

Australian and New Zealand SOCIETY FOR IMMUNOLOGY INC.

ASI NEWS

JUNE 2019

DAY OF IMMUNOLOGY April 29th **P20**

10

A GENTLE ADVOCATE, AN INSPIRATION AND **EDUCATOR**

MARGARET BAIRD WOMEN IN IMMUNOLOGY AWARD

7.900-

ICB: DAY OF IMMUNOLOGY SPECIALS

NEW WAYS TO SHOWCASE **RESEARCH AND TO MAKE IT** MORE ACCESSIBLE

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Key Dates

Registration Open 3 May 2019 Call for Abstracts Open 3 May 2019 Call for Abstracts Close 30 August 2019 Abstract Notifications 27 September 2019 Early-bird / Presenter Registration Close 4 October 2019 Special Interest Group Workshops 8 December 2019

ANDELANDE - FOG

ASI2018 Conference

DELAIDE CONVENTION CENTRE

8 - 12 December 2019

48th Annual Scientific Meeting of The Australian and New Zealand Society for Immunology

Adelaide Convention Centre, South Australia 8 - 12 December 2019

www.asi2019.org

The Organising Committee cordially invite you to participate in the 48th Annual Scientific Meeting of The Australasian Society for Immunology taking place from 8-12 December 2019 in Adelaide, South Australia. The Conference aims to provide

SAVE THE DATE 8-12 December 2019 ADELAIDE, SA

another innovative and dynamic scientific program.

We are putting together a varied and balanced program

spread over 5 days to showcase the best immunological research from Australia and around the world. With a wide-range of topics from tumour immunology, inflammation, autoimmunity, infectious disease, translational immunology and more, we will ensure there is something for everyone.

Preparations are well underway and we anticipate an intellectually challenging time, as well as an enjoyable opportunity to experience South Australia and its unique environment. The Organising Committee are preparing an engaging social program to give you a flavour of South Australian culture and cuisine.

Adelaide is a modern, dynamic, vibrant and lifestyle city with direct access to Australia's best wine regions and stunning scenery, making it an ideal destination for pre and post-Conference touring. It is home to world-class restaurants, a diverse nightlife, stylish shops and more.

We look forward to welcoming you to Adelaide!

Adelaide Convention Centre

The Adelaide Convention Centre is conveniently located in the heart of the city centre and nestled within the beauty of the Riverbank Precinct, surrounded by parklands and the River Torrens.

Close proximity to the medical hub, entertainment, cultural and sport precinct, the Centre is a short walk to international and boutique hotels and accommodation. Public transport, the Adelaide Railway Station and a taxi ramp are on our doorstep.

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WOMEN'S INITIATIVE ON THE MOVE

A conversation is happening and I encourage you to be a part of it.



DAY OF IMMUNOLOGY

This year events were hosted at 23 participating institutes around Australia and New Zealand.



KEYSTONE SYMPOSIUM ON B CELL-T CELL INTERACTIONS

Dr Oanh Nguyen, University of Melbourne

EDITORIAL: CURIOSITY BEGINS FROM A CONVERSATION

Angelica Lau, Newsletter Editor newsletter@immunology.org.au

With the successful launch of Day of Immunology celebrations across Australia and New Zealand on 29th April, what better time is there than now to engage and recruit new generation of scientists? The point of an outreach program is no doubt to raise awareness for immunology and medical research, but more importantly it serves the purpose of educating the public about facts and myths in research, interventions and developments. These are golden opportunities for us to clarify any misconceptions surrounding some of these important aspects of medicine.

In this edition, it is my delight to present to you the amazing effort many volunteers and fellow researchers have put in to make this educational initiative a reality. This is most fitting as ASI have just launched the Margaret Baird Women in Immunology Award (read more about this in the Women's Initiative Program section), to honor and celebrate the legacy of Margaret Baird who was a phenomenal teacher and female scientist in the Immunology community.

School students!

Submit your artwork for a chance to be featured by the Australian & New Zealand Society for Immunology!



A new campaign to connect you with the next generation scientists out there through art and conversation, to bring about excitement and instill inspiration wherever they are.

Carrying on with the same enthusiasm, we have a new campaign to connect you with the next generation scientists out there through art and conversation, to bring about excitement and instill inspiration wherever they are. In order to encourage regular conversations about science between students, parents, teachers, scientists, we are now accepting artwork submissions from school students throughout years 1-12 featuring these following themes:

- What makes up our immune system?
- Tricking the immune system to fight cancer
- How does our immune system fight diseases?
- Autoimmunity: when the immune system goes crazy
- Allergy: Bees, cheese to sneeze

We highly recommend ASI members to encourage students to participate and have their artworks featured on ASI social media and Newsletter.

So if you know any enthusiastic children or students with an unstoppable curiosity for science (and Immunology in particular), who loves to be creative – start the conversation, check out the Studio and turn science into art!

Submit now to <u>newsletter@</u> immunology.org.au ■

At the Studio: Artwork Submissions



ARTWORK BY DAMIAN TANGYE, AGE 11, "THE B CELLS". "DAD TELLS ME HE WORKS ON B CELLS; AFTER DOING SOME READING THIS IS HOW I PICTURED A "B CELL" WOULD LOOK!"



ARTWORK BY CALLAN PHAN, AGE 12, PLASMA CELL IS COOL. "I HAD TO DO A SCIENCE PROJECT ON SOMETHING COOL AND MY DAD WORKS ON PLASMA CELLS, SO WE MADE A PLASMA CELL TOGETHER. I GOT 10/10 FOR IT!"

LETTER FROM THE PRESIDENT

JOHN FRASER, ASI President president@immunology.org.au



Dear Colleagues,

Many will be aware of the efforts over the past 6 months to improve the ASI web portal. Council has invested in the development of a new portal that should go live by mid-June. Our general manager, Tyani Chan, has been working tirelessly on this project and its launch will coincide with the official change of our society name from Australasian to Australia and New Zealand. It looks terrific and most importantly has a modern. secure backend to handle the

This year we have launched a tremendous new initiative the ASI Advanced Immunology School 22-25 July 2019 at Iluka Retreat. The theme for the 2019 AIS is 'Immune Life'.

processing of our all-important membership data. Thank you to those members who have acted as testers for the new site.

This year we have launched a tremendous new initiative - the

ASI Advanced Immunology School 22-25 July 2019 at Iluka Retreat. The theme for the 2019 AIS is 'Immune Life'. There are 60 places available with priority to our new and emerging members and so far 45 places have been filled. It would be wonderful if we could fill all the places. Thanks to all those who have organised this school and who are giving of their time to teach.

The IUIS 2019 conference in Beijing is shaping up well and I'm sure many ASI members will be attending. We did note the very poor gender balance in the list of invited plenary and major symposium speakers which prompted a letter of concern from ASI to the IUIS President. Alberto Mantovani.

I have sad news for those of you who like to sit over coffee with the latest edition of Immunology and Cell Biology. There will be no more print copies of ICB. Most people now read the journal online while still drinking coffee and avoiding keyboard spills. Only a

small number of copies are being printed anyway, most of which probably went straight onto a shelf. There is one added benefit. Submitting authors will no longer be charged for colour images.

As part of the expanding Women's Initiative programme we have launched the Margaret Baird Women in Immunology Award. This exciting lecturer's award is open to any ASI member who can demonstrate a commitment to mentoring and support of women in science. Margaret was a dedicated supported of ASI and a model of enthusiasm and tireless support for young women scientists.

Kind regards

John 🔳

As part of the expanding Women's Initiative programme we have launched the Margaret **Baird Women in Immunology** Award



Australian and New Zealand SOCIETY FOR IMMUNOLOGY INC.

Australian and New Zealand Society for Immunology Inc. PO Box 1371, Mitcham North 3132 VIC P: +61 3 8393 9388 W: immunology.org.au/contact-us

IMPORTANT NOTE FROM THE HONORARY SECRETARY ELISSA DEENICK, Honorary Secretary secretary@immunology.org.au



It's been a while since I wrote a piece for the newsletter but there's been lots happening.

We've had calls for International travel awards and bursaries for IUIS going out earlier this year thanks for all your applications, it's always exciting to be able to support our members traveling to present the work they're doing.

Coming up there will be calls for more awards - the Jared Purton, another round of International travel awards (postgrad, postdoc and Gordon Ada) as well as the new Margaret Baird award and bursaries to attend the Annual meeting which is being held

Coming up there will be calls for more awards – the Jared Purton, another round of International travel awards (postgrad, postdoc and Gordon Ada) as well as the new Margaret Baird award and bursaries to attend the Annual meeting which is being held in Adelaide this year.

in Adelaide this year. By then our new website should be up and running and make the application procedure much more streamlined. Some details about those call follow below.

Also I thought I'd take this opportunity to clarify the difference between the Honorary secretary (currently me, Elissa Deenick) and the secretariat – something I found confusing prior to becoming secretary and I'm sure many other people do too.

The Honorary secretary position is an elected position on the ASI executive and council. In contrast, the secretariat is the company we employ to carry out a lot of the administrative matters for ASI. If you have questions about your membership, payments, due dates for applications etc your first point of contact should be the secretariat on admin@ immunology.og.au. If they can't answer your questions directly they can forward it to the most appropriate person on council.

If you have questions about your membership, payments, due dates for applications etc – your first point of contact should be the secretariat. If you have more complex questions about policy, council, awards etc these are the kinds of things I can answer.

Award Information

International Travel Award

A reminder that we now have a second call for applications for the Gordon Ada Award. The

A reminder that we now have a second call for applications for the Gordon Ada Award. The second-round call for Postgrad and Postdoc awards continues unchanged. These applications will be due in September.

second-round call for Postgrad and Postdoc awards continues unchanged. These applications will be due in September.

I encourage all those planning to apply for an International Travel award to be thinking about those already and contacting labs/institutes that you might want to visit now. If you have a well-planned itinerary it greatly strengthens your application. A reminder that the Jared Purton award is not just another travel award. This award really looks to fund things that are a bit different and don't fit under funding for other awards

Jared Purton Award

Applications for the Jared Purton Award will be due in August.

A reminder that the Jared Purton award is not just another travel award. Applications that read like a travel award application (e.g. I want to go to a conference and then travel to visit a few labs) are very unlikely to score well. This award really looks to fund things that are a bit different and don't fit under funding for other awards e.g. Travel to learn a technique, travel to carry out experiments in another lab, money for pilot experiments, support for someone coming back from parental leave etc

Travel Bursaries for Annual Meeting

I'm also pleased to let you know that we've made a few changes to the bursaries to attend the annual meeting in Adelaide this year:

 We've introduced a second post-doc category for those who are 3-6 years post-PhD – previously only those up to 3 years post-PhD were eligible. We made this change because we recognised that many people, particularly those returning from an overseas postdoc, may be more than 3 years post-PhD and want to

> 100 000 000

engage in the ASI meetings but are still struggling to find the money to attend. However, these awards will be judged separately from the 1-3 post-PhD awards to make sure that early postdocs are not disadvantaged by this change.

