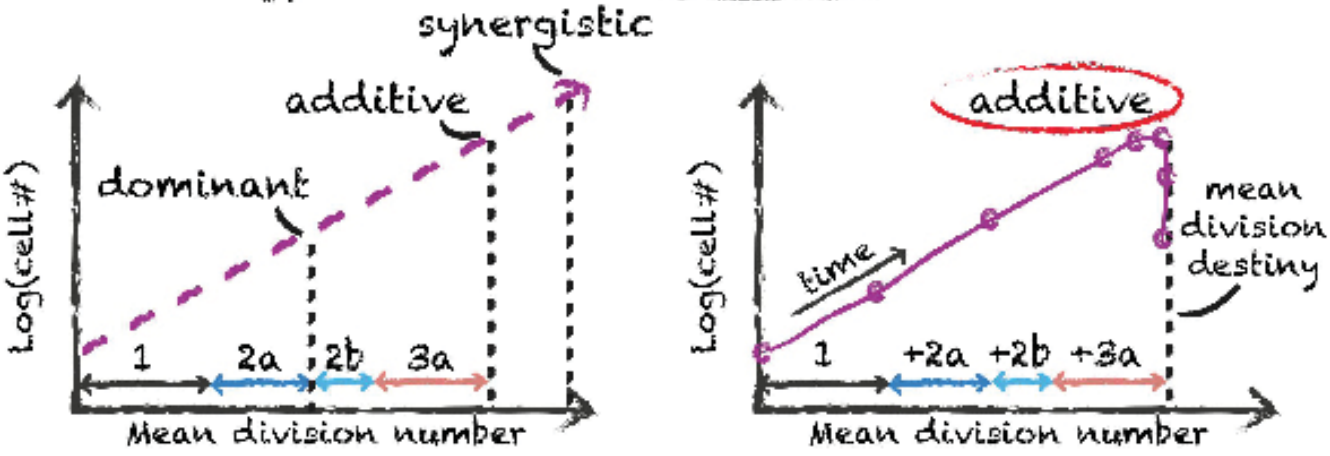
1) What's the main parameter regulated?

~~division rate~~
division destiny = # of divisions before reverting to a quiescent state
~~death rate~~

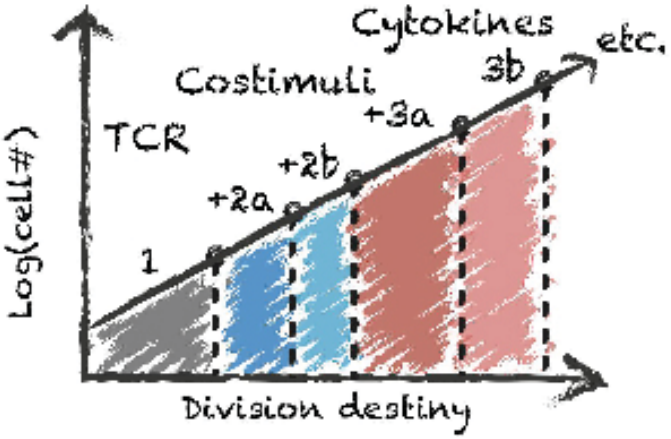


2) How do signals work together?

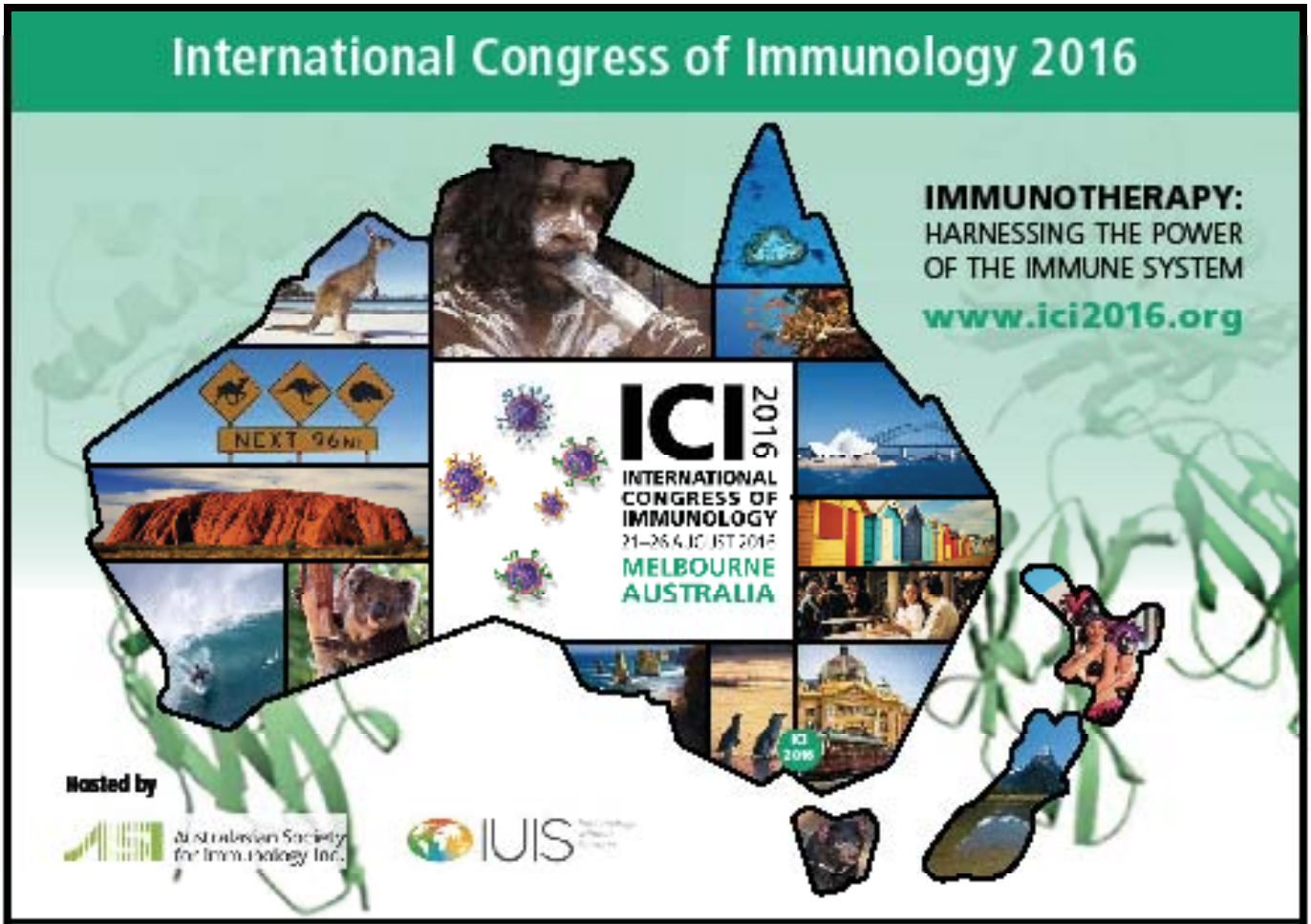
Alternate hypotheses: Observed result:



Quantitative framework of T cell signal integration



International Congress of Immunology 2016



Invitation from the ICI 2016 President

ICI 2016 promises to be an unforgettable event that will bring together delegates from all over the world. We anticipate over 3000 participants, including international leaders at the forefront of the discipline that will present the most recent advances in basic immunology and clinical treatments.

