Australasian Society for Immunology Inc.

N E W S L E T T E R

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Miss Kristy Meiselbach(L) and Miss Nancy Fintic(R), the Walter and Elisa Hall Institute's first Aboriginal and Torres Strait Islander interns who came to the Institute through the Career Trackers Program. The Institute established the relationship with this Aboriginal career internship organisation as part of its Reconciliation objectives and is the first medical research institute to be involved.

Photo courtesy of the Walter and Elisa Hall Institute

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Professor Christopher Goodnow
Garvan Institute
384 Victoria Street
Darlinghurst NSW 2010
Ph: 61 2 9295 8516
Email: c.goodnow@garvan.org.au

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Federation University Australia
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Email: s.berzins@federation.edu.au

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Peter Doherty Institute
University of Melbourne Parkville Vic 3010
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Email: godfrey@unimelb.edu.au

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Dr Roslyn Kemp
Ph: 64 3 479 7708
Email: roslyn.kemp@otago.ac.nz

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Dr Daniel Gray
Ph: 61 3 9345 2497
Email: dgray@wehi.edu.au

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Dr Cara Fraser
Ph: 0422 903 093
Email: cara.fraser@sahmri.com

Australian Capital Territory
Dr Anselm Enders
Ph: 61 2 6125 7605
Email: anselm.enders@anu.edu.au

Project Manager
Miss Sarah Fardy
Ph: 61 3 5227 5794 / 0413 917 990
Email: fardy.s@wehi.edu.au

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Professor Jose Villadangos
Ph: 61 3 9035 7684
Email: j.villadangos@unimelb.edu.au

Non-Voting Councillors:

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Ph: 61 7 4781 6265
Email: Alan.Baxter@jcu.edu.au

Honorary Archivist:
Dr Judith Greer
Ph: 61 7 3346 6018
Email: j.greer@uq.edu.au

Administrative Correspondence
Ms Judi Anderson
ASI Inc. Secretariat
PO Box 7108
Upper Ferntree Gully Vic 3156
Ph: 61 3 9756 0128
Email: immunologysecretariat@gmail.com

A Place to Stand in Science – Indigenous Peoples in Research in Australia and New Zealand

Willy-John Martin
@DubyuJ18. martin@wehi.edu.au
Post Doctoral Researcher, Acute Rheumatic Fever Project, Inflammation Division
Walter & Eliza Hall Institute of Medical Research
1G Royal Parade, Parkville, Victoria 3052, Australia

My ancestral roots reach deep into the Māori tribes of Ngāti Wai and Ngāti Tamaterā, who arrived in Aotearoa New Zealand on the ocean voyage canoes Māhuhu-ki-te-Rangi, and Tainui some 800 years ago. I currently live and work in Wurundjeri country (also known as central Melbourne), whose people belong to the Kulin Aboriginal nation who have lived here for more than 40,000 years. Much of my current research involves the Aboriginal countries of the Australian Northern Territory: the Larrakia, Kunwinjku, Arrernte, Gun-djeihmi and Jawoyn.

It might seem out of place to begin an article in a scientific newsletter in this way. It is a deeply held tradition throughout Australasian and Pacific indigenous communities to orient oneself in reference to the constellation of relationships a person inhabits. In the same way that tracing a person's lab pedigree can highlight their research interests, a cultural pedigree serves to convey the forces that shape one's motivations and the lens through which the speaker views the world.

Australia and New Zealand share some common health challenges with their Indigenous peoples, powerfully illustrated by the enormous deficit in life expectancy. Non-Indigenous people in both countries can expect to live 81 years, while Aboriginal and Torres Strait Islanders live a staggering 10 years less. Even a cursory reflection on your most recent 10 years worth of living, caring, contributing, and growing will reveal how profound this loss truly is. From a macroscopic view, this amounts to a collective loss of 7,135,890 years based on current census data. Encouragingly, New Zealand has made steady strides over the past 20 years, where the life expectancy gap has reduced to seven years – stll a considerable difference equating to a deficit of 4,190,235 years. New Zealand seems to be on the right track, but clearly more progress is needed to achieve equity in both countries.

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Life expectancy conveys only one element of these health challenges. Our Indigenous peoples have higher rates of diabetes, cardiovascular disease, obesity and infectious disease, which together convey that quality of life is also heavily impacted. Some diseases, like rheumatic heart disease, are unheard of in most first world countries, yet Australasian Indigenous peoples have rates that parallel those of the third world. The reasons are complex and multifactorial with economics, psycho-social environment, historicity, health access and education just a few of the elements at play. For those who feel passionately about addressing health inequalities, it can seem impossible to find a way to navigate through these threads to find a solution.

There is, of course, no one solution. Instead, a toolbox filled with numerous, actionable solutions offers the most promising strategy to closing these health gaps. Significant effort is being made in the arenas of public health and primary health care. At the same time, as biomedical scientists and immunologists we have the skills and acuity to make an enormous contribution to Indigenous health, and in the process make new and meaningful discoveries. Yet it seems that a number of barriers prevent this from occurring to its fullest extent.

My research area of acute rheumatic fever, working with Prof. Ian Wicks, arose out of a growing commitment at the Walter and Eliza Hall Institute to make a meaningful contribution to Indigenous heath. Despite making stellar scientific discoveries and functioning as a hotbed of cutting edge technologies for nearly 100 years, WEHI had never harnessed its talents to address the major Indigenous health concerns. Over the past four years we have now been applying modern biomedical techniques to understand the pathogenesis of rheumatic fever as a high priority disease for the Indigenous Australian, with clear overlapping benefits for my people in New Zealand.

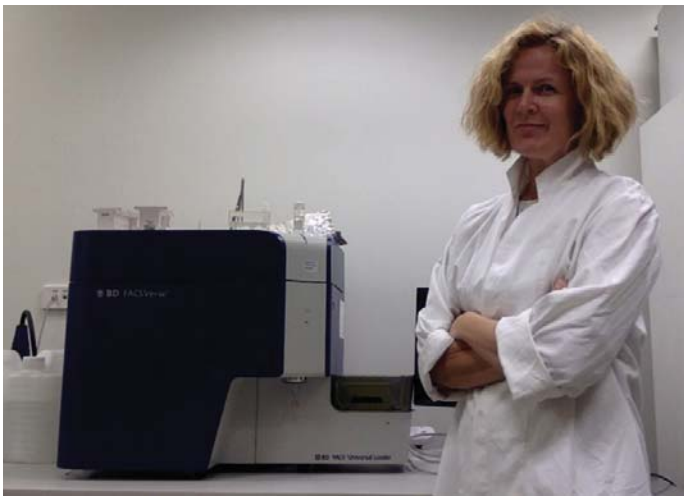
Imbedding these scientific efforts within a culturally safe framework has been a foremost consideration. We have sought guidance from Aboriginal leaders and Aboriginal health organisations, we are completing our first Aboriginal and Torres Strait Islander Reconciliation Action Plan guided by national Reconciliation initiatives, and have established a Reconciliation Committee to drive our objectives, with invaluable counsel from our Aboriginal Committee members. Our Indigenous scientific and cultural initiatives at WEHI are still in their infancy, but I believe that we are making excellent progress.