2. We've included research assistants under the postgrad bursary category. This was to recognise that we also have members who are RAs who also often travel to present at our annual meetings.

Margaret Baird Award

This new award has just been introduced - please see the current updates in the Women's Initiative column on page 10. ■

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WOMEN'S INITIATIVE ON THE MOVE

KYLIE QUINN, Women's Initiative Coordinator kylie.quinn@rmit.edu.au



While our community has made progress with gender equity and diversity, there are also reminders that we are not "there" yetthere remains a lot of work to be done. As noted in the John's president opening address in this newsletter, for many of us seeing the speakers announcement for the IUIS2019 Conference showing a lack of gender equity and a lack of diversity in general was a disappointing and frustrating reminder. This truly is a cause that we must continue to fight for.

For the many female researchers out there this is more than a glaring inequity – it is a missed opportunity. Diversity

Diversity is a strength; it brings new perspectives, it brings creative solutions, it is dynamic and responds to the world around us rather than setting up paradigms to be adhered to.

is a strength; it brings new perspectives, it brings creative solutions, it is dynamic and responds to the world around us rather than setting up paradigms to be adhered to. Those are the kinds of speakers that we want to hear from at IUIS2019, and at any meeting.

ASI places a high value on diversity, as outlined in our **Gender Equity and Inclusion** Policy. Given the discordance with our values, ASI tendered a formal complaint to IUIS, alongside other immunological societies. IUIS also places a high value on diversity and they responded to these complaints with transparency, an acknowledgement that the speaker line-up did not reflect their values and have pursued this issue with commitment to devise a formal policy on diversity and inclusion.

So, a conversation is happening and I encourage you to be a part of it.

If you want to contribute to the development of formal policy on Gender Equity and Inclusion for IUIS, contact the IUIS Secretary, Roslyn Kemp.

To Those We Hope to Support

Finally, I wanted to clarify an important point about the purpose of the ASI Women's Initiative. Our goal is to support women working within immunology in Australia and If you want to contribute to the development of formal policy on Gender Equity and Inclusion for IUIS, contact the IUIS Secretary, Roslyn Kemp.

Aotearoa/New Zealand, and our definition of women includes cis women, trans women and femme/feminine identifying gendergueer and non-binary folks. While this may have been implicit in the goals of the Women's Initiative, we thought that it is important to make it explicit too, on our Website, on our applications and to our community. If there is anything else we can be doing to create a more inclusive community, we would appreciate hearing from you. 🔳

Our goal is to support women working within immunology in Australia and Aotearoa/New Zealand, and our definition of women includes cis women, trans women and femme/ feminine identifying genderqueer and non-binary folks.

A GENTLE ADVOCATE, AN INSPIRATION AND EDUCATOR

MARGARET BAIRD WOMEN IN IMMUNOLOGY AWARD KYLIE QUINN, Women's Initiative Coordinator



MARGARET BAIRD

In the column for this quarter, I find myself reflecting on notable characters who have supported equity and diversity within ASI, how far we have yet to go and what we can do to support equity and diversity right now.

But first I wanted to put a spotlight on a new, very special award for ASI.

The Margaret Baird Women in Immunology Lectureship

Immunology in Aotearoa/New Zealand and ASI owes a great debt to Professor Margaret Baird. She was a co-founder of Immunet, which is the local branch meeting for ASI. She was on the organising committee for the first Tran-Tasman immunology meeting, laying the groundwork for ASI as we know it today. She was a local ASI councillor and was ASI Newsletter Editor for many years. To recognise her many contributions, Margaret received the Derrick Rowley Medal in 2013.

Beyond her role in ASI, Margaret was a rare individual. She was an Emeritus Professor in the Microbiology and Immunology Department at Te Whare Wānanga o Otāgo/the University of Otago. For many years, she led a group Her commitment to and joy in the pursuit of new knowledge was clear to all of those that worked with her. It was infectious...

focused on Dendritic Cell Biology in infection models and cancer. Her commitment to and joy in the pursuit of new knowledge was clear to all of those that worked with her. It was infectious and it was fully on display when, after retiring, she took up a Research Professorship in the Department of Pathology with Prof Antony Braithwaite- she just couldn't give up the pipette. Margaret also taught many generations of young immunologists. Those of us fortunate to be her students were treated with respect and care while she guided us to reach new heights in our careers- she was an incredible teacher. She achieved all of this because of her wonderful character: intellectually engaged, warm, open-minded, a passionate advocate for science and for women, and an inspiring orator.

She was an incredible teacher. She achieved all of this because of her wonderful character: intellectually engaged, warm, open-minded, a passionate advocate for science and women, and an inspiring orator.

Margaret passed away in September 2016, but it feels right to remember her contributions to our community with a celebration of these last traits- her support of women in research and her ability to deliver an incredible talk. In 2017, the NZ-ASI AGM agreed to propose a new award to ASI, to highlight Margaret's commitment to women immunologists and to the immunology community as a whole. Roslyn Kemp, Ries Langley and a number of others then drove the establishment of a trans-Tasman lectureshipthe Margaret Baird Women in Immunology Award.

This lectureship will be a series of guest lectures across Aotearoa/ New Zealand and Australia, focusing on the applicant's research, but also including perspectives on equity and balance in science careers. While not limited to applicants that are women, applicants must demonstrate leadership in supporting and mentoring women in immunology.

For further details or questions, please refer to the ASI website or email me directly at <u>kylie.quinn@</u> <u>rmit.edu.au</u>.

Personally, I am so happy to see Margaret's legacy recognised in this way and grateful to those who organised it. I strongly encourage you to apply for this award and, importantly, to encourage others to apply for this award. I look forward to seeing the incredible candidates that are highlighted in this process.



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STAY TUNED UPCOMING VISITING SPEAKERS IN AUSTRALIA AND NEW ZEALAND

STUART MANNERING, Visiting Speaker Coordinator <u>smannering@svi.edu.au</u>



Donna Faber

Hosted by David Tarlinton, Monash University. Donna will visit Victoria, NSW, ACT and

Queensland. She arrives in Melbourne on August 14th, after attending the IgV meeting on Friday 16th August she will travel to Sydney (18th, 19th Aug), then to Canberra (20-21st Aug) and finally to Brisbane (22-23rd Aug).

Research Interests

Donna has made seminal contributions to two areas of Immunology. One is in resident memory T cells (Trm), a topic of great interest to ASI members. Her specific interests and expertise in localisation and function of Trm in the lung, and their requirement for anti-viral responses have made important contributions. Equally her analysis of the transcriptional networks required for the development and activation of these cells have been major achievements that have provided a basis for the field to progress. Perhaps of greater significance is Donna's contribution to the 5-centre program entitled "Tissue compartmentalization of human lymphocytes", which is a truly remarkable undertaking to map lymphocytes to tissues over the lifespan of humans using a remarkable resource, tissues from organ donors. Part of this work was published this year and last year in Immunity and in the last year in Science Immunology. It is easy to see how this study is going to be the basis of many future studies. Equally important is that Donna is particularly interested in collaborating with groups that have an interest in the data she and her colleagues are generating.

Mirjam van der Burg

Hosted by Emily Edwards from Monash University. Mirjam will





visit, Victoria, South Australia and NZ. Mirjam will be here 6th to 19th October. She will be visiting Adelaide (6-

10/10), Melbourne (10-16/10) and Auckland (16-19/10).

Research Interests

Mirjam has made seminal contributions to two topics of immunology: B cells and **Primary Immunodeficiencies** (PIDs). Mirjam has specific interests and expertise in V(D) J recombination and the impact of defects in this pathway on B cell differentiation and function. with a focus on severe combined immunodeficiency (SCID) and predominantly antibody deficiency (PAD). The most significant contributions to the field were the identification of four new candidate genes for PIDS (genes mutated in PIDs). Two related to SCID and two

related to PAD. Mirjam's research contributed to Erasmus MC being recognized as a Jeffrey Mondell Foundation Centre for Excellence in PIDS in 2010.



Joachim Schultze

Hosted by Stephen Turner from Monash University. Joachim will

visit Queensland, NSW, ACT and Victoria. He arrives in Brisbane on November 10th and leaves from Adelaide after attending the ASI meeting.

Research Interests

Prof Schultze is Director of Genomics and Immunoregulation research program, at the LIMES (Life and Medical Sciences Bonn) Institute at the University of Bonn. In addition, he is the Founding Director of the Single **Cell Genomics and Epigenomics** platform at the University of Bonn and the German Center for Neurodegenerative Diseases. Since 2018, he is also the Speaker of the Bonn site of the newly formed West German Genome Center, a center with more than 70 groups focusing on genomics research. Furthermore, he is the designated coordinator of the national NGS competence network, funded by the German Research Foundation (DFG). He has a sustained track record in developing new systems biology approaches for unravelling complex transcriptional and epigenomic programs within immune cell lineages. He as applied these approaches to generate paradigm shifts in our understanding how transcriptional heterogeneity at a single cell level contributes to myeloid and lymphoid immune cell differentiation and development. He has also applied these approaches to gain new

insights into many disease states such as COPD, obesity, cancer, and neurodegeneration.



Hosted by Joanna Groom, from WEHI, Kate will visit WEHI 6th August (VIC)

Kate Jeffrey

Hudson Institute 8th August (VIC), Garvan 13th August (NSW) and UQ 15th August (QLD)

Research Interests

Dr Jeffrev has made significant contributions to our understanding of the intersection of chromatin accessibility, epigenetics, non-coding RNAs and transcriptional control in innate immune cells and how dysregulation of these events can lead to immunological disease. Her publication record in multiple high impact journals reflects her important contributions to these fields. In particular, Kate is recognized for the discovery of the first inhibitor of the bromodomain and extra terminal (BET) family of epigenetic readers and the demonstration of its protective effects in inflammation (Nicodeme, Jeffrey et al Nature, 2010, cited >950 times). This manuscript laid the ground for what is now and extremely active area in both academia and industry. The bromodomain inhibitor that was discovered by Dr. Jeffrey in collaboration with GlaxoSmithKline is currently in clinical trials. Now as an independent investigator, Kate has discovered a novel immunerestricted epigenetic reader protein, SP140, essential for macrophage identity (Mehta et al, Science Immunology, 2017). Importantly, mutations within this epigenetic protein associate with 3 immunological diseases: Crohn's disease, multiple sclerosis and CLL.

