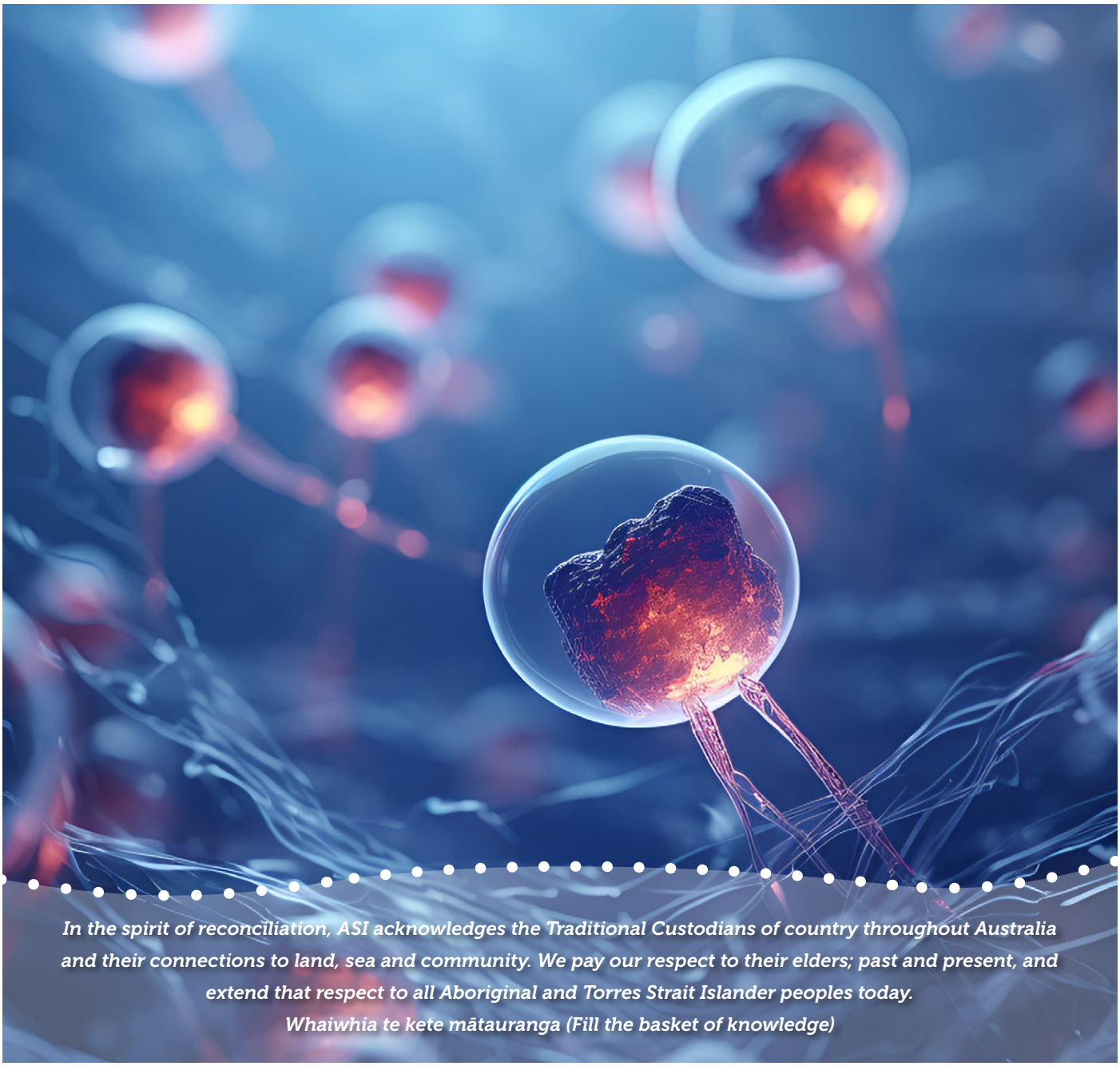
ASINEWS

SEPTEMBER 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

President's Report

ASI was delighted that it was possible to go ahead with the Annual Scientific Meeting which was held at the Melbourne Convention Centre–the first since 2019.

The fact that over 1,000 people attended is testament to how 'starved' the community of Australian and New Zealand immunologists were of the face-to-face interactions. This meeting provided a much-needed venue allowing the community them to reconnect with old friends, make new friends, start new collaborations and just enjoy seeing each other again. We were treated to a smorgasbord of national and international speakers. A highlight of the event was the special session to celebrate the 25th anniversary of the Nobel Prize for Medicine and Physiology for 1996 awarded to Prof Peter Doherty and Prof Rolf Zinkernagel. It was an absolute treat to have Rolf in Australia for this event. We are grateful to A/Prof Mark Chong and his local organizing team for the enormous efforts in making this event such a success, particularly navigating the moving target required to bring this event to fruition. We are also grateful to Prof. Antje Blumenthal, ASI Annual Meeting Coordinator, and the extended members of the community who undertake the multitude of tasks necessary to realise such a successful event.

Our society journals, ICB and CTI, continue to build their success led by our Editors-in-Chief, Prof Adrian Liston (ICB), and Prof Rajiv Khanna (CTI) together with their teams. I'd like to thank the entire team for their continued efforts in driving the continued upward trajectory of these two important journals that have established premier positions in the immunology stable for the community. We are also grateful to the support of Wiley, particularly Tamara D'Mello, who has supported the journal editors in responding to the challenges of the changing landscape confronted by the journals. ICB, formally known as the Australian Journal of Experimental Biology and Medical Science, also celebrates 100 years and this will be highlighted at the annual meeting in Auckland. It is remarkable that the 'Possum Pages' have grown into one of the leading specialist immunology journals and we encourage everyone to submit to the journals, and to touch base if they can contribute stories to this celebration. Many thanks to the committee who have worked diligently mining old records and journal volumes to bring to life a rich content to tell us the story of ICB.

The International Union of Immunological Societies (IUIS) symposium will be held in Cape Town, South Africa late this year (27 November – 2 December) after several years delay. We have funded Special Travel Awards to facilitate the attendance of 4 ASI members, and very pleased to announce our early commitment to funding the IUIS Low Middle Income Country Awards to enable 3 early career scientists to attend. Additionally, we were delighted to be able to work with Australian IUIS representatives to submit the names of emerging Australian and New Zealand immunologists as part of the Rising Stars program, established to raise the profile of outstanding young professionals.

Now we look forward to resuming the normal annual cycle with the 51st Annual Scientific Meeting well under way for 4-8 December to be held at the University of Auckland, New Zealand. Already a rich list of speakers has been assembled including Adrian Liston (Cambridge), Pamella Bjorkman (Caltech), Graeme Ogg (Oxford), Megan K. Levings (British Columbia) and Kiyoshi Takeda (Osaka) just to mention a few. This is a great opportunity to jump across the ditch and enjoy some of the wonderful offerings of our sister country.

Finally, I want to thank my fellow executive members Connie Jackman, Scott Byrne, Stephen Turner, Emma Taylor and CEO Tyani Chan. Through the efforts and extensive experience of this group, it has been possible for me to navigate around the ASI policies, processes and procedures which have become significantly more complex as the organization has grown.

Gabrielle Belz
ASI President

NSW Branch Report

Hi everyone!

The NSW Branch has been keeping busy this year as many of our key activities have resumed since the pandemic. It has been wonderful to see the enthusiasm of our ASI members in bringing these activities back to its former glory.

We are excited to have resumed our visiting speakers program this year, with Dr Chrysothemis Brown from Memorial Sloan Kettering Cancer Centre visited Garvan Institute and Westmead Institute of Medical Research on May 24-25th. She delivered two engaging talks on "Early life imprinting of intestinal tolerance", attracting fantastic participation and questions from audiences. Prof Carla Rothlin from Yale School of Medicine, US, is also expected to visit Sydney in September. She will be visiting the Garvan Institute on 18th and Centenary Institute on 19th.

Meanwhile the 2023 NSW-ACT joint branch meeting is being held on 7-8th September as we speak, so there'll be more updates on this in the next issue.

As always, welcome all suggestions for ASI NSW to support events that will benefit our members. I look forward to seeing many of you at the next events to come.

Best wishes,

Angelica Lau
NSW Councillor

Day of Immunology 2023

The ASI Day of Immunology 2023 was a fantastic success, thanks to the dedication and passion of everyone who organised and ran events across Australia. As always, we reached a large and diverse audience from the public, who engaged in various activities to celebrate and learn about the wonderful world of immunology.

In my first year as the Day of Immunology coordinator, I witnessed the mountain of behind-the-scenes work put in by those who organise and deliver the engaging events and those managing the online content – too many people to thank here.

I am grateful for the legacy left by Dr Gabriela Khoury, who has been an outstanding leader and advocate for immunology in this role the past six years. She expanded the scope and impact of the Day of Immunology and inspired many people with her passion for immunology and science communication. Thank you, Gabi, for your amazing work and dedication!