The support of senior leaders at the Institute has had a major impact on progress and has highlighted the need for strong vision

The support of senior leaders at the Institute has had a major impact on progress and has highlighted the need for strong vision and decisive leadership from the executive level of research organisations. Many individual researchers already make meaningful contributions, either by choosing research areas that are of interest to Indigenous people, by actively ensuring that Indigenous participants are included in the work that they already do, even when it is not particularly an area of high impact to the Indigenous peoples, or through outreach and education programs. But the impacts are greatly magnified when championed by the Directors, HODs, CEOs, and senior scientists, as we are currently observing at WEHI.

Maori and Aboriginal biomedical scientists are, at this stage in history, incredibly rare. Almost all of us have an abiding passion for indigenous health issues. Most are attempting to function in and amalgamate both scientific and cultural elements of research – an enormous task that can slow down some aspects of career progression. Although we dedicate our research efforts to our peoples' causes, it is a task that is too large to be carried by so few. And so it is immensely satisfying that New Zealand and Australian scientists who are not Maori or Aboriginal and Torres Strait Islanders are recognising the need and the impact that they can make. I hope that these efforts will accelerate and that, together, we can build on what has been achieved so far on both sides of the Tasman to tackle these pressing health needs.

Editorial



Who you are as a scientist and who you are as a person are two aspects of yourself that have roots and rootlets in the people in your world. Some of the scientist in you comes from what you learnt from your teachers and supervisors, many of whom become mentors. Some (or a lot) of who you are as a person comes from your culture and family.

June, my grandmother, is a humorous, kind, pragmatic woman with a great deal of spirit. Her influence in my extended family and our family culture is enormous. Time spent with her has this sort of re-set effect on her offspring, putting things into perspective with a good giggle. In some ways, she reminds us of who we really are. Arriving at her ninetieth birthday party on the back of a motorbike last month, she knows who she is and who we are. It is priceless.

Losing your old people before they get to be old is something of a reality for the indigenous peoples of Aussie and NZ. When the people of your culture frequently experience lives shortened by disease, there must be so much grief at the loss of the person but also the loss of their knowledge and wisdom when they go. The affect this has on a culture seems to me like it could be huge, like walking into a house where the floorboards have gone.

The gaps between people of European descent and the indigenous peoples of these lands are ridiculous any which way you look at it. In medical research, there is the chance and the hope that something could be different as we use our knowledge and our nous to uncover new and good ideas for improving health. It is supremely good to read in Willy-John Martin's article, leading this September 2015 edition of the ASI Newsletter, about research teams at the same table as the local indigenous people, hearing from them what matters and what they need before even starting, right from the get-go. Take us to the future.

Joanna Roberts

ASI Secretariat
PO Box 7108,
Upper Ferntree Gully, Vic. 3156
Australia
Tel: +61 3 9756 0128

Note new email address:
immunologysecretariat@gmail.com

Introducing Jomar Life Research Poster Prize Winner for 2014: Ms Heni Muflihah

Heni Muflihah is a PhD student in the Tuberculosis (TB) Research Program at the Centenary Institute and The University of Sydney. Having worked on *Mycobacterium tuberculosis* (*Mtb*) drug resistance in Indonesia, Heni commenced her PhD project on TB vaccines and immunology where she has developed her passion for tackling TB. Under the supervision of Professor Warwick Britton and Dr Manuela Flórido, she has been working on developing new vaccines for tuberculosis using sequential immunization with recombinant Influenza A viruses (rIAVs). Their approach on pulmonary immunization, using viral vectored vaccine to boost protective immunity in the lungs, was developed through collaboration with A/Prof John Stambas from Deakin University who engineered the rIAVs expressing the TB vaccine antigens. They have shown that single immunization with the PR8 (H1N1) strain of rIAV expressing the IA^b-restricted p25 $CD4^+$ T cell epitope of *Mtb* $Ag85B_{240-254}$ (PR8-p25) was immunogenic and protective against *Mtb* infection.(1)

The 2015 WHO global TB strategy targets a 90% reduction in the incidence of TB by 2035. The current BCG vaccine provides inconsistent protection against infectious pulmonary TB, and this has led to a call to increase TB vaccine research. In addition to pre-clinical studies on TB vaccine, Heni is collaborating with colleagues in Indonesia to investigate the response of TB patients to TB vaccine antigens. This is a part of the work of the NHMRC-funded Centre of Research Excellence in TB control (TB-CRE) co-ordinated by Professor Britton. It is expected that her work on understanding immunity to TB vaccines in the murine model and in humans will contribute to the control of this important disease in high burden countries.

(1) Flórido M. et al, *Eur J Immunol.* 2015; 45(3):780-93

Contact: Heni Muflihah,
h.muflihah@centenary.org.au

Figure Legend – Schematic representation of the impact of sequential immunization with recombinant Influenza A viruses (rIAVs) as tuberculosis (TB) vaccines. Two strains of rIAVs were engineered to express the p25 epitope of Ag85B in NA segment of rIAV (A). Intranasal immunization with rIAVs given subsequently within 6 weeks interval (B) resulted in high proportion of polyfunctional Th1 $CD4^+$ T cells specific to Ag85B in the lungs (C). Following *Mtb* challenge, early immune response in the lungs of mice immunized with the rIAVs (D) is proposed to increase protective efficacy against TB (E).