Michael Gerner

Hosted by Cameron Bastow, from University of South Australia. Micheal will visit

Melbourne from Monday 19th to Friday 23rd August 2019. He will be in Adelaide from Saturday 24th August until he flies to Sydney on Tuesday 27th August. He flies home from Sydney on Saturday 31st August.

Research interests

Michael Gerner, has made a significant contribution to the field of dendritic cell and lymphocyte biology. He has established the analytical technique of histo-cytometry. Briefly, histo-cytometry combines the high-quantitative analysis and robust cell identification capabilities of flow cytometry with the spatial information provided by regular immunofluorescence imaging techniques. Utilising this technology, Michael has published a number of highimpact papers in Nature, Cell, and Immunity centred around the precise microanatomical locations of immune cells and how this relates to their function. information that is lost upon normal tissue dissociation required for flow cytometry. Michael's microspcopy expertise further branches out to include tissue clearing techniques which best preserve reporter protein and fluorophore detection, wholeorgan confocal microscopy and 2-photon intra-vital microscopy.

Paul Kubes

Hosted by Tonia Woodberry, ANU. Paul's trip has been delayed for personal reasons. We're expecting him to visit in 2020. ■

BRANCH REPORTS

WA BRANCH REPORT

BREE FOLEY, WA Councillor, Bree.Foley@telethonkids.org.au



Firstly, on behalf of ASI WA I would like to give a huge thanks to the outgoing WA Councillor Dr Connie Jackaman

who has done an absolutely amazing job over the past three years! Her dedication to not only WA ASI but the whole of ASI is hugely admirable and I have very big shoes to fill as the next WA Councillor, but I'm looking forward to the challenge.

Firstly, on behalf of ASI WA I would like to give a huge thanks to the outgoing WA Councillor Dr Connie Jackaman who has done an absolutely amazing job over the past three years! Her dedication to not only WA ASI but the whole of ASI is hugely admirable.

I would also like to thank all the committee members who were involved in organising a very successful Annual Scientific Meeting here in Perth late last year. It was amazing to see so many people volunteer their time to making this event so memorable and I know we're all excited to head to Adelaide at the end of this year!

On Monday 29th of April, ASI WA held a public symposium to celebrate the Day of Immunology. This was a fantastic afternoon of interesting and entertaining talks from researchers across Perth. The audience was captivated by Professor Peter Richmond's presentation on vaccines and how important it is for us to understand the immune response and develop more advanced vaccines. Dr David Martino shared his exciting research in trying to unlock the reasons why allergies are on the rise in Australia by studying epigenetic changes in our immune cells.

The audience was also treated to an excellent talk from Dr Alison McDonnell about how important your immune system is in patrolling your body looking to eliminate cancer and shared her exciting research into new immunotherapies. Dr Demelza Ireland took the audience on a thrilling journey through the immunology of pregnancy and



DR DAVID MARTINO TEACHING US ABOUT THE EPIGENETIC CHANGES CAN INFLUENCE THE ONSET OF ALLERGIES.

ASI NEWSLETTER JUNE 2019

just how critical the balance between accepting the foetus and rejecting the foetus really is.

The audience was also treated to an excellent talk from Dr Alison McDonnell about how important your immune system is in patrolling your body looking to eliminate cancer and shared her exciting research into new immunotherapies. Dr Demelza Ireland took the audience on a thrilling journey through the immunology of pregnancy.

Lastly, I know every audience member was riveted with Ben Horgan's presentation of his experience as a consumer advocate. Ben shared his experience working closely with researchers and how important it is to actively involve consumers in all aspects of research, something I encourage all ASI members to get involved with. A huge thanks to our amazing student subcommittee who organised the event. Well done guys!!

The ASI WA branch has some exciting events coming later this year including the Perth Immunology Group Meeting to be held in October. I look forward to providing more details soon on these events and hope to see you all there!

We always welcome any feedback/suggestions from our members and encourage anyone interested in joining the committee to please let us know!

A huge thanks to our amazing student sub-committee who organised the event. Well done guys!!



PROFESSOR PETER RICHMOND GIVING HIS CAPTIVATING TALK ON VACCINE DESIGN

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OLD BRANCH REPORT

SUMAIRA HASNAIN, QLD Councillor, Sumaira.hasnain@mater.ug.edu.au

The ASI Queensland committee is re-branding and we need your help!



You are invited to design our logo (think immunology, think QLD!).

The deadline for

submission is the 30th of June 2019.

The winning logo will receive \$500 and a free registration the Brisbane Immunology Group Meeting.

Send your entries to the ASI-QLD councillor Dr Sumaira Hasnain Sumaira.hasnain@mater.uq.edu

Brisbane Immunology Group Meeting:

Organising Committee: Sumaira Hasnain, Ray Steptoe, Rajiv Khanna, Kate Stacey, Margaret Jordan, Danielle Stanisic, Matt Sweet

ASI-QLD is very excited to announce the opening of registrations for the Brisbane Immunology Group Meeting to be held at the Sunshine Coast in August!

Register now and submit your abstracts.

www.qimrberghofer.edu.au/big/

Advanced Immunology Course

ASI-QLD supports the Advanced Immunology Course (Diamantina Institute) at the Translational Research Institute, Brisbane.

Registrations and applications are open now on:

www.di.uq.edu.au/advancedimmunology-course

You are invited to design our logo (think immunology, think QLD!).



ADVANCED IMMUNOLOGY COURSE

Diamantina Institute - Monday 15th - Friday 19th July 2019 The University of Queensland Diamantina Institute is pleased to offer a Winter Course in Advanced immunology at the Translational Research Institute.

THE ADVANCED IMMUNOLOGY COURSE OFFERS STUDENTS

- Advanced instruction in immunological techniques Advanced practical training in immunological techniques An opportunity to meet and hear from international leader in the field of immunology Professor Sarah Robertston, University of Adelaide

- "Mechanism of immune tolerance in pregnancy"
 Professor Paul McMenamin, Monash University
 "Understanding the 'plot' of immune responses in the eye and brain"

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VIC/TAS BRANCH REPORT

SCOTT MUELLER, VIC/TAS Councillor, smue@unimelb.edu.au



The Immunology group of Victoria committee has seen a few members step off the committee, including long-

standing members Daniel Andrews (Monash University) and Daniel Layton (CSIRO), and Nick Huntington (Monash) and Bruce Lyons (University of Tasmania). We thank them for their superb contributions over the years and wish them all the best for the future. In return, we warmly welcome Kirsten Fairfax (Menzies Institute for Medical Research and the University of Tasmania), Guna Kurupiah (University of Tasmania), Katrina Binger (LaTrobe University), Dan Pellicci (Murdoch Children's Research Institute. MCRI) and Andrew Murphy (Baker Heart and Diabetes Institute) onto the committee. We also thank student representatives Rosie Millen (Victorian Comprehensive Cancer Centre, VCCC) and Marios Koutsakos (Peter Doherty Institute, PDI) for their excellent contributions over the last year, and welcome new students Taylah Bennett and Xavier Sng (Monash).

We have a busy year for ASI visiting speakers that was kicked off by Dr Bob Seder (from the NIH; hosted by Kylie Quinn) whom gave a seminar at the VCCC on Feb. 20th and another at the Doherty Institute on the 22nd on Feb. He also spoke at the Lorne Infection and Immunity conference on Feb. 21st. Coming up, Professor Donna Farber (Columbia University) will be visiting Melbourne in August, speaking at Monash and also as a plenary speaker at our annual branch meeting on August

15-16th (see more below). Dr Michael Gerner (University of Washington), well known for imaging the immune system using 'histocytometry', is also visiting in August. He will be giving 3 talks: one at SVI on August 20th (hosted by Stuart Mannering), one at PDI on August 21st (host by yours truly) and at Monash BDI. And to continue our great VSP line-up, Professor Joachim Schultze (University of Bonn; hosted by Stephen Turner) will be visiting in September; Dr Kate Jeffrey (Harvard University; hosted by Jo Groom) will also come in September; and last but not least, Dr Mirjam van der Burg (Leiden University) will be coming in October (hosted by Emily Edwards).

The Winter Seminar will be held on 21st June and we are very pleased to have one of IgVs' founders and ASI Honorary Life Member Andrew Lew (WEHI) as this year's speaker.

In August, we will be holding our annual IgV scientific meeting (August 15-16th) at Yarra Valley Lodge in the Yarra Valley

As I write this, another successful series of Day of Immunology (Dol) events just wrapped up around the state, including Discovery Tours at MCRI, VCCC, PDI, WEHI, LaTrobe, Monash Immunology, Monash BDI and the Hudson Institute. Student Workshops were held at GTAC (Parkville) and Federation University Berwick and Ballarat. Finally, a free public lecture on "An ABC of childhood immunity: allergy, bugs and cancer" included speakers Mimi Tang (MCRI), Benjamin Marsland (Monash Immunology) and Misty Jenkins (WEHI), hosted by Sammy Bedoui. Thanks to the local Dol organizing committee for all their hard work and to all the sponsors of these events, including our gold sponsor CSL, and silver sponsors: ARC Centre for Advanced Molecular Imaging, Monash University and Federation University.

As we look towards the year ahead, IgV will once again be holding a number of exciting and engaging scientific events:

- The Winter Seminar will be held on 21st June and we are very pleased to have one of IgVs' founders and ASI Honorary Life Member Andrew Lew (WEHI) as this year's speaker.
- 2. In August, we will be holding our annual IgV scientific meeting (August 15-16th) at Yarra Valley Lodge in the Yarra Valley, with an exciting line-up of international and interstate speakers. Speakers include Donna Farber (USA), Kristen Radford (Mater, UQ), Michael Hickey, David Tarlinton, Laura Mackay, Kirsten Fairfax, Vanessa Bryant, Sarah Londrigan, Karla Helbig and more!
- 3. We will be holding the 2019 IgV Masterclass on Neuroimmunology in October at WEHI. More detailed information on speakers for these events and registration will be announced soon.

Stay tuned to Twitter (ImmunoGroupVic) and to email announcements for more details and registration information about these events. ■

NSW BRANCH REPORT

HELEN MCGUIRE, NSW Councillor, helen.mcguire@sydney.edu.au



Immunology is alive and well in NSW as evidenced by our extensive Day of Immunology

Celebrations! This year saw us spread our reach far and wide in a concerted effort to involve more of our great NSW state.

It was fantastic to see our Sydney based hosting centres accommodate visitors locally and from wider afield!

In the case of our Public Forum on Asthma, hosted by the Centenary Institute, we also connected in by Zoom link up our colleagues in Newcastle (more in special report from me). Similarly, our school outreach 'Face-time a Scientist' event not only accommodated 3 student excursions directly to the UNSW Museum, but also 4 schools across the state, in Bega, Coolah, Gulgong and Condobolin were able to connected to our immunologists via Zoom link up (see special report on UNSW **Museum of Human Disease** events, from Fabio Luciani).

