ASINEWS

DECEMBER 2023

In the spirit of reconciliation, ASI acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their elders; past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples today.
Whaiwhia te kete mātauranga (Fill the basket of knowledge)

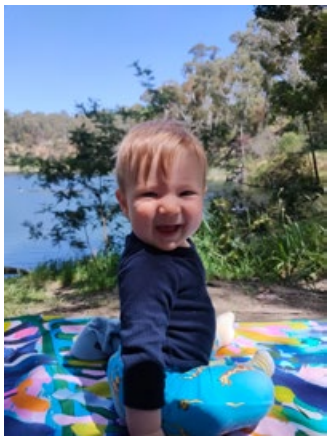
Australian and New Zealand Society for Immunology Inc.
ASI Inc. Secretariat. PO Box 7345 Beaumaris VIC Australia 3193
P: 03 9586 6095 | www.immunology.org.au/contact-us

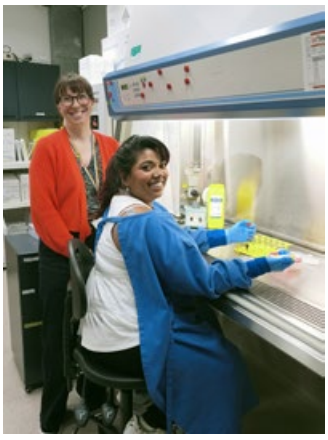
Australian and New Zealand SOCIETY FOR IMMUNOLOGY INC.

Contents

Jared Purton-ASI Award

KYLIE QUINN
RMIT University





I am a Senior Lecturer at RMIT University, where I run the Ageing and Immunotherapies lab.

My team and I are focused on understanding how ageing impacts on immunotherapies, such as vaccines or chimeric antigen receptor T cell therapy. This research brings together my expertise in vaccination, CAR T cell therapy and the ageing immune system, collected during a PhD with Joanna Kirman at the Malaghan Insitute, NZ, and post-docs with Robert Seder at the Vaccine Research Center, NIH, USA and Nicole La Gruta at the University of Melbourne and Monash University, AU. I am passionate about this under-researched area for a vulnerable cohort in our community.

I was awarded a Jared Purton Award way back in December 2019. I had just started my RMIT University Vice-Chancellor's Fellowship and was in the process of establishing my new lab. I urgently needed to recruit motivated students to my team and was keen to use the award funding to recruit a student through the Undergraduate Research Opportunities Program (UROP) run by CSIRO. Little did I know then, but UROP would go on hold for 2 years while the COVID pandemic upended our lives. I was unable to recruit a student, but ASI allowed me to re-purpose the award.

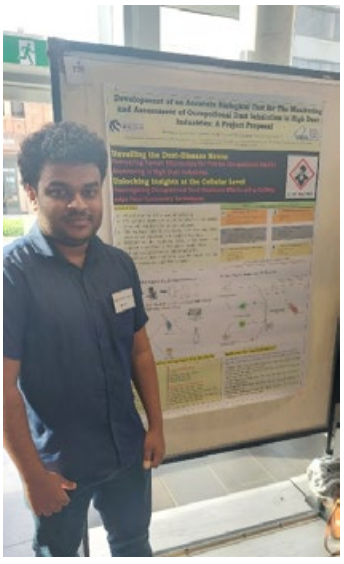
Life has changed in many ways for me and my team since 2019. My lab got up and running, despite COVID's interruptions. I recruited several fantastic PhD students, including Shivali Savita Chinni (pictured). I also became a parent to a gorgeous little fellow called Otis (also pictured). As a result, I have used the generous funding provided by the Jared Purton Award to support a key project being driven by Chinni and support my return to work after parental leave. Chinni is examining how ageing alters the expression of cytokine receptors and costimulatory molecules in mouse and human T cells. It is especially appropriate that this funding supports this work, since Jared Purton himself extensively contributed to this topic, publishing landmark work on cytokine sensing in T cells and age-related changes in that sensing. We deeply appreciate the support of his family to complete our study, supporting both Chinni and I at pivotal times in our careers, and we hope to build on Jared's considerable legacy in the field.

Pictured far left: Otis giving his most enthusiastic smile.

left: Kylie Quinn (left) and Shivali Savita Chinni (right) giving their most enthusiastic smiles.

ASI Global Outreach Award

PRABHASHA JAYASUNDARA
University of Newcastle



I am Prabhasha Jayasundara, a PhD student (immunology and microbiology) in Prof. Jay Horvat's group at Hunter Medical Research Institute (HMRI) at the University of Newcastle in Australia.

Hailing from Sri Lanka, I completed my bachelor's degree in Chemical and Process Engineering at the University of Peradeniya in Sri Lanka. My unique PhD project represents a dynamic collaboration between the fields of immunology and engineering, and it has recently earned me the prestigious "ASI Global Outreach Award."