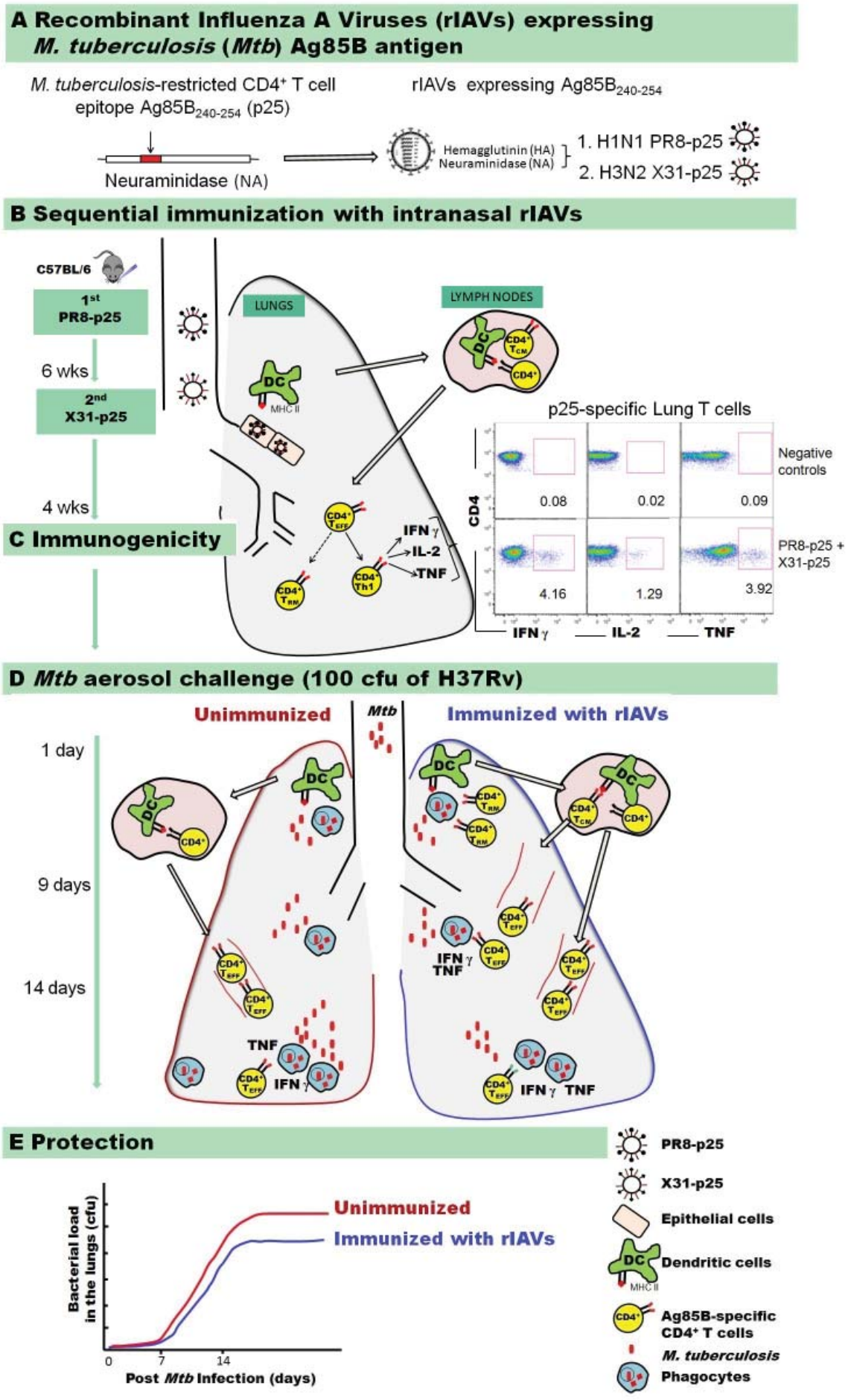
ICB & CTI Online Manuscript Submission

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


A Recombinant Influenza A Viruses (rIAVs) expressing M. tuberculosis (Mtb) Ag85B antigen
M. tuberculosis-restricted CD4+ T cell epitope Ag85B240-254 (p25)
rIAVs expressing Ag85B240-254
Neuraminidase (NA)
Hemagglutinin (HA)
Neuraminidase (NA)
1. H1N1 PR8-p25
2. H3N2 X31-p25
B Sequential immunization with intranasal rIAVs
C57BL/6
1st PR8-p25
6 wks
2nd X31-p25
4 wks
C Immunogenicity
LUNGS
LYMPH NODES
DC
MHC II
CD4+ TCM
CD4+
CD4+ TEFF
CD4+ TRM
CD4+ Th1
IFN γ
IL-2
TNF
p25-specific Lung T cells
CD4
Negative controls
PR8-p25 + X31-p25
0.08
0.02
0.09
4.16
1.29
3.92
IFN γ
IL-2
TNF
D Mtb aerosol challenge (100 cfu of H37Rv)
Unimmunized
Mtb
Immunized with rIAVs
1 day
9 days
14 days
E Protection
Bacterial load in the lungs (cfu)
Unimmunized
Immunized with rIAVs
0
7
14
Post Mtb Infection (days)
PR8-p25
X31-p25
Epithelial cells
Dendritic cells
Ag85B-specific CD4+ T cells
M. tuberculosis
Phagocytes

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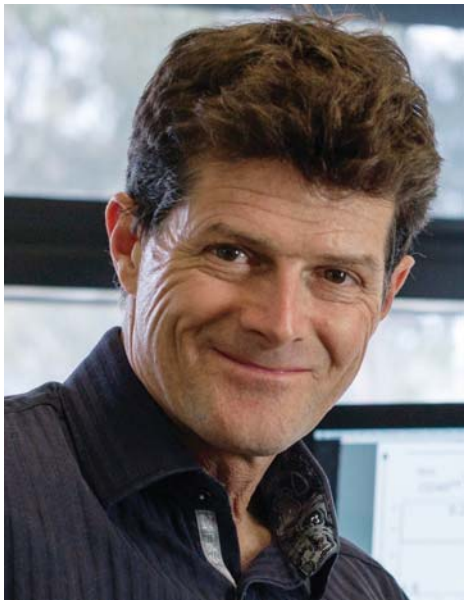
President's Column



By the time you read this, many of us will have recovered from the extra workload of serving on NHMRC peer review panels and we'll all be waiting, worried about our own grant applications and those of our colleagues.

Not for the faint-hearted, this research life, but I still love the thrill of peeling back the next layer of insight into the immune system. Still get goosebumps when I see something amazing revealed by a member of my lab, as part of an interdisciplinary team, by a colleague, and when I read or hear presented a discovery that I couldn't have imagined only five years ago. More often than not, those moments overturn some incorrect assumption or bias I held in my head, and that's when you know you're part of something special. Many of these moments turn into "bricks of knowledge" that don't fade away like fashion. Just as today's research and medicine builds on the collective findings made by immunologists last century, the new findings we each make today add to an intellectual legacy that will be used and built upon in perpetuity. Sure beats a "safe job"!

The challenge in this research life is the long periods between those moments of excitement. How to sustain the enthusiasm, in the face of dreary comments from "Referee 3" and slings and arrows from the grant review process? That's one reason we have an academic society: to get our community together to celebrate, commiserate, and plot the way forward at regional and national meetings and when international speakers come to our shores.

We have two "once in a lifetime" events coming up that are not to be missed. At our Annual Scientific Meeting in Canberra this December we have a crack team of the best immunological minds from Germany coming to speak and network with ASI's members.

And next August, barely a year away now, the whole immunological world comes to Melbourne for the International Congress of Immunology. Please make sure you have both those events in your calendar, and that your students and colleagues are signed up as members of the Society and in the running for member benefits that will accompany these two great meetings.