In the case of the Discoverv Tour at the Garvan Institute, we accommodated visiting students from Sydney catchment as well as Newcastle (more in Angelica Lau and Joanne Reed's special report). And for the first time this year, we welcomed involvement from our colleagues in the New England region, hosting their own educational outreach activities in Armidale (see special report Fake Wounds and Vaccination Campaign for the Day of Immunology from our UNE colleagues).

With our Day of Immunology events now taken care of, we've now set our sights for the rest of the year on a strong program of ASI Visiting Speakers and our branch retreat, the cornerstone event on our state immunology calendar.

Upcoming VSP dates and locations:

- Prof Donna Farber: seminar at Garvan Institute 19th August
- A/Prof Michael Gerner: visit to University of Sydney and seminar at Garvan Institute, 28th/29th August
- Prof Joachim Schultze: seminar at University of Sydney, 19th/20th November

Branch retreat details:

• 5th and 6th September 2019, Sebel Harbourside, Kiama, NSW

*And for those NSW ASI members also planning to attend the World Congress on Inflammation to be held in Sydney 15th to 19th September, get in touch with me for further subsidies on your ASI NSW/ACT Branch Retreat registration fee! At the moment we are able to extend a fully complimentary registration to students!

And as always, please feel free to contact me if you would like to get more information or make any suggestions for upcoming events (<u>helen.mcguire@sydney.edu</u>. au). It has been great to hear keen thoughts of ASI members.

And for those NSW ASI members also planning to attend the World Congress on Inflammation to be held in Sydney 15th to 19th September, get in touch with me for further subsidies on your ASI NSW/ACT Branch Retreat registration fee!



DOI OUTREACH IS EXPANDING IN NSW!

NEWS FROM FIMSA JOANNA GROOM, groom@wehi.edu.au

Here is a brief update of the news from FIMSA.

Launch of new website.

FIMSA has performed a complete redesign and relaunch of the FIMSA.org website. The development of the website update was led by the FIMSA **Secretary General and Chinese** Society for Immunology (CIS), Xuetao Cao. This is a fantastic new resource to find information and links for all current FIMSA Immunology societies. The website also features reports from previous FIMSA courses and links to upcoming conferences and Advanced Courses in Immunology.

This is a fantastic new resource to find information and links for all current FIMSA Immunology societies.

Call for participation in FIMSA events and travel bursaries.

It has been exciting to offer ASI members several opportunities to participate in upcoming FIMSA events. The IUIS-IIS-FIMSA Course in "Basic and Advanced Translational Immunology is taking place in Jaipur, India 12-16 October 2019. We had the opportunity for one ASI member to attend as Senior Lecturer Faculty member for this Course. Professor Gabrielle Belz from WEHI, has taken up this position and will join a great line up of Speakers. FIMSA is also offering the 10 travel grants for FIMSA society members to travel to and participate in this course. Applications were announced in May and open to senior PhD scholars, clinicians, postdoctoral



fellows and young faculty and researchers.

Many ASI members are preparing to attend the 17th International Congress of Immunology, which is to be held in Beijing, China 19-23 October 2019. In May, ASI announced Special Travel Awards to attend this meeting.

ICI in Beijing is also the location for the next FIMSA Council meeting.

Altmetric Awards

AUD500 award for the publication with the highest Altmetric Attention Score.

For details, visit us at www.immunology.org.au







29TH APRIL



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GABRIELA KHOURY, <u>twitter.com@GabrielaKhoury</u> Day of Immunology Coordinator <u>gabriela.khoury1@gmail.com</u>

Australian and New Zealand SOCIETY FOR IMMUNOLOGY INC.

Once again it is fabulous to see the growing interest from our ASI members in engaging the public with immunology. This year events were hosted at 23 participating institutes around Australia and New Zealand. There were 5 public forums organised including a Panel discussion cohosted with 'Science in the Pub Adelaide'. Nine research institutes and university Departments opened their doors to the public by running discovery tours. Multiple secondary school workshops were held in Victoria and NSW, including a new workshop held in Armidale in collaboration with the University of New England (read about this in NSW's DOI report). There was also a museum exhibition, an expansion of "Face-time with a Scientist" and an immunology pub trivia night in New Zealand.

This year the editorial team at Immunology and Cell Biology joined in the celebrations. In collaboration with Wiley they created 'Grandma Summaries', easy to comprehend summaries of past ICB articles accompanied with a Videobyte. The summaries were contributed by ASI members and ICB Associate Editors, I would recommend checking these out online linked here.

In this issue I am excited to be announcing the winner of the Day of Immunology Science **Communication People's Choice** Award. The posters were on display at the Melbourne public lecture and the public voted on their favourites. The votes were close, with Chelsea Gerada's (University of Sydney) "Alien vs Predator" taking the prize! You can view the posters in the September's issue and they will be posted on social media this month where you can vote for your favourite over the next 2 weeks.

As with previous years our events continue to generate media opportunities. You can have a closer look at the articles and interviews which featured our events in this issue at the "Day of Immunology 2019 in the media" and in the past bulletin and membership emails.

Congratulations to all of the organising committees and thank you to all the volunteers who contributed their time to achieve another engaging Day of Immunology. To recognise the hard work of our committees I have submitted an application to the IUIS International Day of Immunology prize. Fingers crossed, I will be updating you with good news in the future!

Enjoy reading the Day of Immunology featured articles and the photos from many of the events in this issue! You can also catch up online by checking out #Dolmmuno.

DAY OF IMMUNOLOGY IN VICTORIA GABRIELA KHOURY

In Victoria, the team has organised a great series of engaging events that focus on educating the public and the next generation of immunologists. The Melbourne Public Lecture is always popular and this year's theme was exceptionally exciting - "An ABC of Childhood Immunity: Allergy, Bugs, and Cancer". The three themes were covered by Prof Mimi Tang (MCRI), Dr Ben Marsland (Monash University), and Dr Misty Jenkins (WEHI) respectively. Prof Mimi Tang first discussed her research on an experimental therapy that is showing promising results in inducing remission in peanut allergy, followed by Prof Ben Marsland who introduced how the microbiome influences our immune system; Dr Misty Jenkins presented on Cancer, and focused on her CAR T-cells therapy research in paediatric brain cancers. If you weren't in Melbourne and missed out you can watch the lecture online (Click here to listen to the public lectures).

Over 4-days we ran Secondary School Workshops in 3 locations, Parkville, Ballarat and Berwick. At GTAC in Parkville, students participated in the 1-day GTAC <u>"Your body at war" program</u>. Year 12 biology students learnt about how the immune system works by Prof Fabienne MacKay (University of Melbourne) and Prof Phil Hodgkin (WEHI), followed by laboratory practical classes which included ELISA and microscopy. Students also enjoyed the highly engaging Careers in Science networking session where they discussed different career paths with students, academics, bioinformaticians, industry scientists and policy makers.

The GTAC program was also run in Ballarat and students from 4 schools in Western Victoria





ABOVE: VICTORIAN COMMITTEE MEMBERS (LEFT TO RIGHT). FRONT: DR NICOLE MESSINA, DR DARRYL JOHNSON, DR GABRIELA KHOURY (CHAIR), CATRIONA NGUYEN-ROBERTSON. BACK: SCOTT REDDIEX, DR CHRIS HARPUR, DR CHRISTOPHE MACRI, DR DAN PELLICCI. ABSENT: DR MARIA DEMARIA (SECRETARY), DR RHEA LONGLEY, DR ERIKA DUAN, DR TIM GOTTSCHALK, DR JESSICA BORGER, DR HUI FERN KOAY, DR CATARINA ALMEIDA, ANNABELLE BLUM, KAYLA WILSON, A/PROF SCOTT MUELLER. PHOTO CREDIT: **<u>HYNESITE PHOTOGRAPHY</u>** travelled to Federation University to participate. Prof Stuart Berzins (Federation University) was the keynote speaker (Read more about this event from "Day of Immunology 2019 in the media" column) and committee members Dr Erika Duan and Catriona Nguyen-Robertson discussed different career paths in science.

The Berwick Secondary School program "Superheroes and Rogue Units" designed by ASI members, was run for the second time this year. Forty Year 12 Biology students had hands on laboratory experience learning about disease diagnosis by our volunteer demonstrators. The students also learnt about the immune system by keynote speaker Dr Justine Mintern (Bio21) and Careers in Science by Dr Danielle Auldist (Federation University).

Eight research institutes opened their doors to the public and hosted Discovery Tours during May. The public and students groups learnt about the institute's research and many people got to try out their science skills by look downing the microscope and even perform the odd ELISA! I would like to welcome our newest host - the Murdoch Children's Research Institute into our Discovery Tour program this year. I would also like to thank our returning hosts and their enthusiastic organising committees at: the Peter MacCallum Cancer Centre, the Walter and Eliza Hall Institute. the Peter Doherty Institute for Infection and Immunity, the La **Trobe Institute for Molecular** Science, the Department of Immunology and Pathology at Monash University, the Hudson Institute of Medical Research and the Monash Biomedicine Discovery Institute.

Thank you to all my dedicated committee members, particularly the sub-committee chairs: Dr Maria Demaria (Secretary), Dr Rhea Longley and Catriona Nguyen-Robertson (Discovery Tours), Dr Dan Pellicci (Public Lecture), Dr Chris Harpur (Sponsorship), Dr Erika Duan and Dr Tim Gottschalk (Secondary School Workshops). Other notable members: Dr Christophe Macri, Scott Reddiex, Dr Darryl Johnson,



ABOVE: CATRIONA NGUYEN-ROBERTSON AND DR ERIKA DUAN AT THE GTAC BALLARAT SECONDARY SCHOOL WORKSHOP WITH TONY CHIOVITTI (DEPUTY DIRECTOR, GTAC). PHOTO CREDIT: FEDERATION UNIVERSITY





ABOVE: SCIENCE CAREER LUNCH – SPEED NETWORKING! PHOTO CREDIT: <u>HYNESITE</u> <u>PHOTOGRAPHY</u>

Dr Jessica Borger, Dr Hui Fern Koay, Dr Catarina Almeida, Dr Nicole Messina, Annabelle Blum, Kayla Wilson and A/Prof Scott Mueller and last but not least, our GTAC Secondary School collaborators including Tony Chiovitti (Deputy Director, GTAC) and his team.

A special thank you to our <u>Sponsors</u> for supporting our many events!