My research focuses on developing an accurate biological test for monitoring and assessing occupational dust inhalation in high-dust industries. Despite stringent safety guidelines and the use of on-site and wearable dust monitoring devices, workers in high-dust industries continue to be diagnosed with occupational dust diseases such as silicosis and coal worker's pneumoconiosis. This suggests that current guidelines and practices may not effectively reduce the inhalation of harmful dust.

The primary objectives of my research are twofold: To establish an assay for detecting various types of occupational dust in biological fluids and airway cells from workers and to utilize this assay to assess the effectiveness and compliance of existing safety guidelines in different high-dust workplaces. Preliminary work using mouse models of occupational dust exposure has revealed that different dust types induce varying levels of lung disease. My team and I have found that the composition of dust, including carbon, silica, and iron levels, plays a crucial role in determining the risk of disease development. Additionally, our research has shown that even acute dust exposure results in dust accumulation in airway fluids and cells.

To develop our diagnostic screening test, we plan to use Raman microscopy to immobilize airway fluids on slides and detect free dust particles and cells containing dust particles. This will allow us to establish a new diagnostic screening test using a single-point Raman spectrometer. Our preliminary work indicates that specific particles possess unique Raman spectra, which enable label-free imaging of cells and fluids containing the same dust. This approach will be extended to analyze different types of dust, including carbon and iron particles, to assess differences between various dusts. Once validated in human samples, this assay could be employed to evaluate the effectiveness of practices and monitoring in high-dust workplaces, potentially improving worker safety and reducing the economic burden on health services. The outcomes of this research will be significant in terms of developing a novel method for detecting occupational dust exposure, ultimately enhancing workplace hygiene and worker safety.

As the recipient of the "ASI Global Outreach Award," I am honoured to receive this recognition from the Australian and New Zealand Society for Immunology. This award aligns with ASI's commitment to promoting equity, diversity, and inclusion. It aims to support students and early-mid-career immunologists residing in Low or Low-Middle Income countries. This award offers an invaluable opportunity for students and researchers from these countries to engage with the global immunology community.

I am grateful for this support, which will not only contribute to my academic and professional growth but also strengthen international collaborations and facilitate knowledge exchange in the field of immunology. I want to express my sincere thanks to the ASI for this recognition and the opportunities it provides. I am excited about the future research endeavours that this award will help me undertake and its positive impact on the field of immunology. I look forward to contributing to the ASI community and sharing the results of my research in the years to come.

Breakthrough Immunology Award

SAPNA DEVI
The University of Melbourne

Thank you, ASI - I'm ecstatic and grateful to be one of the two inaugural awardees. I would like to extend my appreciation to the ASI award committee for selecting my research for this prestigious award.

I am a senior postdoctoral researcher working in Prof Scott Mueller laboratory in the Department of Microbiology and Immunology, at the Peter Doherty Institute for Infection and Immunity, The University of Melbourne. I completed my PhD at Monash University (2011) where my work unravelled the cellular and molecular processes of leukocyte cell migration into the kidney and their influence on inducing inflammation and kidney damage. My interest to further understand the requirements of neutrophil mobilization in various organs led to me to pursue my postdoctoral work (2012-2015) at the Singapore Immunology Network, A*STAR. I since relocated to my mentor's lab at University of Melbourne, where I lead a small group investigating how stress affects immunity. My research vision is to explore how the sympathetic nervous system (SNS) influences anti-cancer immune responses and delineate if the SNS can be targeted to improve cancer treatment.

Sympathetic nerves are found in all tissues and sympathetic activity has been linked to increased tumour progression and metastasis. A mechanistic understanding of the role of stress on anti-tumour immunity is currently lacking. We have compelling new evidence that activation of the sympathetic nervous system can alter the functions and dynamic behaviour of immune cells in tissues and impair T cell responses to infection and tumour (Immunity 2021; DOI: https://doi.org/10.1016/j.immuni.2021.03.025). This implicates the SNS as a potentially important and novel target for cancer therapy. However, how nerves within tumours control the anti-cancer immune response is unknown.

The award will fund our transcriptomic approach to define the identity of sympathetic neurons innervating breast tumours and using chemogenetic mice, address how sympathetic signalling impairs immunity in the tumour microenvironment. Findings from these studies will unlock more project opportunities and will aid in my application for future funding.

Once again, thank you ASI! I look forward to the exciting journey of discovery and exploration that lies ahead in my pursuit of understanding the communication between sympathetic nerves and the immune system and its vital role in anti-cancer immunity.

Career Advancement Award - Miller

ASSOCIATE PROFESSOR GUNA KARUPIAH

Tasmanian School of Medicine University of Tasmania

Every two years, researchers from around the world gather for the International Poxvirus, Asfarvirus, and Iridovirus Conferences. What's remarkable about these meetings is that they don't have specifically invited speakers; instead, the organisers select presentations from submitted abstracts. This gives both new and experienced researchers a chance to showcase their work. I used the ASI Jacques Miller in 2023 to attend the 24th International Poxvirus, Asfarvirus, and Iridovirus Conference in Düsseldorf, Germany.

