Australasian Society for Immunology Inc.

Bright Spark Jared Purton

In His Name - The Jared Purton-ASI Award

Also in this issue

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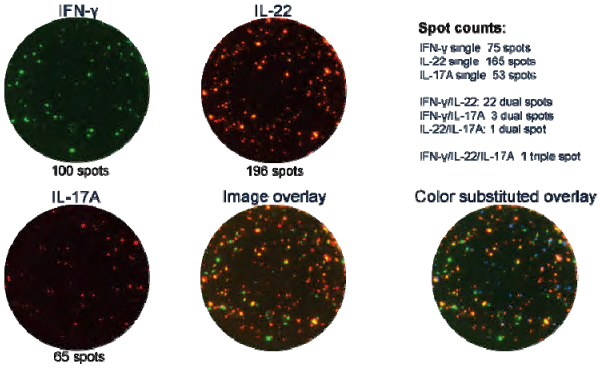

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The Incomparable Margaret Baird is remembered on Page 15.

Cover

The extraordinarily productive energy and spark that Jared Purton brought to his science lives on in the Jared Purton-ASI Award. Discover the inspiration behind this on page 6.

Newsletter newsworthiness

Survey results have been collated and reveal that the society is made up of members of obvious taste and discernment. See more here on page 17.

Fresh energy

The ASI Award winners continue to blow us away with their talent and passion in presenting their science. See what Angelica and Garrett have been up to here on page 21-24.

Editorial

The Immunology of Christmas

The Silly Season is upon us! Immunologists in Australasia come from many places and backgrounds but one thing is for sure – those not born here are either not used to Christmas altogether or the notion of summer Christmas is a little bit on the bizarre side. Labs around the two countries are equipped with a greater number of immigrants than your average workplace. Our northern hemisphere colleagues are used to a winter Christmas and trying their best to make sense of the sunshine, long days, and barbies while at the same time planning for a visit from the fat man.

There are good things about working in science that we can take a bit for granted. One of them is the fabulous variety of cultures and nations that can be found in most labs. Christmas parties in institutes all around are often a chance to tuck in to delectable treats made by colleagues with fabulous food heritages that differ from the who-ate-all-the-pies/chuck-a-sausage-on-the-barbie food traditions we know and love. (All that variety of food has got to be good for our gut microbiome, right?) Labs are also a unique and valuable melting pot of ideas and perspectives with such a variety of backgrounds in the same workplace.

I recently witnessed a wee clash of cultures between a scientist from North America and a scientist from a socialist country. The first scientist was curious about the professional aims of the second. The second proposed a goal of a particularly ambitious, but very worthy, therapy. The first said, 'Yes, yes, yes, but what about you, for yourself. What do you want to be – Professor? Nobel prize winner? CEO?' The second looked blank and politely surprised that a personal aim was of interest when a collective good would be so manifestly achieved by the ambition proposed. The view-points of the two were different, nevertheless they were still sitting at a table.

One of the other great things about a life in science is the relative ease with which you can find work in another country, even if you don't speak the language – this is hard to pull off in many other careers. Lots of us Antipodean types have had the chance to live the winter Christmas fantasy of childhood dreams thanks to a chance to post doc abroad or study elsewhere. Isn't it great how the one-eyed self-satisfiedness with our own countries melts a bit once we see how things are done in other countries?

Thanks for your support of the ASI Newsletter in 2016. And many thanks to Judi Anderson at the ASI Secretariat for all her help. Whatever you're doing this Christmas, make sure you're doing it with people who matter to you and have a very Merry Christmas.

Joanna Roberts
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Those good old fashioned Christmas gifts, eh?

For the Immunologist who has everything

coffee cup

To keep you in that science-y mood put this on your Christmas Tree

decoration

Jared with his two very proud cosupervisors, Dale Godfrey (left) and Tim Cole (right).

"Jared's PhD was one of the most successful and productive that I have seen."

Jared Purton: Standing out from the Crowd

A life less ordinary

Dale Godfrey

In 1998, I had the great fortune of meeting a bright young undergraduate student named Jared Purton, who wanted to work in a collaborative honours project bridging my laboratory at Monash Medical School, and Tim Cole's laboratory at the Baker Research Institute, in Prahran. Jared took to medical research like a duck to water. He was given a challenging project investigating an intriguing area of research that suggested that glucocorticoid hormones were central to the regulation of intrathymic T cell development. Within just a few months, usually while wearing his white terry-towel hat (the Gilligan hat as we used to call it) and one of his bright green football shirts, Jared had completed a highly successful honours project and was awarded a prize for the top honours student in the Dept Genetics at Monash Uni.

From the beginning of his research career, Jared stood out from the crowd, in more ways than one. His success with this project also paved the way for his PhD studies, again under the co-supervision of Tim Cole and myself. Jared's PhD was one of the most successful and productive that I have seen. His unique skills saw him team up with several other research groups in Melbourne, and his important research findings resulted in no less than 11 research publications, including two in *Immunity* and one *Nature*. I struggle to think of other PhDs who have achieved this level of productivity – needless to say - they don't get any better! As a reflection of this outstanding productivity, Jared was the recipient of several highly prestigious awards, including the Mollie Holman medal for the best PhD in the Faculty of Medicine at Monash University, and the Victorian Premier's Commendation for Excellence in Medical Research, which included a lovely evening at Government House for some of Jared's

Dale Godfrey

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The Jared Purton-ASI Award

http://www.immunology.org.au/jared-purton-asi-award/

To learn more about this award, check out the ASI website.

Excellent Work

Jared receiving his Victorian Premier's Commendation for Excellence in Medical Research at Government House

family and colleagues – a very proud moment for us all.

After completing his PhD, Jared travelled to San Diego to work at the Scripps Research Institute with Professor Charlie Surh, to further advance his career as an Immunologist. Jared went from strength to strength in his new location. Here, his work had resulted in several important research papers and another prestigious award - the "Ellison Medical Foundation Fellowship". Jared was indeed facing a bright future as a medical researcher and he was well on the way to running his own independent research team. But tragically, after a late night working in the lab, Jared's life came to an end when he was killed instantly by a drunk driver who collided at high speed with Jared's stationary vehicle. This was an indescribable loss to Jared's parents Alan and Chris, his brothers Cameron and Travers and other family members, not to mention the many friends and work colleagues who were fortunate enough to have known this bright young man.

In addition to Jared's outstanding scientific achievements, perhaps the most important thing about Jared was his wonderful character. He took a completely selfless approach to everything he did. He truly cared about his work colleagues and would take a genuine interest in the well-being of others. People would automatically go to Jared for help and advice, and he was always more than happy to provide it, even when it was obvious that he had more than enough already going on. Jared was a great mentor of more junior lab members and he loved teaching others. This experience was echoed by Charlie Surh in California. He had a great sense of humour and a cheeky hint of informality. I remember very early on, Jared explained to me, in a matter of fact manner, "Bossman (his usual way of referring to me), I am happy to work day and night and on weekends, but I don't work on my birthday". Jared had a great sense of life balance, and his work was all the better for it.

While those who knew him will never forget Jared, his parents, Chris and Alan, wish to do what they can to further the field of immunology in Jared's name. They recently approached me about how best to achieve this and I put them in touch with the ASI vice president, Su Heinzel. This has culminated in a wonderful new award that ASI is very proud to be able to offer to its members, The Jared Purton ASI Award, aimed at early to mid - career researcher with the goal of supporting and advancing their research at a critical point in their career. This award (up to $5000) is a little different from other ASI awards - the use of the prize money is determined by the awardee, the key criteria is that it must directly support their research. For example, this might be used to assist with provision of child care while attending a conference; travel support to attend a conference; travel support to visit collaborators; support to buy equipment or special reagents not otherwise funded. To those of us who knew Jared, this is so appropriate as it is very much in keeping with his generous, warm and supportive approach to his peers and especially for more junior investigators, whom he always loved to help.

The field of Immunology lost one of its brightest new stars when Jared lost his life, but it is wonderful that with the generous support of his parents Chris and Alan Purton, Jared Purton's name will continue to be associated with excellence in Immunology and the encouragement of its newest and most promising members.

Jared Purton publications

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Family Celebration

Jared and his family at his PhD graduation. From left: Alan, Chris, Jared, Travers, Cameron.

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Continued on page 30

Presidentorial

Chris Goodnow

This year has been a big one for the Australasian Society for Immunology, and 2017 will be an equally great year.