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:

https://twitter.com/ASImmunology
https://www.facebook.com/ASImmunology

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

Accounts managed by ASI member, Gabriela Khoury

Honorary Secretary's News

ASI Council positions available

The mid year ASI Council meeting was recently held and several important decisions were made. Chief among these was the unanimous agreement to support the establishment of a new Council position to represent, promote and support female Immunologists. The ASI Women's Initiative Councillor will serve a 3-year term and be responsible for overseeing and implementing initiatives including the Women's Initiative mentoring program and overseeing the Women's Initiative website content that has flourished under the leadership of Ros Kemp and Sarah Fardy. The Women's Initiative Councillor will be joined by other new Councillors who will fill vacancies for branch representatives for the ACT, WA and SA/NT branches (three voting positions on Council), ASI representatives for FIMSA (Federation of Immunological Societies of Asia-Oceania) and the IUIS (International Union of Immunological Societies) (two non voting positions), and the ASI Meeting Co-ordinator (non voting Councillor). This year also sees the election of a new ASI President (voting member of Council and a member of the ASI Executive team). The winner will be Vice President in 2016, President for 2017-18, and Past President in 2019 to help with the transition to the next President. Nominations for all positions are open now and will close on October 15 so please see the ASI website for more details or contact me (sberzins@federation.edu.au) if you have any questions about what these positions involve, or perhaps have a suggestion for who you think might do a good job in those roles so we can give them a friendly tap on the shoulder.

Communication with members

ASI Council approved several initiatives to improve communication with members and the public. In coming months, members should notice improvements to the newsletter (updated layout and improved content) and a growth in our profile on Facebook and Twitter. We have received a lot of positive feedback about the revamped website and it is a great credit to Sarah Fardy (website), Gabriela Khoury (Facebook and Twitter) and Joanna Roberts and Simon Apte (Newsletter) for their enthusiasm and great ideas about how to improve these services for our members. Their contact details are on the website, so please feel free to contact them if you have ideas or comments.

Travel awards

A call will soon go out for the second round of post-graduate, post-doctoral and senior researcher travel awards. These are highly competitive so perhaps start thinking now about your application. Expect the official call to come out in mid September. More information about these awards is available on the ASI website. In addition to these awards, ASI members are eligible for discount registration costs to attend the ASI Annual Meeting, so encourage your colleagues sign up as ASI members before registering to attend the meeting.

Upcoming meetings

The main upcoming events members should keep an eye out for are the ASI Annual Scientific Meeting to be held in Canberra (http://www.asi2015.org/) and the ICI2016 meeting in Melbourne (http://ici2016.org/). ASI Council heard updates about both meetings from the organisers and they will be fantastic events for members. Please visit the websites for information about the programs and great line up of speakers.

Stuart Berzins

The ASI Visiting Speaker Program

Visits since June

Professor Hai Qi visited Sydney, Canberra and Melbourne in late May and early June. Prof Qi gave two talks during his visit to Melbourne; first he spent a day at the Peter Doherty Institute (PDI), meeting with students and researchers, where he gave a talk entitled *When short is more and long is less: visualizing Tfh-mediated help and Treg-mediated suppression*. Prof Qi was also a plenary speaker at the 6th Australian B Cell Dialogue, a two-day B cell conference at WEHI. According to his local host, Vanessa Bryant, he gave a 'brilliant talk' entitled *Altruism or winners-take-it-all in the germinal centre: ICOS makes the call* and everyone "enjoyed his visit immensely and look forward to seeing him in Melbourne at ICI2016".

Visits to come for 2015

Prof Dirk Busch
Technische Universität, Germany
October 2015 visiting Perth, Melbourne, Dunedin, Sydney

Prof Ralph Tripp
University of Georgia, USA
November/December 2015 visiting Brisbane, Melbourne, Geelong, Canberra

Further details are on the website: http://www.immunology.org.au/events-calendar/the-asi-visiting-speaker-program-vsp/

New Visiting Speaker Nomination Guidelines

At the July ASI Council meeting, some changes were made to the VSP nomination guidelines. The most important change is that a twice-yearly call for speaker nominations will be made to be considered and prioritised by the Executive together, with the aim to inviting the best available speakers to as many branches as possible. Updated guidelines can be found on the website: http://www.immunology.org.au/events-calendar/the-asi-visiting-speaker-program-vsp/asi-visiting-speaker-program-guidelines/

Call for Speakers!

The first Call for Speakers has been announced. This is one way to ensure your city gets a visit! Any member of ASI willing to co-ordinate a visit can nominate: simply submit a 500-word (or less) description of the contribution of the proposed speaker to the field, the value of the proposed speaker to the ASI membership and a short list of recent major publications. Please send your nominations to me at: jo.kirman@otago.ac.nz

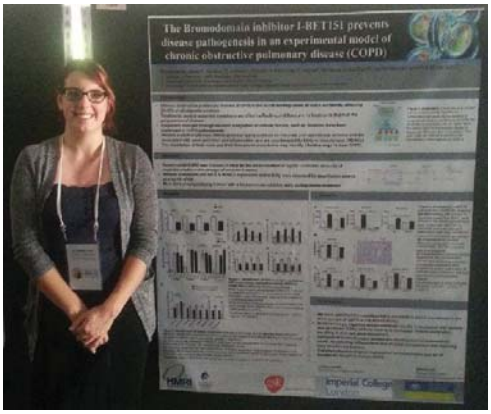
Jo Kirman
VSP Co-ordinator
University of Otago
Dunedin, NZ

Professor Hai Qi at Walter & Eliza Hall
(Photo: Su Heinzel)

Introducing Jomar Life Research Poster Prize Winner for 2014: Ms Berndadette Jones

I am a final year PhD student at the University of Newcastle and Hunter Medical Research Institute (HMRI) under the supervision of Prof. Phil Hansbro. My research focuses on the role that epigenetic mechanisms play in inflammatory airway diseases, in particular chronic obstructive pulmonary disease (COPD). Our group has developed a mouse model that recapitulates the hallmark features of COPD including chronic inflammation, airway remodeling, emphysema-like alveolar enlargement and altered lung function.

Epigenetics is the study of how the environment can alter gene expression in ways that are independent of changes in the genetic sequence. My research primarily focuses on histone modifications, particularly histone acetylation. The process is tightly controlled by two groups of enzymes that acetylate, histone acetyltransferases (HATs), or deacetylate, histone deacetylases (HDACs), histones. In examining the role of histone acetylation in experimental COPD , I found that there was a temporal increase in histone acetylation as smoking continued and features of COPD developed. This was associated with corresponding increases activity and expression of HATs and, in contrast, decreased activity and expression of HDACs.