I am a microbiologist by training, having completed my BSc Honours at the University of Malaya, followed by an MSc degree by research in medical microbiology, virology, and epidemiology from the same institution. I further pursued a PhD in viral immunology at the Australian National University (ANU). Over the years, I have had the privilege of holding prestigious fellowships such as the Fogarty Fellowship at the National Institutes of Health (NIH, USA), the Medical Foundation Fellowship at the University of Sydney, and the International Research Scholar of the Howard Hughes Medical Institute (HHMI, USA). Prior to my current position at the University of Tasmania, I contributed to research at the John Curtin School of Medical Research (ANU) and the University of Sydney.

As a research and teaching-focused academic, I currently lead the Viral Immunology and Immunopathology Group at the Tasmanian School of Medicine. My expertise in orthopoxvirus immunity and pathogenesis has earned me international recognition. I also serve as a member of the WHO Advisory Committee on Variola Virus Research and the WHO Expert Group on Priority Pathogens (Poxviruses) of Severe Epidemic or Pandemic Threat.

In my research group, we concentrate on two broad areas of investigation. Firstly, we are delving into the reasons behind the ineffectiveness of specific antiviral treatments administered more than 48 hours after the onset of symptoms. Secondly, we are keen on understanding the molecular mechanisms underlying the induction of antibody responses by virus vaccines. Specifically, we have been exploring how highly attenuated virus vaccines can be manipulated to induce long-lived antibody responses. Our work involves a model system, which allows us to track the induction of somatic hypermutations in the variable region exon of Ig heavy chain in antigen-specific B cells, along with affinity maturation and neutralizing antibody responses associated with vaccine manipulation.

My attendance at the conference had two primary objectives. One was to present the findings of our team's study on the generation of high-affinity, neutralising antibodies triggered by viral vaccines. The other was to gain insights into the latest research on mpox (formerly known as monkeypox), particularly the ongoing efforts to develop effective medical countermeasures. Given my involvement with the WHO Advisory Committee on Variola Virus Research, I was particularly interested in exploring newer vaccines and vaccine platforms for mpox and other WHO priority poxvirus pathogens. The WHO had declared the multi-country mpox outbreak a Public Health Emergency of International Concern in July 2022. However, the medical countermeasures (vaccines and antivirals) for mpox, which are based on those developed for smallpox (a human disease caused by the variola virus), do not appear to be very effective. Notably, the highly attenuated third-generation smallpox vaccine (Jynneos) is ineffective in inducing long-lived antibody responses as it does not cause a productive infection. Similarly, the first-generation smallpox vaccine (replicating vaccinia virus) used in eradicating smallpox is considered unsafe due to its potential to cause significant adverse effects, especially in immunocompromised individuals. There is therefore a need for effective vaccines against mpox and other orthopoxviruses that infect humans.

The research I presented at the conference was the result of a collaborative effort involving several esteemed colleagues. Together with A/Prof Tim Newsome and Dr Yee Lian Chew from the University of Sydney, Prof Robert Brink and Dr Tyani Chan from the Garvan Institute of Medical Research, and Dr Geeta Chaudhri from the Australian National University, we delved deeper into the complexities of viral vaccine-induced immune responses. The experiments conducted by Dr Preethi Eldi, a talented PhD student, involved the use of Rob Brink's SW_{HEL} B cell receptor (BCR) transgenic (Tg) mice, in combination with either a wild-type or a highly attenuated recombinant ectromelia virus (ECTV)

engineered to express a variant of hen egg lysozyme (HEL). The recombinant viruses were generated in Tim Newsome's lab. SW_{HEL} Tg mice possess HEL-specific Tg B cells capable of class switching, allowing us to track their responses as they undergo affinity maturation and class switch recombination in response to virus-expressed variant HEL. Note: For the non-pox virologist, ECTV is an orthopoxvirus that only infects mice and is closely related to variola, vaccinia, mpox, and cowpox viruses. ECTV infection of mice is an excellent small animal model to study the genetic and immunologic basis for resistance and susceptibility of humans to smallpox.

Our findings shed light on how the spread of the virus vaccine (depending on the route of vaccine administration) significantly influences the immune response, thereby presenting potential opportunities for enhancing vaccine efficacy. Notably, the systemic spread of highly attenuated virus vaccines, mimicking the spread of antigens from replicating viruses, may be crucial to the induction of high-affinity, protective antibodies that are long-lived. At the conference, several presentations focused on mpox and the development of medical countermeasures. At least two groups expressed interest in our SW_{HEL} BCR Tg model system for assessing the effectiveness of their novel orthopoxvirus vaccine platforms, a prospect I am particularly keen to pursue.