This is an opportunity to be part of a major international immunology meeting in Australia as the last ICI was held in Sydney back in 1977.

The Congress will provide a key networking and educational interface for colleagues from industry, university, health providers and independent research organisations to come together.

José A Villadangos

Jose Villadangos
President, International Congress of Immunology 2016
Peter Doherty Institute and Bio21 Institute, The University of Melbourne

KEY DATES

Abstract Submission: Open
Registration: Open
Abstract Submission Closes: 25 January 2016
Author Abstract Notification: 15 April 2016
Early Bird & Author Registration Deadline: 11 May 2016

SOME OF THE CONFIRMED SPEAKERS

Erin Adams
University of Chicago, Chicago Illinois USA

Shizuo Akira
Osaka University, Osaka Japan

Jim Allison
The University of Texas, Houston Texas USA

Yasmine Belkaid
National Institute of Allergy and Infectious Diseases, Bethesda Maryland USA

Xuetao Cao
Chinese Academy of Medical Sciences, Beijing China

Richard Flavell
Yale University School of Medicine, New Haven USA

Christopher Goodnow
The Australian National University, Canberra Australia

Gillian Griffiths
University of Cambridge, Cambridge UK

Kris Hogquist
University of Minnesota, Delaware, Minneapolis USA

Carl June
PENN Medicine, Philadelphia Pennsylvania USA

Stefan Kaufmann
Max Planck Institute for Infection Biology, Berlin Germany

Thirumala – Devi Kanneganti
St. Jude Children's Research Hospital, Memphis Tennessee USA

Ira Mellman
Genentech, San Francisco California USA

Virginia Pascual
Baylor Institute for Immunology Research, Dallas Texas USA

Hidde Ploegh
Whitehead Institute for Biomedical Research, Cambridge Massachusetts, USA

Fiona Powrie
University of Oxford, Oxford UK

Federica Sallusto
Institute for Research in Biomedicine, Bellinzona Switzerland

Feng Shao
NIBS, Beijing China

Carola Vinuesa
The Australian National University, Canberra Australia

Eric Vivier
Centre d'Immunologie de Marseille-Luminy, Marseille France

Find the full list of confirmed speakers on the ICI 2016 website.

SCIENTIFIC PROGRAM HIGHLIGHTS

The following disciplines/themes will form part of the program.

- Innate immunity
- Inflammation
- Acquired immunity
- Vaccines
- Tumour Immunology
- Transplantation
- Allergy
- Autoimmunity and the maintenance of tolerance
- Immunoregulatory gene networks
- Immune deficiencies
- Dendritic cells
- T cell differentiation
- B cell immunity
- Metabolic control of immunity
- Regulation of the immune system by commensal flora
- Therapeutic antibodies
- Mathematic modeling of immune responses

www.ici2016.org

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It is also the perfect opportunity to discover Australia's famous destinations: the Great Barrier Reef, Twelve Apostles, Ayers Rock, the Sydney Opera House, the iconic MCG Stadium and so much more!

Melbourne is recognised as an R&D centre of excellence in medical science, business and finance. With Australia's most culturally diverse population, and repeatedly voted the world's most liveable city, Melbourne has something to offer for everyone.

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Obituary Geoff Shellam (1943–2015)

Alec Redwood[1], Megan Lloyd[2], Jane Allan[3] and Tony Scalzo[4]
Email: a.redwood@iiid.murdoch.edu.au

The Immunology and Virology communities lost a pioneer with the passing of Professor Geoffrey Randolph Shellam on 2nd July. Geoff was a scientist, a teacher, a mentor, a friend, a husband, a father and a grandfather. He was a true gentleman of science and was patient, scholarly, steadfast and true. His respectful manner and his gentle persuasion will be remembered by colleagues and friends and he will be greatly missed.

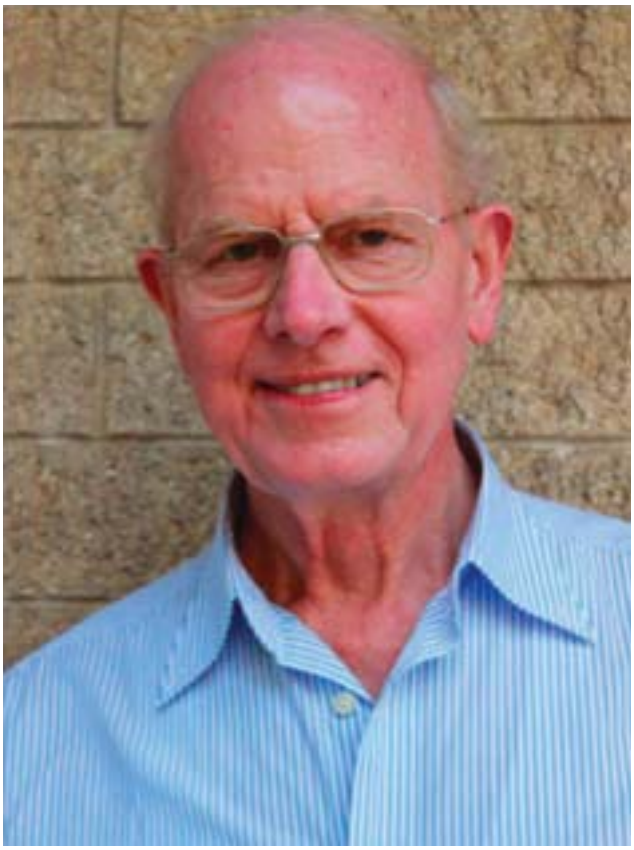

Photo courtesy of Christian Crozier

It is for his work on the immunobiology and genetic resistance to MCMV that Geoff is most rightly acknowledged as a major contributor to virology and immunology.