Read below about the exciting events that took place with partnering institutes, including discovery tours, public forums, and fun activities for kids. Don't miss the in-depth reports from the organisers themselves in this issue.

Exploring Immunology Research and Innovation

The doors were opened to the public at the Hudson Institute, Monash Department of Immunology, MCRI, WEHI, Peter Doherty Institute, St Vincent's Institute, Peter MacCallum Cancer Centre and RMIT, where volunteers took the time to share about the latest research and technologies.

Public forums

In addition to the discovery tours, we offered stimulating and engaging public forums on various immunology topics.

The Secrets of Skin Immunity in VIC: "Getting under your SKIN immunity" was held at the Peter Doherty Institute, where our brilliant and entertaining hosts explained the basics of skin immunity and its importance for our health. Some of our hosts also jumped on RRR's Einstein A Go-Go to speak about their research.

The Microbiome and Childhood Immunity in QLD: QIMR Berghofer hosted a public forum on The Gut's Role in Childhood Illness, where a star-studded panel of experts discussed how the microbiome influences childhood inflammation and immunity.

Skin Immunology in the Pub in TAS: A public event was held at the Black Buffalo Hotel, where attendees enjoyed a casual evening of immunology talks around skin immunity.

Nature vs Nurture in NSW: UNSW hosted a public forum addressing the interplay of our environment and our immune system with an expert panel and a poster competition.

Immunotherapy in the Pub in SA: ASI SA and Science in the Pub joined forces to deliver "The Science of Immunotherapies: Can our immune system save us?" featuring lay-style presentations by three experts in the field.

Immunology Fun and Games in WA: We didn't forget the kids! The Telethon Kids Institute entertained people of all ages with educational and immunological activities, such as making their own bacteria and germ-fighting immune cells.

Investing in the future

We invested in the next generation of scientists by offering science experiences and inspirational career information to high school students.

Career Discovery Tour in NSW: Year 11 and 12 students visited the Garvan Institute for a day full of experiments, immunology education and medical research careers information.

Body at War in NSW: The University of New England hosted a "Body at War" Workshop for senior high school biology students, including hands-on activities to educate students about immunisation and immune cells.

Meet a Scientist in NSW: Year 11 and 12 students visited UNSW Museum of Human Diseases for discussions with a diverse panel of experts. They also engaged with researchers at "Ask me anything" immunologist booths to learn more about everyday science.

High School Workshops in VIC: We held science workshops around Victoria to give many students a hands-on experience of science and immunology.

Career Opportunities in Biomedical Science: The online careers STEMinar revealed to students and early career researchers the diverse career paths and opportunities in immunology and related fields.

Until next year...

Thank you to all the speakers, volunteers, sponsors, hosting institutes and attendees who made this month of immunology events possible and memorable. We hope you enjoyed it as much as we did and learned something new along the way. We look forward to seeing you again next year for another brilliant program!

Caleb Dawson
DOI Coordinator

29TH APRIL
Day of Immunology
Australia and New Zealand

Day of Immunology

VIC/TAS

Dr Holly Anderton (WEHI) presenting at the Public lecture in Melbourne. Photo credit Dr Fern Koay

International Day of Immunology - Victoria and Tasmania

By Dr Maria Demaria (Chair, Day of Immunology Victoria and Tasmania Organising Committee), Dr Susan Christo (Chair, Public Lecture Subcommittee), Dr Timothy Gottschalk (Chair, Secondary School Workshops Subcommittee), Dr Andy Flies (Chair, Science in the Pub Subcommittee), Dr Rhea Longley and Dr Charis Teh (Chairs, Discovery Tours Subcommittee).

It is always a pleasure to be able to engage with members of the public to discuss and showcase immunology! In 2023, we held all of our regular in-person events (and even expanded some!) to celebrate the International Day of Immunology on, and around, April 29th in Victoria and Tasmania. Members of our committee organised and hosted a Public Lecture, a Science in the Pub event, Discovery Tours, Secondary School Workshops, and an online careers STEMinar. You can read more about the highlights of these events from the sub-committee chairs below.

We thank all of our invited speakers, sponsors and supporters, and participating institutes for their contributions and support towards our events this year - we would not be able to host these events without them! I'd also like to acknowledge all of the hard work and dedication of our organising committee of volunteer scientists from all over Victoria and Tasmania - Secretary, Catriona Nguyen Robertson, sub-committee chairs Susan Christo, Andy Flies, Timothy Gottschalk, Emma Grant, Chris Harpur, Gabriela Khoury, Fern Koay, Rhea Longley, and Charis Teh, and all of the sub-committee members, who contributed to organising, promoting, engaging sponsors, and running these events.

We hope to further expand our events in 2024 and look forward to celebrating the Day of Immunology again!

Public Lecture – Getting under your skin immunity!

The 2023 Public Lecture attracted over 100 participants all eager to learn more about the largest organ of our body! The evening was hosted by Dr Claire Gordon (Austin Health) who provided a wonderful introduction on how immunity and skin work together (and when they don't), setting the scene perfectly for our three prominent speakers. Prof Grant McArthur (Peter MacCallum Cancer Centre) left us inspired at the hope of upcoming melanoma treatments, eloquently describing the complexity of the disease and providing up-to-date data on promising new immunotherapies. Dr Holly Anderton (WEHI) made us appreciate just how hard our skin immune cells work to heal our wounds – physically speaking – with an entertaining overview of how our body handles skin damage. Prof Rod Sinclair (Sinclair Dermatology) had the audience hanging onto his every word – educating us on the reality of autoimmune disorders in the skin and providing fascinating case studies on patients from across his stellar career. The crowd were more than happy to wait for refreshments as our Q&A panel prompted dozens of thought-provoking discussions from keen members of the public. We thank all of our audience members, event organizers and of course, our wonderful skin-fluencers of immunology!

Science in the Pub Tasmania

The Science in the Pub Day of Immunology event was attended by about 50 people, with a good mix of scientists and non-scientists. Professor Greg Woods gave the crowd an overview of why and how the skin is one of the most important defences our bodies have against disease. Dr Chrissie Ong then dove into more specific skin immunology and described a mouse model. The panel was rounded out by consultant oncologist Dr Christina Moldovan from the Royal Hobart Hospital and Icon Cancer Centre. She described how anti-PD1 immunotherapy has changed the way several skin cancers

Day of Immunology

VIC/TAS

are treated in the past decade. The audience pelted the panellists with questions for about 15 minutes and several audience members stuck around to chat after the event.

Discovery Tours

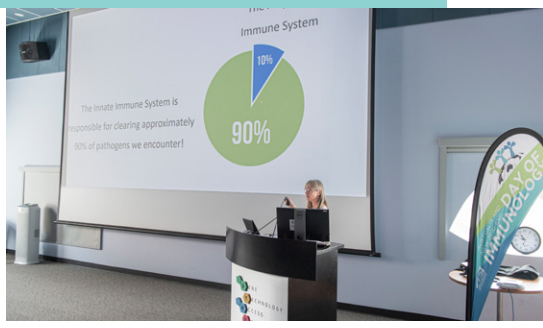
As part of the Day of Immunology Victoria 2023, organised by the Australia and New Zealand Society for Immunology (ASI), the public had the opportunity to go behind the scenes in eight of Victoria's leader medical research institutes: Monash Department of Immunology, Walter and Eliza Hall Institute of Medical Research, Peter Doherty Institute for Infection and Immunity, Hudson Institute of Medical Research, Murdoch Children's Research Institute, Peter MacCallum Cancer Centre, St Vincent's Institute of Medical Research and RMIT University. Our reach this year was expanded with St Vincent's and RMIT being first time hosts! The Discovery Tours provided a unique opportunity for close to 100 people to see what scientists do on a daily basis, find out more about the exciting immunology discoveries and explore the state-of-the-art facilities. Attendees ranged from curious students who were looking for career inspiration to consumers/families impacted with immunological diseases. Those who were not able to make it in-person had the opportunity to participate in virtual tours of the Oliver Newton John Cancer Research Institute and the Department of Immunology and Pathology, Monash University.

Thank you to all members of ASI who have helped make our Discovery Tours a success. We are looking forward to hosting this event again in 2024!