ABOVE: SOME OF OUR DEDICATED DEMONSTRATORS AT THE GTAC PARKVILLE SECONDARY SCHOOL WORKSHOPS. (LEFT TO RIGHT) LAKSHANIE WICKRAMASINGHE, APRIL RAFTERY, DR TIMOTHY GOTTSCHALK, DR JESS BORGER, DARSHANA CHERIAN. PHOTO CREDIT: <u>HYNESITE PHOTOGRAPHY</u>



ABOVE: DR ERIKA DUAN AND DR TIM GOTTSCHALK, CO-CHAIRS OF THE SECONDARY SCHOOL WORKSHOPS DISCUSS CAREERS IN SCIENCE. PHOTO CREDIT: <u>HYNESITE</u> <u>PHOTOGRAPHY</u>



ABOVE: GTAC PARKVILLE SECONDARY SCHOOL WORKSHOPS, STUDENTS LEARN ABOUT HOW THE IMMUNE SYSTEM WORKS BY PROF FABIENNE MACKAY (UNIVERSITY OF MELBOURNE) AND PROF PHIL HODGKIN (WEHI). PHOTO CREDIT: <u>HYNESITE PHOTOGRAPHY</u>



ABOVE: DEPARTMENT OF IMMUNOLOGY AND PATHOLOGY, MONASH UNIVERSITY DISCOVERY TOURS. THE PUBLIC GOT TO LEARN HOW TO PIPETTE, LOOK AT MICROSCOPE SLIDE AND EVEN RUN AN ELISA! PHOTO CREDIT: DR JESS BORGER (MONASH UNIVERSITY), DR RHEA LONGLEY (WEHI)



ABOVE: GTAC PARKVILLE SECONDARY SCHOOL WORKSHOPS, STUDENTS LEARN ABOUT HOW THE IMMUNE SYSTEM WORKS BY PROF FABIENNE MACKAY (UNIVERSITY OF MELBOURNE) AND PROF PHIL HODGKIN (WEHI). PHOTO CREDIT: <u>HYNESITE PHOTOGRAPHY</u>





LA TROBE INSTITUTE FOR MOLECULAR SCIENCE DISCOVERY TOURS. TOP LEFT: (L TO R) DR FUNG LAY, PRAMOD SUBEDI AND EBONY MONSON, TOP RIGHT: (L TO R) PRAMOD SUBEDI, PROF. MARILYN ANDERSON, DR GEORGIA ATKIN-SMITH, DR KHA PHAN AND PROF. ANDREW HILL (DIRECTOR OF LIMS). BOTTOM: (L TO R) STEPHANIE MARINIS AND KEATON CROSSE. PHOTO CREDITS: LATROBE INSTITUTE FOR MOLECULAR SCIENCE BELOW: MONASH BIOMEDICINE DISCOVERY INSTITUTE TOUR. IMMUNE SYSTEM SENSORY DISPLAY. PHOTO CREDIT: THE MONASH BIOMEDICINE DISCOVERY INSTITUTE



DAY OF IMMUNOLOGY IN NSW

PUBLIC FORUM ON ASTHMA, CENTENARY INSTITUTE

HELEN MCGUIRE

On the 2nd May we gathered at the Centenary Institute in Sydney to kick off the first of our two evening Public Events in celebration Day of Immunology. This tremendously informative discussion of asthma covered three perspectives - patient experience, clinical and research, and thoroughly engaged our audience. In addition, those curious audience members who arrived for the welcome reception eagerly stepped up to have their lung function tested- myself included!

I would sincerely like to first thank our three wonderful speakers: Gabrielle Wenman (High School **Teacher and Asthma Patient** Advocate on behalf of Asthma Australia). Professor Vanessa McDonald (Co-director of the NHMRC CRE in Severe Asthma, Deputy Director and Research Leader in the Priority Research Centre for Healthy Lungs and an Academic Clinician in the Department of Respiratory and Sleep Medicine, John Hunter Hospital.), Professor Phil Hansbro (Deputy Director at the Centenary Institute and Director of Centenary UTS Centre for Inflammation.)

Cabrielle began by reminding us that "we often forget breathing is life". Such a profound statement

set the scene for sharing such a wonderfully personal story of her continuous battle with crippling severe asthma. From here she threw down the gauntlet for the two remaining speakers to address clinical need and offer some hope through cutting edge research, of which Prof McDonald and Prof Hansbro offered up in spades! A thoroughly enjoyable evening, for attendees at Centenary and who remote joined in from Newcastle- Hunter Medical Research Institute. Special thanks to the speakers and Karen McBrien from Centenary Institute for helping organise.



ABOVE: OUR THREE SPEAKERS, GABRIELLE WENMAN, PROF PHIL HANSBRO AND PROF VANESSA MCDONALD, AND VANESSA WITH AN AUDIENCE MEMBER GETTING HER LUNG FUNCTION TESTED

DOI MUSEUM OF HUMAN DISEASE AT UNSW

FABIO LUCIANI

Face time with an immunologist for high school students

As tradition of Dol in NSW, we have run for the 6th year in a row the "Face-time with an Immunologist". Dean Lovett, director of the Museum of Human Disease has established a wonderful program with NSW Schools. We took advantage of this and ran 3 virtual and 2 live events at the Museum, engaging with 7 High Schools across NSW and with more than 200 students! This year we fabulously put together 10 early career researchers, 9 PHD students and one postdoc. Notably, 9 of these were females! This gender representation was very helpful as we had several girls from High Schools interested in career paths towards science.

On May 6th and 7th, Y11 and Y12 students engaged with several PhD students and early career researchers (Caroline Ashlev. Mikaela Coleman, Elinor Hortle from University of Sydney; Arun Abayasingam, Brendan Hughes, Christine Fichter, Hannah Law, Money Gupta, Nick Brasher, Thiruni Adikari from the UNSW Sydney) on how the Immune system works and also to discuss career paths. This experience aimed to provide support for their study (HSC and syllabus) as well as for providing "directions" on what research is. how to best choose their career path and have a better understanding of what research is and how this can be helpful for the Society. Students approaching HSC face the dilemma of "what should I do when I leave school?", and "What is immune systems and how this fight pathogens and cancer"? The panel engaged with the students



OUR PANEL OF PHD STUDENTS AND POST DOC VOLUNTEERS IN ACTION DURING FACE-TIME WITH AN IMMUNOLOGIST.

and tried to help answering these questions by telling their stories and more importantly by emphasising that it is not easy to find the right path and that lots of serendipity, passion, and talent need to go together. But most importantly, the joy of doing science! Students asked so many questions and provided feedbacks on how helpful this activity was for them.

Engaging with general public

We have also organised a public event at the Museum of Human Disease, where we discussed the scratch and itches with Dr Brynn Weinstein, president of the Australian Society of Clinical Immunology and Allergy who is also an expert in paediatric food allergy. For this event approximately 30 people from the general community came to attend the event. Dr Brynn showed some fascinating data, for instance, 8 types of food cause 90% of common allergies in children. More strikingly he reported on recent statistics, putting Australia as the country with the highest prevalence of allergies and sadly of the highest death rate following anaphylactic shocks. People were surprised and amazed and asked so many questions that when time was up I had to sadly interrupt the event! Overall, it was a special day, which left the organisers with satisfaction in having contributed to successfully divulgate immunology to the inquisitive students and to the general public.



INVITED SPEAKER DR BRYNN WEINSTEIN GIVING AN EDUCATION SEMINAR ON PAEDIATRIC FOOD ALLERGIES.

DAY OF IMMUNOLOGY: GARVAN DISCOVERY TOUR FOR SCHOOL STUDENTS ANGELICA LAU

On May 3rd, Garvan Institute hosted a Discovery Tour student workshop in celebration of the 2019 Day of Immunology, coordinated by Dr Joanne Reed and Dr Angelica Lau. We welcomed 60 students from years 10-12 along with their teachers for a day of interactive discussions, lab activities and tours around the Garvan, giving students and teachers the chance to explore how a research laboratory was run, the type of cutting-edge technology used and the important research questions being investigated in the Immunology research labs.

The day began bright and early as the first group enthusiastic students arrived as early as 8:15am for our 9am program. Our program first began with an introductory talk by Professor Stuart Tangye who gave an excellent overview on "Why Immunology is Cool". In his talk he covered the basic functions of the immune system and why the study of Immunology is important in understanding



ENTHUSIASTIC HIGH SCHOOL STUDENTS PUT ON GLOVES AND LAB COATS TO EXPERIENCE A DAY IN THE LAB AS RESEARCH SCIENTISTS, FROM PROCESSING TISSUES AND MAKING DNA TO RIDING THE VIRTUAL REALITY "MAGIC SCHOOL BUS" INSIDE A CELL. PHOTO COURTESY OF ANNA SWEENEY AND ANGELICA LAU

ASI NEWSLETTER JUNE 2019



ABOVE: ENTHUSIASTIC HIGH SCHOOL STUDENTS PUT ON GLOVES AND LAB COATS TO EXPERIENCE A DAY IN THE LAB AS RESEARCH SCIENTISTS, FROM PROCESSING TISSUES AND MAKING DNA TO RIDING THE VIRTUAL REALITY "MAGIC SCHOOL BUS" INSIDE A CELL. PHOTO COURTESY OF ANNA SWEENEY AND ANGELICA LAU

the limitations and advances in medicine. Following the introduction, students were split into smaller groups for hands-on activity sessions held within the laboratories of Garvan Immunology and Garvan Weizmann Centre for Cellular Genomics.

We had designed some pretty punny activity stations, namely: "The Cell Observatory", "How to Clone Wars and Electro-fying DNA", "Single Cell Genomics: The Power of one", "Flow Cytometry: Exciting 1000 cells a minute", "Life in a Bottle & Lighting up the Invisible" and "Antibody Sandwich & the BlitZ". Students were given the opportunity to clone DNA, to load and run gel electrophoresis, to examine mouse and human tissue specimens, to see single cells captured in real-time... and many more. One of the favourite activities was the Cell Observatory. Students loved the VR experience as they were immersed inside a cell, "moving and touching" the different cellular components from DNA to ribosome! Some students even put on their competitive hats as we ran a "guess how many cells in the jar" competition throughout the day.

The day concluded with a Careers in Science & Immunology presented by Dr Deborah Burnett and Dr Katherine Jackson, who gave some insightful advices on their journey from two very different career perspectives followed by a Q&A session. The school students were truly

DAY OF IMMUNOLOGY 2019

inspired and we received many great questions ranging from myths and misconception of vaccinations, where is Immunology going, how to become a scientist, what are the challenges of Immunology research, to what sort of career options there are for these bright young minds.

The Garvan Discovery Tour was a huge success and the participation from the students were phenomenal. We received a lot of positive feedback from teachers and students, some of them even wanted to jump the queue for next year's registration! Given the success of two consecutive years, we look forward to continuing this wonderful engagement event at next year's Dol.