Geoff was born in the gold mining town of Kalgoorlie in Western Australia in 1943. The son of a bank manager, he moved frequently during his childhood and was educated in Bendigo then later at the University of Melbourne where he obtained a Bachelor of Science majoring in Microbiology and Biochemistry. Geoff's approach to science was shaped by his time at the Walter and Eliza Hall Institute of Medical Research (WEHI). He started his PhD in 1965, supported by a Commonwealth Serum Laboratories (CSL) cadetship, and under the supervision of Gus Nossal, then the Institute's new Director. Geoff studied the induction of low-zone tolerance following the injection of ultra-low doses of flagellin. This low-zone tolerance was most likely induced by what would later be called regulatory T cells. The WEHI provided a dynamic environment for an enthusiastic young scientist with fellow PhD students such as Chris Parish and Graham Mitchell rounding out the experience. It was also at the WEHI that Geoff met Richard Stanley, they became good friends and ultimately brothers-in- law when Richard introduced Geoff to his future wife Fiona, whom he married in 1973.

… it is easy to imagine Geoff fitting into the scholarly, gentlemanly atmosphere

Following the award of his PhD in 1968, Geoff returned to work at CSL for three years to finish his bond. In 1972 Geoff was awarded a Horace Le Marquand and Dudley Bigg Fellowship by the Royal Society to enable him to work with Professor Nicholas Avrion (Av) Mitchison at the Tumour Immunology Unit of the Imperial Cancer Research Fund Laboratories, University College, London. The period from 1972–1976 with Av Mitchison when he rented a flat in his mentor's house was fondly remembered and it is easy to imagine Geoff fitting into the scholarly, gentlemanly atmosphere. Geoff's research was highly productive and lead to a *Nature* publication in 1974 on antigenic inhibition of cell-mediated cytotoxicity against tumour cells.

In 1976 Geoff was awarded a prestigious Eleanor Roosevelt International Cancer Fellowship and worked with Nancy Hogg, at the National Institutes of Health in Bethesda, MD, USA. Here Geoff studied cellular immune responses to lymphomas associated with viruses such as murine leukaemia virus and Gross virus. In 1977, Geoff returned to Australia, deciding on Western Australia where it all began. Indeed Geoff could trace his family's history in WA as far back as 1830. Geoff returned to Perth as a Post-doctoral Fellow in the Microbiology Department at the University of Western Australia (UWA). He was to remain at UWA for the rest of his career. In 1985 Geoff became the Professor of Microbiology after his father-in-law Neville Stanley retired from the position.

Geoff's contribution to science is broad. He has made contributions to the study of infectious diseases in Antarctic wildlife, the use of viral vectors for immunocontraception, the study of flavivirus resistance and immunological tolerance. However he is best known for his contribution to the biology of cytomegalovirus; more specifically the role that natural killer (NK) cells play in the control of this virus. His early days in the Microbiology Department are remembered for his meticulous analysis of NK cell function. At the time NK cells were predominantly recognised for their anti-cancer role and studying their function was confounded by the vagaries of tumour cells. Serendipitously, Jane Chalmer, working in the same department, was studying genetically inherited resistance to murine cytomegalovirus (MCMV). A collaboration between Jane and Geoff and student, Greg Bancroft, launched a new era in NK cell biology. In 1981 their work demonstrated an association between NK activity and resistance to viral infection, while a later publication that year in *Proceedings of the National Academy of Sciences* documented enhanced susceptibility of mice to MCMV that carried the beige mutation. Geoff immediately understood that the MCMV model provided a far more tractable method for studying NK cell function, leading to a career-long engagement with this virus. Another major contribution to the international NK cell field occurred when

Tony Scalzo, as a Post- doctoral scientist in Geoff's lab, mapped the Cmv1 locus and produced congenic mouse strains that ultimately led to the discovery that the host protein expressed on NK cells, Ly49H, could directly recognise a virally expressed protein, m157. This Ly49H/m157 axis is now widely used to study NK cell function including NK cell memory. Many students and post-docs have earned their stripes with Geoff in this field since those early days. It is for his work on the immunobiology and genetic resistance to MCMV that Geoff is most rightly acknowledged as a major contributor to virology and immunology.

In this short period he convinced New Zealand immunologists to join what was then the Australian Society for Immunology to form the Australasian Society for Immunology (ASI)

Geoff also made a major contribution to the scientific community. He was the editor of *Viral Immunology* and has sat on numerous research panels. He was also involved with reviews of research and teaching institutes including quinquennial reviews of his alma mater, the WEHI. One of his major contributions to the local immunology community occurred during his Presidency of the Australian Society for Immunology from 1991 to 1992. In this short period he convinced New Zealand immunologists to join what was then the Australian Society for Immunology to form the Australasian Society for Immunology (ASI). He also established state branches of the ASI throughout Australia as well as in New Zealand, and formalized the special interest groups within ASI, such as the mucosal immunology SIG. Finally, Geoff also initiated discussions with the University of Adelaide that ultimately resulted in the acquisition by ASI of *Immunology & Cell Biology*, a journal that is now part of the *Nature* Group and is a flagship publication for Australasian Immunology. It was for these contributions to Australian immunology that ASI awarded Geoff a distinguished services medal in 1995 and in 2013 awarded Geoff life-time membership of the Society.

Outside of science Geoff also contributed to the arts. A keen sailor, he served on the Western Australian Maritime Museum Advisory Committee. Perhaps his major contribution, outside of science, however was to UWA University Press. Geoff was elected to the advisory committee of the Academic Press in the late 1980s. In 1991 he became Chair of the advisory committee, a role he retained until 2006. During this period universities across Australia were closing their Academic Presses. Geoff and the other members of the advisory committee fought a rear guard action, preventing three attempted closures during this period. That the Academic Press still exists as an acclaimed independent publisher is in large part due to the efforts of Geoff. It was for his tenacious support of the Press, along with his contribution to research at the University, that Geoff was awarded the UWA Chancellor's Medal in 2008.