Beyond the enriching scientific discussions, the conference provided an excellent opportunity for me to reconnect with long-time colleagues and meet the newer generation of pox, asfar, and iridovirus experts.

I extend my gratitude to the ASI for the Jacques Miller Award, which enabled me to attend and present at the conference.

Below: Attendance at one of the sessions.Quinn (left) and Shivali Savita Chinni (right) giving their most enthusiastic smiles.

Bottom: Guna with Professor Antonio Alcami (Centro de Biologia Molecular Severo Ochoa, Madrid, Spain) and Professor Margarita Del Val (Global Health, Spanish National Research Council, Spain)

NSW/ACT Branch Meeting Report

Highlights from the NSW Highlands

The NSW and ACT branches of ASI came together in Bowral once again for two great days of science and networking in the lovely scenery of the Southern Highlands. A special thank you to our invited speakers. On the first day Dr Quan Nguyen (University of Queensland) gave us a phenomenal visual display of the utilisation of spatial multi-omics in cancers and immune cells at single-cell resolution and within spatial morphological tissue context (Talk title: Spatial Multi-omics Analysis of Immune Responses to SARS-CoV-2 infection in Lung Tissue), and Dr Alexandra Spencer (Newcastle University) presented on her extensive work in vaccine design (Talk title: Using vaccines as a tool to study adaptive immune responses). Professor Claudine Bonder (University of Adelaide) opened our scientific program on the second day and presented on her lifework on understanding vascular mimicry in cancer and therapy development (Talk title: Re-evaluating the tumour vasculature to improve cancer outcomes). The meeting ended with A/Prof Anselm Enders (Australian National University), who shared his work on how unique variants in the DNA-binding domain of IRF4 contribute to patient immunodeficiency (Talk title: A multimorphic mutation in IRF4 causes human combined immunodeficiency and leads to dysregulation of B cell development).

A key aim of the retreat is to provide our students and ECRs with the opportunity to present their research in a friendly and collegiate setting. Over the two days we heard from more than 30 students (Honours and PhD) and post docs from nine institutions covering a diverse range of topics including mucosal immunology, cancer immunology, tissue transplantation, autoimmunity, immunodeficiency, cellular biology, single cell technologies. Building on the high standard set at last year's meeting, the quality of the talks was excellent and made the job very difficult for our judging panel.

Congratulations to our prize winners for the best presentation in their career categories:

- Dr Andy Xin Gao (Post doc) - Zeb2 Drives the Formation of CD11c+Atypical B Cells which Sustain Germinal Centers during Persistent Infection - Sponsored by Miltenyi Biotec
- Cynthia Turnbull (PhD) - DECTIN-1: A modifier of CTLA-4 function and autoimmune disease
- Abigail Grootveld (PhD Student) – Cellular dynamics of tingible body macrophages locally activated by apoptotic cells in the germinal centre
- Yanran Fan (Honours Student) - The effect of a point mutation in IRF4 on the development and function of dendritic cells

This meeting would not be possible without the people behind it. Thank you to our generous sponsors: AstraZeneca, TransnetXY, United Bioresearch, Australian Biosearch/Biolegend, New England Biolabs, BD, Cell Signalling Technologies, Miltenyi Biotech, Cytek and Australian BioResources. We are also grateful to our volunteer chairs and judges for their excellent effort in facilitating the meeting; to student volunteers Natalie Smith and Olivia Lavidis (University of Sydney) who developed and ran the quiz and puzzles entertainment during the dinner; and to Rachel Ireland (University of Sydney) who designed the unique theme and logo for our meeting. Lastly, a big shout out to the other members of the organising committee Helen McGuire (USyd), David Tscharke (ANU), Felix Marsh-Wakefield (USyd) and Anselm Enders (ANU) - many hands make light work.

Angelica & Julia
NSW & ACT Councillors

Career Advancement Awards

MITRA ASHAYERIPANAH

The University of Melbourne

My name is Mitra. It is a pleasure to contribute to the ASI newsletter, and I thought it would be good to share my scientific journey.

I completed my BSc and MSc in microbiology at Iran's most prestigious universities, graduating as the top student in both classes. I used to be a bookworm! This was followed by six years of research assistant experience in vaccine development. I then pursued my PhD at the Peter Doherty Institute of the University of Melbourne, graduating in June 2022. I am currently an early career researcher at the Biomedicine Discovery Institute of Monash University.

Throughout my scientific journey, I have been involved in four research projects.

In my master's, I developed and optimized a genotyping method for nosocomial bacteria called "random amplified polymorphic DNA." My protocol was efficient in genotyping drug-resistant bacteria collected from various hospital wards. This helps to understand if there is any clonal spread of drug-resistant bacteria from one ward to another, and to prevent the spread. This study led to three first-authored and one second-authored publications in Q2-Q3 journals. I am happy that my optimized protocol has been used by 15 researchers and in hospitals around the world.