Reaping the benefits of the best-ever International Congress of Immunology. The success of the ICI2016 meeting continues to resound from every possible perspective. As I described in the last newsletter, the science and atmosphere was tremendous, shining a brilliant light on the quality of Australasian immunology, organization and hospitality.

ASI member benefits were spread widely, with 195 ASI members across all the branches supported by travel bursaries worth $117,993. I'd like to thank all the people who put a great deal of time and creativity into this success, both on Exec, Councillors, and all the ASI members who gave their time to scoring the tremendous field of applicants, and to Kim Jacobssn and Sarah Fardy and others who have managed the massive task of distributing the bursaries and checking off the details.

All of us benefitted from ICI2016 bringing the world's immunologists to our shores.

ICI2016 was also a big success financially. In the years leading up to the congress we all were very anxious about the risk to the Society of a financial loss. Every effort was made to avoid that outcome on the part of Jose Villadangos, Ian Barr as Treasurer, and all the organising team especially Arinex. Thankfully the outcome is the polar opposite. ICI2016 is returning a $750K profit to the Society's coffers. Managed and invested wisely, this windfall will put the Society on a very secure financial footing in perpetuity, to provide more bursaries and other member benefits for years to come.

Extraordinary recognition for extraordinary contributions. To recognize their once-in-a-generation efforts and contributions to the Society, Council at its recent annual meeting voted unanimously to award Honorary Life Membership and The Derrick Rowley Medal to Jose Villadangos, Andrew Lew, Ian Barr, Jennifer Rolland and Dale Godfrey. I'm sure you all will join me in congratulating and thanking these ASI heroes.

Benefits of membership. One of the other positive effects of ICI2016 was promoting a substantial uplift in member

Prof. Chris Goodnow
President of ASI, at the opening ceremony of ICI 2016 in Melbourne
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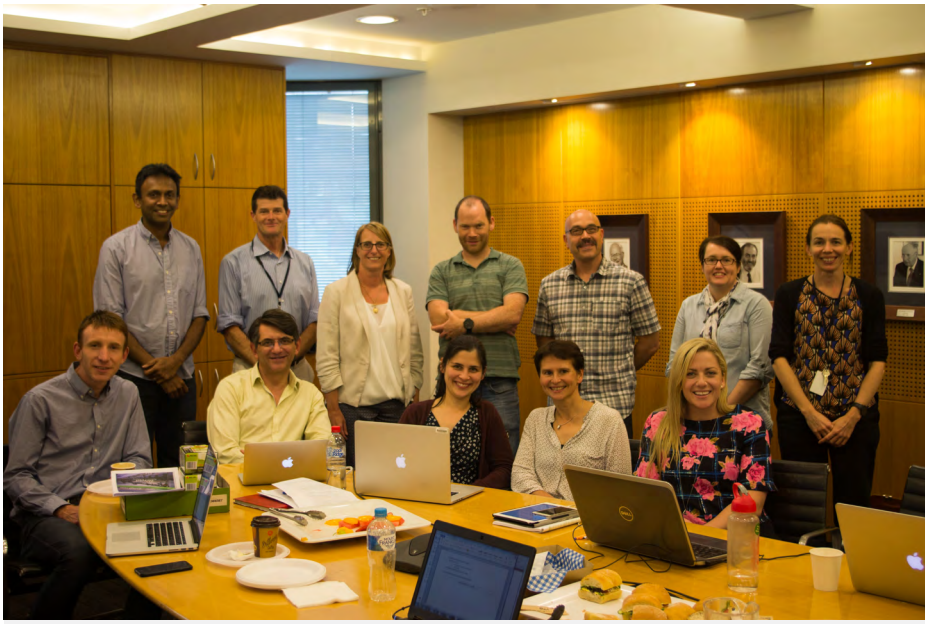

Annual Council Meeting 2016
From left to right standing: Mainthan Palendira, Chris Goodnow, Kristen Radford, Iain Comerford, Ries Langley, Connie Jackaman, Elissa Deenick. From left to right sitting: Ian Cockburn, Jose Villadangos, Kim Jacobson, Susanne Heinzel, Sarah Fardy

Photo Courtesy of Susanne Heinzel

numbers across many of the branches. Even before the ICI windfall hits the 2017 balance sheet, members in 2016 enjoyed:

• $36,361 for Travel Awards

• $19,520 for Bursary Awards, up from $17,449 in previous financial year.

• $6,176 for Student Prizes

• $1,050 for Poster Prizes

• $1,000 for ICB Publication of the Year

• $1,000 for Young Investigator Award

As I write this, a field of members are in the running for the inaugural Jared Purton Award. This is a new annual prize for early career researchers that pays tribute to a talented ASI member and early career researcher who was tragically killed in a car accident in California. On behalf of all of us, I thank Jared's parents for their generosity and vision in establishing this substantial award.

ASI members continue to enjoy outstanding regional meetings and travel bursaries to attend these. I was bowled over by the depth and quality of the young scientists presenting their work at the NSW ACT Regional meeting in Wollongong at the end of November. Hats off to Mainthan Palendira and Ian Cockburn for organizing a brilliant meeting. In the 2015-16 financial year, ASI distributed $82,386 to the branches (up from $60,467 in previous year) for holding regional scientific meetings and events for members and new students in the field. Likewise, in FY2015/16 the ASI invested $28,279 in the Visiting Speakers program that brings members together with outstanding overseas immunologists, up from $25,405 in previous year.

The ASI Website and Newsletter are fostering ever better communication among members and awareness of opportunities for members. In FY2015/16, the ASI invested $52,433 in a development officer (includes late invoice for previous year), $1,407 in web design/support, and $6,817 for Day of Immunology activities. Thank you to Sarah Fardy as our brilliant Development Officer and Joanna Roberts as equally brilliant Newsletter Editor.

ICB and CTI. I'd like to congratulate the Editor-in-Chief for *Immunology & Cell Biology*, Gabrielle Belz, and for *Clinical & Translational Immunology,* Rajiv Khanna, and many of you who contribute to the hard-working editorial team, for the further success of both journals in the last year. Both journals are going up, up, up: in impact, quality of papers submitted, and financial returns to the Society. This is another member benefit: take advantage of top-notch, constructive referees by sending your paper to ICB or CTI, be part of the success of these journals, and maybe win $1000 for best publication to boot.

The current contract with Nature Springer, to publish the Society's journals, *Immunology & Cell Biology* and *Clinical & Translational Immunology,* ends at the end of 2017. Council decided at Mid-Year council meeting that we should market test the contract by going out to tender and hiring a highly recommended agent, Mark Ware, to run the tender process. Tender documents went out to five publishers at the beginning of November, with a timeline of January to select a shortlist and February to interview the shortlisted candidates and make a final recommendation to Council in March/April 2017.

Meetings in 2017. The Queensland Branch is putting together an outstanding line-up for the Annual Scientific Meeting at the Brisbane Convention Centre at the end of November 2017. Don't miss it. Remember, only members have discounted registration, which at least equals the cost of your dues.

And there are 11 international travel bursaries in the offing to go to Erlangen, Germany for the return engagement of the successful Canberra ASI-DGFi joint meeting with our sister German Society for Immunology.

La Presidenta. While our hard-working Executive and Councillors and Volunteers do the lion's share of keeping the ASI ship running, I now have the pleasure of handing over the steering wheel to our new ASI President, Su Heinzel!

Many of you will know that Su has anunparalleled depth of experience and contributions to different aspects of the Society, so it could not be in better hands. Thank you, Su, and thank you to all of you who have contributed to the vibrant life of the ASI this year.

The IUIS Corner

Introduction and Update from Alejandro Lopez

Many of you may not be very familiar with the activities of the International Union of Immunological Societies (IUIS, www.iuisonline.org). I would like to take the opportunity to update you about its activities in order to get the ASI membership closer with the IUIS, where you may find interesting opportunities to participate contributing with your expertise and enhancing your career.

The IUIS is the umbrella organisation of the immunological societies around the globe. It was created in 1969 by the representatives of ten Societies (American Association of Immunologists, British Society for Immunology, Canadian Society for Immunology, Dutch Society for Immunology, Gesellschaft für Immunologie, Israel Immunological Society, Polish Society of Immunology, Scandinavian Society for Immunology, Société Française d'immunologie, Yugoslav Immunological Society). The representatives of the Australian Society for Immunology and the Swiss Society of Allergy and Immunology were unable to attend but expressed support, and their societies were later accepted as founding members of the International Union of Immunological Societies (IUIS). Today the IUIS is made up of 73 member societies which belong to one of four Regional Federations encompassing Europe, Latin America, Africa and Asia-Oceania. Officers of the IUIS are elected every three years during the Council meeting which coincides with the ICI. There is an executive group made up of President, Vice-president (incoming President), Secretary and Treasurer. In addition, a council of 15 members is also elected during the IUIS Council meeting. For the last two years, the IUIS has the secretarial help of the Berlin-based company K.I.T Group GmbH, which will be the Conference organiser in Beijing 2019.

