Australian and New Zealand
SOCIETY FOR IMMUNOLOGY INC.

ASI NEWS

June 2021

Is publishing easier or harder today?

Contact Us

Australian and New Zealand
Society for Immunology Inc.

ASI Inc. Secretariat

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Peter Doherty

Hello and welcome to June 2021

Debbie Burnett, Newsletter Editor
newsletter@immunology.org.au

Hello and welcome to the June 2021 newsletter. I'm very pleased to be able to present a very special newsletter edition today with some truly remarkable contributions from the ASI members..

This includes an extremely special highlight from Professor Tony Basten. For those who don't know him, Tony Basten is an absolute giant in the world of immunology who has made profound and ongoing contributions that have shaped the fields of clinical and research immunology over the last 40 years and based on citations he is listed as one of the top 1000 scientists world-wide, regardless of discipline.

Tony has taken the time to write the ASI members a detailed thought-provoking piece about how he feels the challenges of publishing have changed throughout his 40-year scientific career.

In addition, Women's Initiative coordinator Kylie Quinn is pleased to be announcing the details of the Women's Initiative Mentoring Scheme. She'll be doing a call-out for mentors, so please have a read of the details and sign up to be part of this great initiative.

You can also find out all the details of the Day of Immunology Events that took place across Australian and New Zealand in April as well as some fantastic upcoming events in your local state.

> Huge thanks to the ASI members who submitted photos of their ingenious "Lab Hacks". You can find the submissions from the finalists (and the winner) in this edition of the newsletter

Please check your emails to see the very first "Get to know our Members" profile with Dale Godfrey. Here we have an interview with one of our most distinguished members, Nobel Prize Laureate Peter Doherty.

Huge thanks to all the ASI members who submitted photos of their ingenious "Lab Hacks". You can find the submissions from the finalists (and the winner) in this edition of the newsletter. We had everything from -80 freezer organisation tricks, ways to apply your scientific skills to your indoor plant collection, and an extremely clever (and thrifty) lego confocal mouse microscope stand!

I enjoyed receiving your fantastic contributions so much that I'd like to open up another photo competition for the next edition of the newsletter. This time I'd love to see any science themed cakes or treats you may have created over the years. As an example I'd like to share this microscope cake and slides created by Bethany Pillay, Imogen Moran, Angelica Lau back in 2015. Please submit your most creative Science themed delicacies to newsletter@immunology.org.au by the 15th of August. Remember there are prizes to be won! ■

Secretary Report

Welcome to 2021!

Connie Jackaman, Honorary Secretary
secretary@immunology.org.au

Student membership

In response to the pandemic ASI offered free student membership in 2021 for both new and existing student members. As a result, ASI has seen a surge in student membership and we welcome all our new and returning student members. We look forward to supporting your membership and please feel free to contact us if you have any feedback on ASI award schemes, programs or suggestions. Many thanks also to our Secretariat who processed the many nominations and applications.

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Award information and dates

A reminder to check out the ASI website and in the member portal for details on the different award schemes. Please see the upcoming awards in the 2021 schedule below:-

- Education Award: June 7th to July 5th
- Jared Purton Award: July 19th to August 16th
- Career Advanced Awards, round two: August 30th to September 20th
- COVID Carer Awards, round two: August 30th to September 20th
- Margaret Baird Award: October 4th to October 25th

If you are unsure of your eligibility for a particular award scheme and wish to request an eligibility extension (e.g. due to financial hardship, personal circumstances, maternity leave, carer's leave etc) please contact ASI in advance of the application deadline. This will allow time to assess your request and so that we can adjust the automatic Netranger portal for you to upload your application if required.

Council positions

There are a number of council positions opening for appointment starting in 2022 (please see below). This is a great opportunity if yourself or someone you know is interested to join ASI council and nominations will open later on in the year.

> If you are unsure of your eligibility for a particular award scheme and wish to request an eligibility extension (e.g. due to financial hardship, personal circumstances, maternity leave, carer's leave etc) please contact ASI in advance of the application deadline.

- Vice President
- WA Councillor
- SA Councillor
- ACT Councillor
- FIMSA Coordinator
- Annual Meeting Coordinator
- Social Media Coordinator
- Women's Initiative Coordinator ■

Is publishing easier or harder today?

Tony Basten (President of ASI in 1978-79 and Honorary Life Member)

A universal formula for success in publication

Jan Klein, although known to only a few among the current ASI membership, was a combative and bellicose member of the MHC school of the 1970s and 1980s who once gave an entertaining lecture on his formula for writing a publishable article (1). In it he provided the following advice:

- "The subject of the paper must be' fashionable'
- The manuscript must not be a bad one… nor a very good one either"
- Rather "you write your paper to conform with the established norm"
- "It is extremely important what and whom you cite."

His conclusion was that "if you observe all these recommendations, you will be able to publish your manuscript in any journal you choose."

Your editor has given me the opportunity to discuss Klein's recommendations in the context of the question: 'Is publishing today easier or harder' than it was when I began my career in the 1960-1980 era of immunology.

> Thanks to clonal selection, there were many relatively straightforward experiments waiting to be performed on the time-honoured themes of immunological memory and self-tolerance, although the laboratory technology available was primitive to say the least.

