Australasian Society for Immunology Inc.

ICI 2016 DOWNUNDER

WOMBATS AND KOALAS LOVE IMMUNOLOGY

Also in this issue

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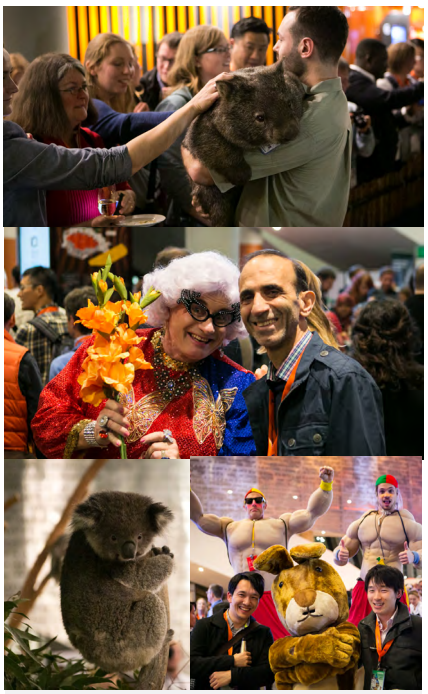

Scenes from Day 1, ICI 2016, Melbourne *Photos courtesy of 'Arinex' Official Congress Photographer*

Cover Image

ICI chair Jose Villandangos on stage at ICI 2016

What a huge success the ICI was this year, hosted in Melbourne thanks in huge part to the ICI 2016 Organising Committee. Read all about it throughout this edition of the ASI Newsletter.

The Lafferty Debate

Innately fascinating

The traditional Lafferty Debate was held at ICI 2016 and vigorously fought by teams from both sides of the moot (Gillian Griffiths for the negative in full flight above). Chaired by Anne Kelso, see selected highlights on page 13.

TimTams for the masses

The ASI booth at the ICI

The important Australasian chocolate biscuit, the TimTam, was shared widely with delegates from around the world from the ASI booth at ICI. See more on page 12.

Editorial

The importance of propinquity

Kanohi ki te kanohi means face to face in Te Reo Maori. The primacy of that idea is widely understood in maoridom. Despite the joys of the internet, actually being face to face to with someone does things and allows things and mediates things that can't be done in cyberspace.This is the very heart of why conferences are so important. Conferences advance knowledge, collaborations, and scientific relationships.

Consensus and disagreement are served in good sized helpings at most scientific meetings. The satisfaction of the consensus is enhanced by being face to face, and any toxicity associated with disagreement is mitigated for the same reason. Convivial and socially awkward moments abound in equal quantities. Stalking that invited speaker that you just have to make a connection with, being stalked by people with undisclosed schemes and agendas, that one fatal glass of bubbles at the start of the night setting you on a path to a seriously sore head the next day, the way that time zone adjustment leads to epidemics of narcolepsy around 2:00pm, the usual quota of warm air headed in the direction of the proverbial, getting into conversation with that guy that no one else seemed to be talking to and finding out he was working on great stuff that you found really interesting, coping with cling-ons, being a cling-on; however it rolls,the people take centre stage.

ICI 2016 held in Melbourne sounds like it was a truly fabulous meeting. The excitement is thick in the air when talking to people who were there. The science was amazing and the social side looked wonderful too. I take my hat off to the organisers as this must truly have been a massive undertaking and by all accounts it paid off royally.

WELCOME

Members of the Wurundjeri people take the stage in the opening ceremony of ICI 2016 as delegates soak it up

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Opening ceremony photos courtesy of 'Arinex' Official Congress Photographer

Perspective on ICI 2016

The Great and The Good

Odette Shaw at the International Congress for Immunology, Melbourne

During the session breaks at ICI there is a quiet roaring hum that permeates the foyer of the Melbourne Convention Centre. It is the sound of over 4000 immunologists discussing science and which stand has the best coffee (the answer was ebioscience).

I was lucky enough to be able to attend this ICI meeting, held every 3 years (the next meeting is in Beijing 2019). This meeting has had a strong tumour immunology focus, unsurprising considering that *Science* named cancer immunotherapy the scientific breakthrough of 2013, but has not neglected the up and coming kid on the block: mucosal and microbiome immunology. A personal high point was some very interesting talks examining the role of the epithelia, tight junctions and the interactions with immune cells in disease.

For me, not a T-cell person or a cancer immunologist, there was still plenty to get excited about. Highlights include listening to Shizuo Akira (father of the TLR knockout mice) describe an elegant series of experiments identifying an inflammatory, granulocyte-like monocyte that is involved in establishing lung fibrosis; Clare Lloyd reminding us that asthma is not just a disease of the immune cells but that the lung epithelia plays an important role; Vishva Dixit explaining the caspase-11 non-canonical inflammasome pathway (now in the latest edition of Janeway); the fascinating WAO-IUIS session celebrating 50 years of IgE; Bart Lambrecht suggesting a universal flow panel for characterising DCs across all tissues to allow data comparisons between labs to further discovery in asthma and allergy, this thought was then later echoed by Gwendoline Randolf, urging us to think beyond CD11c and F4/80 expression as a way to discriminate between macrophages

Odette Shaw

Scientists, Plant + Food Research Ltd, NZ

http://www.immunology.org.au/womens-initiative/database-of-female-immunologists/?cn-s=Odette+Shaw

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Old Buddies

Malaghan Institute Alumni

Dianne Sika-Paotonu (Victoria University, NZ & Telethon Kids Institute WA), Rachel Perret (Fred Hutchinson Cancer Research Centre USA), Willy-John Martin (WEHI VIC), Clare Slaney (PeterMac VIC) and Joel Ma (Doherty Institute for Infection and Immunity, VIC)

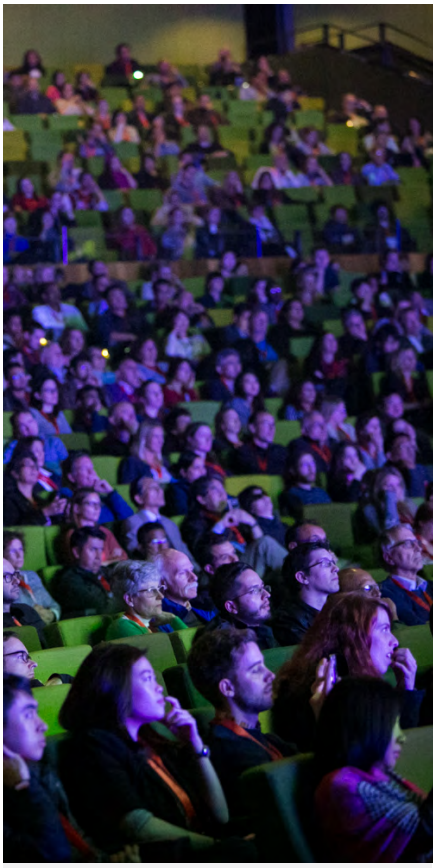
Laughs and jokes

LOL

Jinfang (Jeff) Zhu, Peter Doherty and Graham Le Gros enjoy a bite to eat and a laugh

and DCs.

These are only a few highlights, there were so many high quality talks given by a huge number of PhD students, post-docs as well as big lab heads. The scientific organisers did a great job of constructing the programme, almost too good as most sessions I was



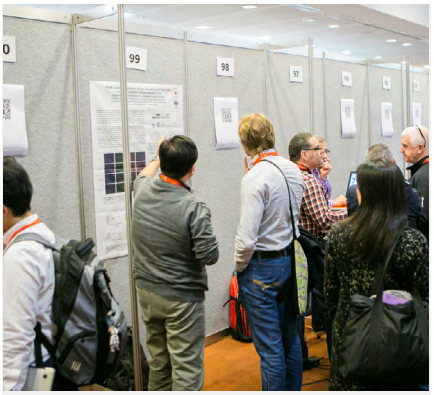
Well attended

Queues out the door for some sessions

racing between rooms and had make some hard decisions on which talks I could go to and which I would have to miss. It was also encouraging that the conference achieved equality in the number of female presenters (43%) and session chairs (55%). I was not the only one excited by all the science, a number of sessions every day were oversubscribed with people queuing out the door to get in.

Being a 21st Century conference, there was an app, complete with the ability to post, like and tag. Some people embraced it more than others, especially post-conference dinner (based on the increase in selfies) however, for checking where sessions were, creating a custom programme, and looking up abstracts of talks it worked quite well. The electronic posters were less successful; the QR reader was not compatible with iPads so the only way to scan electronic posters was using a phone (i.e. poster in squinty vision) and if the poster presenter was not at their poster then most people seemed to pass them by without bothering to scan the barcode. By day 3 there were larger signs indicating the poster titles to try and encourage people to stop by, but at the end of the day traditional posters were still a clear winner.

By the end of the week my brain was full of immunology and I'd certainly got in my 10 000 steps per day. ICI 2016 has sparked new ideas for research projects, improved flow panel markers, and highlighted more papers to look up, and people to contact about new collaborations.