The IUIS is responsible for the coordination of the International Congress of Immunology (ICI) every 3 years and from 2019, it will be directly organising them. In addition, it works on specific committees which structure change in time. They undertake key activities internationally and provide a great opportunity for members of all societies to participate. Any member of each of the member societies could directly contribute to the committees. Some committees work by invitation only, but most are the result of voluntary participation.

The current active committees are:

IC - Clinical Immunology Committee

EDU - Education Committee

GEC - Gender Equality and Career Development Committee

ITH - Immunotherapy Committee

NOM - Nomenclature Committee

PID - Primary Immunodeficiency Expert Committee

QAS - Quality Assessment and Standardization Committee

VIC - Veterinary Immunology Committee

I started my role in the council following the elections held during the 65th IUIS Council meeting which took place in Melbourne on August 22nd 2016. In addition, I was more recently confirmed as a member of the Education Committee following a formal nomination by the ASI. It has been so far a very invigorating experience, in particular due to the feeling of renewal within the Council and the IUIS in general. With two representatives in the Council (Executive Secretary Roslyn Kemp and myself), ASI is in a very privileged position. I will endeavour to facilitate the communication between the IUIS and the ASI membership and am available to help with any queries you may have. Here are some of the highlights of activities of the IUIS in the last months. A link to the IUIS activities could be found on the ASI website.

Prof. Alejandro Lopez
Councillor IUIS

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65th IUIS Council meeting

There was a very surprising shake up of the IUIS Executive with the addition Faith Osier (Kenya) as new Vice-President and our own Roslyn Kemp (New Zealand) as Secretary General; a very welcome departure from a

male-only Executive in the previous years. Another surprising change saw our own Nick King being replaced by Michael Ratcliffe (Canada) in the role of Treasurer. As expected, the previous Vice president, Alberto Mantovani

Ros Kemp, Secretary General IUIS

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(Italy) took the presidency from Jorge Kalil (Brasil). The novel composition of the executive is likely to have a very different dynamism to it and be re-invigorated by the contribution of two young and energetic women. Of significance, Faith Osier is currently the general secretary of the regional Federation of African Immunological Societies (FAIS) who will be hosting the ICI 2022 in Cape Town.

IUIS Congress organising Committee

From ICI 2019 in Beijing, IUIS and the agent K.I.T Group GmbH, Association & Conference Management (Berlin) will be directly the providing the support for organising the IUIS Congress. This is an important transition from the up-to-now local organising committees.

Frontiers in Immunology

Frontiers in Immunology IF (5.6), is the official IUIS journal and the contract with the Swiss based editor is currently being reviewed. There was significant discussion during ICI 2016 about the interactions society members could have with the journal and how they can contribute. It was discussed that it would be desirable that members contribute further to the journal in the various capacities that societies may see fit. In the coming months, a more defined proposal from the IUIS to the society members will be circulated. The new editor in chief of *Frontiers in Immunology*, Gigi Notarangelo (NIH, USA) took up his job recently.

Education Committee

The EDU committee ran its first symposium during ICI2016 under the sponsorship of BioLegend and was entitled: “Global Challenges for Young Investigators”. After four formal 10 min talks, seven students presented their main challenges and an active discussion with the audience followed.

IMMUNOPAEDIA

(http://www.immunopaedia.org.za/)

Immunopaedia Is a very interesting resource designed to provide teaching material for the educational activities of the IUIS. The core of the material is the transcription of a textbook edited by JA Bellanti (“*Immunology IV: Clinical Applications in Health and Disease*”. I Care Press, Bethesda, MD, 2012). It is proposed that members of several IUIS committees and members at large be encouraged/recruited to oversee the content and contribute to its updating. The initiative is well funded by the IUIS and runs primarily from South Africa by Dr Clive Gray and he directs and oversees the site and the preparation of all course modules. There are currently several teaching modules being integrated in a more public site, following the completion of the courses.

Following courses are planned:

- IUIS-FAIS-IMMUNO-GAMBIA COURSE, Nov 19-26, 2016: Dr Dieter Kabelitz from Kiel, Germany will run this course.
- IUIS-FAIS-IMMUNO-ETHIOPIA, Feb 26-March 5, 2017. Dr Pascale Kropf from Imperial College and University of Gondar, is the main organizer of this course.
- IUIS-ALAI-IMMUNO-BRAZIL, Jun 12-16, 2017, Butantan Institute, Sao Paulo. Drs Guillermo Docena, Jorge Kalil and Edecio Cunha-Neto will be the main organizers of this course.
- IUIS-FAIS IMMUNO SOUTH AFRICA 2, Cape Town, October 2017. Dr Clive Gray will be the main organizer of this course with NIH colleagues.

http://www.iuis2019.org

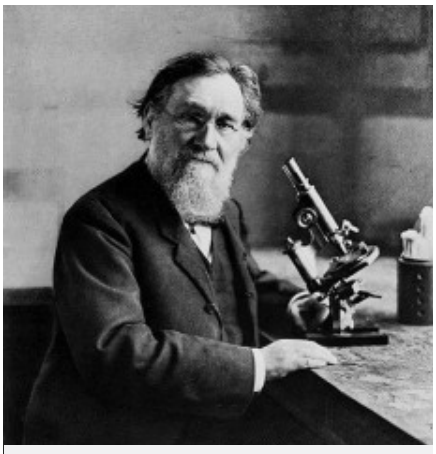
IUIS

Letter from Alberto Mantovani, President IUIS

Dear Presidents of Immunological Societies, Presidents of Federations of Immunological Societies, Colleagues and Friends;

At the 16th International Congress of Immunology in Melbourne, Australia, from August 21 to 26 2016, the new Executive Board and Council of the International Union of Immunological Societies (IUIS) were formed. The Congress was a great success with over 4,000 participants. The next ICI/ IUIS will take place in Beijing, China, 2019, and thereafter in Capetown, South Africa, 2022. Our Executive Board convenes annually, together with the IUIS Council. Our next meeting will take place in Hammamet, Tunisia, on the occasion of the 10th African Immunology Conference (FAIS), 3-7 December 2017.

I have taken over Presidency from Jorge Kalil (Brazil) who is now our Past-President. Faith Osier (Kenya) has been elected as new Vice-President of our Board. Roslyn Kemp (New Zealand)



Elie Metchnikoff

and Michael Ratcliffe (Canada) have been elected as Secretary General and Treasurer, respectively.

At the beginning of the third millennium, Immunology continues to be at the cutting edge of the advancement of science and is a key contributor to human and animal health care. As a long time student of macrophages, I am struck by the coincidence of my taking the responsibility as IUIS President with the 100th Anniversary of the death of Elie Metchnikoff, the pioneer of phagocyte research and a visionary founding father of modern Biology and Medicine (1). As in Metchnikoff's vision and practice, Immunology continues to be rooted in Darwinian culture and it is refreshing that our discipline continues to be thought provoking to philosophers (2,3). Here I will summarize selected lines of effort during my presidency.

1. Strengthening ties with National Societies, Federations and our Committees at large. IUIS is an umbrella organization and links of thrust and cooperation with its constituency need to be strengthened. In particular, executive reporting will be made available to highlight how IUIS support has served as seed money to mobilize resources at the service of our community. Efforts will be made to reach out to dedicated interest societies in fields such as cytokines to foster ongoing and future collaboration.

2. Committees. Committees are the backbone of IUIS and I am sure that I interpret the feelings of all of us expressing our gratitude to Committee Chairs and Members for their dedication and efforts. We should not forget that some of the invaluable tools of our every day scientific life (e.g. CDs nomenclature; MHC etc) have their foundations in IUIS Committees. At a time when a significant number of

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Committee chairs are undergoing rotation, I am confident that incoming chairs will live up to the expectations of our community and once more I want to convey to outgoing chairs the appreciation for their invaluable efforts. The renewal of Committee Chairs and Vice-Chairs is an opportunity to reconsider activities and implement our gender policy.