As head of a research group, Geoff was a terrific mentor; despite a busy schedule he always made time for staff and students. Geoff was particularly gifted at editing manuscripts and theses. Both students and post-doctoral staff dreaded the inevitable comment, mostly written in red pen, 'this is an excellent first draft' (more than once this comment was written on what the post-doc

That the Academic Press still exists as an acclaimed independent publisher is in large part due to the efforts of Geoff

expected was the final draft), which would inevitably be followed by multiple pages of notes and corrections. Geoff never really managed the computer age, comments were always on paper, sometimes many layers of which were taped to the original; track changes was anathema. One of Geoff's pet hates was deadlines, he simply refused to meet them. The laboratory however waited in anticipation, if only for the wonderful whooshing noise they made as they went past.

Geoff had many stories about his travels during his career and in particular during his post-doctoral years. However perhaps one of our favourite stories, related by Chris Parish, is more close to home and provides an insight into Geoff's generous personality.

'I first met Geoff in March 1966 when he began his PhD at the WEHI with Gus Nossal. In fact, Geoff, Graham Mitchell and myself commenced our PhD degrees at the WEHI on the same day, meeting for the first time when we were subjected to a very cursory medical check-up at the Royal Melbourne Hospital.

Geoff never really managed the computer age, comments were always on paper, sometimes many layers of which were taped to the original …

We became close friends, a friendship that has spanned almost 50 years. Richard Stanley also began his PhD soon after and, of course, it was via Richard that Fiona and Geoff developed their relationship. At that time I hadn't been to Western Australia and Geoff, being from the West, encouraged me to make a visit and travel around the south west of WA with him. So in the winter of 1967 we made the trip, with Geoff managing to get a loan of his aunt's very new car during our stay. Geoff was particularly concerned about us damaging the new car and went to great lengths to ensure that it was returned to his aunt unscathed. For instance, when we climbed 60 metres up the Gloucester Tree near Pemberton, he parked the car some distance from the tree to ensure that if we fell, the car would not be damaged! Fortunately, we survived the climb and returned to Melbourne to start very fulfilling careers in immunology.'

Geoff was the Professor of Microbiology at UWA from 1983 until he retired on 30 June 2015. A non-smoker, he was diagnosed with lung cancer in 2011 and dealt with his treatment with characteristic optimism and humour. He passed away at 5pm on 2nd July, one hour before his official retirement dinner. Geoff is survived by his wife Fiona Stanley, his children Hallie and Tiffany and his grandchildren Juniper, Luciana and Griffin. Geoff, you were always caring and considerate, a great mentor and we will miss you terribly.

[1] Institute for Immunology and Infectious Diseases, Murdoch University, Murdoch, Western Australia, Australia;
[2] School of Pathology and Laboratory Medicine, The University of Western Australia, Crawley, Western Australia, Australia;
[3] School of Medicine and Pharmacology, The University of Western Australia, Crawley, Western Australia, Australia;
[4] Botanic Gardens & Parks Authority, Kings Park and Botanic Garden, Fraser Avenue, Kings Park, Western Australia, Australia.

First published in *Immunology & Cell Biology*, kindly reproduced with permission. *Immunology & Cell Biology* (2015) 93, 765–766; doi:10.1038/icb.2015.83

Introducing Jomar Life Research Poster Prize Winner for 2014: Luan Vu

I am a PhD student from Vietnam, funded by AUSAID, studying at the Department of Pathology – University of Sydney under the supervision of Prof. Nicholas J.C. King.

Growing up in dengue endemic areas, I have witnessed my friends, my younger brother and sister and even myself enduring Dengue infection, which had been called "black fever" in the past. Most children in my neighborhood were infected with Dengue. That is what drew me to Dengue studies.

My neighborhood is not alone in suffering from dengue. A recent estimate indicated 390 million people in 128 countries are at risk of dengue infection. Economically, dengue costs these countries billions per year. Aside from the typical symptoms of haemorrhagic disease, Dengue has been increasingly reported as being associated with neurological complications including dengue encephalitis. However, the precise pathogenic mechanisms involved in these complications remain unclear, attributed to the lack of an appropriate animal model. Therefore, using a mouse encephalitis model, in which wild type C57BL/6 mice were intracranially infected with human dengue 2 (DENV-2) isolates, we are hoping to shed light on the immunopathogenic mechanisms involved in the development of DENV neurological complications. Particularly, we have investigated the role of CNS-infiltrating CD8+ T cells and functional heterogeneity of bone marrow (BM)- derived monocytes in the DEN inflamed CNS. To date, we have showed empirically:

- An important role of the draining cervical lymph node (CLN) as a primary reservoir for CNS-infiltrating CD8+T cells,
- The cytotoxicity of CNS-infiltrating CD8+T cells. As far as we know, this is the first time has been demonstrated in vivo,
- In CNS-initiated mobilization of bone marrow-derived monocytes, the neuronal microenvironment drives the preferential differentiation of monocytes towards an inflammatory macrophage or DC phenotype,
- And these specific differentiations within inflamed CNS require a leukocyte extravasation.

Understanding the key drivers leading to these specific differentiation pathways may suggest potential therapeutic opportunities for Dengue.

Luan, 2nd from left, as part of the King Lab, Charles Perkins Centre – The University of Sydney, 2015

Luan in discussion,
The 13th Awaji International Forum on Infection and Immunity, 2014

Luan Vu and his wife Anh Phan,
Vietnamese Lunar New Year celebrations, Vietnam 2012