Secondary School Workshops and Careers STEMinar

Our Day of Immunology Education Outreach Program was back in full force this year expanding to a total of 8 in person workshops across Victoria and Tasmania for students in Years 10-12 from predominantly under-represented public schools. GTAC at Parkville in Melbourne hosted their new program, "The Guardians Within", over four half-day workshops reaching a massive 187 students from 13 schools from all over Victoria. These workshops featured an insightful introductory lecture from ***Professor Nicola Harris*** and ***16 local PhD student mentors*** facilitating the practical activities as well as sharing their perspectives on careers in science with the students. We delivered our in-house designed program "Superheroes and Rogue Units" across four different sites: Federation University Berwick Campus to 40 local VCE Biology students, Federation University Mt Helen (Ballarat) Campus to 72 Year 10-11 students from 5 local schools, Monash University Clayton campus to 63 year 11 students from 2 schools, and the University of Tasmania to over 100 students from 8 local high schools. For those that were unable to attend a workshop in person, we revived our online "Careers in Biomedical Sciences STEMinar" which featured short talks from scientists in various occupations sharing their insights and advice on their science career journeys, followed by a live Q&A. This was attended by over 200 registrants from all over Australia via zoom, and for anyone interested, a recording of the event is available to view at: https://www.immunology.org.au/news-and-events/day-of-immunology/student-workshops/.

Many thanks to ***Tony Chiovitti*** and the GTAC team, ***Kristina Kimtia*** and the team at FedUni Berwick, ***Professor Stuart Berzins*** and the team at FedUni Mt Helen, ***Laura Reid*** and ***Associate Professor Meredith O'Keeffe*** from the Monash Biomedicine Discovery Institute and ***Anuk Kruawan***, ***Grace Russell*** and ***Dr Kirsten Fairfax*** from the University of Tasmania for organising, accommodating and facilitating the smooth operation of these workshops. A shout out to ***Dr Catriona Nguyen-Robertson*** for running the program at Mt Helen, ***Dr Maria Demaria*** for co-hosting the Berwick and Monash workshops and ***Associate Professor Sophie Valkenburg*** for leading the online careers STEMinar. A very special thank you to ***Dr Anita Barry*** and ***Dr Louisa Yeung*** for the procurement of essential reagents and tools for the practical activities and to ***BioRad*** for their continued support of our events. Lastly a big thank you to all of the members of the DoI Secondary School Workshops subcommittee for their outstanding efforts in putting together this incredible programme of workshops: ***Timothy Gottschalk***, ***Maria Demaria***, ***Catriona Nguyen-Robertson***, ***Alexandra Dvorscek***, ***Sophie Valkenburg***, ***Anuk Kruawan*** and ***Dhruti Parikh***.



Above: Professor Nicola Harris (Monash University) presenting to secondary school students at GTAC in Parkville. Photo credit Hynesite Photography and Monash Central Clinical School.

Right: Students participating in the workshop at GTAC in Parkville with Monash University PhD student Rhiannon Grant. The showbag students received at the conclusion of the day in shown the foreground.

Below: Prof Emeritus Greg Woods from the UTAS Menzies Institute for Medical Research, speaking at Science in the Pub Tasmania.

Day of Immunology

NSW

Angelica Lau | NSW Councillor

Celebrating Day of Immunology in NSW

We have had some exciting events across NSW in celebration of the International Day of Immunology (29th April). A big thank you to all the institutions and volunteers who have participated in this year's events. I want to take this chance to acknowledge the time, effort and creativity our volunteers have put in to promote, communicate and raise awareness for immunology and medical research to the wider community, and a big congratulations to all the volunteers for the success of these events this year.

- **27th April – Public Forum "Nature vs Nurture:** The role of environment in shaping our immune system" - University of Sydney supported by ASI NSW. Led by Dr Helen McGuire, Dr Felix Marsh-Wakefield, Dr Caroline Ashley, and supported by volunteer students Lina Daniel and Natalie Smith.
- **1st and 2nd May – Meet a Scientist Workshops - UNSW Museum of Human Diseases supported by ASI NSW.** Led by Dr Angelica Lau (Children's Cancer Institute), Dr Mee Ling Munier (Kirby Institute, UNSW) and Adam Strong (UNSW), supported by the wonderful volunteers Dr Raymond Louie (UNSW), Dr Jesse Goyette (UNSW), Jennifer Chen (UNSW/Garvan), Chris Jara (Garvan), Dr Caroline Ashley (University of Sydney), Dr Kerrie Sandgren (The Westmead Institute/University of Sydney), Kathryn Friend (Chameleon Science), Alexander Crawford (UNSW/Garvan), Alexandra Carey Hoppé (Kirby Institute, UNSW), Mollie Boyd (Kirby Institute, UNSW) and Mengfei Chen (Kirby Institute, UNSW).
- **19th May – Garvan Discovery Tour School Outreach Program for senior high school students supported by ASI NSW.** Led by Dr Clara Young and Dr Jacqueline Tearl, supported by volunteer presenters A/Prof Tri Phan, A/Prof Elissa Deenick, Dr Debbie Burnett, Dr Tim Peters, Dr Katherine Jackson, Megan Faulks, Lachlan Gray, Dr Raymond Louie.
- **30th May – University of New England held a "Body at War" Workshop for senior high school biology students.** Led by Prof Natkunam Ketheesan and the UNE team .

Following this report are the highlights from each of these events, so make sure you read on and check out the awesome photos!

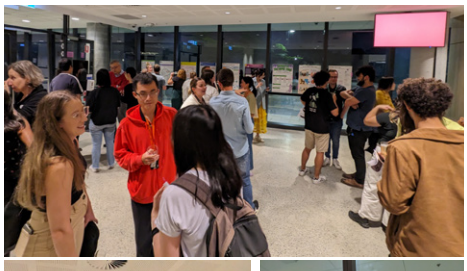
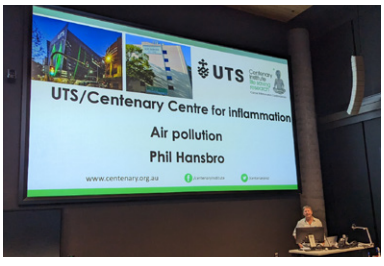
Day of Immunology

NSW

USYD ASI Day of Immunology Public Forum

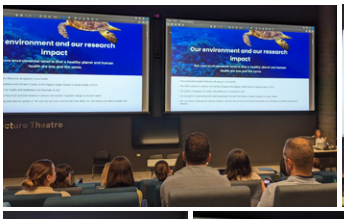
Nature vs. nurture: the role of environment in shaping our immune system.

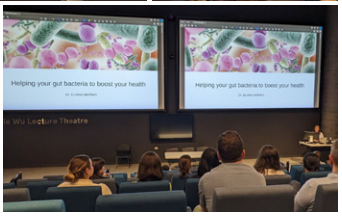
This year's day of immunology celebration at the University of Sydney took the form of a public forum investigating the influence of heritable and environmental factors on our immune system, nature vs. nurture. Held in the Susan Wakil Health building on Thursday 27th April from 5-7 pm and organised by Helen McGuire, Lina Daniel, Natalie Smith and myself, the evening began with refreshments and a poster session. Attendees fuelled their minds and their gut microbiomes while taking in the 9 posters on display, contributed by ECRs from USYD, UNSW, Westmead, UTS, Centenary institute and the Garvan. Each poster explained a complex immunological concept to a general audience and attendees voted for their favourite. There was a three-way tie for best poster with Sibel Alca (USYD), Olivia Lavidis (USYD) and Radhima Wadhwa (UTS) coming away with the prize! Their posters, entitled 'Innately influencing: antigen presenting cells – the original influencers', 'Viral vectors: the trojan horse of cancer therapy' and 'Itaconate derivative: a potential strategy for severe asthma treatment' demonstrated the value of creativity when seeking to make immunological concepts memorable for a lay audience. Our host for the evening, Dr. Megan Steain (USYD) opened the lecture portion of the evening with an insightful discussion on the role of viruses in shaping human evolution. With his thorough analysis of the impact of bushfire smoke particles on lung health Prof. Phil Hansbro (UTS) lead us on a journey from the bushfire season of 2019-2020 through the pandemic, teaching us how to DIY a bushfire when you're stuck within your 5 km lockdown radius but have access to a native vegetation expert and 100-200 trees from a garden centre. Dr. Eliana Mariño Moreno (Monash University, ImmunoBiota Therapeutics) then demonstrated the power of diet in shaping the gut microbiome and regulating immune system function. It was so good to see the Sydney immunologists out and about in-person again and introduce new students to the vibrant immunology research community, I look forward to next year!





Day of Immunology
Australia and New Zealand

Thank you for celebrating with us!

THE UNIVERSITY OF SYDNEY

Australian and New Zealand SOCIETY FOR IMMUNOLOGY INC.