3. Communication. Over the past few years, efforts have been made to improve communication within IUIS. This will continue to be a strategic line work, as testified by this very message. *Frontiers in Immunology*, the official IUIS journal, is a key element in IUIS communication. At the time when IUIS engaged in Frontiers, Open Access publishing was in its infancy and therefore *Frontiers in Immunology* was

IUIS

a risky, innovative endeavour, occupying an empty niche. It is unquestionable that *Frontiers in Immunology* has been a success as indicated by submissions and IF (5.6). After formal renewal of our partnership, *Frontiers in Immunology* will provide a forum for IUIS activities (e.g. Committees) and an effort will be made to foster integration and interactions. We look forward to a productive collaboration with Gigi Notarangelo (NIH, USA) who has taken over as Editor in Chief of *Frontiers in Immunology*.

4. Immunology without borders. A global vision is at the heart of IUIS. Supporting immunology in less developed countries with emphasis on education has been and will continue to be a major thrust of IUIS. Tackling old and new threats will require immunological tools. Moreover, many on earth still do not have access to the benefits of immunological research. Think of the 1.9 million children under 5 who die each year because they do not have access to the most basic vaccines (http://www.gavi.org) . IUIS Presidents (e.g. Stefan Kaufmann, Jorge Kalil, Director of Butantan in Brazil, myself) have been involved in initiatives on global health issues rooted in immunology such as the Global Alliance for Vaccines and Immunization (GAVI) (e.g. 4). It is time that, in addition to strengthening our commitment, an effort be made to establish institutional links and increase awareness in our community. Immunologists worldwide can serve as loudspeakers in academia and society on global health issues such as hostility to vaccines in developed countries and capacity building in developing countries.

I am confident that IUIS and its constituency will continue to serve "Immunology without borders" in the interest of scientific progress as well as human and animal health.

Yours friendly,

Alberto Mantovani, MD

Professor

IUIS President

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Margaret Baird 1945 - 2016

A zest for living

Sarah Young and Anthony Braithwaite

Margaret grew up in the small coastal town of Tauranga in the North Island of NZ, but moved south to the University of Otago in Dunedin where she completed her first degree in Zoology in 1967. Margaret then taught (without formal training) science and biology at the local Anglican girls school, St. Hilda's Collegiate for 3 years. She loved the work and displayed a natural flair for teaching, providing an enthusiastic and encouraging learning environment. As well as science teaching, Margaret provided leadership in Debating and Drama. This broad interest in, and enthusiasm for, many cultural and scientific areas characterised her entire life.

In 1970 husband Stephen was appointed to a Mathematics post at King George VI School in Honiara, the capital of the (then) British Solomon Islands Protectorate. This was a shared adventure for both Margaret and Stephen, wanting to do something different - very different. Honiara was a potent mix of traditional Melanesian culture, an emerging younger educated group looking towards independence, and a veneer of traditional colonial administration. Setting this alongside vigorous local custom, languages and Pacific values made an extraordinary 'technicolour' society. Margaret entered into all this with her usual vigour, teaching part-time science and art and appearing in plays produced by the local drama group.

The family returned to New Zealand at the start of 1972, Stephen to a mathematics post at Kings High School while Margaret was busy with child rearing (Harriet, 3 and Sophie, born at the start of 1973). She also taught part-time - in Speech and Drama!

Professor Margaret Baird

Following this, again, in the spirit of exploring new fields, the family went to the UK in 1976 - Stephen to a teaching post - whilst Margaret focussed on child rearing, but managed to develop some skills at bridge, and as many of us know, began to perfect her superb culinary expertise. After two interesting years, they returned permanently to Dunedin. A 200 level course in Microbiology, an elective in her original degree, had much sparked Margaret's interest and which she decided to explore further. She wrote to the then Head of Department at Otago, Professor John Miles, and his reply encouraged her to consider Microbiology further. Fortuitously, his letter also mentioned a brand new course: a Postgraduate Diploma in Immunology in which she enrolled in 1978. She was often fond of

Dunedin around the time of Margaret's undergrad years

noting about this period that she was the oldest student and the only female!

Margaret went on to do a PhD in Transplant Immunology with Prof Barbara Heslop in the Pathology Department at the University of Otago, which was completed in 1984. In 1985, she was part of the organising committee for the first joint meeting of the two immunology societies on either side of the ditch. This was held in Queenstown New Zealand and paved the way for the formation of the Australasian Society for Immunology. Margaret was one of the first people in NZ to work on the Dendritic Cell (DC) and she became well-known for her expertise and her enthusiasm in this area. In 1998 Margaret became a lecturer in the Microbiology and Immunology Dept, working on DCs in the context of infectious diseases and cancer. Margaret was also a popular and effective teacher who taught immunology to over two thousand students every year. Also during this time Margaret became the Post Graduate co-ordinator in which she provided young researchers and students with mentorship and advice - both scientific and general -typically instilling enthusiasm and excitement. She was promoted to Full Professor at the start of 2011.

Margaret embraced her role as mentor and scientist and became a forceful advocate for immunology and the ASI during her very successful professional career. She supervised over 50 postgraduate students, taught thousands of undergraduate students, and was an examiner for 45 Masters or PhD students within NZ and overseas. She was successful in obtaining nearly $20 million in research funds as a principal or associate investigator and she made many valuable contributions to university committees, to national funding agencies, and other government bodies; and to the ASI - indeed, she edited this Newsletter from 2008-2010. She has thus been an outstanding role model and advocate for women in science, so it was no great surprise - except to herself - when she was awarded the Derrick Rowley Medal in 2013 for services to Immunology and the ASI.

Upon her retirement in 2012 she took up a part time Research Professorship back in the Dept of Pathology. She began working with Professor Antony Braithwaite on the role of the p53 tumour suppressor and its isoforms in the immune response, particularly, the importance of p53 in the regulation of DC function. She brought an entirely new flavour to the laboratory, which still continues, as well as a sparkle which was enjoyed by all.

Margaret will always be remembered as a selfless person, having an infectious zest for life and an undaunted enthusiasm for science.

Assoc. Prof. Sarah Young, Head of Dept of Pathology, Dunedin School of Medicine, University of Otago, NZ

Prof. Anthony Braithwaite, Dunedin School of Medicine, University of Otago, New Zealand

The News about Our Newsletter

Survey results from July 2016 for the ASI Newsletter

Joanna Roberts

Question: Who reads the ASI Newsletter?

Answer: Lots of ASI members, clearly a group with excellent taste and discernment.

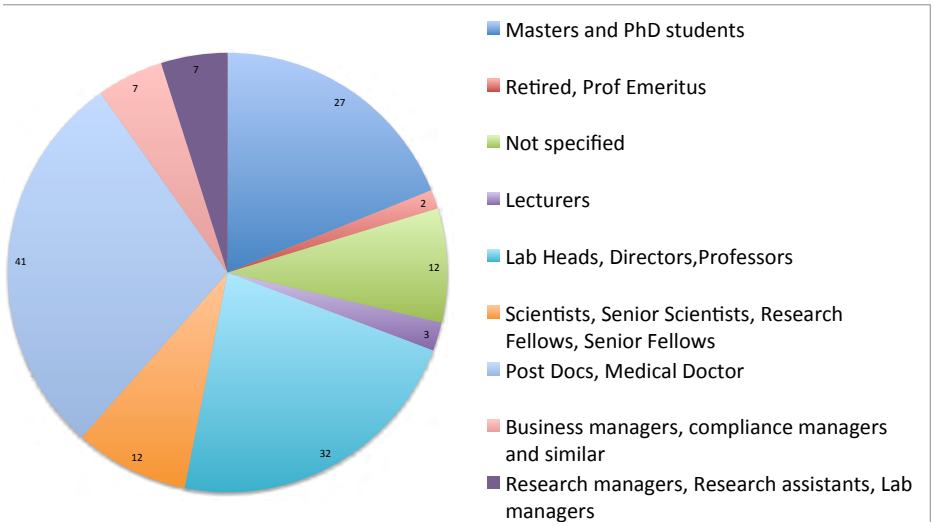
In June of this year, nearly 190 of you made a moment in your busy lives to respond to our survey about the ASI Newsletter. It is just absolutely bloody marvellous of you to have taken the time to do that, so thank-you for your responses and comments. Your feedback really helps.

I ran the survey in two stages – firstly whereby respondents had to identify themselves. This created a wonderful bias to the results. Nearly everybody who responded declared that they read or scanned the newsletter with no one admitting they didn't read it.