During my research assistant years, I constructed recombinant BCG vaccines to improve efficiency against tuberculosis. Genetic modification of mycobacteria is a challenging task because of their thick outer membrane. For that, I had a six-month visit to the Universitat de Barcelona. This was my first experience of international collaboration. The constructed vaccines presented an expanded antigen repertoire and showed improved immunogenicity in mice compared to parental BCG. Due to my supervisor's retirement in 2017, the resulting publications have been delayed. Still, the team endorsed me in 2022 to take the corresponding author role. One paper from this study is out, and two others are currently under review at PLOS ONE, etc.

In my PhD studies, under the supervision of Prof. Jose Villadangos, we showed that dendritic cells (DC) become dysfunctional in mouse models of sepsis. This phenomenon is called DC paralysis and contributes to protracted immunosuppression. We developed strategies to restore DC function, enabling sepsis mice to control subsequent infections. The manuscript from this study is at minor revision for acceptance by Cell Reports. We further tried to extrapolate these findings from the mouse model to the clinic by phenotypic and functional characterization of DC from severe COVID-19 and trauma patients admitted to ICU. This research is ongoing in my PhD laboratory. I am hopeful that the understanding from my mouse studies will ultimately help improve immune responses in critically-ill patients towards preventing ICU-acquired secondary infections.

The ASI Career Advancement Award supported me in attending the DC2022 symposium where I was able to share our findings of DC paralysis in sepsis mice with experts in the DC field.

During my postdoc at Monash University, I have been working on generating murine bone-marrow derived DC (BM-DC) by using an improved protocol. This protocol allows the generation of a higher number of BM-DC, and holds promise to improve the generation of human DC from cord blood for applications such as cancer immunotherapy. I have performed phenotypic and functional characterization of these BM-DC. I also successfully used these BM-DC for vaccination in tumour-bearing mice. The manuscript from this study is expected to be submitted for peer-review soon.

I sometimes think to myself that perhaps it was not the best career choice to become a biomedical scientist, but deep down, I feel beyond proud of the contribution that I have been able to make during my scientific journey. I feel so much motivation and enthusiasm to keep up with the hard work and my resilient spirit. I look forward to the future chapters of my career to unfold.

Career Advancement Awards

SARAH DART

The University of Western Australia

My name is Sarah, and I received this award as a PhD student at the University of Western Australia. My research in transplantation immunology was supervised by Professor Michaela Lucas, Professor Gary Jeffrey, Professor David Joyce and Professor Axel Kallies. Our groups research focus is the tissue-resident leucocytes transferred within an organ from a donor to a recipient.

We know that tissue-resident leucocytes play important roles in wound healing and pathogen protection, and there is some evidence that their retention after transplantation is associated with improved graft outcomes. However, little is known about the factors affecting their retention post-transplantation, and we have proposed that they are depleted by graft-infiltrating recipient leucocytes. Within my thesis, we described the effects of donor-recipient mismatch and immunosuppressive drugs on donor leucocyte retention and the recipient leucocyte response after transplantation. Murine liver and kidney transplants were performed by our microsurgical team, and the establishment of clinically relevant immunosuppression protocols for this project was supported by our collaborators at PathWest Laboratory Medicine. We demonstrated that even a minor antigen mismatch is sufficient to reduce the number of donor leucocytes after transplantation. Additionally, the administration of our chosen immunosuppressive therapies to MHC-mismatched kidney recipients did not improve the retention of donor leucocytes. Further work investigating the functional effects of these findings are underway. These data contribute to our understanding of immune responses after transplantation, which may be critical to improving graft health and patient outcomes.

I passed my PhD in May, just prior to giving birth to my son. As a scholarship recipient I was ineligible for any paid maternity leave, but still wanted to be home with my son. At the same time, to share our findings and set myself up well for a postdoctoral position in 2024, I wanted to finish some analysis and prepare my thesis chapters as manuscripts for publication. This award has supported my work-life balance, allowing me to continue to work on my career with casual hours around my care responsibilities, without hurrying back into a job to support my family financially. I am incredibly grateful to ASI for their support in these endeavours and look forward to sharing our findings with the immunology community.

The IUIS Corner

Joanne Reed | IUIS Coordinator

Welcome to the final edition of IUIS Corner for 2023. Before I start reflecting on the year that was, I would like to look to the future with an exciting announcement...

ASI are bidding to host the IUIS World Congress 2031 in Brisbane!

The IUIS Congress is the largest international conference in immunology with thousands of participants, including basic, translational and clinical scientists, from those in their early career stages to long-time experts and global leaders.

After hosting a successful IUIS Congress in 2016, ASI is primed to once again host our international immunology community and showcase our region.

If you would like more information or would like to advocate for ASI's IUIS Congress bid by displaying a slide at the end of your talk at an international immunology conference, please get in touch.