Day of Immunology

NSW

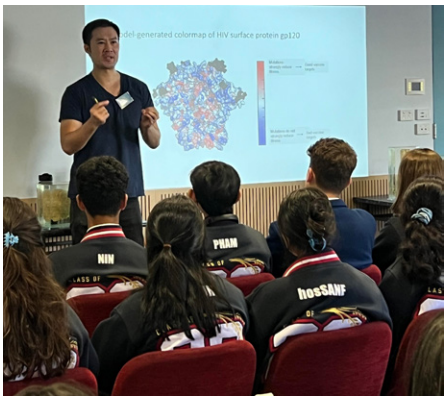
Mee Ling Munier

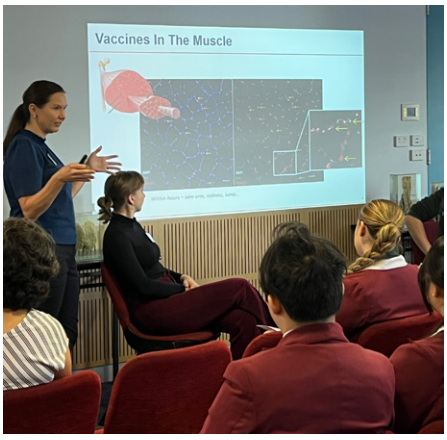
School Program at UNSW Sydney

On the 1st and 2nd of May 2023 we celebrated the Day of Immunology at UNSW Sydney. We were very fortunate to have the support of Adam Strang and Jo Dable from the UNSW Museum of Human Disease who were happy to host us and allow us to be a part of their schedule over the two days.

Groups of year 12 students from a number of different schools around Sydney and one from Cooma were in attendance on both days, they were able to chat one on one at our "Ask an Immunologist" stations located around the museum. The immunologists in attendance at the stations were Ray Louie (UNSW), Jennifer Chen (UNSW/Garvan), Chris Jara (Garvan), Caroline Ashley (University of Sydney), Kerrie Sandgren (The Westmead Institute/University of Sydney), Kathryn Friend (Chameleon Science), Alexander Crawford (UNSW/Garvan) and students from my team Alexandra Carey Hoppé, Mollie Boyd and Mengfei Chen (Kirby Institute, UNSW).

We also had four panel presentation sessions where staff and students presented their work and/or their journey of how they got to where they are now. Ray Louie introduced the students to the Bioinformatics world of Immunology. Kathryn Friend described her journey from university to industry and owning her own business. Jesse Goyette, (group leader, lymphocyte signalling group, UNSW) shared how he found his way to UNSW Sydney and his work as a Molecular Immunologist. Jesse also highlighted to the students that there are many paths in science including illustration (using a David S. Goodsell illustration as an example). Caroline Ashley described her love of high school science and her path to becoming a new post-doc with a PhD in virology. Kerrie Sandgren described her journey and her work understanding what cells are involved when vaccines stimulate the immune response. Lachlan Gray (UNSW/Garvan) shared his passion for computational immunology and his PhD project on why females have a higher risk of autoimmune disease. Alexander Crawford a fourth year medical student shared some of his results from his honours year undertaken at the Garvan. Alexandra Carey Hoppé had the students enthralled with her photos as a professional dancer turned PhD student studying immune responses to vaccination in human lymph nodes!





Day of Immunology

NSW

Mee Ling Munier

I had the pleasure to facilitate the panel presentations and encourage the students to ask questions, I did have to apologise to our panellists for any weird questions I had asked to get the discussions started! It was really great to have a mix of talks from students, early career post-docs and more senior group leaders and industry. The pitch of the talks was excellent and was evident by the engagement of the student audience.

Thanks to Angelica Lau who organised the day!

It was a fantastic two days of celebrating Immunology and was well received by the Year 12 students. We're really grateful to the Immunologists who took time out of their busy schedules to share their passion for Immunology!!

NSW

Natkunam Katheesan, Catherine Lee and team.

University of New England

Infection and immunity were put under the microscope during a workshop for senior high school biology students last week, called Body At War, at UNE Tamworth.

UNE Professor in Biomedical Science, Natkunam Ketheesan, had the students engrossed in considering why life expectancy worldwide has increased significantly from as recently as the 1950s (hint - it all starts with clean drinking water), and the part played by medical advances such as immunisations.

Students learned about the many different cells of the blood and their roles ... and in the case of leukocytes, their rolls! They viewed some under the microscope, and were shown how blood-group typing is done using immune reagents.

Thank you to the students and teachers for a great session and your very insightful questions.and all the Garvan volunteers involved in making this day such an astounding success.

Day of Immunology

NSW

Clara Young

The Garvan Welcomes the Next Generation of Scientists

On Friday May 19, 2023, in celebration of the "Day of Immunology," the Garvan Institute of Medical Research and ASI welcomed the next generation of scientists for the Garvan Career Discovery Tour, a day filled with immersive experiences for Year 11 and 12 high school students. The event aimed to fuel the students' curiosity about careers in science and research while shedding light on the crucial role immunology plays in advancing healthcare.

The event reached students from seven different high schools across Sydney, representing a mix of public and private institutions, as well as single-sex and co-ed schools.

The success of the event was only made possible with the participation of twenty-one passionate and dedicated Garvan and UNSW Sydney scientist volunteers, including my fantastic event co-lead of the event, Dr. Jacqueline Tearle. Our Garvan volunteers thoughtfully designed a range of lab practicals, which included microscopy and histology, DNA cloning, tissue culture and interactive bioinformatic session using single-cell RNA-seq COVID patient datasets. The students were able to get a taste of scientific

research in action – something we hope offered the students insight into life in the lab.

The students were also given the opportunity to grasp the complexities of the immune system with engaging talks by the Precision Immunology program heads Associate Professor Elissa Deenick and Professor Tri Phan. In true style, Professor Tri Phan presented the students with a trick puzzle problem which prompted enthusiastic exasperation from the students when the answer was finally revealed.

The event also featured career talks by two accomplished Garvan researchers, Dr. Debbie Burnett and Dr. Tim Peters, which included a healthy dose of cute possum photos and comical memes. They shared their personal journeys and experiences, offering valuable advice to the students considering a career in science. The day ended with a highly interactive Q&A session enabling students to delve deeper into the volunteers' career journeys and their day-to-day roles in medical research.

The feedback received from the students was overwhelmingly positive, with some teachers reporting the event had sparked a keen interest in immunology amongst some of the students. Perhaps we will see some of these students in the lab in a few years' time!

Dr. Jac Tearle and I would like to thank ASI and all the Garvan volunteers involved in making this day such an astounding success.

BD Science Communication Award

SARAH DART

The University of Western Australia

My name is Sarah, and I have just completed my PhD at The University of Western Australia under the supervision of Professor Michaela Lucas, Professor Gary Jeffrey, Professor David Joyce and Professor Axel Kallies. My research investigated the retention of tissue-resident leucocytes transferred from an organ donor to a recipient during transplantation, including the effects of donor-recipient mismatch and immunosuppressive drugs. To study this, we used mouse models of kidney and liver transplantation performed by our microsurgical team and applied clinically relevant immunosuppression. We described differential effects of donor-recipient mismatch and immunosuppressive drugs on the retention of donor leucocytes and the recipient leucocyte responses after transplantation. Tissue-resident leucocytes play critical roles in organ function and protection against pathogens. By describing the effects of donor-recipient mismatch and immunosuppression on donor leucocyte retention, our data contributes to the understanding of post-transplant immune responses which may be critical to improving graft health and patient outcomes.

I was excited to be selected to present in the BD Science Communication session at the ASI 2022 ASM as this has always been one of my favourite sessions. To explain the immunological concepts of transplantation and immunosuppression, I used the analogy of a dog walker arriving at a new dog park. The dogs already at the park where like the recipient immune cells, whilst those arriving with the dog walker were the donor immune cells. Each breed of dog with a different temperament represented a different immune cell subset. I explained how the different drugs affected each breed, for example, making some sleepy and ineffective.

Like all things in science, this was not a solo effort. I am fortunate to work with Dr Amy Prosser, two-time winner of the BD Science Communication award, who helped me refine my original concept. In addition, prior to the ASM, we at the ASI WA branch decided to host a practise session for those who had been selected for oral and poster presentations. In this session I received a lot of valuable feedback from ASI WA members which improved the presentation further. Asking for and accepting this support and feedback definitely improved my presentation, and I am very grateful to everyone who contributed – thank you! In addition, I would like to thank ASI and BD for continuing the Science Communication session at our ASMs, and for awarding me this prize.

Gordon Ada Award

SOPHIE VALKENBURG

DMI, PDI, The University of Melbourne and HKU-PRP, The University of Hong Kong

Whilst the COVID-19 pandemic was an incredibly interesting time for research for some, it had a profound impact on everyone's lives to some extent and upturned many lives. I spent the last 10 years working in Hong Kong and building up an established research program, my husband lost his job due to the pandemic leading my family to relocate to Australia. I applied for this award to support childcare costs, as I have 2 young children, and as many know the logistics of childcare, drop off/pickup and the many days off or term holidays make it difficult to work full time or travel overseas. My husband lost his job in 2020 and has had unstable casual work for the past 2 years. He is a highly qualified pilot and was till recently juggling 3 jobs, that often have very short notice for occasional work, where he could be called on a flight mission the next day and away for up to a week. This makes planning for our family very difficult and stressful whilst re-establishing my research program at the University of Melbourne. Support from this award to help with childcare costs, allows me to focus on quality work knowing my children are in good care, at day care and at home with a babysitter, irrespective of my husband's intermittent and unstable schedule.