21st century Poster Session

QR code and reader to view posters at the ICI poster sessions

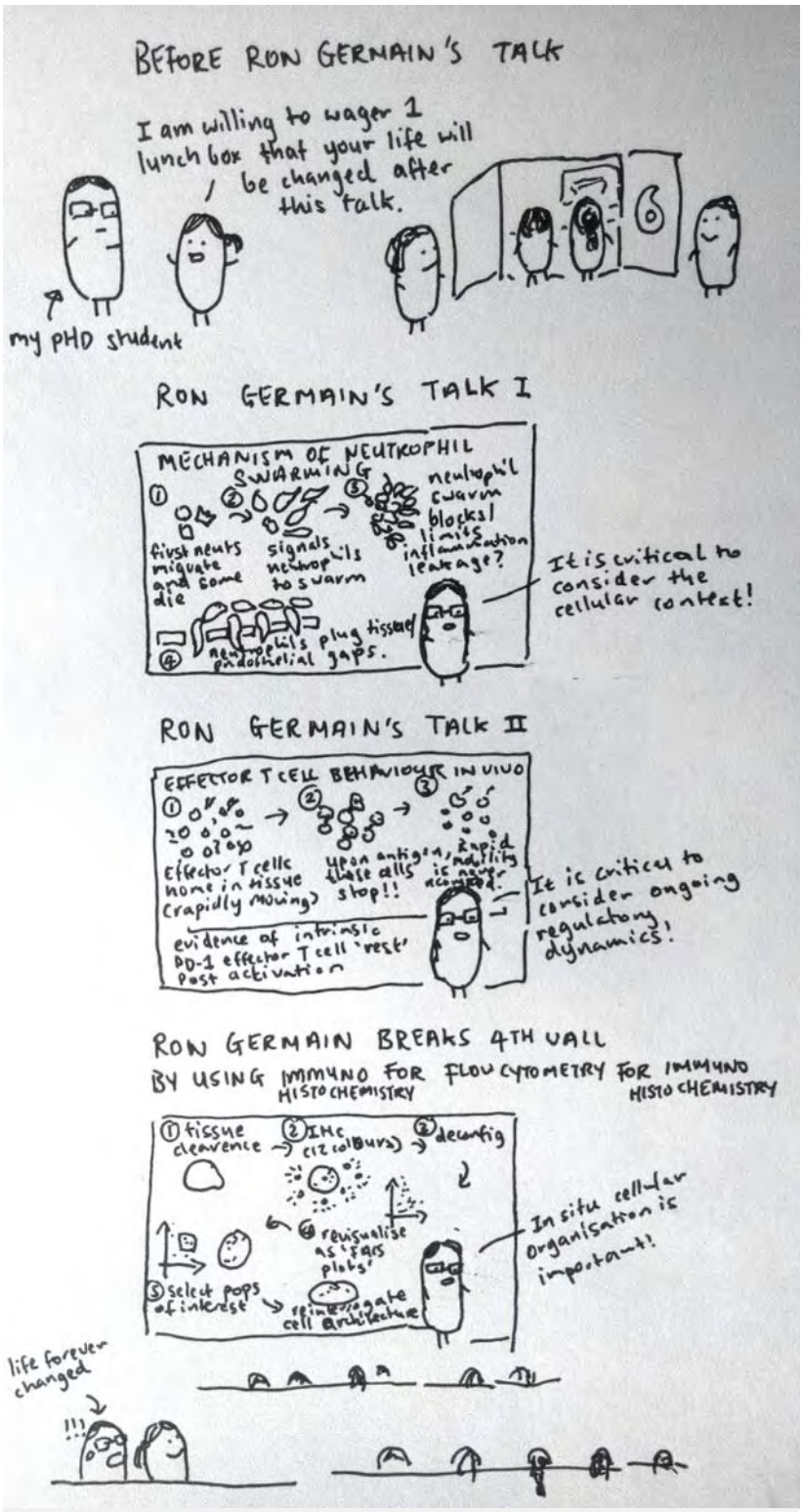
ICI 2016 Conference Dinner

Post-Conference dinner selfies demonstrated how well the conference ap was embraced by delegates

Photos for this article courtesy of Plant and Food Research, Clare Slaney and 'Arinex' Official Congress Photographer

Doodles that captured ICI 2016

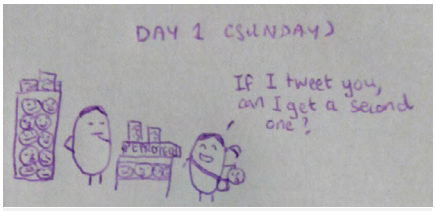
Picture perfect from Erika Duan on Twitter



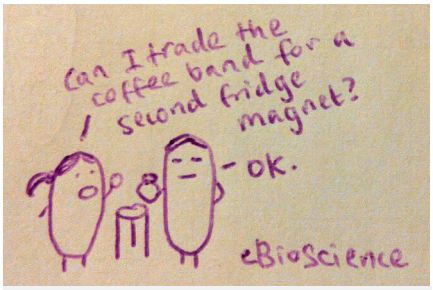
#ICI2016Melb day 4 recap: Ron Germain emphasises to consider cellular interactions within spatiotemporal contexts.

Erika Duan, LaTrobe University

Follow Erika on Twitter @ Inscientist1

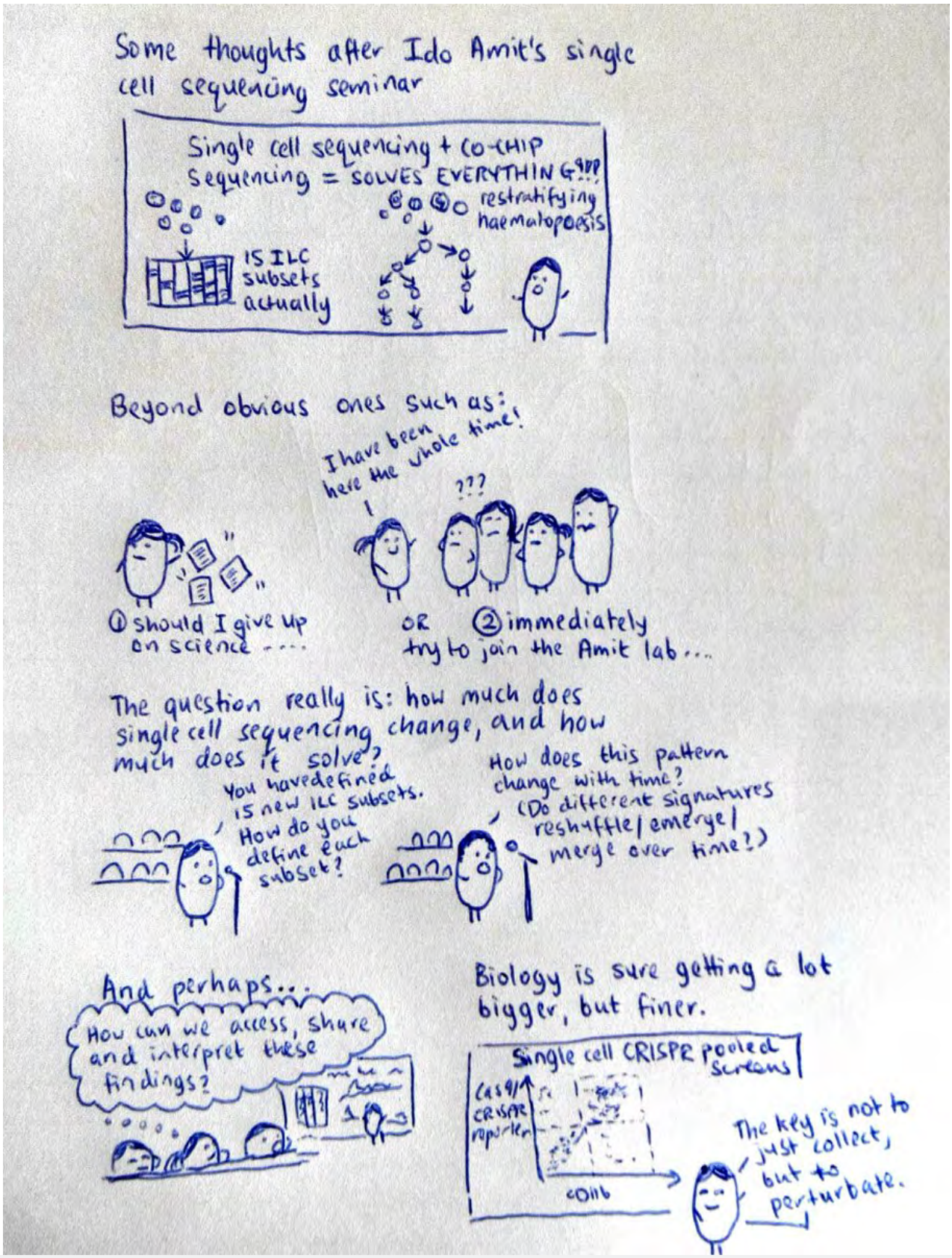


#ICI2016Melb Day 1 doodle diary: unsuccessfully trying to hustle for more trade freebies.



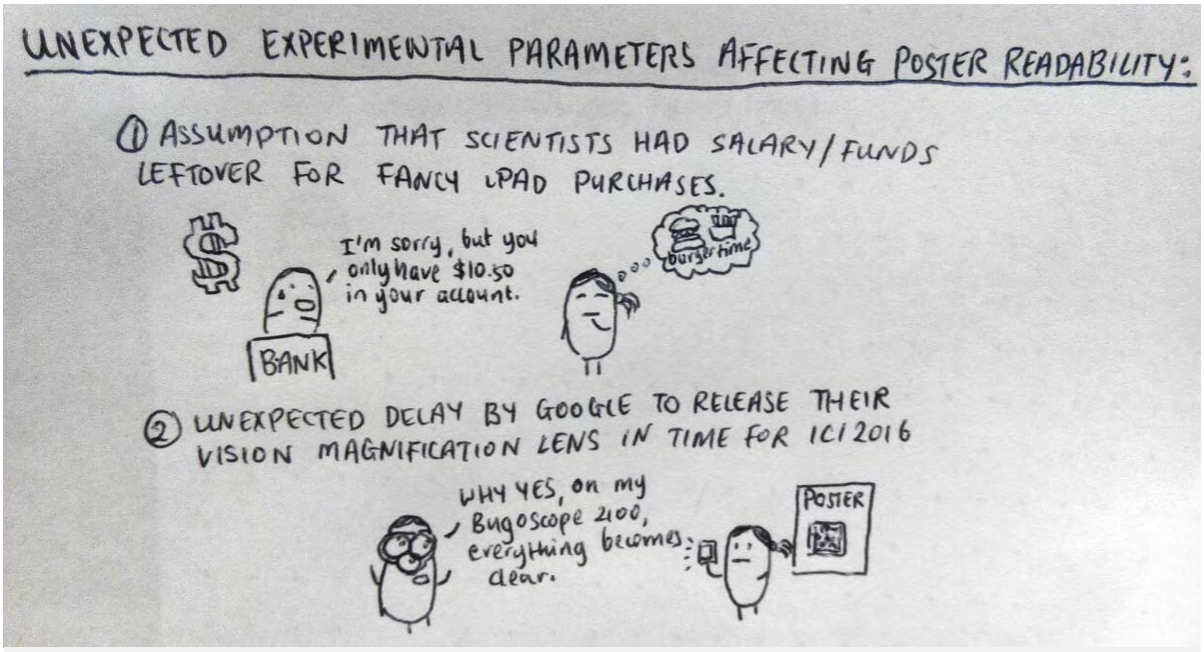
#ICI2016Melb day two at the trade displays and my hustle improves. Thank you @ eBioscience