In a moment of clarity about our ability to be honest with our opinions, I suggested we re-run the survey making the name field optional. This led to far more responses as well as a small gnarly percentage saying they never read it. Subjective as this may be, this gave me more confidence in the data!

Of the 188 respondents, over 60% had downloaded and read or scanned the most recent Newsletter. A clear majority (75%) were in favour of the new layout with the majority of other responses 'Not Sure' (There were only two 'No' s). Thank-you 'Boldfish', the creatives who put the newsletter template together, our verdict is you got it right.

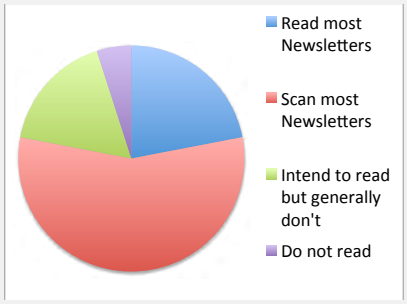
It was interesting to look at the bunch of replies from the 'Yes I read it or scan it' respondents and see what positions they occupy (a total of 145 replies in this group). You can see from the



Readership of Newsletter by Job Description

pie graph shown here that there is a good mixture. Many chose 'Lab Head' or 'Director' as their job description which suggests that if you want to get some notice for what you are doing in places where it counts, this Newsletter probably delivers good bang for your buck.

One of the survey comments suggested, "Highlighting labs is a great idea I think, it gives you an idea of work happening around Australia. Maybe even extending this to highlight depts, Eg in clinical settings, that many of us may be unaware of." I couldn't agree with this more. The good news is, IF YOU WANT TO TELL US ABOUT YOUR LAB or CLINICAL DEPT, WE WANT TO HEAR ABOUT IT! This is your invitation from me, the editor, to drop me an email (joanna@flowjoanna.co.nz or joanna.roberts@gmail.com) saying you'd like us to run a piece on your lab. What a great way to promote your tools, expertise, ideas, humanity,



Survey responses about reading ASI Newsletter

and anything else you've got going for you.

We got an appreciable number of comments saying we should be returning to a print edition as this was read much more. As editor, I have to take that idea on board and have a closer look at it. I will report back. We also had a couple of suggestions that we take the Newsletter in the direction of a web feed. Also worth giving consideration to.

Another big call came from one of our sustaining members (sponsors). Some of the good things the ASI does are possible thanks to the funding we get from this group. This comment from one of our sustaining members puts it succinctly, “Without the sponsors and supporting donations, societies would find it hard to exist, offer financial incentives to strengthen their membership base, provide travel bursaries, or hold the lavish meetings it does. Please recognise science and industry as a symbiotic relationship - one wouldn’t exist without the other.” This year we’ve implemented the publication list from sustaining members to highlight publications where independent scientists are using sustaining members’ products to publish peer-reviewed articles. Take a look and see how products and services from these sponsors of ours are making the difference in successful research projects.

Editor's to do list:

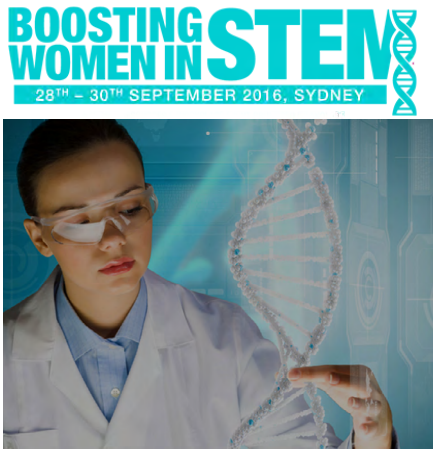
Respond to suggestions about print-format (a return to)
Respond to suggestions about web feed options
Keep thinking of ways to support ASI sustaining members
Consider request to attach Newsletter to email
Look at layout comments eg Paragraph justification

Ideas for Content to consider

A section on upcoming funding opportunities
A historical piece highlighting key discoveries, with links to articles, and the contributions of Australians
Q and A section
A 'for and against' style section, on hot topics, of limited length. Competitive rather than invited writers
Foster links between mouse models and clinical immunology

The enthusiastic comments were great, “Good job guys, keep up the hard work!!”, “Loved the layout Great with hyperlinks. Great with colour.The enthusiasm of the travel reporters always inspires me. Well done creating a quality presentation in the face of so many different ways to communicate.”, “The new format is very attractive/ professional and will increase accessibility and my level of interest in issues covered in the newsletter.”, “It is entirely fit-for-purpose. Congratulations!”, “Pretty awesome! :)”, “I like it and feel it’s worthwhile”, “As a retired immunologist enjoy hearing the latest news.”, “I really like the recent changes made to the format of the newsletter. Great work!”

Lastly, there were lots of good suggestions about content for the Newsletter. Some of these ideas are noted in the ‘Editor’s To-Do List’ table. Take the opportunity to write a piece for us or co-ordinate a piece of writing for us – here are some great ideas to work off.



Kim Jacobson is a Laboratory Head at Monash University (B cells and Antibody Memory Lab) and a member of the Monash University FBPS Gender Equity Committee. She is ASI Treasurer, a NHMRC RD Wright Biomedical Career Development Fellow, and 2016 VIC Young Tall Poppy Science Award recipient. Monash University paid for attendance at the conference.

Photo courtesy of Monash University

Boosting Women in STEM conference

How to close the gender gap in academia and industry for 2.3 million STEM-qualified Australians

Kim Jacobson

I recently attended Akolade's "Boosting Women in STEM" conference focused on practical solutions to increase the numbers of women entering and being retained in STEM fields and thus halt the waste in both talent and economy by failing to retain qualified women in STEM.

In particular, speakers focused on recruiting female students into higher education STEM, and linking higher education with industry. Highlights of the conference were presentations by Deborah Urbanski (Director of Equal Opportunity and Diversity, NASA) and Fi Shewring (Founder, SALT).

For me, it was good to get out of the mindset of medical research and hear a broader perspective from people across multiple different science and technology-related industries. In particular, the most inspiring presentation was by Fi Shewring, the founder of SALT (Suppnorting and Linking Tradeswomen). Fi not only mentors students and tradeswomen, she is involved in archiving the memories and history of women who worked in trades during WWII. In addition, she organises teams of volunteer tradespeople to go to drought-stricken Lightning Ridge in north-western NSW to work on houses and farms that are in disrepair (read more here.)

The main points that came through:

Creating a progressive culture, both in the workplace but also in early education.

"We want a workplace that represents the diversity of the community we live in" (Libby Lyons, Workplace Gender Equality Agency). It's also good for productivity: increasing diversity in management increases profitability and innovation (Karen Iles, Tata Consultancy Services).

To do this, we need to overcome STEM gender myths, such as (1) there is an innate difference in the STEM capabilities of males and females, (2) we've won the gender equity battle in science, and (3) pay gaps are just due to women having children. With respect to the latter, the pay gap indeed exists after normalising for children, and a German study on trans females show pay decreases after transition (Dr Roslyn Prinsley, Office of the Chief Scientist).

How do we change workplace culture?

Deborah Urbanski's presentation about the workplace culture at NASA was a highlight of the conference. In particular, her main point was that we should "View the law as a thermometer – it doesn't cure the problem; it just reflects the temperature". In sum, we need to employ proactive and innovative measures if we want to harness the diversity of our community.

View inclusion and innovation as a leadership competency

In particular, NASA has a range of measures to track inclusive leadership KPIs for management. The second component of NASA's strategy is engaging the workforce, and I believe encouraging, recognising and rewarding leadership and innovation at all levels of the workforce is key to changing culture.

For example, “How do you actively promote diversity and inclusion?” could be a standard question on promotion/ appointment applications. The benefits would be 1) equity is not just a top-down approach, 2) by leaving it as an open question, new innovative approaches emerge by engaging people who would not normally be involved, 3) normalise the ideas of diversity and inclusion as part of the workplace culture.

Does implicit/unconscious bias training work?

Unconscious bias training is rapidly being employed by increasing numbers of workplaces. Some speakers expressed skepticism over whether training adequately helps change culture (Amanda Dobbie, Women in Banking and Finance), and others suggested that targeted training is a more effective strategy. For example, training is more successful if it is implemented just prior to promotion or hiring panels (Deborah Urbanski, NASA, and Gemma Lloyd, Diverse city careers) – timing implicit/unconscious bias training just before grant panels may therefore also be useful!