The notification of the Gordon Ada Career advancement award came serendipitously through when I was on a trip to Hong Kong, in June 2023. During this time my husband started a new job in Hong Kong after nearly 3 years without a full-time job, returning full circle to where he was before but with a new airline. At the same time, a Portuguese backpacker joined our household to help with childcare and provide a stable home base as an au pair on the working holiday visa program. On the Hong Kong trip, I was invited to chair a panel discussion at C2i (Center of Infection and Immunity, an outpost of HKU-Pasteur) in Science Park, a commercial translational research focussed center. The workshop was focussed on the defining the parameters of healthy immune response, based on the Interior Milieu project of Pasteur Paris being implemented in Hong Kong, and how to translate basic research to precision medicine. The panel discussion I facilitated was between David Bishai, a vaccine economist (Head of Department, School of Public Health, HKU), and immunologists James Di Santo (Institut Pasteur), and Sook San Wong (HKU-Pasteur). I was also in Hong Kong as an invited faculty for an intensive one-week student course on 'Emerging infectious diseases' hosted by the Croucher foundation. HKU has a long-standing reputation of running student courses for nearly 20 years, in immunology, cell biology and virology- which is a great experience for students from around the world to meet to build their own network, interact with expert faculty, and work together in either a practical laboratory or workshop series. This particular course, was focussed on the COVID-19 response and brought together 20 expert faculty including Christian Drosten (Charite Hospital, Germany), Darragh Duffy (Institut Pasteur, France), Marco Vignuzzi (A*Star, Singapore), Mart Lamers (Duke-NUS, Singapore) to name a few! and 32 students from 13 different countries- who had unending questions and presented a H5N1 response proposal. I was also able to reconnect with my HKU research team- a stellar PhD student Carolyn Cohen, who will soon complete, and RAs Kelly and Pat, who are helping to maintain longitudinal vaccine cohort studies I am committed to before I left Hong Kong.
All while my kids had fun with their grandmas and the new babysitter at home. Many thanks to ASI for supporting this award to defray childcare costs, which often limits the ability of parents to work or travel.

Gordon Ada Award

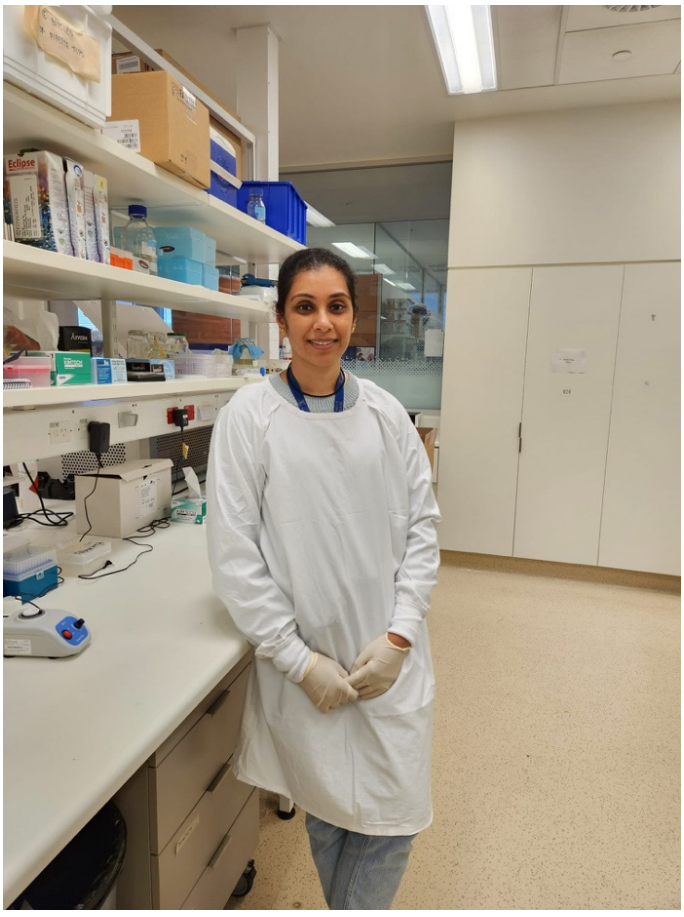
SAPNA DEVI
The University of Melbourne

A point came in my undergraduate life where I had decided to pursue on Honours and was searching for a project. Enter Prof Michael Hickey as a lecturer for one of my classes and I vividly remember how he was explaining about cells and adhesion molecules by getting the class to participate in one of those games consisting of a sticky ball with a Velcro board. I was specifically intrigued by his black and white videos of cells rolling in blood vessels. This sparked me and I had to do this as I could literally see what I was studying and so my research career begins. Now when I reflect about this, I was indeed privileged to have been taught to perform surgeries and prepare mice for intravital imaging experiments by Michael himself which was already challenging for time-poor Honours student. I went on to complete my PhD studying the mechanisms of leukocyte trafficking in the kidney in technicolour though. Otherwise known as using two-photon intravital imaging, I was the first in the lab to use this microscope for my studies.

I further pursued my interest in leukocyte trafficking and was offered a postdoctoral position in the lab of A/Prof Lai Guan Ng in Singapore who was at that time setting up the first two-photon facility in the country. Here I studied the regulatory mechanisms of neutrophil migration in the bone marrow, particularly in the response of neutropenia treatments and discovered a pool of neutrophils in the lungs that could be readily mobilized. I learned so much in that time, building on my inventory of techniques and am very appreciative for the many opportunities that had come my way.

Fast forward to today, I have been working with Prof Scott Mueller where my interest now lies in the role of the sympathetic signalling in controlling immune cell functions. Signals produced by the sympathetic nervous system (SNS) are increased during times of stress and are implicated in worse outcomes for patients with diverse diseases, including cancer. Some evidence suggests that stress can impair immune responses, resulting in poorer outcomes of disease. Yet, how stress impairs the immune system remains poorly understood. We have discovered that signals produced in response to stress can have a remarkable impact on immune cells by causing them to stop in their tracks (Devi et al., Immunity, 2021). Since immune cells need to be able to move in order to locate and destroy pathogens and tumours, the capacity of stress to prevent this has implications for immunity against infections and cancers.

I am pleased and immensely grateful to ASI to be awarded the distinguished Gordon Ada Career Advancement award.



Winning this award has allowed me to take on a chemogenetic approach in my studies i.e., using Designer Receptors Exclusively Activated by Designer Drugs (DREADD) mice. Specifically, I have purchased and imported R26-LSL-hM4Di-DREADD mice and establish this colony in our animal facility for my research.

I want to know if targeting the SNS can augment anti-tumour immune responses and if combined with current chemotherapy and immunotherapy strategies, will this improve treatment response? To determine this, I am currently crossing these mice to Tyrosine hydroxylase-cre mice to generate SNS-inhibitory DREADD mice where I can study the outcomes of suppressing sympathetic nerves on T cell-tumour interactions with an assortment of techniques including intravital imaging, single cell RNA sequencing and spectral flow cytometry.

I very much look forward to the findings from my planned studies with these mice and of course very much happy to discuss with fellow researchers who may be interested in this model for their own research.

Career Advancement Awards

ALEXANDRA (ALI) DVORSCEK

Department of Immunology,
Monash University(BABS) at UNSW Sydney

My name is Alexandra (Ali) Dvorscek and I am a final year PhD Student in the Department of Immunology at Monash University.

I completed my undergraduate degree at Monash University, studying a Bachelor of Biomedical Science and Science, majoring in genetics, molecular biology and immunology. I then performed my Honours project in the Immune Memory Laboratory at the Department of Immunology within the Central Clinical School, Monash University, under the supervision of Dr Isaak Quast and Prof David Tarlinton. Motivated by the success and fun I had during my Honours year, I started my PhD in the same lab at the beginning of 2020, supported by a Monash Research Training Program stipend.

Our lab's research focuses on antibody memory, investigating which processes lead to the generation of memory B cells and plasma cells, and how their persistence and reactivation is regulated. As a part of this lab, my primary supervisor, Group Leader Dr Isaak Quast and his research team investigate the immune response to vaccination and how we can optimise vaccines to generate robust and durable memory. My PhD project, titled "Investigating Factors that Modulate Germinal Centre Response Initiation and Maintenance" forms an integral part of this research. As such, my work examines the molecules and processes that regulate vaccination responses, by virtue of their ability to promote the initiation and persistence of germinal centres, specialised structures critical for the generation of high affinity, humoral immune memory.