Most importantly, I'd like to take this chance to thank many people for this event could not happen without the help and generosity of many volunteers on the day. I'd like to like to thank and acknowledge Joanne Reed - we make the best team! Thank you to Julia Kiss who had helped set up some of the foundation work for this event. Thank you to Stuart Tangye, Deborah Burnett and Katherine Jackson for giving inspiring talks and leading interesting discussions. Thank you also to our volunteers Clara Young, Bethany Pillay, Jin Yan Yap, Natalie Eshow, Mollie Boyd, Jacqui Rodgers, Megan Faulks, Eleanor Moule, Peter Schofield, Stacey Walter, Hira Saeed, Eric Lam, Angela Yin, Rama Dhenni, Lisa Worley, Candy Laurianto, Christopher Jara who ran the stations and guided the students around the labs. Thank you also to Anna Sweeney, Brad Timms, Gabriella O'Neill, Joseph Hewitt, Irwan Effendy, Kate Patterson, Grant Churchill and Tina Dempsey who also helped out in logistical side of things. Lastly, I would also like to thank the Garvan Foundation and the ASI for the financial support of this event.

ASI NEWSLETTER JUNE 2019



SOME OF OUR STUDENTS, RA AND POST-DOC VOLUNTEERS WHO HELPED INSPIRED AND TEACH THE NEW GENERATION SCIENTISTS AT THE DISCOVERY WORKSHOP! BACK ROW (L TO R): CHRISTOPHER JARA, PETER SCHOFIELD, JOANNE REED, ELEANOR MOULE; FRONT ROW (L TO R): KATHERINE JACKSON, MEGAN FAULKS, ANGELICA LAU, CANDY LAURIANTO, BETHANY PILLAY.

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THE DAY OF IMMUNOLOGY: FAKE WOUNDS AND VACCINATION CAMPAIGNS SINEAD HENDERSON, RICHARD CHARLESWORTH AND NATKUNAM KETHEESAN

To celebrate the Day of Immunology, ASI members at the University of New England in Armidale initiated an Immunology and Vaccination Education Programme and invited teachers from local High Schools to collaborate. Teachers Hannah-Lee Hourigan, Yvette Ballard and Jonathon Shumack with Lab Technician Judy Miller from the Presbyterian Ladies College in Armidale took up the challenge!

In the lead-up to the Day of Immunology, Year 9 students were given an introduction to immune cells and their function in class, before three ASI members visited to enlighten and entertain the students with presentations on the immune system, infection and immunity and the importance of vaccination. Freshly armed with an appreciation for immunology and its role in wound healing, it was time to make some wounds.

DON'T WAIT! VACCINATE! AGAINST TETANUS!

WHAT IS TETANUS?

Tetanus is a serious disease, also known as lockjaw, that is caused by Clostridium tetani, a harmful pathogen found in soil, horse manure and rusty objects. This disease is one that is preventable. by vaccination.



WHO CAN BE

AFFECTED BY

THE DISEASE?

People of all ages can be

know someone who does?

Vaccinate today to keep everyone you know safe.

affected by tetanus. Although

infants and elderly people are

at the most risk. Do you fit into one of these categories? Do you

WHAT ARE SOME SYMPTOMS?

Some symptoms of tetanus are: suffocation, respiratory failure, pneumonia, hypertension (high blood pressure), hypotension (low blood pressure) and possibly a heart attack. Some of these are fatal and all cause serious long-term discomfort.

BUT DON'T WORRY! THERE IS A WAY TO PREVENT IT!

Like it is commonly said, prevention is better than a cure. Vaccination is the best way to prevent this disease.

By not vaccinating, you are not only placing yourself at fist, but also those around you. In Australia, we aim to have 95% of our population vaccinated, but only 84% is vaccinated against the disease. By vaccinating, you are protecting you friends, neighbours as well as yourself.

In most cases, the activity began with the simulation of a small cut to the arm - just a modest wound built with skin putty and some appropriately placed 'blood.' But the standard escalated quickly - small cuts were no longer sufficient, and soon enough, students were missing chunks of their arms, fingers had been lost and an unlucky victim was stabbed with a butter knife. The students showcased their creativity as they raided the fish tank for gravel and broke chunks from plastic containers to make their injuries look more realistic. After the most elaborate of injuries had been crafted. featuring an intense face wound spanning from the eye to the jaw - it was time to clean up. The smell of chocolate blood and banana pus slowly left the room as each wound was photographed and miraculously healed.

Picture 9: The students enjoyed creating fake wounds after learning about the role of immunology in the healing of wounds. Don't they look incredibly realistic?

After the fun activities in the lab, students enjoyed an engaging presentation where they learned valuable tools on how to communicate scientific information effectively. The visit culminated in a Q&A session, where students asked all their burning questions covering the highlights of science, the perks of research, and most importantly, what do scientists eat for

LEFT: THE TETANUS VACCINATION CAMPAIGN POSTER DESIGNED BY SARAH WATERS, JESSE YOUNGHUSBAND AND SIHAN DONG WAS AWARDED FIRST PLACE.

30

DAY OF IMMUNOLOGY 2019

ASI NEWSLETTER JUNE 2019



THE STUDENTS ENJOYED CREATING FAKE WOUNDS AFTER LEARNING ABOUT THE ROLE OF IMMUNOLOGY IN THE HEALING OF WOUNDS. DON'T THEY LOOK INCREDIBLY REALISTIC?

breakfast.

After the visit, students worked in groups and used their new knowledge of effective scientific communication to research a vaccine preventable disease and to create a vaccination campaign poster. The best vaccination campaign and posters were judged by Teachers at the **Presbyterian Ladies College** and by Academic Staff at the University of New England, and the best poster has been printed to display at the University and the School. Students with the best posters were awarded certificates, and all participants received "Giant Blood Cells," courtesy of ASI.

Student reception to the programme was excellent, and 100% of participants recommended continuation of the programme in 2020. Student feedback revealed that "it was





really engaging and made a topic that can sometimes be hard, easy and understandable and fun," and that "it was a good experience to have and the information gained will be effective in the future. I think vaccines are something everyone should know about so it would be good to run again." Due to the positive reception of the programme, it is planned that the competition will be expanded across all schools in Armidale, with 2020 bringing the inaugural Inter-School Immunology and Vaccination Poster Competition.

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DOI SNAPS FROM South Australia



PRESENTERS AT SCIENCE AT THE PUB, ADELAIDE: CLAUDINE BONDER, HOLLY GROOME SIMON BARRY



CLAUDINE BONDER SCIENCE IN THE PUB, ADELAIDE





SCIENCE IN THE PUB, ADELAIDE



HOLLY GROOME INTERVIEW AT THE PUB, ADELAIDE



HOLLY GROOME INTERVIEW AT ABC

DOI SNAPS FROM New Zealand

ASI NEWSLETTER JUNE 2019

NEW ZEALANDERS CHILLING OVER DRINKS AS THEY CELEBRATE THE DAY OF IMMUNOLOGY WITH A TRIVIA NIGHT

DAY OF IMMUNOLOGY 2019 IN THE MEDIA

DR GABRIELA KHOURY, twitter.com@GabrielaKhoury ASI social media manager gabriela.khoury1@gmail.com

28TH APRIL 2019 Einstein A Go-Go, RRR radio, Melbourne

Prof Mimi Tang, Melbourne public lecture speaker, from MCRI discussed her research with Dr Shane and the team on RRR Einstein A Go-Go for International Day of Immunology.

Read about and listen to <u>"Combating Peanut Allergies Is</u> <u>Getting a Bit Gutsy"</u>



PROF MIMI TANG (MCRI AND RCH), MELBOURNE PUBLIC LECTURE. CREDIT: GERALD HYNES HYNESITE PHOTOGRAPHY **30TH APRIL 2019**

Ballarat Secondary School Workshops were featured on WIN All Australia News and 9 News Western Victoria

The GTAC Day of Immunology Secondary School Workshops in Ballarat at Federation University were featured on WIN news and 9 News Western Victoria. Click on the link below to watch the footage. ASI member and past Secretary Prof Stuart Berzins (Federation University) key speaker was interviewed.

WIN All Australia News Watch at 0.50 or <u>follow link</u>

9 News Western Victoria www.facebook.com/9NewsWesternVictoria/videos/2017841285008518/

30TH APRIL 2019 Holly Groome Science in the Pub speaker- ABC radio Adelaide

Holly Groome from the Robinson Research Institute and University of Adelaide was interviewed by David Bevan on her research.



HOLLY GROOME, SCIENCE IN THE PUB INTERVIEW

3RD MAY 2019, Ballarat Courier, Victoria

ASI members, past Secretary Prof Stuart Berzins (Federation University) our key speaker and Day of Immunology Coordinator Dr Gabriela Khoury were interviewed by Michelle Smith.



Read the article here: "FECRI, Fed Uni researchers and students mark International Day of Immunology in Ballarat"

15TH MAY 2019, Star News, Victoria

Day of Immunology Coordinator Dr Gabriela Khoury and Dr Erika Duan Victoria Committee members were interviewed by Star News on the Secondary School workshops held in Berwick.

Read the article here: "Tomorrow's scientists enjoy Immunology Day"



Join in the discussion on Twitter (<u>@ASImmunology</u>) and <u>Facebook</u>.

Word around the Universities and Institutes

The Peter Doherty Institute for Infection and Immunity, Victoria, Australia.

Dr Fern Koay shares a re-cap on the Melbourne Public Lecture -An ABC of Childhood Immunity: Allergy, Bugs and Cancer.

https://www.doherty.edu.au/ news-events/news/the-abc-ofchildhood-immunity

The Garvan Institute of Medical Research, NSW, Australia.

Featuring our very own Newsletter Editor - Dr Angelica Lau, The Garvan Institute of Medical Research hosted 60 high school students who got to test out laboratory techniques and also learn about careers in science and immunology.

https://www.garvan.org.au/ news-events/news/day-ofimmunology-garvan-inspiresstudents-for-stemm

Monash Biomedicine Discovery Institute, Victoria, Australia.

The Monash Biomedicine Discovery Institute (BDI) invited more than 50 Year 11 students from Mac Robertson Girls' High School and John Monash Science School to celebrate the Day of Immunology.

https://www.monash.edu/ discovery-institute/news-andevents/news/2019-articles/dayof-immunology-at-the-monashbdi

Malaghan Institute of Medical Research, New Zealand.

Director of the Malaghan Institute of Medical Research Professor Graham Le Gros was interviewed and Dr Phillip George discusses immunotherapies - <u>"Immunotherapy profoundly</u> changing the way we treat cancer" ■

Clinical & Translational Immunology

2018 CTI CiteScore **7.27**

Cutting-edge advances in biomedical research

Editor-in-Chief: Rajiv Khanna

Clinical & Translational Immunology is an open access, online-only journal, seeking to cover basic, translational and clinical studies in all aspects of human immunology, including experimental models specific to human diseases.