Poster session, ASI December 2014 Wollongong

Our initial experiments and data resulted in discussions with potential collaborators including Prof. Ian Adcock at Imperial College London, as well as GlaxoSmithKline (GSK). These discussions have led to a fruitful collaboration with both parties, who have greatly contributed to developing this research. GSK has provided a novel HAT inhibitor which I have tested to determine its ability to affect disease when given as a prophylactic treatment in proof of principle experiments. These prophylactic treatments led to improvements in the major features of disease. I presented this data in my poster at ASI.

Since then I have determined whether this HAT inhibitor is effective therapeutically, and in a situation of smoking cessation. This produced very promising findings and is now leading on to mechanistic studies. We are also progressing to studies with human cells *in vitro*.

Contact: Bernadette Jones,
bernadette.jones@uon.edu.au

Figure Legend:

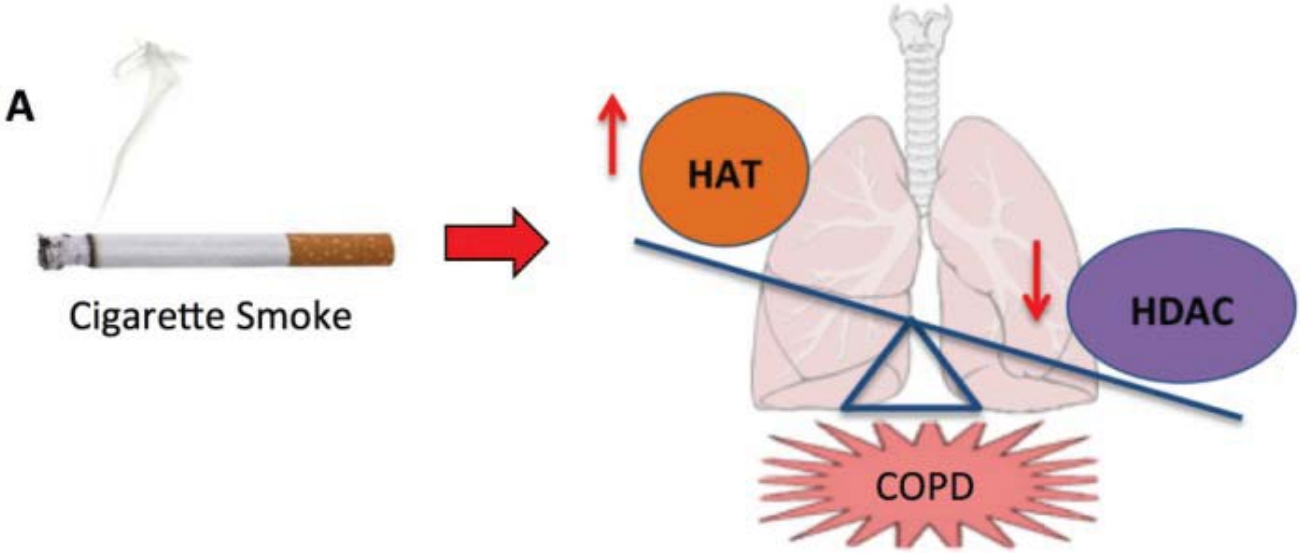
A) Cigarette smoke exposure leads to an imbalance of HATs and HDACs in the lungs, increasing HATs expression and activity while at the same time decreasing HDACs expression and activity; this imbalance leads to increased histone acetylation, and expression of pathological associated genes, which is likely to be involved in driving COPD development.

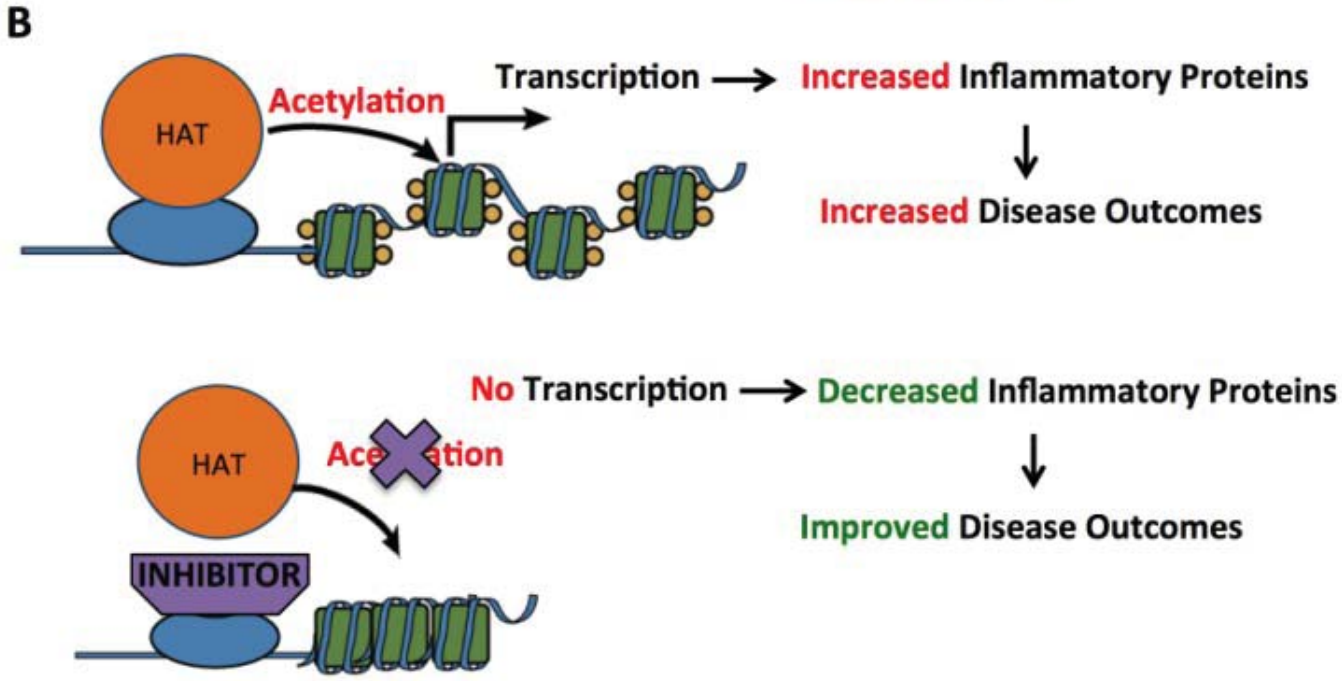
B) HATs acetylate histones which leads to the chromatin structure opening and allowing transcription factors to gain access to the DNA; this activates transcription, which we postulate in COPD triggers a cascade of inflammatory proteins which leads to the development and worsening of disease. Our inhibitor prevents the HATs/histone interaction thus blocking the acetylation that occurs on this site; this in turn prevents translation and results in a reduction in inflammatory gene and protein production with the potential to improve outcomes in COPD.