My research has focussed on two main factors that modulate B cell responses; the canonical GC cytokine IL-21, and antigen-specific antibodies. Whilst the work I have done on IL-21 has been published (Dvorscek et al., EMBO Reports, 2022), my research into how antigen-specific antibodies regulate immune responses has been the primary focus of the last year of my PhD. I have found that pre-existing antigen-specific antibodies can substantially modulate the ensuing B cell response, and this effect is critically dependent on their dose, specificity and affinity. These antibodies influence the earliest stages of the immune response to vaccination and they differentially regulate B cell activation, differentiation and persistence. We are currently in the final stages of this work and will submit our results for publication in the coming months, so watch this space!

Given the many hurdles and interruptions throughout my candidature, largely imposed by the COVID-19 pandemic and limited access to hospital and lab sites, I extended my PhD submission date beyond the duration of my stipend. The ASI Career Advancement Award will fund the time until completion of my PhD and thus allow me to focus on getting our most recent data published, which is critical for both my thesis and my next career steps.

I am sincerely grateful to ASI for giving me this award and I look forward to sharing the research that this award has allowed me to perform with the ASI community in the future!

Career Advancement Awards

CARMEN MATHMANN

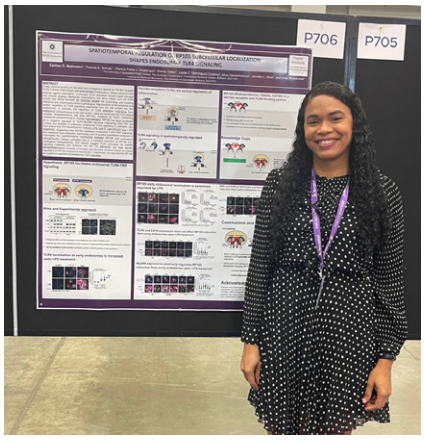
Frazer Institute, The University of Queensland

I completed my PhD studies in cell biology and pathobiology at Columbia University Medical Center in May 2017 under the supervision of Associate Professor Yinghui Mao. During my graduate studies, I was awarded two research fellowships from the National Institutes of Health (NIH) in the USA. I also completed additional training in quantitative imaging at Cold Spring Harbor under the direction of Dr. Jennifer Waters from Harvard University.

After a career break and part-time employment due to ongoing carer responsibilities, I commenced my post-doctoral research training in 2018 under the supervision of Professor Antje Blumenthal, who leads the Infection and Inflammation group at the University of Queensland Frazer Institute. As part of the Infection and Inflammation group, I apply cutting-edge light microscopy techniques and expertise to enhance our research into macrophage interactions with Listeria monocytogenes (PLoS pathogens, 2022 DOI: 10.1371/journal.ppat.1010166) and Mycobacterium tuberculosis (Cell Biology and Immunology, 2021 DOI: 10.1111/imcb.12503). Additionally, I am leading a research study to elucidate innate immune sensing by Toll-like receptors (TLRs) regulation through directed subcellular positioning. To support my post-doctoral research efforts, I have been awarded two fellowships from the American Association of Immunologists (in 2019 and 2022). My future aspirations are to contribute to the scientific community in the pursuit of elucidating the molecular mechanisms that modulate innate immune functions to discover potential targets for the prevention and treatment of infections and inflammation-driven pathologies.

The ASI career advancement award has supported my attendance to my first international conference after substantial career breaks due to two maternity leaves and ongoing carer responsibilities for my two children. By providing childcare support, this award has helped me regain momentum and accelerate my trajectory as an academic researcher. At the IMMUNOLOGY2023TM conference, I was awarded an Abstract Trainee Award, and my abstract was selected for an oral and poster presentation at one of the Block symposia that showcased cutting-edge research in innate immunity, infection, and autoimmunity. I greatly benefited from the insightful discussions during my talks and at the conference,

enabling me to generate and build an international reputation in my discipline. I leveraged this award by connecting with scientists in my area to expand my professional network and establish future collaborations. I utilised this opportunity to position myself favourably for future competitive research funding schemes in the USA. Specifically, I discussed opportunities and obtained guidance and advice for future funding through the AAI and the NIH post-doctoral fellowships.



Career Advancement Awards

DEVI JENIKA

Bio21 Institute,
University of Melbourne

My name is Devi Jenika currently working as a Research Officer in Associate Professor Shalin Naik's laboratory at Walter and Eliza Hall Institute (WEHI), dedicated to investigating the expansion and generation of conventional dendritic cell type 1 (cDC1) based on human stem cells. Upon recognition of cancer cells, these specialized dendritic cells are capable of activating cytotoxic T cells to effectively target and eliminate tumour cells.

My academic journey began with a Bachelor of Science degree in Immunology and Pathology at the University of Western Australia (UWA) in Perth, Western Australia. Subsequently, I pursued an Honours year under the guidance of Professor Justine Mintern at the Bio21 Institute in the University of Melbourne, where I furthered my research interests in immunology and vaccinology. Building upon this foundation, I embarked on a Ph.D program at the University of Melbourne under the same supervisor, concentrating on investigating the immune response elicited after immunization of an innovative nanoparticle-based vaccine platform. This platform utilized biopolymer particles (BPs) composed of polyhydroxybutyrate (PHB), a biocompatible material approved by the FDA for medical applications, thereby suggesting its potential as a safe vaccine carrier.

My honours and doctoral investigations explored the capacity of BPs to be taken up by dendritic cells that subsequently elicit robust T cell-mediated responses against melanoma and lymphoma tumour models. Additionally, I delved into comprehending the mechanisms underlying the immune response triggered by BPs immunizations. The results of this project offer promising prospects for the use of BPs as alternative vaccine carriers for diseases without effective immunisation strategies. Furthermore, my Ph.D. research included CRISPR-Cas9 genome-wide screening to elucidate the molecular machinery regulating C-type lectin 9a (Clec9a) regulation in dendritic cells, a crucial aspect to enhance Clec9a-targeted antibody-based immunotherapy.

My pursuit of translational-based research and dedication to developing novel therapies for clinical implementation have been steadfast since my undergraduate years. During my Ph.D., I had the privilege of being mentored by Bobby Gaspar, CEO of Orchard Therapeutics, which provided me with an opportunity as an academic researcher in the esteemed biotech company. The company focused on the development of haematopoietic stem cell (HSC)-based gene therapy using lentiviral vector to correct genetic defects, such as patients suffering from metachromatic leukodystrophy (MLD). I was honoured to receive the Career Advancement Award, which supported this effort financially and allowed me to undertake a 6-week academic visit to London, UK. During this period, I studied and contributed to cutting-edge research in cellular and gene therapy, focusing on HSC-based T regulatory cellular therapy to address autoimmune diseases. This invaluable experience provided exposure to the dynamics of research in the industry and facilitated collaboration with an intellectually diverse group of international scientists. My exposure to the industry setting nurtured my passion for translational research, aiming to bring novel treatments to fruition for the benefit of patients. Following this academic visit and my continued interest in translational research, I decided to accept my current position in Naik's laboratory, where I hope to be able to advance a novel dendritic cell-based therapy as a cancer vaccine. Thus, I am truly thankful to ASI for supporting me in this opportunity.

Career Advancement Awards

ISABELLE JIA HUI FOO

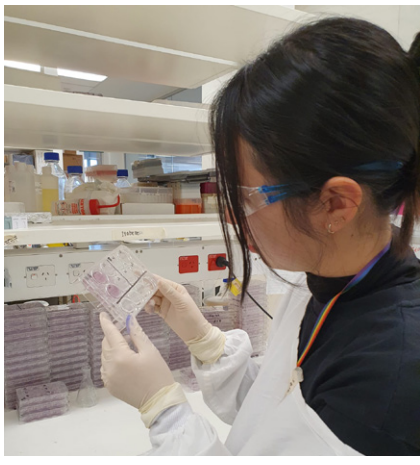
The Peter Doherty Institute for Infection and Immunity

I am a final year PhD student at The Peter Doherty Institute for Infection and Immunity, University of Melbourne, under the supervision of Professor Katherine Kedzierska. I completed my undergraduate studies at The University of Melbourne in 2017 with a Bachelor of Science, majoring in Microbiology and Immunology. I then completed a Master of Biomedical Science degree in Professor John Fazakerley's laboratory before joining Professor Katherine Kedzierska's group for my PhD.

The Kedzierska laboratory researches immunity to pandemic and newly emerged influenza viruses, and most recently SARS-CoV-2. Our laboratory's research ranges from mouse experiments to human immunity with a particular interest in understanding the CD8+ T cell responses in high-risk groups, including children, the elderly, pregnant women, and Indigenous Australians.