ICI DOODLES ON TWITTER

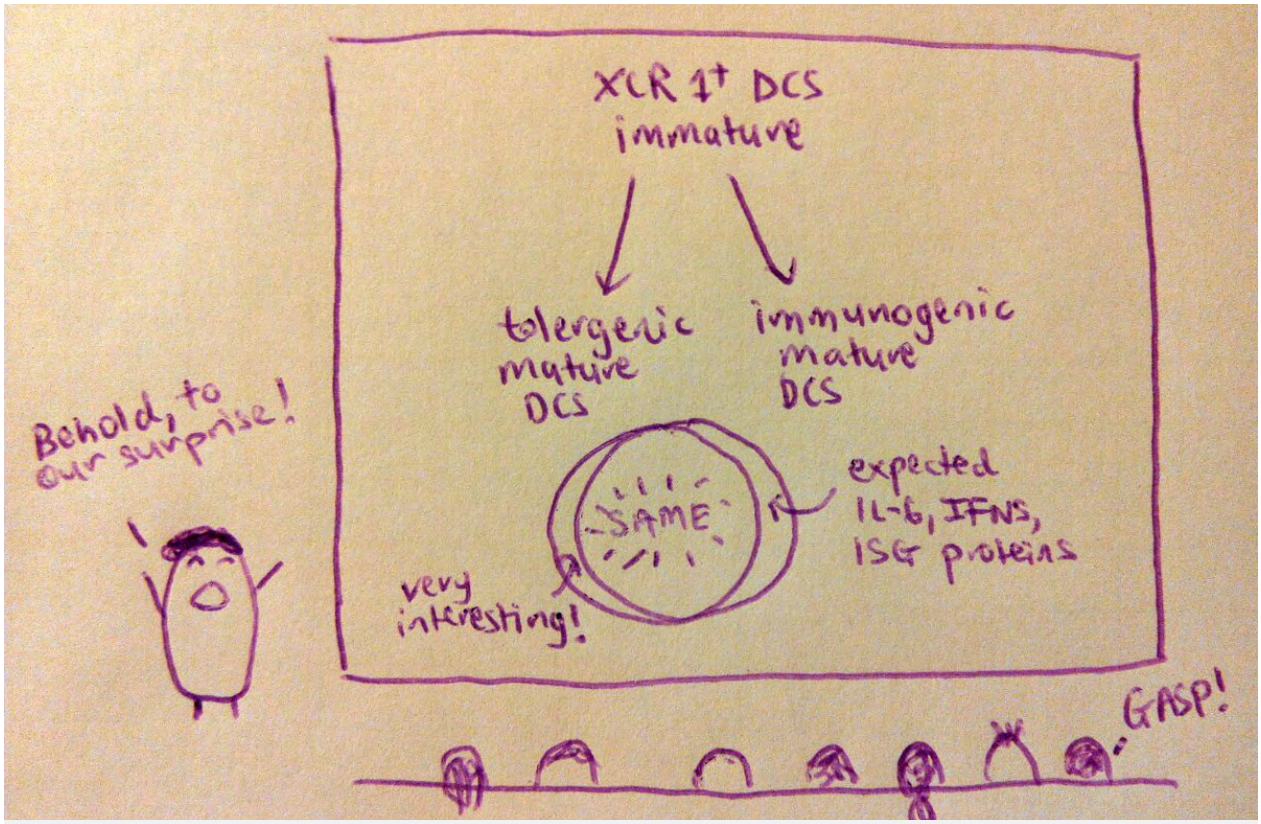


#ICI2016Melb day 3 recap: Ido Amit's incredible single cell genomics studies leaves many thoughts. @ASImmunology

ICI DOODLES ON TWITTER



Terrific time at #ICI2016Melb. Last poster session and doodle @ASImmunology.



#ICI2016Melb Monday lunch time: exciting and eye-opening lecture on comprehensive cDC profiles by Bernard Malissen.

Presidentorial

Chris Goodnow

Wow – how magnificent was ICI2016!!!

Words cannot express my admiration and thanks to Jose Villadangos and all the members of the Organising Committee: Andrew Lew, Ian Barr, Jennifer Rolland and Dale Godfrey, and of course Sarah Weatherby, Nicole Appleby & Lauren Minta and the rest of the professional logistics team from ARINEX. Likewise, a huge thanks to the intrepid forerunners with the bravery to launch the Australian bid to IUIS many years ago, and to Sumiko Tanaka and the team at KIT and IUIS.

It was a beautifully crafted smorgasbord of the best science from all parts of the world, all aspects of immunology, and all parts of the career spectrum. There were legions of big shots, left-fielders, dogma-challengers, next generation leaders, newcomers. If it was happening in immunology anywhere, it was being presented in Melbourne at ICI2016.

You could come up to speed with the latest advances in barrier defects in allergy in the morning, inspect cool new technologies in the trade exhibition over coffee, be gob-smacked by trials of CAR-T cell therapy for leukemia at lunch, be thrilled by a staccato of incisive studies in tolerance and autoimmunity in the afternoon, and then surf a sea of posters: old school hanging on the wall and new-app style on an iPad. In between and over breakfast and dinner, catch up with old friends and find new collaborators from around the world. Multiply that by five-plus full days and even the best set of synapses were burning out.

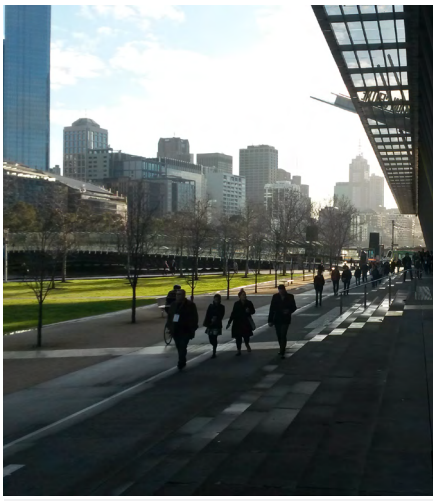
Hats off to Andrew Lew, Vice President and Chair of the Scientific Program Committee, who spent almost every day for the last two years crafting

Jose Villadangos, Chair of ICI Organising Committee

Chris Goodnow
President of ASI, at the opening ceremony of ICI 2016 in Melbourne
c.goodnow@garvan.org.au

4000 ICI delegates
"It was a beautifully crafted smorgasbord of the best science from all parts of the world..."

Luke O'Neill and Ken Murphy square off during the Lafferty Debate



Melbourne weather - cool and bright at the Convention Centre

a program that by all accounts was the best ever ICI. And hats off to the fifty-two immunologists who worked painstakingly with Andrew on the Scientific Program Committee, and the ten immunologists on the Scientific Advisory Committee: your collective efforts paid huge dividends to all 4000 of us attending the meeting. Hats off to the many ASI members from every branch, and to Kim Jacobson, Elissa Deenick and Su Heinzel on ASI Exec, who carefully scored more than three hundred travel bursary applications and found the funds to ensure an amazing attendance by the up-and-coming generation of Australasian immunologists.

If five days wasn't enough for you, there were many who rolled up for an extra day on Sunday for the Clinical Immunology Course chaired by Reinhold Schmidt and Warwick Britton and the Basic Immunology Course chaired by Nicole LaGruta. Thanks to the course coordinator Jenny Rolland and speakers, including past-presidents of ASI and AAI Dale Godfrey, David Tarlinton and Marc Jenkins, both courses were outstanding!

The organisation and venue worked like clockwork. Indeed that little ticking kill-switch clock in the lower left corner of everyone's presentation kept almost every concurrent speaker and session running on time. Even yours truly finished ahead of time: a career PB! The venue layout gave a sense of space and openness, looking out onto the Yarra River and Melbourne CBD, fostering free-flowing circulation and interactions to rival a draining lymph node after smallpox inoculation.

Even the atmospheric Melbourne weather came to the party: cool enough to keep us focussed on the meeting, but

bright enough to keep spirits high.

And then there was the Lafferty Debate. The brilliance people muster always blows my socks off at ASI annual meetings, but this was one for the record books. It was dazzling, both as didactic immunology, stand-up comedy, and helpful early advice from the NHMRC CEO about revisions to the grant assessment process. The video is going straight to the pool-room. But not to worry if you missed the debate, we also hope to post the vid on ASI's YouTube channel with the permission of our remarkably gifted debaters.

Financially, the meeting was an equally great success, much to the relief of all involved who lived through doomsday scenarios of wiping out not only the Society but losing our own home and the shirt on our back. All of us as ASI members will reap benefits for years to come, through expanded opportunities to support bursaries, travel, awards, regional and national meetings, and other initiatives. For this legacy we owe a huge debt of gratitude to Jose and the team, especially Ian Barr as Treasurer and Chair of the Sponsorship and Exhibition Committee, and to all of the wonderful companies and organisations that contributed to the conference exceeding its sponsorship targets, and to all the meeting delegates who contributed to the meeting exceeding registration targets.

Most importantly, at the end of the week four thousand influential immunologists returned home to every part of the globe with a clear and lasting impression that there never was a more exciting time to be an immunologist. And that Australasian immunologists are well organised, smart, upbeat and fun, culturally diverse, tenacious, and just great to work with on projects big or small. That, to me, is absolutely priceless!