There are also useful tools to avoid language bias during recruitment. For example, use of an IT program (Textio) that scans job ads etc. for language bias (masculine/feminine bias).

It also needs to start early. A number of presenters discussed the inability of children and teenagers to think of females as scientists. Norman Gray (Box Hill Institute), discussed a pilot program in kindergarten about the power of language in introducing science – when counting, say “let’s do math”; when building blocks, say “let’s do engineering and/or let’s construct something”. This has a two-fold effect – normalising science to children from an early age, while avoiding the gender segregation of what boys and girls can do. Unintentionally, the conference also highlighted additional cultural barriers that can impede STEM career progression for females. Three high school students were invited to share their experience of an intern program, but only two presented; the family of the third did not permit her to attend. This young person had to convince them to accept her internship but presenting at this conference was unfortunately a step too far.

Preparing to succeed in STEM industries

One other theme that permeated the conference was opportunities that created a bridge to industry for STEM students. For example, QUT has a career mentor scheme in which employees from outside companies mentor students (Prof Suzi Derbyshire, QUT). On the other side, Johnson & Johnson have multiple programs, including industry tours, work experience and internships, and encourage employees to be mentors to students. They also sponsor MedTech’s Got Talent, and HaTCHathon (Gavin Fox-Smith, J&J).

Mentoring – is it useful or is there are better way?

QUT has an internal leadership program, which supports shadowing or sponsoring rather than mentoring (Prof Suzi Derbyshire). Similarly, Amanda Dobbie (Women in Banking and Finance) promoted sponsorship over mentoring, to make sure relationships are useful. Furthermore, the mentoring program employed by the Box Hill Institute is run differently to most – female mentors apply, are interviewed, and only a few are accepted and they are paid. In particular, they look for passionate and positive people, who can be empathetic, but provide practical solutions to roadblocks encountered during a career (Norman Gray, Box Hill Institute).

There is momentum to increase both gender and cultural diversity in STEM. This conference provided a timely update on the success (or not) of workplace initiatives and presented fresh ideas from leaders of start-ups, industry, TAFE and universities who are passionate about harnessing the diversity of our country to generate innovative scientific and technological advances.

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 Garrett Ng

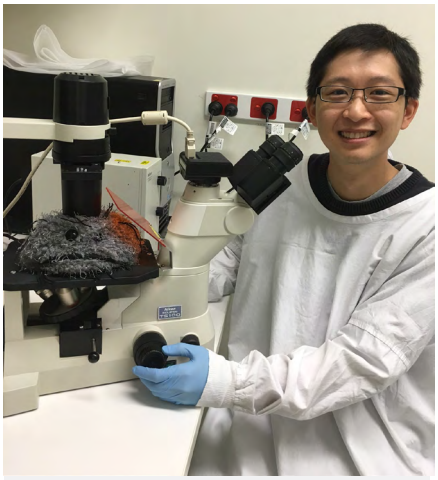
Winner Graham Jackson Memorial Prize for Mucosal Immunology - Oral Presentation

When I started my PhD with the Immunology and Mucosal Pathogens group (headed by A/Prof Phil Sutton), one of the group's primary interests was how host genetics influenced the response to infection. Many of the projects used *Helicobacter pylori,* which chronically infects the stomach, to study host response. Over decades, severe chronic inflammation caused by *H. pylori* can progress to gastric cancer.

My project was originally based on understanding why MUC1 polymorphisms were linked with development of gastric cancer. At the time, it was known that Mucin 1 (MUC1), highly expressed on mucosal epithelia, acted as a decoy receptor and physical barrier against bacterial pathogens. Of course, the logical hypothesis was that MUC1 prevented *H. pylori* from contacting the epithelium and thus reduced activation of the immune system.

That didn't turn out to be the case. One of the first experiments I was involved in during my PhD was the generation of bone marrow chimaeric mice (i.e. transferred *Muc1-/-* bone marrow into wildtype mice and vice versa). Infection of these mice showed that MUC1 expression on the bone marrow and derived immune cells was the primary determinant of gastritis severity. This meant that our hypothesis on how MUC1 controlled inflammation was wrong.

A couple of years and many experiments later, we found that one particularly potent proinflammatory cytokine, IL-1β, was significantly upregulated in MUC1-deficient stomachs after infection. At the time, inflammasomes, large protein complexes centred around an activating receptor that convert inactive pro-IL-1β to mature cytokine, were under intense investigation by many groups. We found that MUC1 only limited IL-1β maturation via a single inflammasome: the NLRP3 inflammasome. This inflammasome has many diverse stimuli, and exactly how it is activated is still a mystery. However, one facet that was quickly understood was that an early signal, usually through Toll-like receptors (TLRs), upregulated



Garrett exploring unusual laboratory fauna in his spare time

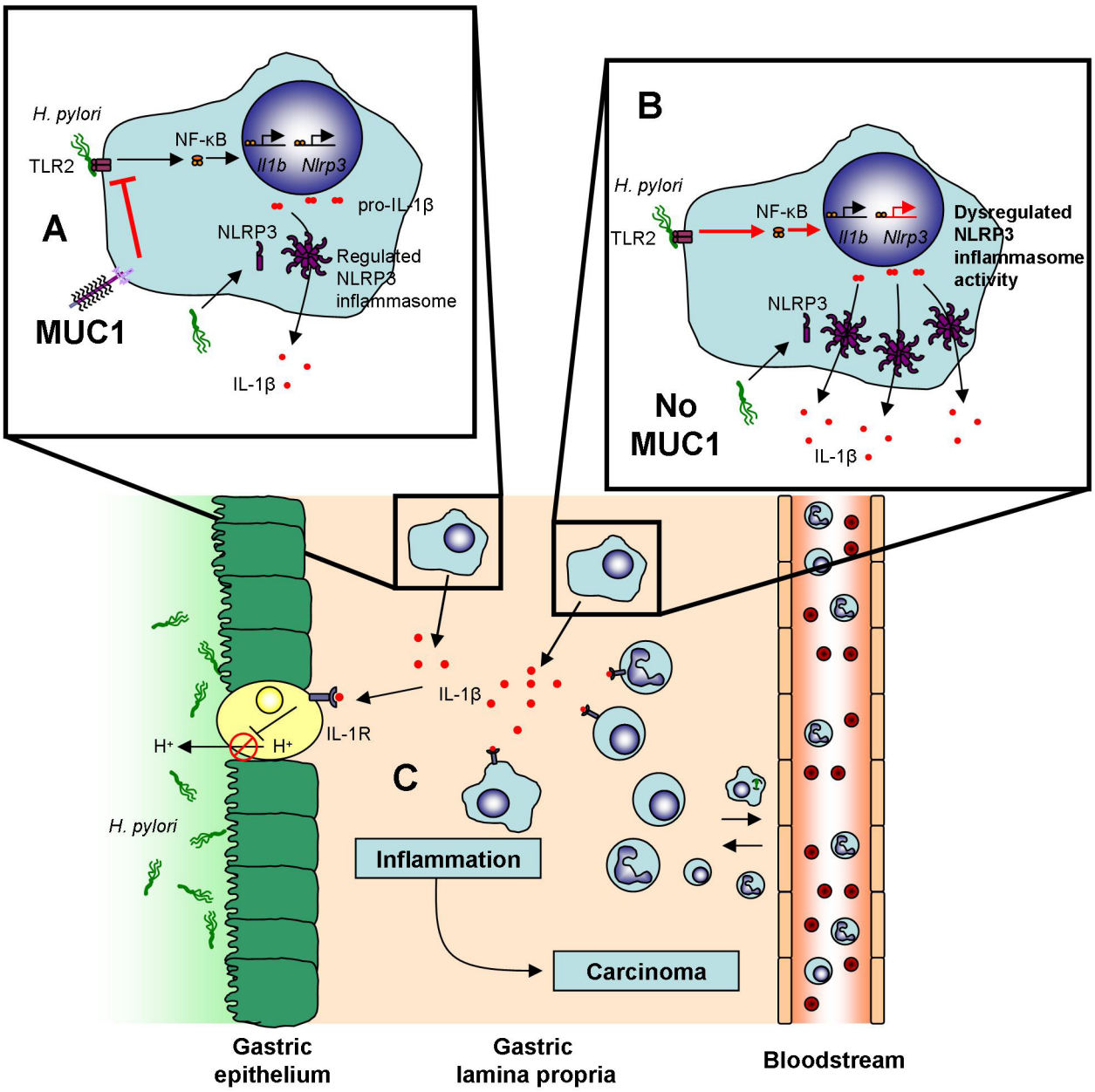


Figure: MUC1 regulation of *H. pylori* pathology. (A) *H. pylori* activates several Toll-like receptors, primarily TLR2, which results in NF-κB activation and subsequent upregulation of NLRP3. NLRP3 is also activated by *H. pylori*, which results in assembly of the NLRP3 inflammasome that cleaves pro-IL-1β into mature cytokine. MUC1 suppresses the activation of TLRs, possibly via a direct interaction, limiting upregulation of NLRP3 and thus conversion of pro-IL-1β to prevent excessive inflammation. (B) In the absence of MUC1, TLRs are hyperactivated, resulting in increased NLRP3 expression and subsequently, excessive production of IL-1β. (C) The downstream effects of IL-1β secretion include the recruitment/activation of immune cells (inflammation), which promotes carcinogenesis, and also the suppression of gastric acid secretion by parietal cells. Low gastric acid production is a major risk factor for *H. pylori*-related disease.