Relative to a single virus infection, prior infection with an unrelated virus, could affect antiviral responses, tissue pathology and the clinical severity of disease. Limited information exists on how prior infection with a non-respiratory virus affects a subsequent influenza virus infection, or vice versa. With the geographical expansion of arboviral diseases and increasing burden of respiratory viral diseases, respiratory and arboviral co-infections is an emerging global health concern. My PhD project focuses on understanding the immunopathological and immunological outcome of co-infection between two unrelated viruses, influenza A virus (IAV) and Semliki Forest Virus (SFV), a neurotropic arbovirus, using mouse model. We have shown that when mice were given SFV followed by IAV (SFV→IAV), it resulted in delayed IAV viral clearance in the lung, elevated cytokine/chemokine levels, and exacerbated lung pathology. This was linked to impaired IAV-specific CD8+ T cell responses in the lungs, caused by suboptimal CD8+ T cell activation and proliferation in the draining lymph node and dendritic cell paralysis. Moreover, we also found altered trafficking of immune responses, whereby IAV-specific CD8+ T cells being redirected to the brain in SFV→IAV co-infection. With prior SFV infection causing an increase in blood brain barrier permeability and the presence of IAV RNA in the brain, these could be the contributing factors that have led to the redirection of IAV-specific CD8+ T cells to the brain.

Unfortunately like many others, my PhD progress was subsequently affected by COVID-19 related disruptions throughout 2020 and 2021. In compliance with government restrictions, I was forced to work from home for 3 months in 2020 when I intended to conduct laboratory work. These restrictions were particularly disruptive to my experiments since I conducted animal



experiments, and it was difficult to find sustained period without disruption to see through these experiments. This meant that I had to extend my candidature, eventually exhausting my stipend funding. However, with the generosity and support of ASI, I am now able to continue my research and drive my PhD project to completion.

I am extremely grateful and honoured to be awarded the Postgraduate ASI Career Advancement Award in 2023, and I would like to thank ASI again for enabling me to complete my PhD to the best of my ability.

Career Advancement Awards

NAOMI DANIELS

University of Otago, New Zealand

My passion for immunology developed in my first year of Health Science at the University of Otago, where I gained a particular interest in the way the immune system interacts with threats encountered in the external environment. I completed my PhD at the Malaghan Institute of Medical Research under the excellent mentorship of Professor Franca Ronchese, where I primarily studied allergic responses in the lung. I have since continued in lung immunology as a postdoctoral research fellow in the laboratory of Associate Professor Jo Kirman, an incredibly inspiring researcher in the field of Tuberculosis at the University of Otago.

Now specialising in Biosafety Level 3 (BSL3) Tuberculosis vaccine studies, my current research seeks to understand why the bacille Calmette–Guérin (BCG) vaccine fails to provide protection against highly virulent strains of Mycobacterium tuberculosis (Mtb). I recently developed fluorescent clinical strains of Mtb by transformation of patient specimens, providing an invaluable visualisation tool for investigating the lung immune response to different strains of Mtb.

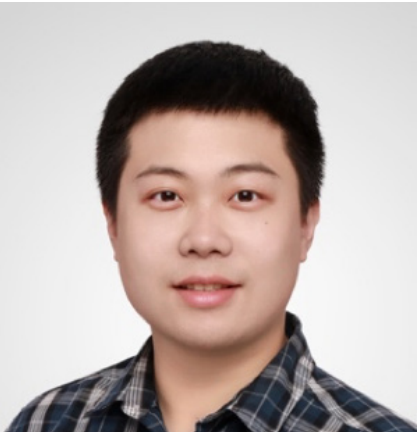
In the first 6 months of 2023 I was based at Colorado State University (CSU; Colorado, USA) to perform critical experiments for my postdoctoral research project, as part of a collaboration with the Henao-Tamayo laboratory. The world-class BSL3 containment facility at CSU, and expertise within the lab group, allowed me to carry out in vivo experiments involving aerosol infection with the fluorescent Mtb and spectral flow cytometry of infected lungs. Excitingly, I was able to utilise the cutting edge technology of spatial transcriptomics, a novel high-powered molecular profiling method, to examine gene activity within the lung cells, in the context of the specific spatial location within the tissue microenvironment. In coming months I will be heavily focussed on performing high dimensional analysis on data obtained from my experiments at CSU, and completing both spatial transcriptomic and single cell RNAseq analysis on additional samples obtained.

I was extremely grateful for the award of the ASI career advancement grant to assist in the cost of bringing my three children under 6 years of age to be with me while I was carrying out my work at CSU. I applaud ASI's commitment to helping women (and in particular, mothers) overcome barriers to pursuing significant career opportunities due to caring responsibilities, for which there are very few other sources of funding. The work at CSU has been transformative for accelerating my career as a research immunologist and I look forward to publishing insights into the immune evasion tactics Mtb employs and ultimately, to contribute to improving vaccination strategies against Tuberculosis disease.

Career Advancement Awards

WUJI ZHANG

Peter Doherty Institute for Infection and Immunity



I am Wuji, a PhD candidate from Professor Katherine Kedzierska's Laboratory at the University of Melbourne within the Peter Doherty Institute for Infection and Immunity. I am deeply honoured to be awarded the ASI Career Advancement Award – Postgraduate in support of my ongoing research.

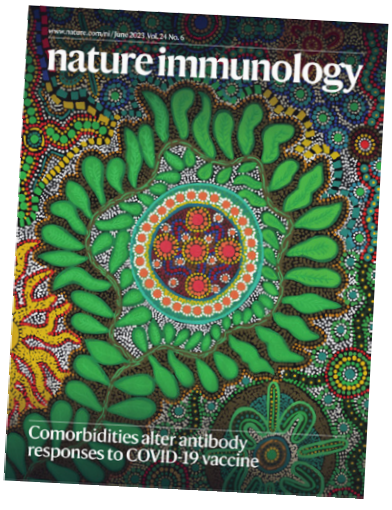
The Kedzierska Laboratory has been researching immunity to seasonal and newly emerging respiratory viruses for over 10 years, including seasonal and pandemic influenza viruses, epidemic H7N9 avian influenza virus and SARS-CoV-2 which caused the COVID-19 pandemic. We investigate immune responses in both healthy individuals and high-risk groups, with a particular interest on understanding CD8+ T cell responses, given their ability to form immunological memory and target more conserved epitopes.

I first undertook an Honours Project in 2019 within Professor Kedzierska's Laboratory, focusing on immune responses to seasonal influenza vaccines in hematopoietic stem cell transplant recipients who are vulnerable to severe viral infections. While all the recipients in the cohort were at least one year post transplantation, those that had longer periods post transplantation had better humoral responses towards the vaccine. This work was recently published in Clinical & Translational Immunology (https://doi.org/10.1002/cti2.1456).

Building on my experience with human samples and immunology experiments, I continued my study in the Kedzierska Laboratory as a PhD student in March 2020 at the onset of the COVID-19 pandemic. My PhD project aims to understand human immunity to influenza and SARS-CoV-2 infections and vaccinations. Despite the availability of influenza vaccines, and more recently COVID-19 vaccines, it is not yet fully understood why some people mount robust immune responses following infection and/or vaccination, while some succumb to severe viral infection requiring hospitalisation and sometimes death.

In the first Aim, I compared and contrasted immune responses in the blood and respiratory tract of hospitalised patients infected with SARS-CoV-2. While immunity in blood has been studied by our group and others, what happens in the respiratory tract was less clear. Our findings revealed higher magnitude of cytokines and chemokines, high level of RBD-specific antibodies and activated T cells in the respiratory tract. This work was published in Nature Communications (https://doi.org/10.1038/s41467-022-30088-y). My second PhD aim investigated immune responses to SARS-CoV-2 in Indigenous populations. Our research showed that Australian First Nations peoples elicited effective immune responses following COVID-19 vaccination. We observed that while humoral responses could be impacted by chronic co-morbidities, T cell responses remained robust. This work was recently published in Nature Immunology (https://doi.org/10.1038/s41590-023-01508-y), and the artwork of the Yanyuwa and Garrwa artist Zoe Mardijbalina Fitzpatrick describing "the hard work that the Research Team has gone through to find out how the covid vaccination affects the bodies of chronically unwell people" was featured on the journal cover of the June 2023 issue.

Currently, I am finalising the last chapter of my PhD thesis focussing on my influenza project I did before thesis writing. My Melbourne Research Scholarship will conclude in September (after 3.5 years). Therefore, I am very grateful to be awarded the ASI Career Advancement Award, which will provide essential support during my thesis writing and final experiments. This Award will not only contribute to the completion of my thesis but also enhance my readiness and competitiveness for potential post-doctoral positions in the upcoming year. I am sincerely thankful to ASI and the committee for supporting my PhD study.



Diana Hansen
EDI Coordinator

EQUITY DIVERSITY & INCLUSION

ASI Member Consultation

Would you like to join the First Nations Advisory Committee?