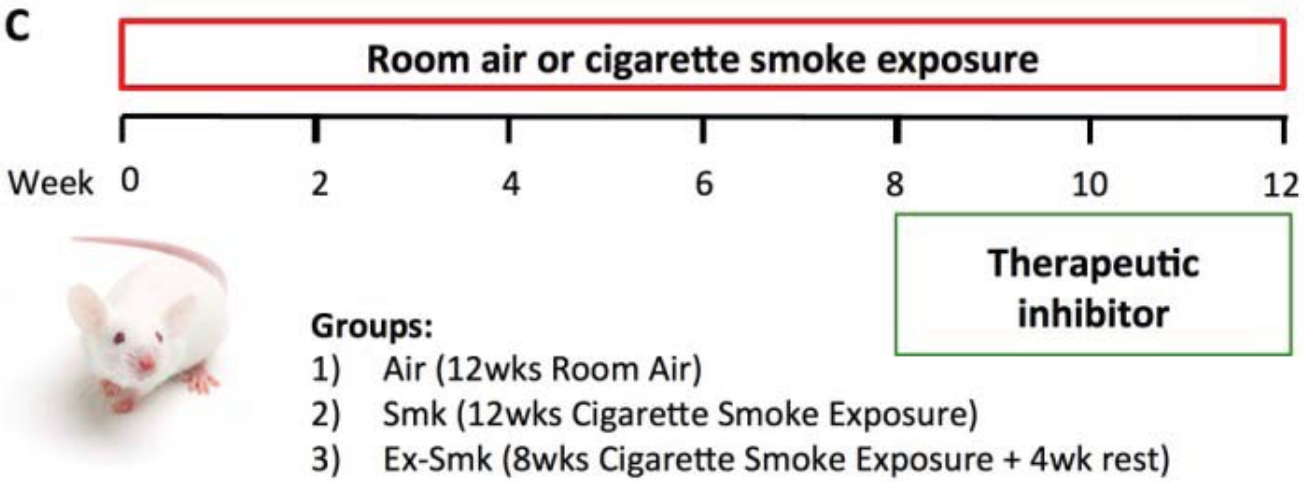
C) COPD is recapitulated in an animal model, whereas BALB/c mice are exposed to 12 cigarettes 2x/day, 5x/week for up to 12 weeks. At week 8 mice show features of disease such as chronic inflammation, emphysema-like alveolar enlargement and altered lung function. Therapeutic treatment with the HAT activity inhibitor was started from week 8 (where disease is developed) and maintained for 4 weeks, with mice either continuing smoke exposure for 4 weeks or having a rest period which replicates what happens in the clinic when diagnosed patients continue or quit smoking, respectively.

Left: Team building with GSK biopharm lab group; Knebworth, UK 2010

Right: Making new friends; family holiday in Cancun, Mexico 2008


A
Cigarette Smoke
HAT
HDAC
COPD


B
HAT
Acetylation
Transcription
Increased Inflammatory Proteins
Increased Disease Outcomes
HAT
INHIBITOR
No Transcription
Decreased Inflammatory Proteins
Improved Disease Outcomes


C
Room air or cigarette smoke exposure
Week 0 2 4 6 8 10 12
Therapeutic inhibitor
Groups:
1) Air (12wks Room Air)
2) Smk (12wks Cigarette Smoke Exposure)
3) Ex-Smk (8wks Cigarette Smoke Exposure + 4wk rest)

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IUIS Immunology without Borders

Invitation from the ICI 2016 President

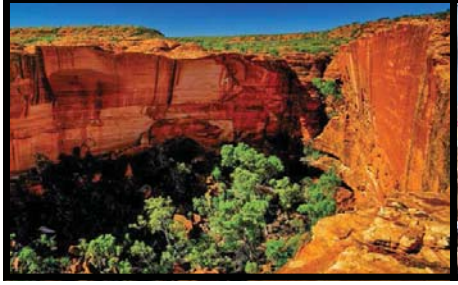
ICI 2016 promises to be an unforgettable event that will bring together delegates from all over the world. We anticipate over 3000 participants, including international leaders at the forefront of the discipline that will present the most recent advances in basic immunology and clinical treatments.

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



FAST FACTS

Abstract Submission: Open
Registration Opens: 22 September 2015
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

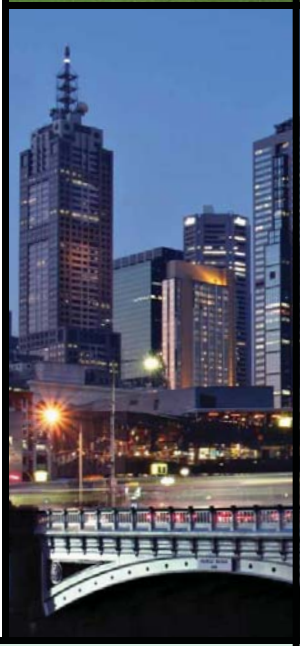
Federica Sallusto
Institute for Research in Biomedicine, Bellinzona Switzerland

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
- Life and death decisions in the immune system
- Metabolic control of immunity
- Regulation of the immune system by commensal flora
- Immunotherapeutic drugs
- Therapeutic antibodies
- Mathematic modeling of immune responses

www.ici2016.org

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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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Australasian Society for Immunology Inc.

IUIS Immunology without Borders

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91 – 97 Islington Street, Collingwood Victoria 3066 Australia
P: +61 3 8888 9510 F: +61 3 9417 0899
E: ici2016@arinex.com.au

Upcoming Conferences

55th Midwinter Conference of Immunologists
23–26 January 2016
Asilomar, California, USA
Registrar: kim.gurney@byu.net
www.midwconfimmunol.org
On-line registration by 13 November 2015

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/

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We invite all ASI members to contribute copy that is

* interesting or historical
* useful or thought provoking
* what the student membership care about.

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email
immunologysecretariat@gmail.com or
joanna.roberts@gmail.com

Sustaining Membership

ASI Inc acknowledges the support of the following sustaining members:

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- Stemcell Technologies Inc
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ASI Councillors' News

N.Z. News

NZ ASI 2015, 1–3 July
Committee members: Fiona Radcliff, Ries Langley, Fiona Clow, Julie McIntosh, Natalie Lorenz, Julie Cakebread

This year the NZ branch meeting came to Auckland for the first time and was held at the University of Auckland. We heard some great updates on the interesting immunology going on around the country. Our international speakers – Peng Li (South China Institute for Stem Cell Biology and Regenerative Medicine), Kathy McCoy (University of Bern, Switzeland) and Wolfgang Weninger (Centenary Institute, Australia) – all gave wonderful overviews of their exciting research. Roger Booth (University of Auckland), the 2015 Watson Orator, demonstrated why he is held in high regard for his teaching, with an entertaining and interactive presentation, some in song. As always, the students impressed with their mastery of the Pecha Kucha format, which made the judging very difficult. Buck Awards for student presentations: Ryan Kyle (winner), Connie Gilfillan (runner-up) (both from the Malaghan Institute); Heslop Award for postdoc presentation: Hilary Sheppard (University of Auckland); One Health Award: Willy-John Martin (WEHI).