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Clinical & Translational Immunology

Catch up on recent Special Features from *Clinical & Translational Immunology*, including:



CTI Special Feature on Endoplasmic Reticulum and Oxidative Stress in Immunopathology

Special Feature Coordinator: Sumaira Z Hasnain

Endoplasmic reticulum (ER) stress and related molecular programs, which occur when proteins misfold during biosynthesis in the ER, are important components of the pathophysiology of several diseases including cancer, diabetes, inflammatory bowel disease and multiple forms of respiratory inflammation. Despite this, our understanding of the molecular programs that regulate ER stress, ER-associated degradation pathways, oxidative stress and the unfolded protein response are limited. In this Special Feature of *Clinical & Translational Immunology*, we highlight the complex relationship between cellular stress pathways and inflammation and the potential strategies that could pave the way for specific drugs designed to improve protein folding, manipulate the unfolded protein response to reduce inflammation and restore homeostasis.

(July 2018)

CTI Special Feature on Genome-wide Association Studies and Immunity

Special Feature Coordinator: Manuel Ferreira

This Special Feature of *Clinical & Translational Immunology* marks 10 years since genome-wide association studies (GWAS) were first applied to immune-related diseases. The five reviews cover findings from ankylosing spondylitis, asthma, Crohn's disease, multiple sclerosis and type-1 diabetes. Topics covered include a summary of genetic associations reported to date, the likely target genes underlying those associations, novel insights into disease aetiology, and challenges and opportunities that will shape our field in the next 10 years.

(June 2018)

CTI Special Feature on Microbiota and immune cell crosstalk: dialogues across health and disease

Special Feature Coordinator: Erika Duan

The therapeutic potential of correcting microbiota dysbiosis has galvanised researchers and clinicians alike. Immune cells can selectively sense and eliminate microbial species, interact within a local microenvironment and migrate into the periphery or distal organs following co-ordinated activation. This renders them as prime candidates in the endeavour to understand how a localised microbiome can broadly influence organism health and disease susceptibility. Specific commensal microbes can induce tolerogenic or tissue reparative immune cells to maintain organ health, whilst unintentional microbe translocation can initiate disease pathology. Critically, bi-directional communication exists as certain immune cell products can sequester microbial species. Since immune cell contributions to acute and chronic diseases are extensively studied, insight into the mechanisms of immune cell and microbiota crosstalk may provide new leads in the development of superior therapeutic agents. In this Special Feature of *Clinical & Translational Immunology*, we present four reviews which address and summarise the evidence for immune cell and microbiota crosstalk during different acute and chronic diseases. (May 2018)



Special Feature Coordinators: Ajithkumar Vasanthakumar and Kirsten Ward Hartstonge

Distinguishing self from non-self is a unique feature of the immune system. While negative selection rigorously eliminates auto-reactive T cells, the few cells that escape could trigger severe auto-immune responses. Regulatory T cells (Tregs) however, keep these auto-reactive T cells and other inflammatory T cells in check to preserve immune homeostasis. Paucity of Tregs leads to fatal autoimmunity in both mice and humans. While most Tregs develop in the thymus, they adapt and populate multiple lymphoid and non-lymphoid tissues. Besides suppressing auto-reactive T cells, Tregs also perform non-canonical functions, which include tissue repair and regulation of organismal metabolism. Tregs therefore are heterogeneous in their tissue localization and function. A small fraction of Tregs that differentiate from conventional CD4+ T cells in the periphery further adds to this heterogeneity. In this special feature, we have collated reviews from experts to highlight Treg cell heterogeneity from the perspective of their origin, phenotype, tissue localization, function and the complexity in regulation of these features. (March 2018)

Start reading at www.wileyonlinelibrary.com/journal/cti







TRAVEL REPORT

KEYSTONE SYMPOSIUM ON B CELL-T CELL INTERACTIONS 10-14th February 2019, Keystone, Colorado, USA

DR OANH NGUYEN, SENIOR Research Fellow, Prof Katherine Kedzierska Laboratory, Department of Microbiology & Immunology, University of Melbourne, The Peter Doherty Institute for Infection & Immunity, Level 7, 792 Elizabeth St, Melbourne, 3000, VIC Australia T: +61 3 8344 3383, E: <u>oanheei@gmail.com</u> or <u>thonguyen@unimelb.edu.au</u>

Keystone Symposia conferences are one of the best international conferences to attend. Presentations are of highest quality with world-renowned scientists in the field presenting on unpublished or "in-press" data. The poster sessions are bustling for hours and provide a great opportunity for scientists to mingle with the invited speakers. In 2018. I was awarded the ASI Gordon Ada Senior Travel Award to attend the 2019 Keystone Symposium on B Cell-T Cell Interactions, which I attended in February this year and it happened to be in Keystone! The

The Keystone Village was absolutely beautiful with the frozen lake for ice-skating, the snow-capped mountains in the background, and the fluffiest snow I've ever seen and walked in!



KEYSTONE VILLAGE

The conference was made even more impressive as it was a joint meeting with the Keystone Symposium on Molecular Approaches to Vaccines and Immune Monitoring, which complemented beautifully with our current work on influenza vaccines.

Keystone Village was absolutely beautiful with the frozen lake for ice-skating, the snow-capped mountains in the background, and the fluffiest snow I've ever seen and walked in!

Having worked on killer CD8+ T cells throughout most of my scientific career. this conference was all about B cells and the other type of T cells: helper CD4+ T cells, which I started working on since joining Professor Katherine Kedzierska'a Laboratory in 2014. As such, I was very excited to attend my very first international B cell conference and to finally meet all the amazing scientists, whose papers I had gotten to know quite well. The conference was made even more impressive as it was a joint meeting with the Keystone Symposium on Molecular Approaches to Vaccines and Immune Monitoring, which complemented beautifully with our current work on influenza vaccines.

The program was broadly split into germinal centre B cell biology, T follicular helper (Tfh) cell biology and antibody responses to pathogens such as influenza virus, HIV and malaria. Presentations were outstanding with inspiring Keynote and Plenaries from Profs Antonio Lanzavecchia, Carola Vinuesa and Gabriel Victora who were the joint Scientific Organisers, Shane Crotty, Ian Wilson, Michel Nussenzweig, Patrick Wilson, Marc Jenkins and Mark



TALKING SCIENCE WITH COLLEAGUES DURING THE POSTER SESSION. LEFT-TO-RIGHT: OANH NGUYEN (MYSELF), ADAM WHEATLEY AND ALICE DENTON.



Overall, the meeting was absolutely amazing and provided a great opportunity for meeting new scientists, catching up with old colleagues.

Shlomchik, just to name a few. One of my favourite sessions was an afternoon workshop where Laura Vella was comparing Tfh cells from the human lymph node and the blood of young children and adults. My poster session on the Tuesday evening was such a buzz, talking non-stop for hours over a glass (or two) of white wine, answering questions and receiving very supportive feedback from scientists all over the world.

The highlight of the conference for me was the Wednesday Plenary session starting with Patrick Wilson, followed by my supervisor, and then two short talks from Ian Cockburn and Daniel Lingwood. The room was packed out, people from the joint meeting nextdoor were streaming in to find a seat but it was standing room only at the back for the late comers. Katherine did an outstanding job presenting our novel and unpublished data. Being a killer CD8+ T cell person herself, this was the first time she had ever given a B cell talk to a very distinguished B cell crowd. Overall, the meeting was absolutely amazing and provided a great opportunity for meeting new scientists, catching up with old colleagues (i.e. Alice Denton) and to establish new collaborations and connections.

Finally, I would like to thank the Australasian Society for Immunology for the Gordon Ada Senior Travel Award to support my travel to this conference, as well as my visits to Prof Paul Thomas' (St Jude Research Children's Hospital, Memphis)



INVITED SPEAKERS IN THE PLENARY SESSION ON "B CELL RESPONSES TO INFECTIOUS DISEASES". LEFT-TO-RIGHT: PATRICK WILSON, KATHERINE KEDZIERSKA, IAN COCKBURN AND DANIEL LINGWOOD.

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ICB: DAY OF IMMUNOLOGY SPECIALS New ways of showcasing our content

ANNE LA FLAMME, ICB Editor-in-Chief, anne.laflamme@vuw.ac.nz

The fun of serving as an editor is not only being exposed to all of the fantastic immunological research that is being done, but also finding new ways to showcase and to make it more accessible to our readers through Special Features, Virtual Issues, and Video Summaries. See here are some highlighted showcase items we have picked out for you.

Special Features

Traditionally, ICB has highlighted hot topics in immunology through our very popular <u>Special Feature</u> Issues and this year is no different. Two of our 2019 Special Features have been published, and I invite you to read and enjoy them. A third Special Feature on Memory is just being finished off and will be available to you shortly. Keep an eye out for a Content Alert from ICB! If you are not yet signed up for these Web Alerts that notify you of new ICB content, please do so <u>here</u>.

Immunology & Cell Biology



SPECIAL FEATURE ON PRIMARY IMMUNODEFICIENCIES

The April 2019 issue contains a Special Feature on Primary Immunodeficiencies. Inborn errors of immunity, or primary immunodeficiency disorders (PID), are monogenic diseases of the immune system. These affections give rise to complex diseases with a wide range of susceptibility to infections. The advent of next-generation sequencing has ushered in a Golden Age of PID research. The number of genes identified as responsible for PID has been rapidly rising, with a new PID gene identified on average every week for the past 10 years. Despite the recent explosion of knowledge, 90% of the estimated 3000 PID genes have yet to be studied. This Special Feature discusses recent advances in PID research, and what it means for our understanding of human immunology. *Immunology & Cell Biology* thanks the coordinators of this Special Feature – Adrian Liston & Stephanie Humblet-Baron – for their planning and input.



MECHANISTIC DISSECTION OF THE DISRUPTION CAUSED TO AN IMMUNOLOGICAL NETWORK, AS IDENTIFIED BY SINGLE CELL SEQUENCING. THE PICTURED PID IS DRIVEN BY MUTATION IN NFIL3 AND RESULTS IN EXCESSIVE IL-10 PRODUCTION. IMAGE COURTESY OF ADRIAN LISTON (THE BABRAHAM INSTITUTE, CAMBRIDGE, UK) & STEPHANIE HUMBLET-BARON (KV LEUVEN, BELGIUM).