Top 5 IUIS Highlights of 2023

1 The 18th IUIS International Congress of Immunology in Cape Town. ASI funded seven early career researchers to attend the Congress – four ASI members and three members of international immunology societies from low to middle income countries.

2 IUIS launched the Early Career Committee, an initiative to promote and connect ECRs in the field of immunology at an international level. ASI members with less than 10 years active working experience after their last awarded degree (BSc, MSc, PhD) are invited to join.

3 International Day of Immunology 2023 was celebrated on 29 April with a live panel discussion on the theme 'Immunology Talks to Public Health'. The recorded discussion among global experts is available on the IUIS website.

4 IUIS and its Gender Equality Committee (GEC) announced the inaugural winner of the Menarini Prize for Outstanding Woman Immunologist, Professor Diane Mathis.

5 IUIS Council elections saw a new executive and council form in 2023, with myself and fellow ASI member Professor Roslyn Kemp elected to represent our region.

Wishing you all an enjoyable break and I will be back with more IUIS news in 2024.

SOMETHING NEW IS COMING!

ASI will be making some changes to the newsletter format and frequency to better fit with the digital needs of our readers.

Do you have any feedback?

This is your chance to be heard!

Email: newsletter@immunology.org.au before the end of 2023 to provide your feedback. Let us know what you think about the current newsletter format and frequency and how you would feel about any changes. If you have any suggestions for content, layout changes or improvements please let us know.

VIC/TAS Branch Report

It has been a busy year for the VIC/TAS ASI branch, with many seminars happening across the branch, as well as the IgV Annual Scientific Meeting.

Visiting Speaker Programme

It has been brilliant to see the ASI Visiting Speaker Program fully resume this year. We have had five different speakers visit Melbourne this year, presenting seminars at Monash University, The Walter and Eliza Hall Institute (WEHI), Olivia Newton-John Cancer Research Institute (ONJCRI) and Peter MacCallum Cancer Centre (Peter Mac). Speakers included Chrysothemis Brown, Hai-Hui Xue, Carla Rothlin, Michela Locci and special mention to Paul Kubes who visited the University of Tasmania as well as two sites in Melbourne. It has been fabulous to have so many international speakers once again visiting our shores bringing some world-class immunology. Big thank you to all the nominating members as well as local hosts who worked hard to coordinate these visits and look after our speakers while they were here.

IgV Annual Scientific Meeting 3-4 August

More than 100 people attended our IgV Annual Scientific Meeting held at the Yarra Valley Lodge, not far from Melbourne. We had a fabulous meeting showcasing some of the excellent immunology research happening in Victoria and Tasmania at the moment. Special mention to our two interstate invited speakers Severine Navarro (QIMR) and Stuart Tangye (Garvan), as well as all our other invited speakers who featured throughout the two days, Sammy Bedoui (UoM), Stephanie Gras (La Trobe), Nick Huntington (Monash), Mark Hulett (La Trobe), Misty Jenkins (WEHI), Ian Parish (Peter Mac), Clare Slaney (Peter Mac) and Rhiannon Werder (Murdoch).

We had fabulous sessions covering cancer immunotherapies, infection and innate immunity, T cell biology and development, lung immunity, B cells and immunodeficiencies, and tumour immunity. The IgV Annual Meeting provided many opportunities for students and postdocs to present their research, and the quality of oral and poster presentations over the two days was exceptional. In particular, the three-minute thesis session always picks up the pace and showcases some fabulous research in record time.

Congratulations to the following award winners:

- Best oral presentation by a student - Yangsong Xu (Baker Heart & Diabetes Institute)
- Best oral presentation by an early postdoc - Harry Horsnell (The Peter Doherty Institute for Infection and Immunity)
- Best three-minute thesis – Sean Cutter (La Trobe University) and Rachel Peiris (The Peter Doherty Institute for Infection and Immunity)
- Best poster presentation by a student – Olivia Moscatelli (The Walter and Eliza Hall Institute) and Thomas Collins (Baker Heart and Diabetes Institute)