ICI 2016 Conference Dinner

Photos for this article courtesy of Chris Goodnow, Gabi Khoury and 'Arinex' Official Congress Photographer

Social Media- Highlights from ICI2016 and the ICI ASI Booth

Tweets and meets at ICI

Gabriela Khoury, Social Media Manager ASI

Twitter: @ASImmunology and @ Dayofimmunology

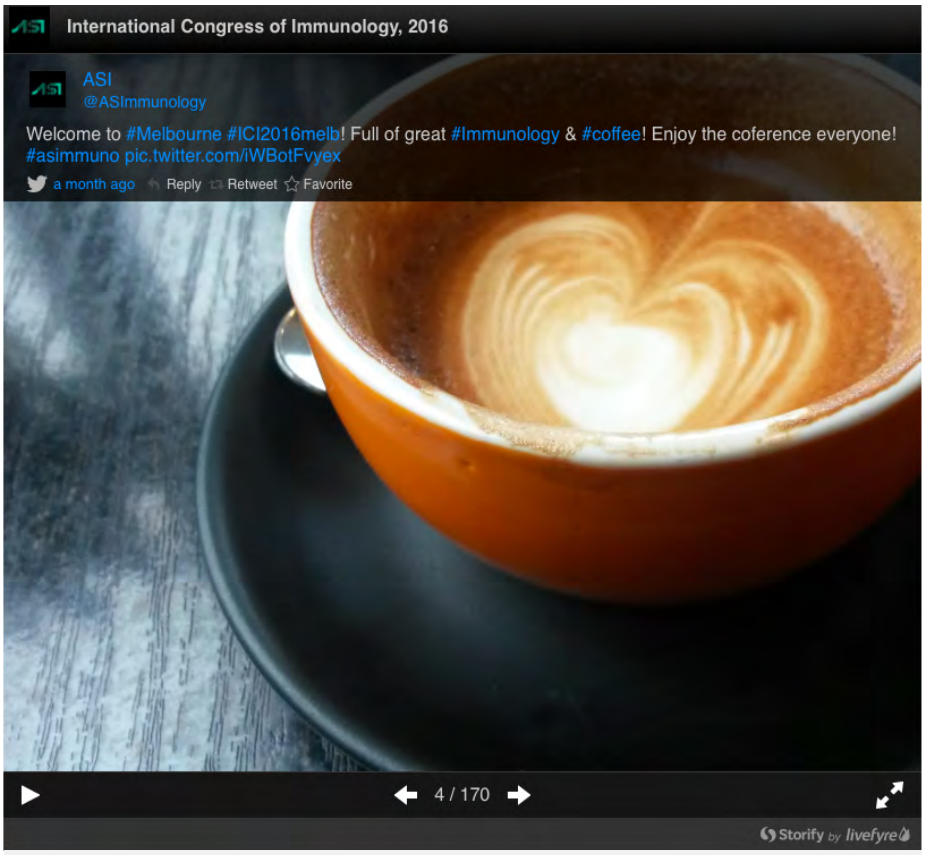
Facebook: facebook.com/ ASImmunology/ and facebook.com/ DayofImmunologyVic/

With immunologists from around the world descending into Melbourne, ICI 2016 was a fantastic week full of great immunology research, public engagement and some fun too!

Explore the Storify for highlights captured from the conference. I've personally selected these from twitter and you may have even been quoted!

Thanks to all the members who dropped by the ASI table to say hello and a special thanks to those who brought along new recruits.

You can check out all the posts I made throughout the conference on the ASI social media accounts. Plus some photos from the conference have been included in this edition of the newsletter.



Explore the conference in pictures and tweets here at Storify

Gabi Khoury ASI Social Media Manager (above); New and Continuing Members of ASI at the ASI Booth, ICI (left and below)

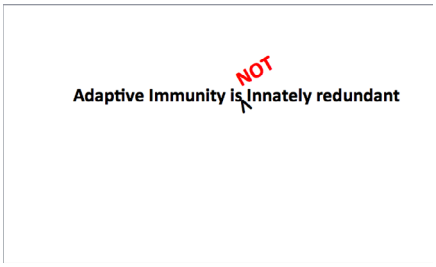
LAFFERTY DEBATE IN PICTURES

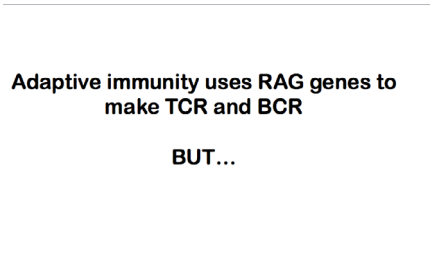
Anne Kelso announces the winning team in the Lafferty Debate, the Negative team, opposing the moot "Adaptive Immunity is Innately Redundant".

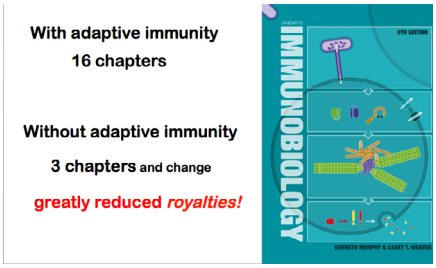
The Lafferty Debate, ICI 2016

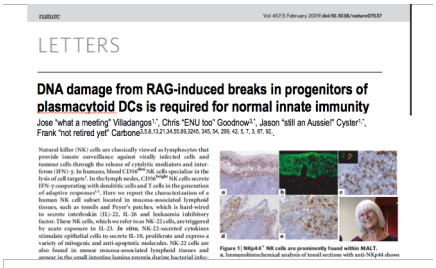
In Pictures

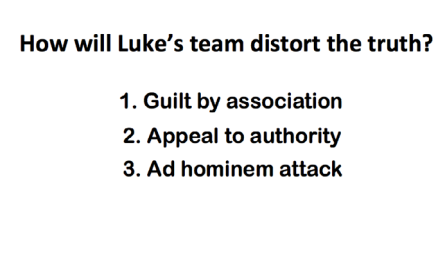
At this year's ICI meeting, The Lafferty Debate had as moot "Adaptive Immunity is Innately Redundant". The victors were the team for the negative, the leader of whom has kindly agreed to share the some of the powerful debating material used in aid of their cause. Thank you, Ken Murphy.

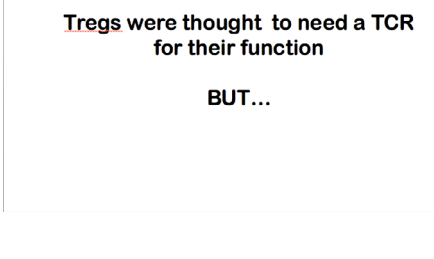


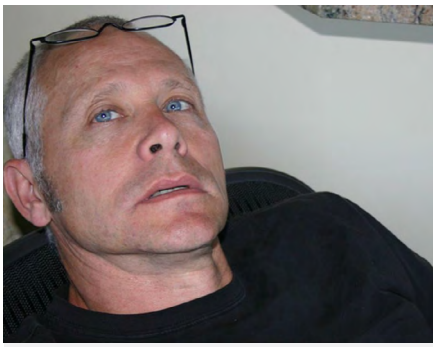












Ken Murphy
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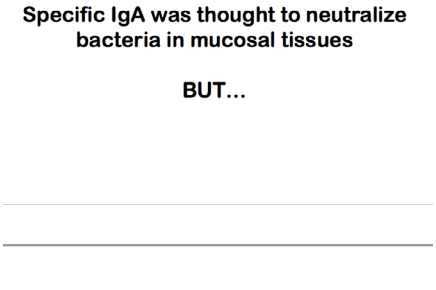
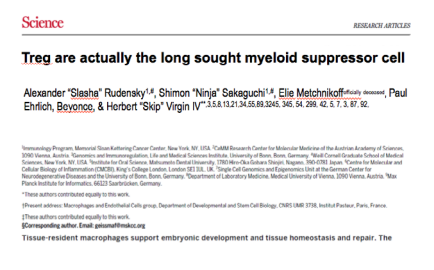
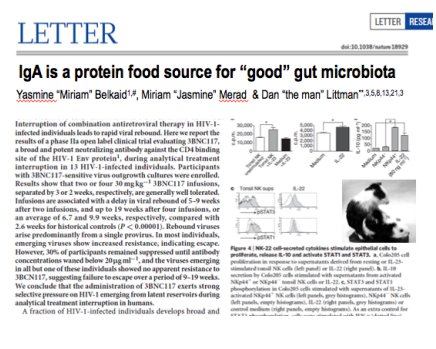






LAFFERTY DEBATE IN PICTURES

2. Appeal to authority

Argument from authority

An **argument from authority** (Latin: ***argumentum ad verecundiam***), also called an **appeal to authority**, is a logical fallacy that argues that a position is true because an authority agree with it.

Examples[edit]

Charles A. Janeway Jr., wrote of arguments from authority: **"Don't listen to Innate Immunologists. It took an ADAPTIVE IMMUNOLOGIST to figure out how how that works."**

History[edit]

John Locke, in his 1690 *Essay Concerning Human Understanding*, was the first to

Sure,
Hoffman & Beutler won a Nobel.

BUT…

They aren't Australian!

These guys thought adaptive immunity was non-redundant!

Clonal Selection	Antibodies/Tolerance	MHC restriction
Adaptive ✔	Adaptive ✔	Adaptive ✔

If these guys agree, who is Luke to question?

Gillian Griffiths and the sword of innate immunity

The great debaters: Nick Huntington, Gillian Griffiths, Clare Bryant, David Tarlinton, Luke O'Neil, Elissa Deenick, Kate Schroder, Ken Murphy

Photos courtesy of Chris Goodnow and the 'Arinex' Official Congress Photographer

goGermline on target

ASI Sustaining member, Ozgene

Genetically modified mouse models are vital for biomedical research. Gene targeting in mice via homologous recombination in embryonic stem (ES) cells has been particularly useful over the years. While new technologies, such as CRISPR-Cas9, have been discovered, gene targeting in ES cells still remains the best practice for complex genetic modifications.