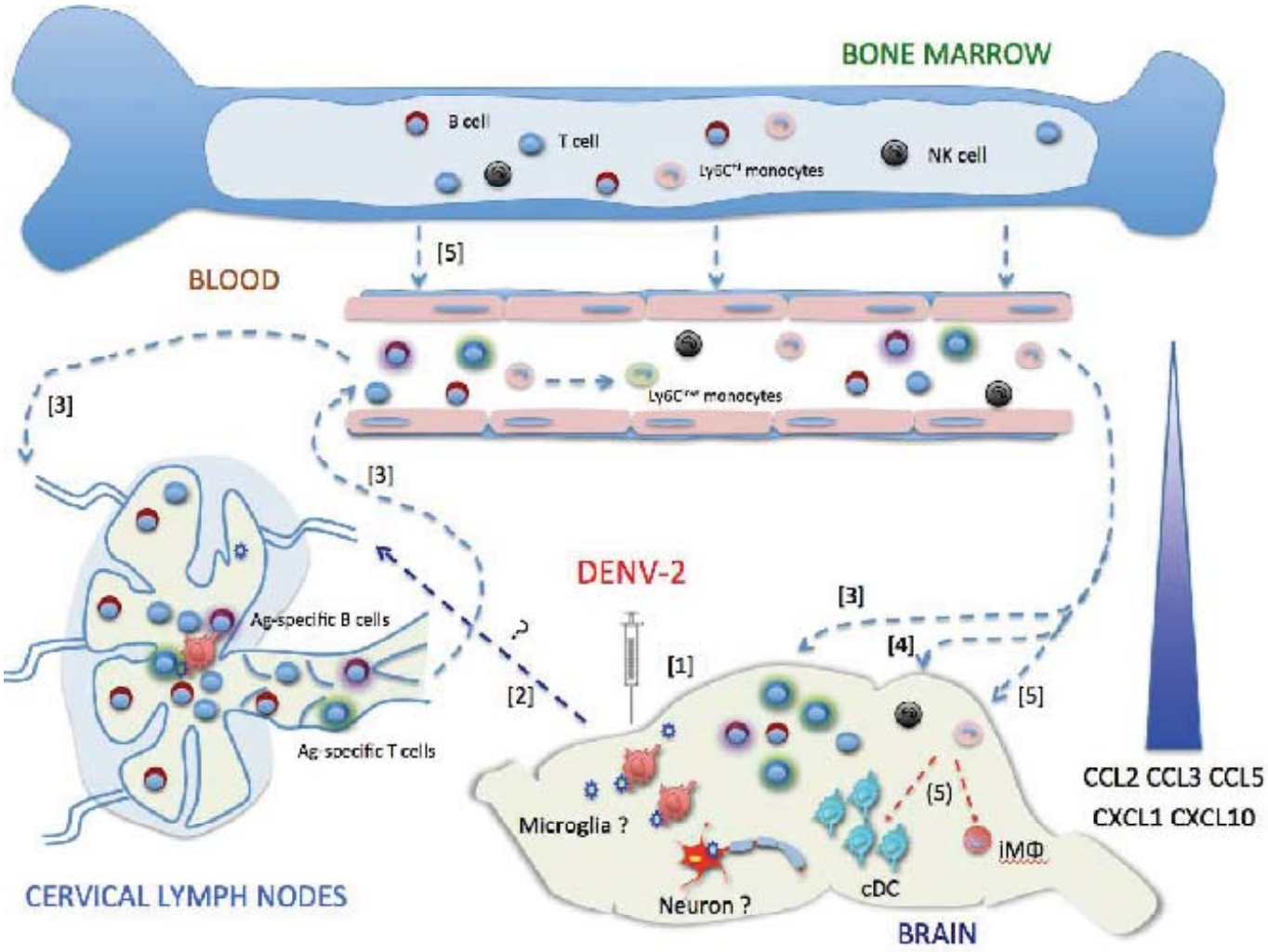

Figure. Cellular immune response in a murine DENV-2 encephalitis model.
The intracranial injection of DENV-2 activates microglia and upregulates number of pro-inflammatory cytokine and chemokines **[1]**. Antigen-bearing cells and soluble antigen drain from the inflamed CNS to cervical lymph nodes via CSF and interstitial fluid, respectively. Antigens are presented to cognate T cells and B cells in CLNs **[2]**. Antigen-specific T cells and B cells enter the blood and traffic to the inflamed brain **[3]**. Nature killer (NK) cells are also recruited into the inflamed brain **[4]**. Monopoiesis in the bone marrow leads to the emigration of Ly6C^{hi} monocytes to blood and then brain where they preferentially differentiate into conventional dendritic cells (cDC) and to much lesser degree, inflammatory Ly6C^{hi} macrophages (iMΦ) **[5]**.

The ASI Visiting Speaker Program

By the end of 2015 we will have had a total of six visiting speakers: Alex Shalek, Eric Vivier, David Masopust, Hai Qi, Dirk Busch and Ralph Trip. Feedback from those who have hosted the speakers has been positive. In 2016, we will be using the new nomination procedure that was approved in the Mid-Year Council Meeting (regulations are available on the ASI website), which includes a call for nominations. It is hoped that the process will allow Branch Councillors and Executive to decide how best to invest their funds for their membership, and will also go some way towards correcting the clear gender bias of our speakers.

Visits since September

Prof. Dirk Busch, Technische Universität, Germany, hosted by Stephen Turner

In October we were delighted to host Professor Busch in Perth, Melbourne, Dunedin and Sydney. Prof. Busch gave a fascinating seminar 'Adoptive T cell immunotherapy: from single cells to immunity' that described research showing that adoptive transfer of cells from the memory CD8+ T cell pool have properties similar to stem cells. These properties allow transfer of very small numbers of cells that can show clinical efficacy. In Dunedin postgraduate students found the time spent with Prof. Busch invaluable and appreciated his approachable manner.

Upcoming visit

Prof. Ralph Tripp, University of Georgia, hosted by Reena Ghildyal

Professor Tripp will be visiting Australia at the end of November and early December (Brisbane, Melbourne, Geelong, Canberra). He will be attending the Annual Scientific Meeting in Canberra.

Confirmed speakers for 2016

Ben Seddon, University College, London, hosted by Roslyn Kemp

Clare Lloyd, Imperial College, London, hosted by Phil Hansbro
Itineraries for these visits are to be confirmed and will be updated on the website.

A further five speakers were nominated in the first nomination round for 2016 which closed on September 25. ASI Branch Councillors have ranked the speakers they are willing to support. The nominated speakers are now under consideration for approval by the ASI Executive.

Joanna Kirman
VSP Co-ordinator

ASI Councillors' News

N.Z. News

This quarter, New Zealand was pleased to be able to host Prof Dirk Busch in Dunedin. Dirk met with many scientists and researchers as well as presenting a widely attended and stimulating seminar.

In the next few months, the NZ immunologists are concentrating on collaboration across centres. The New Zealand Society of Oncology conference in Christchurch in early November features two immunologists, Roslyn Kemp and Rod Dunbar, and the Maurice Wilkins Centre is holding its annual symposium with the theme "Cancer Immunotherapy" in Auckland in late November. The symposium will provide an update on the stunning impact of immune therapy on many advanced cancers, covering both the increasing role of immune therapy in clinical practice, and the mechanisms of action of the new immune drugs. It will also summarise current New Zealand research in this field, and highlight new opportunities to re-think approaches to cancer research in the light of immune therapy's success in the clinic.