Fiona Radcliff
NZASI 2015 committee co-chair

At the branch AGM, two key resolutions were passed. The first is to provide funds for all members to travel to VSP presentations, not just student members. The second resolution is to provide travel funds for students to ASI 2015 and ICI 2016 for those students who apply for ASI travel awards but are unsuccessful.

An increase in local membership was noted for Palmerston North following the 2014 meeting and Auckland for the 2015 meeting. The next meeting of NZASI will be held at University of Otago, Christchurch in 2017.

Roslyn Kemp
Councillor

S.A./N.T. News

The next upcoming event for the SA/NT branch is the 11th Annual Adelaide Immunology Retreat (AIR-11). The retreat is aimed at giving PhD students, Honours students, ECRs and Research Assistants the opportunity to present their work and interact in a relaxed environment and will be held on 7-8 August at Lyndoch. We are looking forward to welcoming Prof Carola Vinuesa (Australian National University) as our invited national speaker and our invited local speaker, Dr Iain Comerford (The University of Adelaide). Look out for a full meeting report in the next edition of the ASI Newsletter.

I would like to thank the AIR-11 organising committee: 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.

I would also like to acknowledge the generous support of our sponsors, The Hospital Research Foundation (QEH), Miltenyi, BD Biosciences, Centre for Cancer Biology, Uni SA, Genesearch, Geneworks, John Morris, DAKO, DKSH, Adelab Scientific, Millennium Science, Southern Cross Science, Australian Biosearch, Epitope Technologies, SAHMRI, Qiagen, Sigma, Eppendorf, ELISA Kits, Promega, ThermoFisher and Olympus. Without their generous financial support, the event could not be held.

Cara Fraser
Councillor

Victorian News

We've been fortunate to have some amazing immunology in the Vic/Tas. branch recently to take our minds off a long and brutal winter. The IgV Mid-winter Seminar at The Castle Hotel was given by Prof. Alan Baxter with an engaging talk about "A transcriptional network approach to immune regulation and autoimmunity" that suited this relaxed forum very well. This fixture on the Vic/Tas. immunology calendar was generously supported by Miltenyi Biotec and the relocation of this seminar from research institutes to a pub has re-invigorated the forum with excellent attendance and very positive feedback.

On 3rd June, Professor Hai Qi from Tsinghua University came by as an ASI Visiting Speaker (hosted by Vanessa Bryant). Hai gave two talks during his visit to Melbourne; he first spent a day at PDI, meeting with students and researchers, where he spoke about "*When short is more and long is less: visualizing Tfh-mediated help and Treg-mediated suppression*." Hai was also a plenary speaker at ABCD6 (6th Australian B Cell Dialogue), a two-day B cell conference at WEHI, where he gave a brilliant talk, "Altruism or winners-take-it-all in the germinal centre: ICOS makes the call", capping off a great week for humoral immunity.

There is more in store with the Annual IgV Retreat just around the corner on 8-9 October. We're going all out this year at the Novotel Forest Resort Creswick since there will not be a Retreat next year (pretty sure that ICI2016 will make up for it). There is an amazing line-up of international and national speakers confirmed with Professors Dirk Busch, Andreas Strasser, Ranjeny Thomas, Barbara Fazekas, Patrick Bertolino, Tom Kay, Marc Pellegrini, Joanna Groom, Jane Oliaro and Nicole LaGruta all confirmed speakers. This will be a fantastic event for lab heads, postdocs and students alike, at super-cheap rates, so make sure that you don't miss it! You can register for this meeting online at the Victorian and Tasmanian branch page at: http://www.immunology.org.au/igv-registration-payment-2015/.

Daniel Gray
Councillor

Queensland News

Brisbane Immunology Group Retreat 2015, Seaworld Resort, Gold Coast – A Whale of a Time

Report by Frances Pearson, Postdoc, Mater Research

The Brisbane (and Gold Coast and Far North Qld) Immunology Group Annual Retreat was held at Seaworld Resort on the Gold Coast on August 20-21. Once again this was a vibrant and enjoyable meeting, attracting 150 immunologists from around Queensland and beyond. The exceptionally high calibre of the speakers, which included Prof. David Price (Cardiff University), Dr Axel Kallies (WEHI), Dr Jane Oliaro (Peter Mac), Dr Thomas Gebhardt (University of Melbourne) and Prof. Phil Hansbro (University of Newcastle), together with stimulating talks from ECRs and students really made this event a huge success. For the first time, live updates and photos were tweeted from BIG using the hashtag #ASIBIG with some updates being relayed to Twitter and Facebook followers of QIMR Berghofer and TRI. As always, discussions held over morning and afternoon tea, whilst viewing posters and, of course, at the bar (with after-party lubrication provided by Jomar Life Research) were both vibrant and productive.

Professor Price opened the meeting with a stimulating talk on the molecular basis of HLA-associated HIV control, and the important role of TCR clonotype. Gut immunology, a particularly hot topic this year, with Dr Paul Giacomin's interesting report of a trial of intestinal helminth infection for treatment of Coeliac's disease, sparked a lively debate. Prof Mark Morrison gave a talk on the commensal bacterium Faecalibacterium prausnitzii's impact on the gut microbiome, and Professor Hansbro discussed the use of faecal transplants to halt the pathogenesis of smoking-induced chronic obstructive pulmonary disease.

One of the meeting's highlights was the Jonathan Sprent Oration which was given this year by Prof. Dale Godfrey (University of Melbourne). The oration focussed on the development, diversity and function of Mucosal Invariant T (MAIT) cells, a current

BIG things in Queensland – A/Prof. Kristen Radford opens the BIG meeting and welcomes participants

topic of intense research in Prof. Godfrey's lab. This year's BIG ICON lecture was deservedly awarded to Prof. Rajiv Khanna of QIMR Berghofer, and was preceded by an entertaining photo montage introduction from Prof. Alejandro Lopez. The talk, entitled 'BIG challenges in translating immunology research', focussed on Rajiv's work on CMV and other viral infections in haematopoietic stem cell transplants recipients. He ended by describing a novel T cell-based immune monitoring technology that he has developed in collaboration with Cellestis Inc., which will allow identification of patients at high risk of post-transplant viral infection.