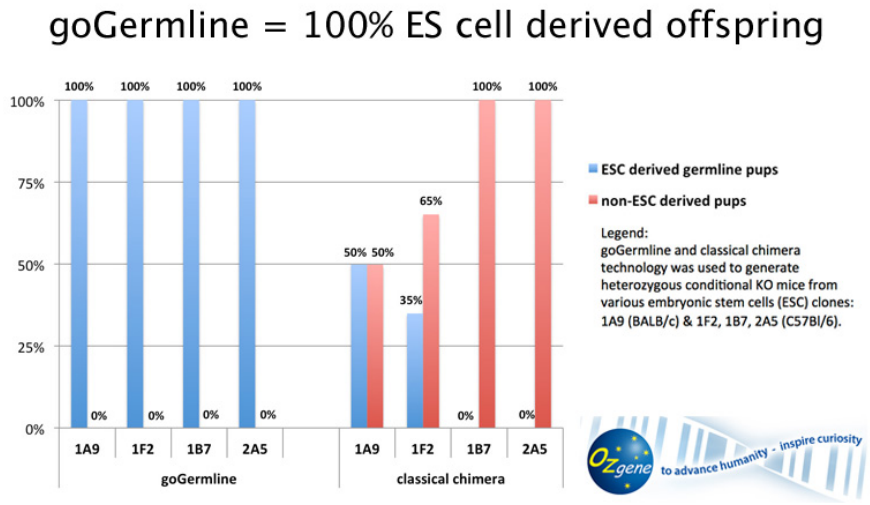
One aspect of the gene targeting process that has not been optimised is the efficiency of germline transmission. To summarise, the genetic modification is done in mouse ES cells, which are injected into host embryos in order to generate a chimeric mouse. The chimeras are then mated with the aim to obtain offspring from the modified ES cells, carrying the genetic modification. Unfortunately, the host embryos are usually 'stronger' than the ES cells and the majority of offspring are derived from the host embryo. In other words, more wild type mice are created compared to the desired ES cell derived mice.

Dr Frank Koentgen, a longstanding ASI member, wanted to avoid these excess animals being generated. Generating fewer mice would improve the 3R's (Replace, Reduce, Refine) of animal welfare as well as streamline the process for generating gene targeted mice. Frank and Dr. Gabi Suess were the first to publish knockout mice on C57BL/6 background in 1993. They are also the founders of Ozgene, a Perth-based company that provides mouse models for academic researchers and pharmaceutical companies globally.

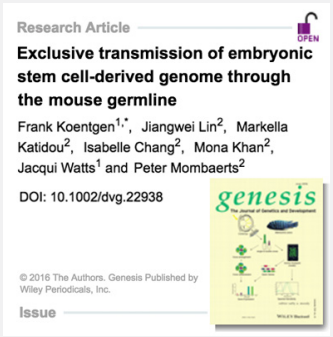
Frank came up with the idea of injecting ES cells into sterile blastocysts, which were produced by crossing Tsc22d3 floxed females with ROSA26-Cre males. This produced males that were sterile due to a complete cell-autonomous defect in spermatogenesis. The resulting male chimeras were sterile, but when the fertility was rescued by the ES cells, they transmitted the ES cell-derived genome to 100% of their offspring. This discovery was named goGermline and a patent was filed by Ozgene in 2014.

goGermline was first tested as Ozgene's internal R&D project to prove the hypothesis with exciting results. Not only were all offspring derived from the ES cells, but also very low percentage chimeras gave a multitude of ES cell derived offspring.

The method was then independently validated by Prof. Peter Mombaerts and his team at the Max Planck Research Unit for Neurogenetics in Germany. The combined goGermline data from Ozgene and Max Planck was published in *genesis*: "The complete elimination of the collateral birth of undesired, non-ES cell-derived offspring



goGermline ES cell derived offspring rates


Research Article

Exclusive transmission of embryonic stem cell-derived genome through the mouse germline

Frank Koentgen[1,*], Jiangwei Lin[2], Markella Katidou[2], Isabelle Chang[2], Mona Khan[2], Jacqui Watts[1] and Peter Mombaerts[2]

DOI: 10.1002/dvg.22938

genesis

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Issue

The combined goGermline data from Ozgene and Max Planck was published in *genesis*

in goGermline technology fulfils the reduction imperative of the 3R principle of humane experimental technique with animals" (genesis 54: 326–333, 2016).

Since the implementation of goGermline, Ozgene has reduced its animal numbers in the creation of germline offspring by 95% and significantly refined its animal usage. goGermline has enabled Ozgene to answer scientific questions quickly, breed mice more efficiently, and significantly reduce project timelines. In fact, Ozgene's fastest conditional knockout project was recently completed in only 20 weeks from vector design and construction to germline transmission.

The greater impact, however, lies in the improved process of generating gene targeted mice and the positive impact on animal welfare in the scientific community. Frank's original vision was to make goGermline available to scientists and animal research facilities at a reasonable cost to help them reduce time, animals and waste. The wheels are already in motion with A*STAR in Singapore holding the first goGermline license and several other facilities trialling the technology around the world.

The goGermline technology is part of Ozgene's overall mission "to advance humanity - inspire curiosity". It advances animal welfare as well as humanity by creating better tools for medical research.

For more information on goGermline, please visit www.ozgene.com/goGermline

Catherine Osbourne with Peter Doherty. T- shirt quote. "It might look like I'm doing nothing but at the cellulur level I'm actually quite busy."

Women in Science: Catherine Osbourne

How Australia fails mid-career scientists.

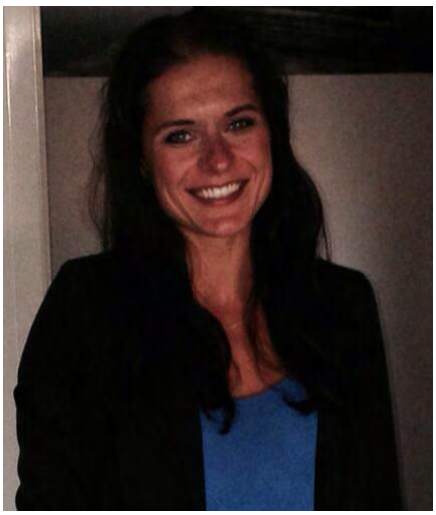
Catherine is Business Development Manager with Jomar Life Research. She recently authored a piece for ABC News Online about the attrition of the Australian mid-career scientist - getting the job is not the problem...

When the global financial crisis hit, forcing microbiologist Catherine Osborne to return from scientific work in the United States, she found that getting a job in the Australian research industry isn't the hard part—staying in one is.

.."The university offered me a 12-month contract. Now, one of the reasons I had done a PhD was to avoid 12-month contracts, so I requested a three-year contract. I didn't expect tenure, but I did want better career options than living 12 months at a time. They agreed to see how it was going after the first year, then contemplate a longer term contract. One year is barely enough time to get anything done in environmental microbiology, but by the end of it, I had a new lab all set up, I'd taught a whole bunch of students environmental microbiology. I was even beginning to get some interesting results. And I helped write an Australian Research Council Linkage Grant for a three-year project. When we got that grant, I was excited: it meant I was part of a three-year project. I thought all of the unofficial supervision I was giving PhD students could then be official for the term of their three-year projects. I was wrong."...

To read more, check out this article in full on abc.net.au. also hear the radio interview here

'That Scientist is a Lady' is the ASI Newsletter Women in Science Column, with support from Vanessa Bryant, ASI Women's Initiative Co-ordinator bryant.v@wehi.edu.au



Introducing Marie Greyer

Winner *Immunology & Cell Biology* **Poster Award**

After completing the MSc in Integrated Immunology at the University of Oxford, I was awarded the competitive Melbourne International Research Scholarship to commence my PhD at the Laboratory of A/Prof Sammy Bedoui at the University of Melbourne, The Peter Doherty Institute for Infection and Immunity. Sammy Bedoui is an expert in the field of Dendritic cell (DC) and T cell immunology and his group uses models of viral and bacterial infection to study how the innate and the adaptive immune system interact. The main focus here is to understand how innate cells sense pathogens and how this information is integrated into protective T cell responses.

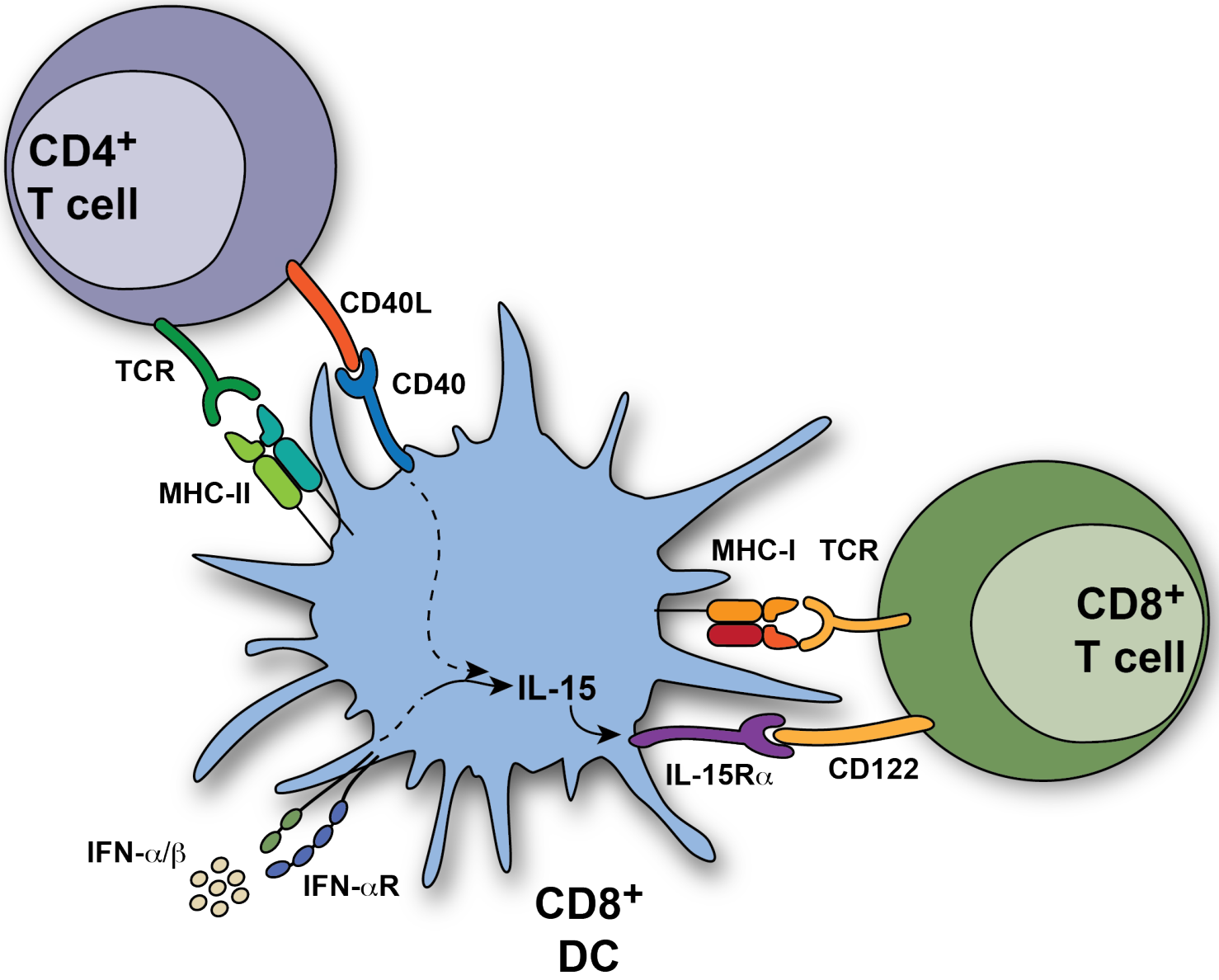
I have studied the mechanisms by which T cells 'help' DC in driving immune responses and how these cells integrate multiple signals for the initiation of a protective immune response. This is important as DC often require stimulation from CD4+ T cells to propagate CD8+ T cell responses, but precisely how T cell help optimizes the priming capacity of DC and why this appears to differ between varying types of CD8+ T cell responses remains unclear.