Congratulations to Elizabeth Forbes-Blom from the Malaghan Institute – Liz is the Principal Investigator for one of the High-Value Nutrition's priority research programs that will investigate ways nutrition can improve immune defence against respiratory illness. High-Value Nutrition has drawn together researchers from different institutions and across disciplines to deliver results through collaboration. This research team includes scientists from the Malaghan Institute as well as colleagues from Plant & Food Research, AgResearch and the Medical Research Institute of New Zealand.

Finally, NZ expects to have a strong presence at ASI 2015 in Canberra – the NZ branch will support travel for students and post docs who applied for travel bursaries from ASI to attend the meeting but were unsuccessful.

Roslyn Kemp
Councillor

S.A./N.T. News

11th Adelaide Immunology Retreat (AIR-11) 2015 Report

Now in its 11th year, the Adelaide Immunology Retreat (AIR) has continued to grow; this year 56 delegates attended and it was once again a great success. The retreat was held at Lyndoch Hill, Lyndoch from 7-8 August and was opened by our national invited speaker, Professor Carola Vinuesa (Australian National University). Prof. Vinuesa shared with us her inspiring personal scientific journey in her presentation 'A personalised approach to autoimmune disease'. On the second day of the retreat, our local speaker, Dr Iain Comerford (University of Adelaide), presented his work on Chemokines, Cell Migration and Multiple Sclerosis. The high calibre of presentations did not end there, with excellent talks by Early Career Researchers, Honours students and PhD students covering a diverse range of topics which included reproductive immunology, vaccination, allergy, neurobiology and sepsis to name a few. Overall, the standard of the presentations was exceptional and the judges found it extremely hard to select the best presentations. Congratulations to the following award recipients: Natalie Stevens (Best PhD presentation), Duncan McKenzie (2nd prize PhD presentation), Ervin Kara (3rd prize PhD presentation), Kay Myo Min (Best Honours presentation), Dr Preethi Eldi (Best Early Career Researcher presentation) and Dr Nicole Wittwer (2nd prize Early Career Researcher presentation). There were also plenty of opportunities for interaction between the delegates and invited speakers. This included a tenpin bowling competition at Barossa Bowland followed by a wine tasting and dinner upon returning to Lyndoch Hill.

I would like to thank the AIR-11 organizing committee members – Susan Christo, Natasha Kolesnikoff, Iain Comerford, Houng Taing, Nicholas Hauschild, Tessa Gargett, Anita Kral, Damon Tumes, Dave Yip, Kate Parham, Maddison Archer, Emma Thompson, Aneta

Zysk, Vahid Atashgaran – for all their hard work and enthusiasm for the meeting. Also a BIG thank you to all our sponsors – The Hospital Research Foundation (QEH), Miltenyi, BD Biosciences, Centre for Cancer Biology, UniSA, Genesearch, Geneworks, John Morris, DAKO, DKSH, Adelab Scientific, Millennium Science, Southern Cross Science, Jomar Life Research, Australian Biosearch, Epitope Technologies, SAHMRI, Qiagen, Sigma, Eppendorf, ELISA Kits, ThermoFisher and Olympus. Without the generous financial support of all our sponsors, the event each year could not be held.

New SA/NT State Branch Councillor

This will be my last newsletter as ASI SA/NT State Branch Councillor as my term will come to an end at the Canberra ASI annual meeting. I have really enjoyed my time as Councillor – it has been a privilege to serve the Society and the SA/NT membership. Particular highlights have been watching the Adelaide Immunology Retreat grow each year and having the opportunity to raise public awarness about the importantace of immunology research through Day of Immunology events. I have really enjoyed working with the fantastic group of people who have volunteered their time to be a part of the organising committees for these events.

I would like to welcome the new Councillor, Dr Iain Comerford, to the position. Iain has participated in the organising committees for AIR and Day of Immunology for several years and I am sure he will do a fantastic job. Below, I have posted his short bio. Congratulations on your appointment Iain!

Dr Comerford is a research fellow funded by Multiple Sclerosis Research Australia (MSRA) at the University of Adelaide. His major research interests are immune cell activation, immune cell migration and the biology of the atypical chemokine receptor family, particularly in the context of autoimmunity in the CNS. He completed his undergraduate studies in immunology at the University of Glasgow in the UK in 2001 and his PhD training at the Beatson Institute for Cancer Research and the University of Glasgow between 2002-2005 with Professor Robert Nibbs. During his PhD studies, he generated several genetically-modified strains of mice to shed light into the function of the atypical chemokine receptor family which regulate the function of chemokines.

LtoR: Dr Iain Comerford (invited local speaker), Dr Preethi Eldi (Best Early Career Researcher presentation), Dr Cara Fraser (SA/NT Councillor), Dr Nicole Wittwer (2nd prize Early Career Researcher presentation), Kay Myo Min (Best Honours presentation), Natalie Stevens (Best PhD presentation), Ervin Kara (3rd prize PhD Presentation) and Duncan McKenzie (2nd prize PhD presentation) [Photo: Huong Taing]

Group photo at Lyndoch Hill, Lyndoch, SA. [Photo: Huong Taing]

He moved to Australia in 2005 to join the Chemokine Biology Laboratory at the University of Adelaide headed by Professor Shaun McColl. In 2009 he was awarded a fellowship from MSRA to lead investigations into immune cell activation and trafficking in models of MS. He is an active member of ASI has been on the organising committee for Adelaide Immunology retreat for the last five years.

Cara Fraser
Councillor

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Victorian News

The IgV Retreat held on 8-9 October at the Novotel Creswick Forest Resort was a great success! We had a stellar line-up of speakers who gave inspiring talks of great breadth, typified by our international speaker, Professor Dirk Busch (TUM, Munich, Germany). He described an amazing pipeline of fundamental, applied and clinical research into the stem cells powering the memory T cell compartment that paves the way for new experimental tools and therapeutic approaches for immune disorders. Our interstate visitors – Professors Barbara Fazekas, Ranjeny Thomas and Patrick Bertolino – also gave excellent presentations on autoimmunity and liver immunology and Prof. Andreas Strasser outlined the survival requirements of B cell lymphomas that might be exploited for new therapies. Prof. Tom Kay, Marc Pellegrini, Joanna Groom, Jane Oliaro and Nicole LaGruta capped off the fantastic stable of invited speakers, but the meeting was also notable for the high calibre of presentations from students and early-career postdoctoral fellows. Many won prizes for their talks and keen engagement throughout was exemplified by the great questions and post-session discussion (fuelled by the generous bar tab). Congratulations are due to the organisers of the Retreat, in particular Meredith O'Keeffe, for making 2015's meeting such a success. The sponsors of the meeting provided great support and interactions that substantially enhanced the meeting.