expression of NLRP3 itself prior to activation. This struck our attention because MUC1 was known to suppress TLR signalling. Our subsequent experiments supported the idea that MUC1 was suppressing NLRP3 expression via TLRs and we were excited at the prospect of publishing our findings. In fact it would be many drafts, several different journals and more than a year of review and revision before this work was finally accepted by Gut (see figure; dx.doi.org/10.1136/gutjnl-2014-307175) and we could hit the pub.

Although we know how MUC1 suppresses *H. pylori* inflammation in mice now, there are two obvious questions remaining: i) does MUC1 suppress inflammation in a similar fashion during other infections? And ii) does MUC1 function similarly in humans? Although I have subsequently moved on to different projects, these are two questions that the group is now attempting to answer.

Having transitioned into a post-doctoral role in the same laboratory (now renamed Mucosal Immunology) has certainly been an interesting exercise. Since then, the projects that I have been involved in have renewed my interest in the genetics of disease, an area that I would like to move towards in the future.

Introducing Angelica Lau

Winner BD Science Communication Award

I received my Honours degree in Science from the University of Sydney, majoring in Organic Chemistry and Immunobiology. The opportunity to work on a multidisciplinary honours project heightened my interest in understanding the cellular mechanisms that provide long-lived protection against pathogens. In 2013, I started my PhD in the B Cell Biology lab under the supervision of Professor Robert Brink and Dr Tyani Chan at Garvan Institute of Medical Research. The lab focuses on the regulation of B cell survival and antibody production during protective immune responses. Our group studies B cell function in vivo and how these processes contribute to autoimmune diseases, allergy and cancer.

During my PhD, I investigated the role of the TNF receptor, BAFFR (TNFRSF13C), in antigen specific T-dependent B cell responses. BAFF signaling through BAFFR is critical for the survival and maturation of naïve B cells during B cell development, as well as playing a role in controlling B cell's longevity in mediating antibody responses. However it remains unclear how BAFFR signaling impacts on a B cell's ability to generate high affinity antibodies and long-lived memory cells (Bmem) in response to pathogens.

To improve killing efficiency for the target pathogen, activated B cells form clusters known as germinal centres (GC) in secondary lymphoid tissues. Here, GC B cells undergo clonal expansion and somatic hypermutation of their BCR to generate high affinity B cell clones that are selected to become plasma cells and long-lived Bmem. Independent of the GC process, low affinity B cells also commit into the early memory fate to provide long-term protection against re-exposure to the pathogen. The failure to properly maintain or control these processes can result in impaired clearance of the pathogen or potentiate the onset of self-reactive B cell clones.

Using the SWHEL transgenic mouse model developed in our laboratory, we showed that BAFFR is not required for the survival or maturation of GC B cells during an immune response. We saw that the selection in GC B cell was independent of T cell-derived BAFF, and that selection of high-affinity BAFFR-deficient GC B cell was normal. In fact, BAFFR-expression on B cells was not required to produce high-affinity antibodies. Interestingly, we observed that the survival of GC-independent early Bmem was highly dependent on BAFFR expression. These findings suggest early Bmem have a distinct survival requirement through BAFF-BAFFR signaling.

At the 2015 ASI conference in Canberra, I presented these findings at the BD Science Communication session, for which I was the prizewinner. It was a privilege to be given this opportunity to explain my research in a creative manner. This challenging opportunity taught me the joy and value in sharing science with the general public. I love B cell biology and in the future I hope to further my work in elucidating the mechanisms that controls B-cell function in the context of vaccine development. I am particularly interested in future career opportunities that will allow me to translate and transcribe my scientific skills and knowledge to a broader, public community.

Angelica Lau

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Professor Robert Brink r.brink@garvan.org.au

Figure (following page): B cell conscription in the immune system's military base during a T-dependent immune response.

B Cell Conscription in the Spleen/ Lymph node (Military Base of the Immune System)

Naïve B cell
Civilian

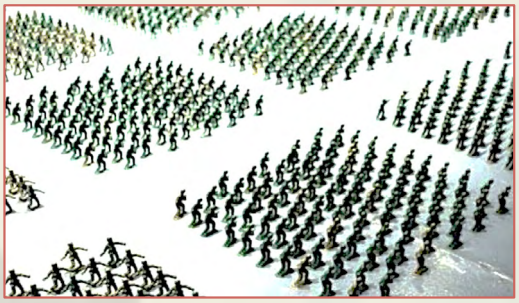
T follicular Helper cell

Follicular dendritic cell

Join the GC TRAINING!!

We need better weapons than our low-affinity NERF guns.

Activated B cell
Recruits



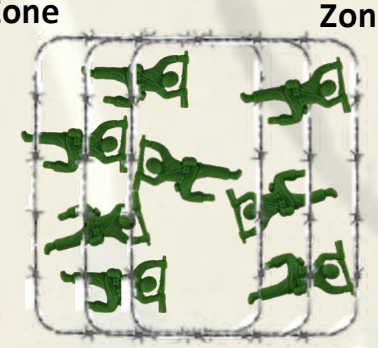
Troopers
Cluster to form
Germinal Centre (GC) platoons

Early memory B cell
Junior Scouts

GC B cell
Trooper

Dark Zone

Light Zone



Cell death

Post-GC memory cell
Expert Scouts

Plasma cell
Expert marksman

Angelica Lau 2015

Visiting Speakers Program (VSP) Report

Check out who's coming to a town near you next year

Joanna Kirman, VSP co-ordinator

Visits in 2016

At the time of printing, the fifth and final visit for 2016 will have been completed by Professor Hiroshi Kiyono, who is visiting Brisbane in Australia and then Wellington and Hamilton in New Zealand. Dr Julie Cakebread has organized a mini-symposium for his visit to Hamilton and we look forward to hearing about this in the next newsletter.

Visiting speakers for 2017

From the first call for nominations for 2017, ASI Exec approved five speakers for next year. Thanks to all who nominated speakers – including those who missed out in this round. Please do not let that put you off in the future – the acceptance rate is above 50%!

The first group of approved speakers for 2017 is: **Adrian Liston** (University of Leuven) **Cezmi Akdis** (Swiss Institute of Allergy and Asthma Research) **Daniel Mucida** (Rockefeller University) **Lars Nitschke** (Erlangen University) **Nancy Haigwood** (Oregon Health and Science University).

Please contact your Councilor as soon as possible if you would like one of these speakers to visit your branch. A second call for speakers will be made early in the New Year so please get thinking about speakers you would like to suggest. Nominating a speaker is the best way to ensure your city gets a visit.

Gender equality and diversity and the Visiting Speaker Program

In the recent nomination round it was disappointing that only a quarter of nominated speakers were women (thank you to Gabrielle Belz and Elizabeth Forbes-Blom for nominating them!). We need to do much better to fight our unconscious bias when thinking of speakers we would like to have visit. As scientists, our CVs are assessed by our invitations to present; therefore this bias can affect future grant success, the ability to secure a job and to be promoted.

Supporting women through the ASI VSP enhances the ability of both female and male immunologists to achieve their potential. Our early career ASI members are provided with role models and, to quote Prof Jennifer Martin from the University of Queensland: "If we're going to have the best science and the best research, then we need the best brains from all of the world, not just a section of the world".