Using Herpes simplex virus type I as a model of infection, we have shown that CD8+ T cell priming depends on DC receiving stimulation from both type I IFN alpha/beta and CD4+ T cells to provide IL-15. Interestingly, we observed that increased innate stimulation reversed the helper-dependence of CD8+ T cell priming and that the innate stimulus, rather than CD4+ T cells themselves, determined how 'help' was integrated into the priming response by DC. These findings identify T cell help as a flexible means to amplify varying suboptimal innate signals in DC (Cell Reports; DOI: http://dx.doi.org/10.1016.). I also presented my results at the ASI conference in Canberra (2015), for which I received the *Immunology & Cell Biology* Student Poster Prize.

Whilst transitioning from my PhD, I have taken on the role as a co-ordinator for the newly established International Research Training Group- The Bonn & Melbourne Research and Graduate School (Bo&Merang). This program is an arrangement between The University of Melbourne in Australia and the Friedrich-Wilhelms-University Bonn in Germany, offering a vast range of different PhD student projects to study the role of myeloid immune cells and adaptive immunity in the context of infection and inflammation.

For the future I would like to translate the skills and knowledge acquired during my PhD into the context of cancer immunology. My work has identified how DC integrate different stimulatory signals within their environment and these insights can be used to potentiate current adjuvant strategies. Another exciting concept includes the use of antibody-mediated inhibition of those signals that can limit or abrogate tumour-specific T cell responses. I am particularly interested in applying these concepts to the clinic and to develop ways of enhancing current immunotherapy strategies.

ASI 2015 Poster Session; Mandatory coffee breaks during thesis writing; The Bedoui group - celebrations for my PhD oration



Graphical Abstract from Marie Greyer - Figure Legend

DC often require stimulation from CD4+ T cells to propagate CD8+ T cell responses, but precisely how T cell help optimizes the priming capacity of DCs and why this appears to differ between varying types of CD8+ T cell immunity remains unclear. We show that CD8+ T cell priming upon HSV-1 skin infection depended on DC receiving stimulation from both IFN-alpha/beta and CD4+ T cells to provide IL-15. This was not an additive effect but resulted from CD4+ T cells amplifying DC production of IL-15 in response to IFN-alpha/beta. We also observed that increased innate stimulation reversed the helper dependence of CD8+ T cell priming and that the innate stimulus, rather than the CD4+ T cells themselves, determined how “help’” was integrated into the priming response by DC. These findings identify T cell help as a flexible means to amplify varying suboptimal innate signals in DC.

Visiting Speakers Program (VSP) Report

Visiting Speaker gold mine

Joanna Kirman, VSP co-ordinator

Nominations are now open for 2017 – the deadline is 5pm September 30th. Be inspired by the reports below; having a visiting speaker is a valuable experience for students and senior researchers alike and a great opportunity to network and form new collaborations. Simply email a description of the proposed speaker's contribution to the field (less than 500 words) and a short list of recent publications to: jo.kirman@otago.ac.nz. Up to 4 speakers will be selected for a tour from the nominated individuals. Detailed VSP guidelines can be found on the ASI website.

You may have been enthused by a speaker at a conference you have attended or if you would like ideas for excellent female speakers (which we strongly encourage), these can be found on the American Association for Immunologists searchable database: https://aai.org/cvweb_aai/cgi-bin/memberdll.dll/OpenPage?WRP=CSOW_speakerSearch.htm

2016 VISITORS

We've had a busy few months with four excellent visiting speakers touring Australasia in July and August. Every branch received a least one visitor and as you can see from the reports below all of the visits were extremely well received.

BENEDICT SEDDON

Perth – Melbourne – Dunedin

Ben's visits to Australia and New Zealand were very successful. Nicole La Gruta, his host at Monash, Melbourne said "Ben gave an outstanding presentation entitled 'T cell memory: cellular gymnastics of induction and maintenance'. Apart from that he met with several immunologists out here at Monash, including myself, Steve Turner, Stephen Daley and Steve Gerondakis which stimulated much discussion and exchange of ideas."

Ben Seddon was impressed with the classy restaurant he was taken to in Dunedin, New Zealand

Ben also impressed immunologists and students at the University of Otago in Dunedin, New Zealand, with his excellent presentation. Local student ASI members enjoyed discussing their research with him over lunch, and the NZ branch was able to support two ASI members from other NZ cities to attend Ben's seminar and meet with him.

Ben's host in Perth, Connie Jackaman, noted, "Ben presented highly interesting work, looking at the dynamics of T cell turnover in endogenous memory compartments using a combination of novel cell labelling and fate mapping approaches. For the first time as well his seminar was streamed live to the Perkins South Campus to reach a larger audience across the state!"

CLARE LLOYD

Newcastle/Sydney – Adelaide – Melbourne

Phil Hansbro, who nominated Clare wrote "Clare visited the University of Newcastle and the Hunter Medical Research Institute from the 1st -4th of August as ASI visiting lecturer. Clare met with many researchers over 3 days providing invaluable input and advice and developing contributions. Clare then gave an outstanding talk on her studies of Ormdl3, TGF-beta and IL-33/IL-13 in airway remodelling in severe asthma. This was a thoroughly productive and invaluable visit from one of the world's experts in the study of the pathogenesis of respiratory diseases from which many ECRs and PhD students benefited substantially."

Clare's visit to Melbourne was also a success, as local host Alistair Stewart explains: "Clare visited the Lung Health Research Centre (LHRC) at the Department of Pharmacology and Therapeutics at University of Melbourne on the 19th of August. Her visit started with a student/postdoc lunch describing her career path and discussing options with our budding scientists. The University of Melbourne leader for the Athena SWAN program met with Clare to learn how Imperial College was able to achieve silver SWAN status in gender equality in science leadership. Later in the afternoon she had discussions with me on the emerging role of TGF-beta in severe asthma, a theme that formed a major part of her lecture entitled 'Living on the Edge – Regulation of Pulmonary Immunity by Epithelia'."

Claire (fourth from right) enjoying the student/postdoc lunch at the University of Melbourne

MUZLIFAH HANIFFA

Brisbane – Sydney – Melbourne – Perth

Muzlifah Haniffa had a very busy tour with a new branch visited every day! The WA branch appreciated the visit by Muzz. Connie Jackaman said "Muzz presented a seminar at Curtin University on August 11th titled "Functional heterogeneity of human mononuclear phagocytes in health and disease". She gave a fantastic overview of the mononuclear phagocyte network based on her work using functional genomics and comparative biology. She also presented recent data with single cell technologies and the latest advances the field. As part of Muzz's whirlwind tour she also met with local groups at two other sites: Telethon Kids Institute, UWA and Institute for Immunology and Infectious Diseases, Murdoch University."

Andrew Harman, her host in NSW said "Muzz's visit was a great success. She was met by one of our PhD students at the airport and escorted to the Westmead Institute for Medical Research (WIMR). This student is about to commence a postdoc in her lab so it was a great chance for them to meet and spend some time together. We then gave Muzz a tour around the institute and she gave her seminar at midday. About 60 people attended the seminar including many guests external to WIMR and it was well received. WIMR then put on a lunch for Muzz and in the afternoon she then met with several research groups. My research group then took her to Circular Quay for some drinks and we then went to Newtown for a very nice Thai meal. We all thoroughly enjoyed hosting Muzz who seemed to enjoy herself." Which she did – as Muzz herself said of her visits, "I really enjoyed meeting all of you and discussing science."

ARLENE SHARPE

Canberra – Sydney – Brisbane

Arlene Sharpe visited three branches in Australia before and after attending the International Congress of Immunology in Melbourne. She visited ANU in Canberra and the Centenary Institute in Sydney where she was the Keynote speaker at an afternoon workshop on "Immunotherapy – From Bench to Bedside" organized by Mainthan Palendira. In Brisbane, Arlene visited QIMR, where her host Michelle Wykes said "Arlene gave a very interesting overview of her research on PD-1 and T cell responses, with some emphasis on her recent work on regulatory Tfh cells. She also took the time to chat with lab heads as well as students during the day."

Arlene on the Sunshine Coast, Queensland

Muzz (third from left) enjoying the sights of Sydney with researchers from the Westmead Institute

Muzz out for dinner with researchers from Curtin University

New Zealand

Roslyn Kemp

In August, Dunedin **hosted Dr Ben Seddon as part of the VSP**. Ben spent a couple of days in Dunedin and gave a seminar, and then came on a lab ski retreat to Queenstown. Two students (Auckland, Hamilton) and a researcher (Palmerston North) were funded by NZASI to come to Dunedin to meet with Ben.

The NZ branch part-funded 20 students and postdocs to attend ICI in Melbourne – these members came from all over the country and reported that they loved the conference, so thank you to the organisers. Highlights included the quality of the international speakers, the gender equity session, and the opportunity to hear so many different talks.