There are still some great events on the Immunology calendar coming up, with Dr Andrew Bean hosting ASI Visiting Speaker Professor Ralph Tripp (University of Georgia, USA) from 25-28 November. Then the ASI2015 Annual Conference is upon us at Canberra, which has a truly impressive line-up of national and international speakers. The organisers have done a tremendous job so far and it is sure to be an amazing conference. I look forward to seeing you all there!

Daniel Gray
Councillor

A.C.T. News

This is my last report as the ASI Councillor for the ACT. It has been a great time and I hope that I managed to keep the branch in as good a shape as it was when I took over from Steve Daley at the Melbourne ASI meeting. During the past three years I certainly gained a much better understanding of ASI and what is involved in the organisation of a scientific society. The highlight of my time as ASI Councillor is clearly the ASI annual meeting in Canberra. At the moment of writing we are still very busy to make final preparations but by the time you read this newsletter I am sure you will all agree that it has been a great meeting. Organisation of the annual meeting is a big job for any branch but even more so for a relatively small branch like the ACT. Without the very active help of a large proportion of the local membership (approximately 1/3 of all full ASI members are part of the LOC!) it would be impossible to organise the meeting and I want to take this opportunity to thank everybody for their great help!

After three years as Councillor I will be handing over to Ian Cockburn at the Canberra

ASI Annual Scientific Meeting and I am sure that with the ongoing help of everybody in the branch and also our friends from NSW, we will be able to continue to host events like the annual branch retreat or ASI visiting speakers.

Anselm Enders
Councillor

ICB & CTI Online Manuscript Submission

Online manuscript submission for *Immunology & Cell Biology* and *Clinical & Translational Immunology* now available via:

http://mts-icb.nature.com/
http://mts-cti.nature.com/

All manuscript submissions to ICB and CTI should in future be made online via these websites to speed up the reviewing and acceptance of manuscripts.

Gabrielle Belz, Editor-in-Chief
Immunology & Cell Biology
Clinical & Translational Immunology

The ASI Website

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

- Links providing members with free access to Immunology & Cell Biology, Nature Immunology, Nature Reviews Immunology
- Special offers for ASI members
- Download and upload forms for ASI awards
- Positions vacant page
- Online membership renewal
- Upcoming conference listings
- Women's initiative
- Twitter feed

as well as many links to sites of immunological interest at home and abroad. If you would like to advertise a job or conference, or if you have an immunology news story, or a favourite immunology-related site that you would like to see linked to the ASI website, please email Sarah Fardy at fardy.s@wehi.edu.au

Upcoming Conferences

10th International Congress on Auto-immunity
6–10 April 2016
Leipzig, Germany
http://autoimmunity.kenes.com/
Abstract submission deadline:
27 October 2015
Early registration deadline:
11 January 2016

The Walter and Eliza Hall Institute of Medical Research
WEHI Seminars on the Web:
www.wehi.edu/seminars/

Travel Award Conference Reports

T cells: Regulation and Effector Function

March 29-April 3 2015. Snowbird, Utah, USA

Nick Gherardin
Godfrey Lab, University of Melbourne

T cell effector function is critical to any adaptive immune response, and T cells play an important role in many areas of human health and disease. Since their discovery more than three decades ago, the field of T cell immunology has become one of the largest and most diverse areas in biomedical research. The Keystone Symposium on '*T cells: Regulation and Effector Function*', held in Utah, USA in April this year brought together world experts from a number of T cell subfields including development, antigen recognition, differentiation, metabolism, responses to pathogens, autoimmunity and regulation. As a young PhD student, I felt extremely privileged to be in attendance at what was a 'who's who' of T cell immunology, with a lineup that included names such as Ron Germain, Diane Mathis, Mark Jenkins, Stephen Jameson, Frederica Sallusto, Mark Davis, Shimon Sakaguchi, Albert Bendelac, John Wherry, Erika Pearce, Alexander Rudensky and many more. Even Dale Godfrey got a guernsey, because I guess they had to even out the playing field somehow. Indeed Australia had an impressive contingent of attendees, both senior and junior, and I think collectively we made quite an impression on the other attendees both academically and, of course, socially.

My presentation included my PhD work characterising a novel subset of MR1-restricted T cells. This work was particularly well received both by the members of the innate-like T cell field in attendance as well as the wider audience. The Keystone Symposia are a fantastic forum for presenting one's work; the limited spaces available make for an intimate atmosphere in which junior scientists like myself can have extended conversations with eminent researchers in the field about their work, as well as our own. Overall, the conference was highly intellectually stimulating and an enormous amount of fun. Being on the powdered slopes of the Snowbird ski resort for a week was also somewhat of a bonus! I would highly recommend the Keystone Symposia to any PhD students looking to attend an international conference in their field of study.

ASI student members who attended the conference.
LtoR: Nick Gherardin, Michelle Nguyen, Nick Collins, Bethany Macleod, Jyh Liang Hor

After attending the conference, I visited the laboratories of Professor D Branch Moody at Harvard Medical School in Boston and Professor Mitch Kronenberg at La Jolla Institute for Allergy and Immunology in San Diego. Both labs are world renowned for their expertise in CD1-lipid-restricted T cells. My visits were highly productive and my presentations well received. I thoroughly enjoyed my time in both labs and cities. Indeed as I currently wrap up my PhD studies, I am now thinking to the future and where my next stint in research may be.

I would like to thank ASI for providing me with this excellent opportunity and highly valuable experience.

Sustaining Membership

ASI Inc acknowledges the support of the following sustaining members:

- Abcam Australia Pty Ltd
- ARC Centre for Excellence in Advanced Molecular Imaging
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- Stemcell Technologies Inc
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European Congress of Immunology

6-9 September 2015, Vienna, Austria

Paul Beavis

Cancer Immunology Research, Peter MacCallum Cancer Centre, Melbourne

The European Congress of Immunology chose the historical city of Vienna to host its fourth triennial meeting. As a British 'ex-pat' this gave me a great chance to visit some family and friends, as well as giving a talk at Bart's College in London, prior to arriving in Vienna. This meant I arrived in Vienna without the jet-lag usually associated with attending an international meeting.

The conference ran over three days and had a very busy schedule with talks in up to six parallel sessions that ran from 8:30 in the morning until 7:30 in the evening. It was therefore impossible to attend as many talks as one would wish, but ensured that there was always something interesting being discussed.