ASI prioritizes respectful and inclusive approaches, aiming to cultivate cultural diversity within our membership and supported activities. In alignment with our strategic goal of promoting equity, diversity, and inclusion (EDI), we aim to cultivate greater cultural diversity within our membership and supported activities.

The EDI Committee would like to consult all members who identify as First Nations individuals from Australia and members who identify as Māori individuals from New Zealand.

The objective is to foster meaningful connections and enhance our comprehension of cultures, research journeys, and professional paths. Ultimately, we aim to develop a culturally-appropriate program that can effectively assist in the career advancement of indigenous members in Australia and New Zealand.

The initial step will be to gather an Advisory Committee, willing to meet every 2 months during the second half of 2023.

Please register your interest by email to: edi@immunology.org.au.

SOMETHING NEW IS COMING!

Exciting news, from next year there will be some fresh changes to the newsletter format, allowing it to expand into a more digital setting.

Do you have any suggestions, ideas or thoughts on changing the newsletter to a more accessible digital format?

Please let us know at newsletter@immunology.org.au

Mucosal Immunology SIG Update

In May 2023 the Mucosal Immunology Special Interest Group of ASI came together for an independent scientific meeting for the first time in nearly 30 years. After initial plans for June 2020 being delayed, the Mucosal Immunology and Microbiome Symposium (MIMS) finally went ahead over 17-19th May 2023 at Peppers Resort in Noosa, QLD.
All 79 attendees made their way down the palm tree lined driveway to the resort within Noosa National Park to enjoy some excellent science, wonderful food and stimulating discussions. International keynote speakers Dr Chrysothemis Brown and Dr Nicholas Collins joined 13 invited national speakers, primarily composed of ECMRs. The 'dinner with an expert' social event involved the speakers joining a dinner table with 7 other attendees at one of eight different restaurants in the Noosa region. The revelry then continued with drinks at a local cocktail bar, where the indoor dancefloor had a distinct odour of bleach! After an early start, eased by breakfast beside the rainforest, Friday's sessions were capped off by an awards ceremony.

The topics covered at MIMS 2023 highlight how recent advancements in mucosal immunology have significantly enhanced our understanding of immune cell development and behaviour at the mucsoa – especially in human translational research. Streamlining of Next-Generation Sequencing and data mining has opened up numerous possibilites, including the study and treatment of inflammatory bowel disease (IBD). Examples include the development of personalised medicine, where a designer bug is employed to treat IBD. Or the reconstruction of gut-derived cells from IBD patients in a laboratory dish, which can identify important genetic factors that influence the function of these cells. These technologies have also helped to probe the developmental processes of immune cells during early life in humans. Talks also delved into the quirky behaviour of mucosal immune cells and their responses to unqiue environments. For instance, it was observed that when food sources are restricted, T cells migrate to bone marrow for protection. Furthermore, the microbiome was found to play a significant role in these processess. MIMS was an excellent showcase of the excellence and diversity of mucosal immunology research happening in Australia and New Zealand.

The IMS 2023 prize winners were (pictured L-R above):

Best poster: Tejasri Yarlagadda, presented by Valerie Verhasselt

Most engaged ECR: Marina Yakou, presented by Mike McGuckin

Best lightning talk: Melody Dobrinin, presented by Lisa Connor

Best oral presentation (jointly awarded): Rabina Giri and Daniel Howard, presented by Lisa Connor

A huge thanks to all our sponsors, especially QIMR Berghofer MRI, Mucosal Immunology journal, Society for Mucosal Immunology and ASI. The full program of MIMS 2023 presentations and abstracts can be viewed here https://www.immunology.org.au/events/2023-ASI-Mucosal-Immunology-and-Microbiome-Symposium/

After 5 years of dedicated leadership, Simon Phipps has handed over the role of SIG Chairperson to Lisa Connor. The Mucosal Immunology SIG Virtual Seminar Series is now set to resume with a fantastic line-up of speakers, so keep an eye on your inbox and make sure to register. Early-mid career researcher award initiatives are in development, so make sure to join us by updating your ASI profile to include Mucosal Immunology as a special interest and follow us on Twitter @Mucosal_ASI. New initiatives will also be announced on our ASI webpage https://www.immunology.org.au/asi-programs-and-opportunities/special-interest-groups/mucosal-immunology/

Laura Cook

Save the Date

MIMS will return to Peppers Resort, Noosa from **20-23 May 2025** for another symposium. These will occur every second year, alternating with the International Congress of Mucosal Immunology (ICMI), which is next occurring over 6-10 July 2024 in Copenhagen.

The IUIS Corner

Joanne Reed | IUIS Coordinator

IUIS Launches Junior Community for ECRs

The IUIS Junior Community (JC) is a new initiative to promote and connect Early Career Researchers (ECRs) in the field of immunology or related disciplines at the international level. This is a great opportunity for ASI ECRs interesting in growing an international network and contributing to immunology activities with international impact.

IUIS JC will work with IUIS committees, council and the Executive Board to achieve the following aims:

- Support the creation of junior national or regional societies, with a focus on low-to-middle-income countries.
- ECR representation in the IUIS council and committees to ensure that IUIS activities meet the needs of ECRs.
- Mentorship programs connecting experienced IUIS members with ECRs.
- Virtual and in-person conferences, seminars, schools, and workshops for ECRs.

How to join the IUIS Junior Community

IUIS JC welcomes members with a scientific background working in the field of immunology or related disciplines with less than 10 active years of working experience after their last official degree (BSc, MSc, PhD).

For more information, please visit the following link: https://iuis.org/the-iuis-junior-community/

IUIS Junior Community

DID YOU KNOW?

IUIS compiles a list of upcoming immunology conferences and schools all in one place. To see what is happening click the "events" tab on the IUIS homepage: https://iuis.org/events/

Sustaining Member Publications

UNITED BIO RESEARCH

1. **GFP-Trap Agarose**

   https://www.ptglab.com/results?q=nano+traps&category=&filter=product-type%3DNano-Trap%26Target%3DGFP&sort=relevance

   Jian Chen et al (2023)
   A split GAL4 RUBY assay for visual in planta detection of protein-protein interactions

   The Plant Journal
   DOI: 10.1111/tpj.16234

2. **uPA/Urokinase Rabbit Polyclonal Antibody**

   https://www.ptglab.com/products/PLAU-Antibody-17968-1-AP.htm

   Farina Hanif et all (2023)
   International Journal of Molecular Sciences

   miR-3174 Is a New Tumor Suppressor MicroRNA That Inhibits Several Tumor-Promoting Genes in Glioblastoma

   DOI: 10.3390/ijms24119326

3. **Phospho-MEK2 (Thr394) Polyclonal antibody**

   https://www.ptglab.com/products/Phospho-MAP2K2--Thr394--Antibody-28955-1-AP.htm

   Mendiola, A.S., Yan, Z., Dixit, K. et al (2023)
   Nature Immunology
   Defining blood-induced microglia functions in neurodegeneration through multiomic profiling

   DOI: 10.1038/s41590-023-01522-0

BD

1. **BD FACSLyric™ Clinical Flow Cytometry System**

   Fryer, H.A, Hartley, G.E., Edwards, E.S.J et al. (2023) COVID-19 Adenoviral Vector Vaccination Elicits a Robust Memory B Cell Response with the Capacity to Recognize Omicron BA.2 and BA.5 Variants.

   J Clin Immunol
   https://doi.org/10.1007/s10875-023-01527-2

2. **BD Research cell sorter, Research cell analyser and FlowJo software.**

   Mifsud, NA, Illing, PT, Ho, R, et al. (2023) The allopurinol metabolite, oxypurinol, drives oligoclonal expansions of drug-reactive T cells in resolved hypersensitivity cases and drug-naïve healthy donors.

   Allergy.
   https://doi.org/10.1111/all.15814

3. **BD Rhapsody TCR/BCR profiling assays**

   Iwabuchi S, Tsukahara T, Okayama T, et al (2023) B cell receptor repertoire analysis from autopsy samples of COVID-19 patients.

   Front. Immunol.
   https://doi.org/10.3389/fimmu.2023.1034978

Ozgene to advance humanity - inspire curiosity

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

   Bourqui et al., (2023). A novel mouse model for an inducible gene modification in the renal thick ascending limb. Am J Physiol Renal Physiol.

   doi: 10.1152/ajprenal.00250.2022.

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

   Davies et al., (2023). PI(4,5) P2-dependent regulation of endothelial tip cell specification contributes to angiogenesis. Sci Adv.

   doi: 10.1126/sciadv.add6911.

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

   Fiedler et al., (2023). Co-modulation of TNFR1 and TNFR2 in an animal model of multiple sclerosis. J Neuroinflammation.

   doi: 10.1186/s12974-023-02784-z.

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 and Cell Biology, Clinical and Translational Immunology

ASI Council

Executive Committee

President | Gabrielle Belz
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
mz.chaudhry@uq.edu.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