New Zealand

Roslyn Kemp

New Zealand lost a major force in immunology in September. Margaret Baird, who for years was an inspiration to undergraduate and postgraduate immunologists passed away after a short illness. It is difficult to find an immunologist in New Zealand who wasn't blessed by Margaret's enthusiastic personality and her willingness to help one and all. Personally, Margaret supported me as a new female staff member in a male dominant environment with laughter and advice, and I will miss her.

Hamilton and Wellington hosted Hiroshi Kiyono, with a special mini-symposium at AgResearch, Ruakura. NZ branch funds supported researchers to travel to attend the meeting.

Western Australia

Connie Jackaman

Final ASI WA local event for the year

The end of year sundowner was held at the Harry Perkins Institute for Medical Research (north campus) on 24th November. This annual event, organised by the ASI WA student committee (Wayne Aston, Amy Prosser and Amanda Chionh), has proven to be very popular in the past. This year featured three Honours students from three different immunology fields presenting their projects, followed by drinks and nibbles. This event was a great way to finish off a busy year for immunology in WA!

Perth Immunology Group (PIG) meeting in 2017

Preparations are underway to hold the two-day PIG meeting either end of July/ early August or October 2017. The PIG meeting provides a forum for Perth immunologists of all levels to present their latest research in a relaxed and informal environment. All participants will have opportunities to present their work in relevant themed sessions and to network with our invited guests and immunologists from Perth. A happy hour (or two) will also be included in the program. More details to come in early 2017!

Preparations are also underway for the ASI annual meeting in 2018, last held in Perth in 2010. The local organising committee will be meeting regularly in 2017 and if you would like to join the committee please contact the ASI WA branch.

End of year WA branch feedback

If you have any questions or suggestions please fill out the end of year WA branch survey. This only takes around 5 minutes and we always welcome any feedback. Look forward to seeing you all soon!

Regards (on behalf of the ASI WA committee) Connie Jackaman

Cytokines 2016
Meeting of the International Cytokine and Interferon Society (ICIS)

16-19th October 2016, San Francisco, California, USA

Paul Baker, Inflammation Division, Walter & Eliza Hall Institute of Medical Research, Melbourne

This October, I had the opportunity to attend Cytokines 2016 in San Francisco. I had previously attended the same meeting when it came to Melbourne in 2014, and while it was a great experience for a first year PhD student, having only recently started my project, I wasn't ready to submit an abstract at the time. This time around I had an abstract prepared and I was excited to be able to share my work in an international forum.

On arrival in San Francisco we were greeted with heavy rain, making for an easier transition from weather we thought we'd left behind in Melbourne. Once the conference began however, the weather cleared considerably and we were treated to fantastic Californian sunshine for the rest of the week.

Golden Gate Bridge at sunset, San Francisco

The conference itself was fascinating and enjoyable. Keynote speaker Dr Yasmine Belkaid spoke about her work on the influence of commensal microbes on the host immune system, including how Staphylococcus epidermidis and Corynebacterium accolens are able to increase numbers of antifungal CD8+ T-cells or IL-17-producing □□ T-cells respectively in the skin; she also presented on how adipose tissue affects the memory T-cell population in response to infection. Other stand out presentations included those by Dr Erika Pearce who spoke about metabolic regulation of memory T-cell formation, Dr Federica Sallusto who spoke about both memory Th17 subsets and identifying T-cell clonotypes in narcolepsy, Dr Kate Jeffrey who spoke about a novel epigenetic reader that controls macrophage activation in models of colitis, and Dr John O'Shea who closed the meeting with a terrific talk on the role of T-bet in interferon signaling.

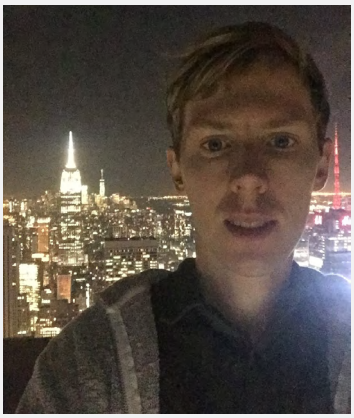
I was lucky enough to have my abstract accepted for an oral presentation in the Primary Immunodeficiencies session on the third day of the conference. Having a number of senior clinical researchers and industry representatives in attendance was daunting considering I was presenting the molecular details of a highly translational project, however they seemed impressed by our work and it was a valuable experience in presenting my data to a diverse audience.

Most evenings we found time to explore downtown and the waterfront, ending up at a fun new restaurant or bar each night. Whilst in San Francisco, I also visited the excellent San Francisco Museum of Modern Art and hired a bike to ride over the Golden Gate Bridge to Sausalito, followed by a scenic ferry ride back to the city.

In the week following the conference, I visited a number of research centres around the United States to present my work, discuss collaborations and explore potential post-doctoral opportunities. In San Francisco I visited Stanford University, I then flew to Washington DC and saw a couple of laboratories at the National Institute of Health (NIH) and finally I travelled to the University of Massachusetts, just

outside of Boston. In all of these places, I was given the opportunity to present a seminar followed by meeting with various lab members who discussed their projects and showed me around their respective campuses. I learned a lot about the exceptional work being done in these facilities and was able to make connections with prominent researchers in the fields of innate immunity and infectious disease.

Once I completed my lab visits I took a few days off to visit New York City as some much-needed downtime before my return to Australia. I am extremely grateful to ASI for providing me with the opportunity to travel abroad, attend an international conference and visit laboratories all over the United States; this trip has vastly improved my scientific communication skills and provided me with networking opportunities that will hopefully prove valuable throughout the rest of my career.



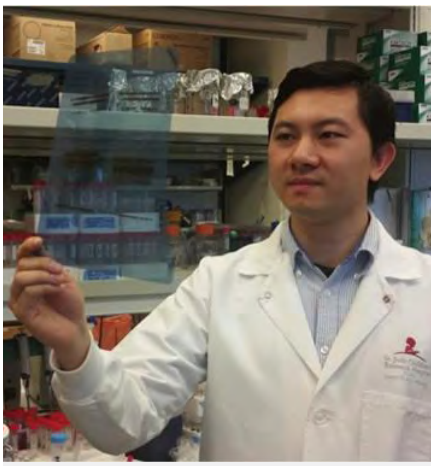
Top of the Rock, Rockefeller Plaza, New York City

Cytokines 2016
Meeting of the International Cytokine and Interferon Society (ICIS)

16-19th October 2016, San Francisco, California, USA

Si Ming Man, St Jude Children's Research Hospital, Memphis, USA/ Institute of Medical Research, Melbourne

As a recipient of an ASI Postdoctoral International Travel Award, I travelled to San Francisco, California USA, where I attended the 4th Meeting of the International Cytokine and Interferon Society called "Cytokines 2016". The conference was held in the district Embarcadero between 16th and 19th October. The keynote speaker this year was Dr Yasmine Belkaid from the NIH, USA. She presented interesting findings to demonstrate an important role of microorganisms in shaping immunity, with reference to certain clades of Corynebacterium and Yersinia species in influencing T cell responses. Other highlights included Dr Di Yu from Monash University, Australia, who presented exciting data on the therapeutic effects of IL-2 in patients suffering SLE, through a mechanism that targets TH17 and NK cell subsets. Dr Curt Horvath from Northwestern University, USA, presented data to show that the RNA sensor LGP2 has positive and negative regulatory roles in response to viral infection. Dr Michael Diamond from Washington University, USA, and Dr Adolfo Garcia-Sastre from Mount Sinai, USA, both presented exciting data showing the importance of interferon signalling in the immunopathogenesis of Zika virus and other Flaviviruses. I presented an oral and poster presentation on interferon-inducible proteins in the activation of the DNA-sensing AIM2 inflammasome and the LPS-sensing Caspase-11–NLRP3 inflammasome.



Si Ming Man

I was amazed by the quality of the latest research that was presented at the meeting. I had a fantastic time learning more about all aspects of cytokines produced as part of the innate and adaptive immune response, various pathogen–sensing machineries, intricate signalling pathways, and the mechanisms behind how immune responses can shape health and disease. Furthermore, I had an opportunity to meet many fellow Australians at the meeting. This meeting provided a perfect opportunity to discuss potential collaborations as I prepare to launch my own independent group in Australia from January 2017. I'd like to sincerely thank the ASI for giving me a wonderful opportunity to travel to San Francisco and present my work.

Publication List - Our Journals and Sustaining Members

August 2016 - October 2016

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

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abcam

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JOMAR LIFE RESEARCH

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See the full list of publications using Ozgene models here

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Continued from Page 8, "Jared Purton, A life less ordinary"

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