As a tumour immunologist, it was amazing to see just how many sessions, talks and posters were dedicated to Cancer Immunotherapy. One of the highlights of the meeting was the Cancer Immunotherapy Symposium in which Tasuku Honjo discussed his identification of PD-1 as a key mediator of T cell responses and its translation into anti-PD-1 one of the major immunotherapy breakthroughs. This talk earned a standing ovation and was a stirring reminder of the benefits that our work in Immunology can yield for patients. Other notable talks from the Cancer Immunotherapy field were Michael Malone's keynote lecture on the development of Chimeric Antigen Receptor T cells and Laurence Zitvogel's work on the role of the microbiota in response to anti-CTLA-4.

Australian and New Zealand Immunology was well represented with 70 abstracts submitted and (by my count) 18 talks awarded. I was unable to attend all these talks due to sessions running in parallel but those that I did, including those of Dr Antonia Pritchard (QIMR), Miss Hui-Fern Koay (Melbourne University) and Alex Davenport (Peter Mac), were all well attended and raised interesting discussion. This all certainly bodes well for the ICI meeting in Melbourne next year.

Outside of the meeting, the ECI congress was a great chance to catch up with colleagues who previously worked at the Peter Mac and have returned to work in Europe. The ECI had organised a number of structured networking events to facilitate these interactions including the organised pub crawl on the Monday night. However, the scheduling of my talk in the session beginning at 8:30am on the Tuesday was enough to ensure that I left this event a lot earlier than most! I did not get to see as much of Vienna as I would have liked given the hectic schedule but it is a fantastic city and definitely worth a visit at some point, especially if you like schnitzel, strudel or German beer!

Socialising with old friends and new at the ECI congress opening reception. LtoR: Christophe Paget, Ludovic Martinet, Paul Beavis, Christelle Faveeuw, Alexander Davenport

I learnt a lot at this meeting, met some new potential collaborators, and having the chance to present my data at this meeting as well as Bart's College in London was a fantastic experience. I would like to thank the ASI for their generous travel scholarship which made this incredibly rewarding trip possible.

Maria-Theresien-Platz: One of the many picturesque sites in Vienna

TOLL 2015 – Targeting Innate Immunity

30 September – 3 October 2015. Marbella, Spain

Kaiwen Chen

Institute of Molecular Bioscience, University of Queensland

The TOLL 2015 meeting ran over a course of four days in the beautiful city of Marbella, Spain. This conference focused on various aspects of innate immune signalling pathways, ranging from detection of endogenous danger signals, host pathogen interactions to inflammatory cell death mechanisms. I particularly enjoyed the presentation by world-renowned scientist, Dr Vishva Dixit from Genentech, where he described the discovery of Gasdermin D, an inflammatory caspase substrate critical for the induction of pyroptotic cell death.

The TOLL conference attracted more than 1000 participants from all over the world, which provided a good opportunity to discuss and present my unpublished work during the poster session, as well as gaining insights about the working environment of prospective post doctoral training laboratories from fellow students and post docs.

I took advantage of the geographic location of the TOLL meeting and organised various laboratory visits in Europe for potential post-doctoral training opportunities. I was fortunate to have the opportunity to present a seminar at the Francis Crick Institute, London, as well as in Biozentrum, Basel.

Kings Cross train station, London

I truly enjoyed my time in Europe and I have met lots of wonderful people along my travels. I would like to extend my most heartfelt gratitude to ASI for sponsoring this travel fellowship.

Below: Arial view of Basler Munster

International Congress for Mucosal Immunology

14 – 18 July 2015, Berlin, Germany

Rhiannon Werder
University of Queensland

With my ASI travel award in (figurative) hand, I was off to Berlin in July this year to attend the International Congress for Mucosal Immunology.

We all gathered on Tuesday evening for the opening address by Sidonia Fagarasan who discussed adaptive immune cells maintaining gut microbiota diversity. The next morning, the conference officially started and I thoroughly enjoyed the first plenary session of the day by Andreas Diefenbach, investigating the role of IFN-λ and IL-22 in gut infections. Subsequent concurrent symposia in the morning and afternoon discussed topics ranging from epithelial cells in innate immunity to host-microbiota interactions to mucosal immunology in the neonate. We were all blown away by Shimon Sakaguchi's fascinating talk about subsets and functions of Tregs.

The next morning began with another impressive plenary session including talks from Allan Mowat, William Agace and Martin Guillams. Following this, I was fortunate enough to be selected to present in the Immunology of Asthma: Basic symposia. I presented work from the first two years of my PhD investigating the role of IL-33 in asthma onset by dampening antiviral immunity. It was a wonderful opportunity to present my work and it was met with positive feedback and discussion.

Preparing to present in the Immunology of Asthma: Basic symposia

Overall, the conference was very focused on the gut microbiota, which is unsurprising given the huge advances which have been made in recent years to phenotype bacterial species. However, it also highlighted the relative lack of research to date investigating the microbiota of other mucosal surfaces, in particular the lung. This was the focus of Ben Marsland's talk on the final day which highlighted that the lung microbiota is altered between healthy patients and those with asthma/COPD. Additionally, early life perturbations can heavily influence these changes given the lung is not fully colonised until 2-3 months old in humans, and this microbiota heavily influences immune responses. The conference was rounded out by Charles MacKay, who highlighted the protective effect of the gut microbiota and production of short-chain fatty acids on a range of inflammatory diseases.

Of course, my time in Berlin was not all symposia and posters with ample opportunity to explore the wonderful city. It was great to see all the main sites of Berlin such as the Brandenburg Gate, Tiergarten, the Berlin Wall and Museumsinel; as well as exploring the trendy areas like Kreuzberg. Additionally, any trip to Germany would also not be complete without ample sampling of the local cuisine and beer! Copious amounts of currywurst, pork knuckle and schnitzel were consumed, washed down with Weissbier. One evening after the conference a group of us made our way uptown to an enormous beer garden for plenty of beers and science chats!

The International Congress for Mucosal Immunology was a fantastic conference to attend, with not only the best research in mucosal immunity presented but the opportunity to meet with world-leaders in the field and forge new collaborations. I sincerely thank the ASI for affording me this opportunity!

Left:
Pork knuckle and Weissbier

Right:
Enjoying post conference beers in a German beer garden

Publications List

Highly Accessed and Selected Articles from the Australasian Society for Immunology Journals

Clinical & Translational Immunology Highly Accessed Articles

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