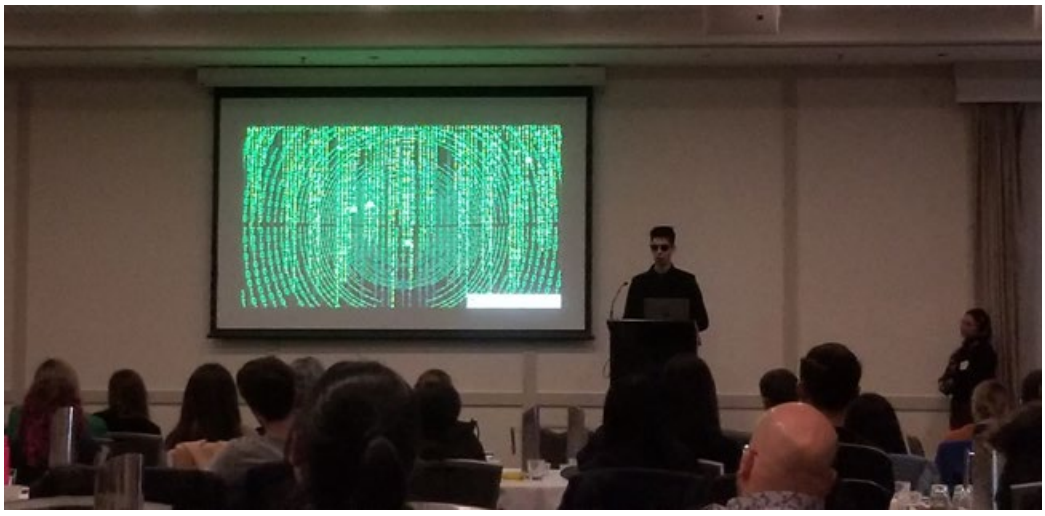
A huge thank you to all the IgV committee members who were involved in putting this meeting together, particularly Lisa Mielke (president) and Katrina Binger (Secretary). Thank you also to the many people who assisted with assessing the oral and poster presentations.

Finally, a big thank you to all the meeting sponsors, StemCell, Lonza, Transnetyx, New England BioLabs, Revvity, United Bioresearch, Monash University Dept of Biochemistry and Molecular Biology, Australian Biosearch, Milteny Biotec, BD, Chameleon Science and Perkin Elmer. As always, holding these types of meeting is only possible with their continued support.

Autumn and Spring Seminars

IgV hosted two seasonal Friday afternoon seminars this year. For the Autumn Seminar, IgV teamed up with the ASI Visiting Speaker Program featuring Hai-Hui Xue (Center for Discovery and Innovation, Hackensack University Medical Center, USA) and the Spring Seminar featured ASI's President herself, Gabrielle Belz (Frazer Institute, University of Queensland). At the Autumn Seminar in May, Hai-Hui Xue spoke on grand master synergy, highlighting three stories about Tcf1, CTCF, and cytotoxic T cell biology. While in November at the Spring Seminar, Gabrielle Belz presented on epithelial-immune sensing and how it sets the landscape for mucosal homeostasis. The seminars were held both online and in person at The Leveson, and it was fabulous to see immunologists from all over Melbourne, representing multiple Universities and Institutes, come together to discuss science over a glass of wine or pint of beer. Thank you to co-convenors Daniel Pellicci (MCRI) and Oanh Nguyen (UoM), as well as event sponsor Miltenyi Biotech, for all their efforts in organising these tremendous seminars.

Louise Rowntree
VIC/TAS Councillor



NSW Branch Report

Thank you from the outgoing NSW Councillor

Dear all, I hope you're all doing well and are looking forward to the upcoming festivities in December.

What a wonderful opportunity it is that this year's ASI annual scientific meeting is in the natural reserves of New Zealand! I'm looking forward to seeing many of you there and see the fantastic progress made over the year.

The year of 2023 has been a significant one of change, growth and renewal. It is with slight sadness to share with you that my term as branch councillor ends at the AGM this year. It has been an immense privilege to have served the NSW immunology community over many occasions, organising branch meetings, working with passionate students, researchers, clinicians to celebrate day of immunology, special seminars and more. I'm grateful for the opportunity that has been given to me and the peer support that I have received from many of you across the network as I navigated my career an early career researcher.

I joined the ASI in 2015 as a member and with some luck began my role as the newsletter editor. This really widened my vision as I immersed myself into the ongoing improvements it strives to achieve as a society, and the outstanding science that is within the ASI community. With much encouragement from my predecessor, Helen McGuire [ex branch councillor], I took up the 3-year term as NSW Councillor just as the COVID pandemic hits in 2020. Whilst that had been an exceptionally challenging time on many levels, I am forever grateful for the growth experience that it had brought upon me.

I'd likely particularly extend my thanks to the local NSW advisory committee, who has provided much guidance and support on many levels to ensure that NSW Immunology stays strong and coherent as a network. I merely played a little part in being a touch point.

I would also like to especially thank my fellow ACT Councillor, Julia Ellyard, whom I have worked with on multiple occasions to make NSW-ACT Branch Meeting a success. Finally, I am delighted to be passing on the NSW Branch Councillor role to Felix Marsh-Wakefield, who was voted in as the councillor [2024-2026]. Felix was appointed NSW treasurer in early this year and have seen through the activities of the branch, so I'm sure under his leadership NSW will continue to thrive.

Meanwhile, I will continue working with Felix as the branch treasurer for ASI NSW and also as the Special Interest Group Coordinator [2024-2026], to contribute more closely to the research-specific interests of the ASI network nationally.

I shall see you around and I look forward to be in touch again soon.