The NZ AGM was held on August 29, and led to two key initiatives:

1. To hold the 2017 branch meeting in Christchurch. We currently have no ASI members in this city but plenty of immunology-based researchers. Based on increases in membership from Palmerston North and Auckland (2014 and 2015 conferences), we hope to establish a new member base in Christchurch. The Royal Society of NZ has also offered to sponsor an invited speaker. This meeting will be organized by Roslyn Kemp, Margaret Currie and Mark Hampton, along with a larger committee.

2. To hold the 2018 conference in Queenstown, as part of Queenstown Research Week. This is NZ's premiere research event and we hope to attract delegates from a wide variety of disciplines. This meeting will be organized primarily by Rod Dunbar (Auckland).

Finally, **congratulations to Anne LaFlamme of Victoria University, Wellington, who was recently promoted to Professor**. Anne was the NZ Councillor for ASI from 2011-13 and has served as an inspiration to many members with her ability to do high quality research and teaching, while maintaining a large service role to her university and to ASI. To listen to Anne's Inaugural Professorial Lecture "How Did It All Go So Horribly Wrong? Immunity Versus Autoimmunity", visit this link: http://www.victoria.ac.nz/about/news-events/victoria-public-lecture-series/how-did-it-all-go-so-horribly-wrong-immunity-versus-autoimmunity

Watch Professor Anne La Flamme's Inaugural Professorial Lecture

Western Australia

Connie Jackaman

ICI 2016: It was great to see the support and number of WA participants at ICI in Melbourne! Congratulations again to the ASI WA early career postdocs and students who received travel bursaries for ICI and to all the presenters at ICI. The program highlighted the involvement of young immunologists and prior to ICI, the student committee of the WA ASI branch (Wayne Aston, Amy Prosser and Amanda Chionh) hosted a practice session for the WA students giving oral presentations (Anthony Buzzai, Rachael Zemek, Kyle Mincham, Abbie Creamer and Charu Nanayakkara). All their presentations were well received at ICI and overall the organisers did a fantastic job with the conference program. A definite highlight of the program was the Lafferty debate and we are sure it will continue to be discussed in years to come!

ASI international VSP: Prior to ICI, the WA branch hosted two visiting speakers, Dr Ben Seddon and Dr Muzlifah Haniffa.

Dr Seddon's seminar, organised by Phil Stumbles, Murdoch University, titled "T cell memory: cellular gymnastics of induction and maintenance" was held at

the Harry Perkins Institute for Medical Research, North Campus, on 29th July. He presented highly interesting work, recently published in PNAS, looking at the dynamics of T cell turnover in endogenous memory compartments using a combination of novel cell labelling and fate mapping approaches. For the first time as well his seminar was streamed live to the Perkins South Campus to reach a larger audience across the State. As part of his visit he also met with a number of local groups across universities/institutes throughout WA.

Dr Muzlifah Haniffa presented a seminar at Curtin University on August 11th titled "Functional heterogeneity of human mononuclear phagocytes in health and disease". Muzz gave a fantastic overview of the mononuclear phagocyte network based on her work using functional genomics and comparative biology. She also presented recent data with single cell technologies and the latest advances in the field. As part of Muzz's whirlwind tour she also met with local groups at two other sites: Telethon Kids Institute, UWA and Institute for Immunology and Infectious Diseases, Murdoch University.

National visiting speakers: ASI WA will continue to offer support to local WA research groups to host national visiting fellows/collaborators at any time throughout the year (up to $500 for accommodation and/or flights subsidies). Please contact the committee for further information and if you are interested in hosting any upcoming visitors.

ASI cross promotion in local activities: ASI WA members have also been highlighted in a number of local conferences over the last few months.

Firstly, more than a dozen ASI WA postdocs and students presented at the Australian Society for Medical Research scientific symposium held at Curtin University on 7th June. Congratulations to Anthony Buzzai, Niamh Troy and Ben Wylie who received awards for their presentations. PhD student Ben Wylie's presentation (from Telethon Kids Institute) on dendritic cells in melanoma also attracted attention in *The West Australian.*

On 25th June, ASI WA students participated in the Australasian Society of Clinical Immunology and Allergy WA Immunology Day. Five students were selected for oral presentations in the postgraduate session at the annual meeting. Congratulations to PhD student, Jesse Armitage from UWA, who was awarded best presentation for his work on mesenchymal stem cells in chronic obstructive pulmonary disorder. Jesse also received the Best Poster Prize at the Thoracic Society of Australia and New Zealand Annual Scientific Meeting, held 29–30 July.

A further annual local conference was the Combined Biological Sciences Meeting, August 26th at UWA, which included an Infection and Immunity session. The ASI WA sponsored prize

at this event was awarded to Lelinh Duong from Curtin University for her honours studies examining changes to macrophage inflammatory responses during aging.

Future branch activities: In the next few months the WA branch will be holding a "Teaching Immunology" session and the end of year sundowner (with further details to come). In 2017, we will be holding a Perth Immunology Group (PIG) meeting and if you would like to be involved please contact the committee. If you have any further news, questions or suggestions please send through any details – we always welcome any feedback and look forward to seeing you all soon!

South Australia/ Northern Territories

Iain Comerford

Congratulations to David Yeung, the winner of the 2015 ASI SA/NT branch sponsored Best Student Publication Award (Centre for Cancer Biology) for his manuscript entitled 'TIDEL-II: first-line use of imatinib in CML with early switch to nilotinib for failure to achieve time-dependent molecular targets.' (*Blood 2015* Feb 5; 125(6):915-23).

Professor Suzanne Cory (WEHI; guest CCB AGM speaker) and the awardee, David Yeung

Australasian Cytometry Society

Annual Cytometry Conference of the Australasian Cytometry Society Oct 30th-November 2nd, Sydney, NSW

Check out the ACS website for more details

2016 ThymUS Conference

Maui, Hawaii, USA, 5-9 June 2016

Professor Nicole La Gruta, Monash University, Melbourne

A few years back I was searching for an outstanding fundamental T cell immunology meeting and had started doing a bit of research on thymic T cell development. Dale Godfrey kindly suggested I might be interested in attending the (in)famous ThymOZ meeting on Heron Island. A hastily arranged trip and I was soon watching baby turtles, snorkelling, and speaking with researchers as interested as I was in the basics of T cell biology. It was a fantastic meeting. So, naturally, I jumped at the chance to attend this year's ThymUS conference in Maui, Hawaii, a sister conference to ThymOZ (along with the Japanese T cell conference) that occurs on rotation every three years. The program was broadly split into the development and function of thymic stromal cells and the differentiation of various T cell lineages, and all of the signalling, transcriptional and epigenetic controls regulating those processes. Later sessions focused on the function of those T cells, spanning their role in autoimmunity to aging and cancer. All in all, the conference provided something for anyone with even a vague interest in T cell development and/or function.

Obviously a key indicator of the quality of a meeting is the calibre of the researchers attending. In this regard, the meeting was outstanding, featuring leading scientists such as Diane Mathis, Kris Hogquist, Al Singer, Steve Jameson, Charles Surh and Yousuke Takahama to name only a few. Combined with the fact that the conference was relatively small (177 delegates), this meant that there was plenty of opportunity to meet with any or all of the attendees, and to establish new connections and collaborations. In addition, immediately following the ThymUS Conference was the Agonox T-cell based immunotherapy meeting, A Deeper Dive, which I didn't attend but which also featured an impressive line-up of speakers.

An Hawaiian sunset - Nicole La Gruta

A highlight of the meeting was a talk by Miho Shinzawa from Al Singer's group, who presented her work on FLIPFLOP mice, in which CD4 expression was controlled by the CD8 locus and vice versa, resulting in MHCI-restricted CD8+ Th cells and cytotoxic MHCII-restricted CD4+ T cells. These fascinating results suggested that the temporal regulation of co-receptor expression, rather than MHC restriction, determines T cell function. Steve Jameson presented his work, done in collaboration with David Masopust, on the immune compartments and responses of pet shop mice that have been naturally exposed to a range of different pathogens (recently published in *Nature*). The study concluded that the immune compartments of these mice better reflected those of an adult human, while the immune system of typical SPF mice was much more akin to that seen in human neonates, providing food for thought on the best animal model to address specific

The much coveted **'don't get excited' award t-shirt** about which I was very excited.

Luau at ThymUS 2016 - Nicole La Gruta

biological questions. Of particular note, Ellen Rothenberg gave an outstanding presentation on her detailed analysis of the mechanisms of Bcl11b activation required for T cell development, noting three separate asynchronous mechanistic inputs that co-ordinate in an unprecedented way to drive Bcl11b expression.

I would also like to highlight the Founder's Keynote Address, a tour de force by Dr Janko Nikolich-Zugich, who detailed his personal crusade and fascination with T cell repertoire selection over the course of his entire career. Having followed Janko's work closely over the years, I found this to be a particularly interesting and satisfying end to the conference. I was joined at the meeting by several compatriots, including Dale Godfrey, Ann Chidgey, Steve Daley, Logesvaran Krshnan, and Charis Teh, who all presented their outstanding work to a keen reception, with Charis receiving an award for her presentation.

My own talk was scheduled for the Wednesday, the last talk before the morning break, and I presented some recent work done in collaboration with Jamie Rossjohn and Stephanie Gras, showing an unorthodox mode of TCR recognition of pMHCI and the implications of that for T cell activation and participation in the antiviral immune response. During my presentation I made a note of the fact that we had little to no data on how such TCRs are selected in the thymus, but even so, it was well received and I was pleased to discuss my work during the break with the many researchers who approached me to provide suggestions and encouragement. That input alone made the meeting well worthwhile.

Perhaps I should have described the island and venue first, in which case maybe more of you would still be reading. The venue on the island of Maui (second largest Hawaiian island) was the Wailea Beach Marriott Resort and Spa and it was exactly how one imagines Hawaii to be. Unlike Honolulu which seems overcrowded and touristy, the resort in Maui was a tropical paradise. Suffice to say, there was a level of cognitive dissonance, being thoroughly engaged in T cell biology, while being surrounded by palm trees, sand and swimming pools. I managed to do some snorkelling with Ann Chidgey and we saw six huge turtles feeding on the plants growing on the lava rocks just offshore – so close we could have touched them. There was also the opportunity to attend a luau showcasing Hawaiian dancing and culture. The Conference dinner was on the rooftop with a buffet dinner and Mai Tais and pina coladas – a great opportunity to consolidate the acquaintances made and agree to meet again at the Japanese conference next year. At this point I would like to mention my award, so generously bestowed at the dinner by the Conference organizers – the 'Don't get excited' award for presenting no thymus data at the ThymUS conference! A proud moment.