The weather was decidedly un-Australian for the annual beach cricket tournament organised by Ray Steptoe, though the clouds set quite the dramatic backdrop for what was once again a thoroughly enjoyable competition and chance to unwind.

Congratulations to Arabella Young of QIMR Berghofer and Rhiannon Werder of UQ SBMS who were selected by the judges as winners of the Student Presentation Prize for their talks on targeting adenosine in the tumour microenvironment, and aeroallergen-induced IL-33 and its effect on respiratory virus-induced asthma, respectively. Margaret Veitch was the worthy recipient of the award for Best Poster, which focussed on the expression of PD-1/PD-L1 in a precancerous model of cutaneous non-melanoma skin cancer.

The meeting could not have happened without excellent co-ordination from the organising committee especially from A/Prof. Kristen Radford and Mandie Quince. We thank this year's event sponsors: Animal Resource Centre, Stemcell Technologies, Australian Biosearch, Sysmex, Becton Dickinson, Sigma Aldrich, Miltenyi Biotech, Lonza, Jomar Life Research, BMG Labtech, PerkinElmer, ThermoFisher Scientific and, of course, to ASI and QIMR Berghofer for continued support. Thank you to all the invited speakers, chairs and all other participants for their contribution towards making this such an enjoyable and valuable meeting and we look forward to the next BIG retreat in 2017.

Beach cricket with Surfer's Paradise in the distance –
Even though the sun didn't turn up to play, the cricket game was enjoyed by all

Travel Award Conference Reports

Keystone symposia: T Cells: Regulation and Effector Function

Snowbird, Utah, USA

Julia Marchingo
Walter & Eliza Hall Institute, Victoria

In March-April this year I had the great privilege to attend the "T cells: regulation and effector function" Keystone symposia in Snowbird, Utah as well as to circumnavigate the globe on an amazing tour of world-class T cell immunology laboratories.

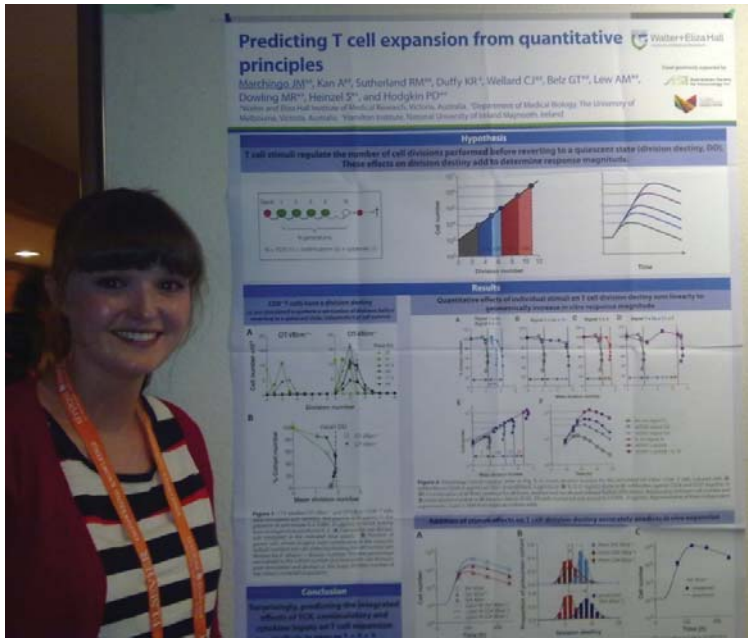
The goal of the Keystone Symposia was a wide-ranging conference bringing together scientists under the broad umbrella of T cell immunology. This it certainly delivered, with talks ranging from keynote speaker Wendell Lim's discussion of their synthetic biology approach to controlling CAR T cell behaviour, to Diane Mathis's muscle Tregs and Marc Jenkin's elegant investigation of the clonal regulation of $CD4^+$ T cell differentiation. There was a strong Australasian contingent in attendance with talks from Laura Mackay, Jyh Liang Hor, Dale Godfrey and Daniel Pellicci certainly showcasing the world-class T cell immunology happening right here in Australia and New Zealand.

There were several excellent opportunities for the younger conference attendees to present their work and I was also fortunate enough to speak in a workshop on the first day of the conference. This was a wonderful chance in addition to the lively poster sessions to receive feedback on my recent work investigating how different stimulatory signals integrate together to regulate T cell division destiny.

In addition to the science there were also a few breaks in which to enjoy the Snowbird environment. I had my first ever ski lesson and snowshoeing experience (pictured) during which I somewhat ignominiously slid down a rather long slope on my bottom, but otherwise had a lovely time. Excitingly, on the last day of the conference I also saw my first ever snowfall and reacted with more enthusiasm than dignity (much to the amusement of my German colleague who was present at the time!).

Both prior to and after the meeting I took the opportunity to visit a large number of diverse laboratories across both the west and east coasts of the USA, The Netherlands and Scotland. Highlights included hearing about the advances in measuring and modelling gene network regulation during T cell thymic development in the lab of Ellen Rothenberg at CalTech, California and the new developments in quantitative proteomics from the group of Doreen Cantrell in Dundee, Scotland, who we can look forward to hearing more from at the ASI2015 conference in Canberra later this year.

My profound thanks to the Australasian Society for Immunology, the Victorian Comprehensive Cancer Centre and Picchi Brothers Foundation for supporting this travel. The support of these organisations was instrumental in allowing me such a wonderful opportunity to comprehensively explore the world of T cell immunology.



Publications List

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

Clinical and Translational Immunology Highly Accessed Articles

Hagn, M. *et al.* B cell-derived circulating granzyme B is a feature of acute infectious mononucleosis. *Clin Transl Immunology* **4,** e38 (2015).

Coler, R. N. *et al.* From mouse to man: safety, immunogenicity and efficacy of a candidate leishmaniasis vaccine LEISH-F3+GLA-SE. *Clin Transl Immunology* **4,** e35 (2015).

Hsieh, J. *et al.* A GMCSF and IL7 fusion cytokine leads to functional thymic-dependent T-cell regeneration in age-associated immune deficiency. *Clin Transl Immunology* **4,** e37 (2015).

Immunology & Cell Biology Selected Recent Reviews

Bryant, V. L. & Slade, C. A. Chemokines, their receptors and human disease: the good, the bad and the itchy. *Immunol. Cell Biol.* **93,** 364–71 (2015).

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Kufareva, I., Salanga, C. L. & Handel, T. M. Chemokine and chemokine receptor structure and interactions: implications for therapeutic strategies. *Immunol. Cell Biol.* **93,** 372–83 (2015).

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Simon Apte

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Nathan Bartlett

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of experimental allergy. *Immunol. Res.* **62,** 280–91 (2015).

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Lisa Ebert

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Judith Field

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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
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- 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