Angelica Lau
NSW Councillor

Sustaining Member Publications

a. goGermlineTM (https://www.ozgene.com/gogermline-knockout-and-knock-in-mice/)

Kayagaki et al., (2023). Inhibiting membrane rupture with NINJ1 antibodies limits tissue injury. Nature.

doi: 10.1038/s41586-023-06191-5.

b. Knockout mouse model (https://www.ozgene.com/services/knockout-mice/)

Mah et al., (2023). The chromatin reader protein ING5 is required for normal hematopoietic cell numbers in the fetal liver. Front Immunol.

doi: 10.3389/fimmu.2023.1119750.

c. Humanized mouse model (https://www.ozgene.com/services/humanized-mice/)

Pegoretti et al., (2023). Sequential treatment with a TNFR2 agonist and a TNFR1 antagonist improves outcomes in a humanized mouse model for MS. J Neuroinflammation.

doi: 10.1186/s12974-023-02785-y.

1. GFP-Trap (https://www.ptglab.com/results?category=&q=gfp-trap&target=)

Seung Cho Lee et al. (2023) Chromatin remodeling of histone H3 variants by DDM1 underlies epigenetic inheritance of DNA methylation Cell doi: 10.1101/2023.07.11.548598

2. CHAC1 Rabbit Polyclonal Antibody (https://www.ptglab.com/products/CHAC1-Antibody-15207-1-AP.htm)

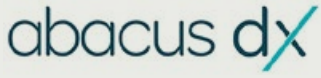
Yuyang Liu et al. (2023) Autoregulatory control of mitochondrial glutathione homeostasis Sciencedoi: 10.1126/science.adf4154

3. GAPDH Mouse Monoclonal Antibody (https://www.ptglab.com/products/GAPDH-Antibody-60004-1-Ig.htm)

Meijian Liao et al. (2023) LINC00922 decoys SIRT3 to facilitate the metastasis of colorectal cancer through up-regulation the H3K27 crotonylation of ETS1 promoter

Mol Cancer doi: 10.1186/s12943-023-01859-y

Thanks to our Sustaining Members



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.

The ASI membership directory, listing all current members of the Society is available at http://www.immunology.org.au/asi-membership-directory/

REMEMBER:
Renew your
ASI membership

To renew your membership, click here. Please note that if you have not held a membership within the last 2 years, you will be prompted to provide 2 Nominators willing to support your application.

ASI Member Benefits include:

- Career Advancement Awards
- Bursaries to attend ASI's Annual Meeting
- New Investigator and Student Awards at ASI Annual Meeting
- ASI Women's Initiative to support female scientists
- ASI Member's benefits publishing in ASI Journals ICB and CTI
- Special offers from ASI's Sustaining Members
- Full access to the journals Immunology & Cell Biology, Clinical & Translational Immunology

ASI Council

Executive Committee

President |
president@immunology.org.au

Past President | Stephen Turner
stephen.j.turner@monash.edu

Hon. Secretary | Connie Jackaman
secretary@immunology.org.au

Treasurer | Emma Grant
treasurer@immunology.org.au

Deputy Treasurer | Scott Byrne
treasurer2@immunology.org.au

Voting Council

NSW Councillor | Angelica Lau
asinsw@immunology.org.au

SA/NT Councillor | Damon Tumes
asisant@immunology.org.au

QLD Councillor | Severine Navarro
asiqld@immunology.org.au

VIC/TAS Councillor | Louise Rowntree
asivictas@immunology.org.au

ACT Councillor | Julia Ellyard
asiact@immunology.org.au

NZ Councillor | Inken Kelch
asinz@immunology.org.au

WA Councillor | Rachael Zemek
asiwa@immunology.org.au

Non-Voting Council

General Manager | Tyani Chan
generalmanager@immunology.org.au

Social Media Coordinator
Marina Yakou
socialmedia@immunology.org.au

Day of Immunology Coordinator
Caleb Dawson
doi@immunology.org.au

Newsletter Editor | Deborah Burnett
newsletter@immunology.org.au

IUIS Representative | Joanne Reed
joanne.reed@sydney.edu.au

FIMSA Representative | Di Yu
di.yu@uq.edu.au

ICB Editor-in-Chief | Adrian Liston
al989@cam.ac.uk

CTI Editor-in-Chief | Rajiv Khanna
rajiv.khanna@qimrberghofer.edu.au

SIG Coordinator
Fernando Guimaraes
sigs@immunology.org.au

Visiting Speaker
Program Coordinator
Zeeshan Chaudhry
vsp@immunology.org.au

Equity Diversity Inclusion
Coordinator and Chair
Diana Hansen
edi@immunology.org.au

Annual Meeting Co-ordinator
Antje Blumenthal
a.blumenthal@uq.edu.au

Honorary Archivist | Judith Greer
j.greer@uq.edu.au

The ASI membership directory, listing all members of the Society is available at https://www.immunology.org.au/members/

Disclaimer:
The views expressed are those of the authors and do not necessarily reflect the official policy or position of ASI