SPECIAL FEATURE ON MACROPHAGES IN TISSUE REPAIR

The March 2019 issue of *Immunology & Cell Biology* contains a Special Feature on Macrophages in tissue repair. In the late 18th century, Metchnikoff proposed the 'phagocytosis theory' in which he controversially placed the contribution of macrophages to organismal biology as being of even greater importance than their role in bactericidal defence. His view still prevails today, with macrophages appreciated as playing a fundamental role in the process of tissue repair. The present series of articles explores recent advances in this area, highlighting the importance of macrophage heterogeneity, plasticity, tissue specificity, activation status and cellular metabolism on the outcome of tissue repair. Finally, in a broader view of the repair process, the role of neutrophils as well as eicosanoids as supporting macrophage migration and polarisation is discussed. *Immunology & Cell Biology* thanks the coordinators of this Special Feature – Tiffany Bouchery and Nicola Harris – for their planning and input.



IMAGE: ALVEOLAR MACROPHAGES IN A CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) PATIENT; PRECISION-CUT LUNG SLICE STAINED FOR EPITHELIAL CELLS (EPITHELIAL CELL ADHESION MOLECULE EPCAM IN GREEN) AND MACROPHAGES (CD206 IN PURPLE). IMAGE COURTESY OF FRANZ PUTTUR, INFLAMMATION, REPAIR & DEVELOPMENT, NATIONAL HEART & LUNG INSTITUTE, IMPERIAL COLLEGE LONDON, UK.

VIRTUAL ISSUES

One of the new initiatives for 2019 was the creation of Virtual Issues, which take our published content on a specific topic and collate it into a named issue. This process enables us to build an issue with original research articles as well as reviews on a specific topic. Currently, we have 2 virtual issues for you to peruse: ICB's top 10 for 2017/2018 and Cancer Immunotherapy.

Immunology & Cell Biology Best of 2017-2018

Each year on July 1, the Immunology & Cell Biology (ICB) Editorial Team selects the top 10 original research publications from the previous 12 months, and three of these are invited for presentation at the Annual Scientific Meeting of the Australian and New Zealand Society of Immunology. While only three are presented in the "Best of ICB" session. the Editor-in-Chief would like to formally acknowledge all of these publications in this virtual issue. Together, they highlight the excellence, depth and breadth of the research published regularly in ICB.

Virtual Issue on Cancer Immunotherapy

The April 2019 issue of Immunology & Cell Biology contains a Virtual Issue on Cancer Immunotherapy. In 2011, the FDA approved the first cancer immunotherapy: the inhibitory checkpoint inhibitor anti-CTLA4. The science underlying this treatment was recognised in the 2018 Nobel Prize for Medicine awarded to James Allison and Tasuko Honjo. We are now facing a revolution in cancer medicine with novel immune-based cancer treatments including antibodies, cytokines and molecules that boost anti-tumor immunity, in addition to adoptive cell transfer therapies (ACT) that rely on the administration of immune cells to attack tumors. This series of articles explores recent advances in this area, highlighting how the immune system can be harnessed in immunotherapy against cancer and the issues that hinders its efficacy. Immunology & Cell Biology thanks the coordinators of this Virtual Issue - Christophe Macri and Justine Mintern - for their planning and input.



SLE : .D

VIDEO SUMMARIES FOR THE DAY OF IMMUNOLOGY

For the Day of Immunology 2019, ICB contributed to ASI's programme of events by preparing special summaries of recent research published in ICB to be shared with the wider community. These summaries were also paired with a video to help engage our readers and the public. I'd like to thank the ICB Editorial Team for contributing these summaries, which have proven quite popular. Given this popularity, we are looking to continue to add similar content to promote immunological research to the public. Please enjoy and share these summaries and videos here, and watch as we develop this space further.

- Contagious Cancer the curious case of Tasmanian devil facial tumour disease Amanda Oliver & Jessica Borger
- Tackling the ingredients that trigger asthma in children Simone Nuessing & Ian A. Parish
- Pregnancy and the Immune System Tyani Chan
- "It's in our DNA" Genetics, gut microbes, and diabetes Anne La Flamme
- Infant immunosuppression protecting the innocent from themselves Kayla Wilson & Justine D. Mintern
- Dysfunctional defence causes severe flu infections in infants Annabelle Blum & Justine D. Mintern
- Dealing with dead cells in systemic sclerosis Jurie Tashkandi, Yang Huang & James Harris, Monash University

^{29 April 2019} Day of Immunology

Watch and read our summaries of the latest research in immunology

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PUBLICATIONS OF INTEREST

OUR SUSTAINING MEMBERS



Mouse IFN-y ELISA PRO kit

Natividad, J. M., et al. (2018). Bilophila wadsworthia aggravates high fat diet induced metabolic dysfunctions in mice. Nature Communication DOI: 10.1038/s41467-018-05249-7

Human IL-10 FluoroSpot BASIC (550) Grist, J. T., et al. (2018). Extracellular Lactate: A Novel Measure of T Cell Proliferation. Journal of immunology. DOI: 10.4049/jimmunol.1700886

Mouse TNF-α ELISpot BASIC (HRP)

Chida, J., et al. (2018). Prion protein protects mice from lethal infection with influenza A viruses. PLoS Pathog DOI: 10.1371/journal.ppat.1007049



Recombinant Human EGF (carrier-free) Tam A, et al. (March 2019) Hedgehog signaling in the airway epithelium of patients with chronic obstructive pulmonary disease Scientific Reports - Nature. 2019 Mar 4;9(1):3353. doi: 10.1038/s41598-019-40045-3.

Recombinant Mouse IL-23 (carrier-free) Martínez-López M, et al. (Feb. 2019) Microbiota Sensing by Mincle-Syk Axis in Dendritic Cells Regulates Interleukin-17 and -22 Production and Promotes Intestinal Barrier Integrity Immunity. 2019 Feb 19;50(2):446-461.e9. doi: 10.1016/j.immuni.2018.12.020. Epub 2019 Jan 29.

Recombinant Mouse TGF-β1 (carrier-free) Liu B, et al. (Jan. 2019) The lineage stability and suppressive program of regulatory T cells require protein O-GlcNAcylation Nature Communications - 2019 Jan 21;10(1):354. doi: 10.1038/s41467-019-08300-3.



goGermline embryos

Zhou et al. (2019). The testicular soma of Tsc22d3 knockout mice supports spermatogenesis and germline transmission from spermatogonial stem cell lines upon transplantation. Genesis. doi: 10.1002/dvg.23295

Conditional knockout mice

Currey et al. (2019). Mouse Model of Mutated in Colorectal Cancer Gene Deletion Reveals Novel Pathways in Inflammation and Cancer. Cell Mol Gastroenterol Hepatol. doi: 10.1016/j.jcmgh.2019.01.009

Conditional knock-in mice

Hudson et al. (2019). Alloimmunogenicity of an isolated MHC allele is affected by the context of MHC mismatch in a murine model. Transfusion. doi: 10.1111/trf.15109



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anti-PD-1

Holokai et al. (2019). Increased Programmed Death-Ligand 1 is an Early Epithelial Cell Response to Helicobacter pylori Infection. PLOS Pathogens. DOI: 10.1371/journal.ppat.1007468

anti-CD112

Cluxton et al. (2019). Suppression of Natural Killer cell NKG2D and CD226 anti-tumour cascades by platelet cloaked cancer cells: Implications for the metastatic cascade. PLOS One. DOI: 10.1371/journal.pone.0211538

anti-CD210

Ni et al. (2019). Comparative proteomic study reveals the enhanced immune response with the blockade of interleukin 10 with anti-IL-10 and anti-IL-10 receptor antibodies in human U937 cells. PLOS One. DOI: 10.1371/journal.pone.0213813



NATE (nucleic acid transfection enhancer)

Gui et al. (2019) Autophagy induction via STING trafficking is a primordial function of the cGAS pathway. Nature. DOI: 10.1038/s41586-019-1006-9.

Pam3CSK4 TLR1/2 agonist

Anh et al. (2019) Dampened NLRP3-mediated inflammation in bats and implications for a special viral reservoir host. Nature Microbiology. DOI: 10.1038/s41564-019-0371-3

Normocin antimicrobial reagent

Laute-Caly et al. (2019) The flagellin of candidate live biotherapeutic Enterococcus gallinarum MRx0518 is a potent immunostimulant. DOI: 10.1038/s41598-018-36926-8

abcam

Anti-Serine/threonine-protein kinase 4/MST-1 antibody [EP1465Y] (ab51134) Du X et al. (2019) Hippo/Mst signalling couples metabolic state and immune function of CD8a+ dendritic cells. Nature DOI: 10.1038/s41586-018-0177-0

Recombinant Anti-Cytokeratin 19 antibody [EPNCIR127B] (<u>ab133496</u>) Breinig M et al. (2019) Multiplexed orthogonal genome editing and transcriptional activation by Cas12a. Nature methods DOI: 10.1038/s41592-018-0262-1

Recombinant Rabbit IgG, monoclonal [EPR25A] - Isotype Control (<u>ab172730</u>) André P et al. (2019) Anti-NKG2A mAb Is a Checkpoint Inhibitor that Promotes Anti-tumor Immunity by Unleashing Both T and NK Cells. Cell DOI: 10.1016/j.cell.2018.10.014



EasySep™ Human Naïve CD4+ T Cell Isolation Kit

Zhenke et al. (2019) N-myristoyltransferase deficiency impairs activation of kinase AMPK and promotes synovial tissue inflammation. Nature Immunology. doi: 10.1038/s41590-018-0296-7

EasySep Direct Human Pan-Granulocyte Isolation Kit

EasySep™ Human CD4+ T Cell Enrichment Kit,

EasySep™ Human B Cell Enrichment Kit

Fregin et al. (2019) High-throughput single-cell rheology in complex samples by dynamic real-time deformability cytometry. Nature Communications. doi: 10.1038/s41467-019-08370-3

EasySep™ Human CD3 Positive Selection Kit II

EasySep™ Human CD4 Positive Selection Kit II

Yang et al. (2019) Mass cytometry analysis reveals that specific intratumoral CD4+ T cell subsets correlate with patient survival in follicular lymphoma. Cell Reports. doi: 10.1016/j.celrep.2019.01.085

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Australian and New Zealand SOCIETY FOR IMMUNOLOGY INC.

The aim of the ASI is to encourage and support the discipline of immunology in the Australia and New Zealand region.

The Australian and New Zealand Society for Immunology

Incorporated (ASI) was created by the amalgamation in 1991 of the Australian Society for Immunology, formed in 1970, and the New Zealand Society for Immunology, formed in 1975. The aim of the Society is to encourage and support the discipline of immunology in the Australasian region.

It is a broadly based Society, embracing clinical and experimental, cellular and molecular immunology in humans and animals. The ASI provides a network for the exchange of information and for collaboration within Australia. New Zealand and overseas. ASI members have been prominent in advancing biological and medical research worldwide. We seek to encourage the study of immunology in Australia and New Zealand and are active in introducing young scientists to the discipline.

ASI Member Benefits include:

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- ASI Women's Initiative to support female scientists
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