All in all, the meeting was fantastic; a wonderful venue, and a great combination of outstanding scientists whose shared interest in the thymus and T cells has forged many friendships over the years and a collegial and fun conference environment. I would highly recommend it (and its partner meetings) to anyone with an interest in T cell development and immunity. Many thanks go to the Australasian Society for Immunology for supporting my travel to this conference by way of a Gordon Ada Senior Travel Award.

There were certainly loads of things to do that I never got around to – climbs to the edge of volcanoes, diving etc – but in my downtime I succumbed to resort directives and lapped up the sunshine by the pool ... Infinity of course.

To learn more about the 'Gordon Ada' Senior Travel award, see the ASI website

World Immune Regulatory Meeting

16-19 March 2016, Davos, Switzerland

Connie Gilfillan, Malaghan Institue of Medical Research New Zealand

After far too many hours traveling with delayed flights and missed connections, I arrived in Davos, up in the beautiful Swiss Alps. The World Immune Regulatory Meeting (WIRM) is held here annually and I can see why the location remains unchanged. The relatively small numbers and more cozy feel was ideal for my first international conference and I would like to thank the ASI for its support.

The program was split into plenary sessions, workshops and poster sessions with topics ranging from immune tolerance and immune regulation, to immunotherapy in cancer and tumour tolerance. I had the privilege of speaking at the tumour immunology workshop, along with a number of great researchers and, following the session, I enjoyed speaking with some of the leaders

Meeting the chairman of WIRM and the director of the Swiss Institute of Allergy and Asthma (SIAF), Cezmi Akdis.

of the cancer immunology field such as Pedro Romero. A highlight for me was hearing Vincenzo Bronte speak, who gave a great talk on immune suppressive and immune stimulating mechanisms in the tumour microenvironment. He focused on

Stunning scenery on the Northern Mountains, heading up to Strelapass.

monocyte-derived dendritic cells, emphasising the importance of CD40 for their expansion, as well as a high avidity tumour antigen to get CTLs that are able to overcome immune suppression. Another big name was Giorgio Trinchieri who unpackaged the integral role of microbiota in oncogenesis, but conversely, in the priming of anti-tumour immune responses. He went on to say many tumour models like MC38 and EL4 treated with CpG and oxaliplatin, respectively, have a 60% drop in efficacy following antibiotic treatment and this phenomenon was linked to TNF production by myeloid cells, which was lost following antibiotics.

A great feature about this conference is the focus on fostering networking and a large part of that interaction was during the poster sessions, which were held each night. Dinner was a social occasion; many of the delegates and plenary speakers would stay and chat and following dinner, everyone would visit posters for the remainder of the night.

Following a fantastic conference, I was off to visit several labs for future post-doctoral opportunities. Making the most of being in Switzerland I had the privilege of visiting labs within the University of Zurich and the Ludwig Cancer Research Center in Lausanne. I then traveled further abroad to Trinity College (Dublin, Ireland) and Vrije Universiteit Brussel (Brussels, Belgium). It was a great opportunity to be able to present my research, receive invaluable feedback and met some talented scientists. My thanks go out to the investigators who took the time out from their busy schedules to meet with me, show me around their facilities and introduce me to their research teams.

Reflecting on the trip, it was certainly full, but productive. I met many wonderful people and have grown both scientifically and personally. Perhaps most importantly, I have come back with renewed vigor to finish my PhD, knowing there are exciting post-doctoral opportunities that lie ahead. Once again, I would like to thank ASI for their generous support, which made this exciting and worthwhile journey all possible.

Publication List - Our Journals and Sustaining Members

May 2016 - July 2016

Highly accessed articles from *IMMUNOLOGY AND CELL BIOLOGY* and *CLINICAL AND TRANSLATIONAL IMMUNOLOGY* from recent months as well as publications making use of tools, services or reagents supplied by our SUSTAINING MEMBERS.

Linking the T cell receptor to the single cell transcriptome in antigen-specific human T cells. Eltahla AA, Rizzetto S, Pirozyan MR, Betz-Stablein BD, Venturi V, Kedzierska K, Lloyd AR, Bull RA, Luciani F. *Immunol Cell Biol*. 2016; 94:604-611. doi: 10.1038/icb.2016.16

The molecular mechanisms of TLR-signaling cooperation in cytokine regulation.Liu Q, Ding JL.*Immunol Cell Biol.* 2016; 94:538-42. doi: 10.1038/icb.2016.18

A synergistic combination: using RNAseq to decipher both T-cell receptor sequence and transcriptional profile of individual T cells. Schober K, Busch DH. *Immunol Cell Biol*. 2016; 94:529-30. doi: 10.1038/icb.2016.3

Targeted therapeutics in SLE: emerging strategies to modulate the interferon pathway. Oon S, Wilson NJ, Wicks I. *Clin Transl Immunology.* 2016 May 13;5(5):e79. doi: 10.1038/cti.2016.26. eCollection 2016.

Dietary metabolites and the gut microbiota: an alternative approach to control inflammatory and autoimmune diseases. Richards JL, Yap YA, McLeod KH, Mackay CR, Mariño E. *Clin Transl Immunology.* 2016 May 13;5(5):e82. doi: 10.1038/cti.2016.29. eCollection 2016.

Toll-like receptors: the swiss army knife of immunity and vaccine development.Dowling JK, Mansell A.*Clin Transl Immunology.* 2016 May 20;5(5):e85. doi: 10.1038/cti.2016.22

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EasySep™ Mouse Monocyte Enrichment Kit, EasySep™ Mouse T Cell Enrichment Kit Ben-Shaanan, T. L. *et al.* Activation of the reward system boosts innate and adaptive immunity. *Nat. Med.* **22,** 940–4 (2016).

EasySep™ Human CD4+ T Cell Enrichment Kit Apps, R. *et al.* HIV-1 Vpu Mediates HLA-C Downregulation. *Cell Host Microbe* **19,** 686–95 (2016).

RosetteSep™ Human CD4+ T Cell Enrichment Cocktail, RosetteSep™ Human CD8+ T Cell Enrichment Cocktail Roybal, K. T. *et al.* Precision Tumor Recognition by T Cells With Combinatorial Antigen-Sensing Circuits. *Cell* **164,** 770–9 (2016).

Affymetrix… "*The Prime Flow™ RNA Assay was performed … the amount of cellular viral mRNA quantified by real-time PCR strongly correlated to the amount of viral cellular mRNA measurable by PrimeFlow™ RNA Assay … demonstrating that both techniques were equivalent in the measurement of viral mRNA..."* **Kinetics of HIV-1 latency reversal quantified on the single cell level using a novel flow-based technique.** *J. Virol.* **(2016). doi:10.1128/JVI.01448-16**

RayBiotech… "The RayBio® Immunome Protein Arrays are multiplex protein immunoassays which enabled simultaneous screening for autoantibodies against 1636 human proteins… was used to screen the serum of 30 H. pylori-seropositive PD patients (case) and 30 age- and gender-matched H. pylori-seronegative PD patients (control) in this study..." **Suwarnalata, G. et al. Augmentation of Autoantibodies by Helicobacter pylori in Parkinson's Disease Patients May Be Linked to Greater Severity.** *PLoS ONE* **11, e0153725** (2016).

Bellbrook Labs...."We developed a Transcreener® assay for immunodetection… a broadly applicable high-throughput screening (HTS) assay for discovery of glycosyltransferase inhibitors...." Zielinski, T., Reichman, M., Donover, P. S. & Lowery, R. G. **Development and Validation of a Universal High-Throughput UDP-Glycosyltransferase Assay with a Time-Resolved FRET Signal. Assay** *Drug Dev Technol* **14, 240–51 (2016).**

Mouse models from **Ozgene** used in the following recent publications:

Koentgen, F. *et al.* Exclusive transmission of the embryonic stem cell-derived genome through the mouse germline. *Genesis* **54,** 326–33 (2016).

Perez-Siles, G. *et al.* Characterizing the molecular phenotype of an Atp7a(T985I) conditional knock in mouse model for X-linked distal hereditary motor neuropathy (dHMNX). *Metallomics* **8,** 981–92 (2016).

Lo, T.-H. H. *et al.* Characterization of the Expression and Function of the C-Type Lectin Receptor CD302 in Mice and Humans Reveals a Role in Dendritic Cell Migration. *J. Immunol.* **197,** 885–98 (2016).

Hiroshi Kiyono from the University of Tokyo is visiting NZ in November, hosted by Julie Cakebread as part of the ASI Visiting Speaker Program

Seminar dates: Friday 11 November, Malaghan Institute, Wellington; Monday 14 November, AgResearch, Hamilton.

As always, NZASI funds are available for NZASI members to travel to attend ASI VSP seminars - contact roslyn.kemp@otago.ac.nz for more information.

Publication List - ASI Members

May 2016 - July 2016

Andreas Behren

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IUIS Immunology without Borders

Congratulations to Roslyn Kemp (University of Otago, NZ) and Alejandro López Ramírez (QIMR Berghofer Institute of Medical Research, QLD) on their recent election to the IUIS. Roslyn takes a role as Secretary General while Alejandro will serve as a Councillor.

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The Society

Immunology in Australasia

The aim of the ASI is to encourage and support the discipline of immunology in the Australasian region.

The Australasian Society for Immunology Incorporated (ASI) was created by the amalgamation in 1991 of the Australian Society for Immunology, formed in 1970, and the New Zealand Society for Immunology, formed in 1975. It is a broadly based society, embracing clinical and experimental, cellular and molecular immunology in humans and animals. The Society provides a network for the exchange of information and for collaboration within Australia, New Zealand and overseas. ASI members have been prominent in advancing biological and medical research worldwide. We seek to encourage the study of immunology in Australia and New Zealand and are active in introducing young scientists to the discipline.

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