The immunological world in the 1960-1980 era

My answer to the question has two components, scientific and technical. But before embarking on a dissection of these components, I should set the scene by recounting what was happening at that time within the cosy little world of Immunology; a world consisting of a 'global college of perhaps 200 individuals' according to Gus Nossal when writing about the evolution of our specialty in 1986 (2). Mice, guinea pigs, rabbits and rats were the main experimental players which meant that my doctoral project involved the use of these creatures rather than humans. However, come the second year of my PhD (which predated the establishment of the ASI by four years), Neils Jerne stated in his summing up at the 1967 Coldspring Harbor Symposium that Immunologists "are waiting for the end." This sentiment was seconded by Burnet in his book 'Genes, Dreams and Realities' (3) in which he wrote that:

"The contribution of laboratory science has virtually come to an end!", reflecting, I may say, his singular dislike of Molecular Biologists not Immunologists. Nevertheless, what an extraordinary statement to make given that the Clonal Selection Theory, together with the discovery of the immunological functions of the small lymphocyte (by Gowans) and the thymus (by Jacques Miller) had ushered in a new dawn for adaptive immunity; or to use the words of Burnet's colleague and co-author, Frank Fenner published in the July 1999 issue of the Society's Newsletter: "The Clonal Selection Theory set the scene for the modern era of cellular and molecular immunology." You could therefore hardly blame the next generation of hopeful Immunologists for siding with leading optimists like Medawar who in 1974 chose to write that: Modern immunology "bears upon every branch of medicine and upon

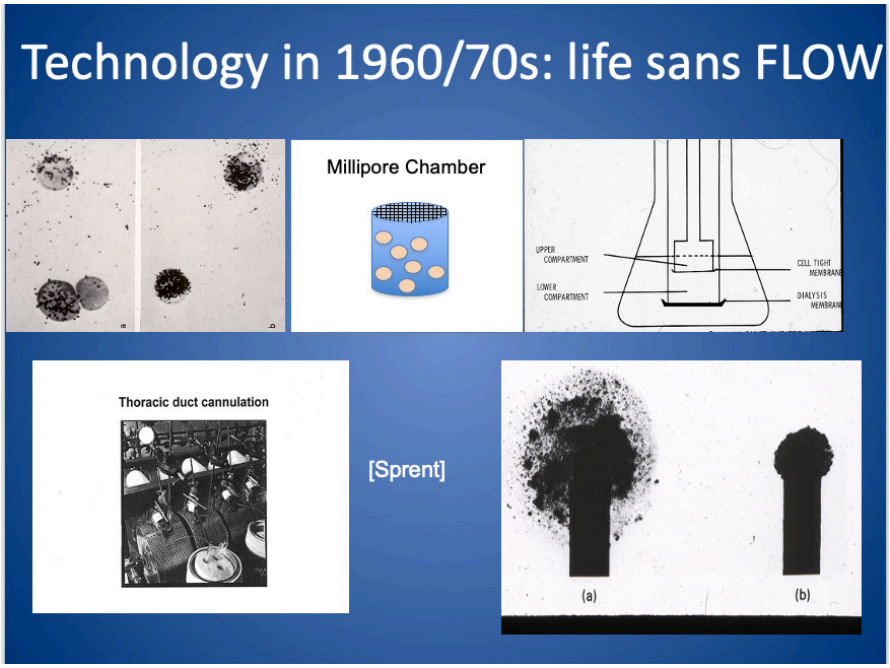

FIG.1. THE METHODOLOGY OF THE 1960S AND 1970S.
TOP LEFT: AUTORADIOGRAPHS OF LYMPHOCYTES DOUBLE LABELLED WITH IODIDE ISOTOPES.
TOP MIDDLE: MILLIPORE CHAMBER IMPLANTED IN THE PERITONEAL CAVITY OF RATS TO DEMONSTRATE RELEASE OF FACTORS FROM CELLS.
TOP RIGHT: THE DIENER- MARBROOK FLASKS USED TO DEMONSTRATE FACTOR DEPENDENT COLLABORATION BETWEEN T CELLS IN TOP CHAMBER AND B CELLS IN THE LOWER CHAMBER.
BOTTOM LEFT: THORACIC DUCT LYMPH; THE BEST SOURCE OF PURE LYMPHOCYTES (COURTESY OF WORLD CHAMPION CANNULATOR, JON SPRENT).
BOTTOM RIGHT: CAPILLARY TUBE SYSTEM FOR VISUAL MEASUREMENT OF MACROPHAGE INHIBITION FACTOR (MIF), ONE OF THE FIRST CYTOKINES TO BE DESCRIBED.

the performance of every organ system in the body," thereby securing a place for our discipline as 'the cancer of medicine'.

The days of primitive technology: a challenge

Thanks to clonal selection, there were many relatively straightforward experiments waiting to be performed on the time-honoured themes of immunological memory and self-tolerance, although the laboratory technology available was primitive to say the least compared to that we now take for granted today. Examples are illustrated in Figure 1. There was no flow, no monoclonals, no PCR and only one fluorochrome. Thoracic duct lymph was the prime source of pure lymphocytes (with Jon Sprent still holding the cannulation world record). Surface receptors were detected by autoradiography and antibody responses were measured by the Jerne plaque assay using Alistair Cunningham's chambers. There was no internet; hence searching the literature for references required constant trips to the library. Access to a competent PA to help with this was therefore paramount. The first word processors were not introduced until the early 1980s. Consequently, every correction to a typed manuscript had to be done manually with journals requiring multiple hard carbon typed copies. Space for publications was severely limited and there was no such thing as supplementary figures. The technology involved in publication was therefore greatly inferior to that of today and in that sense meant that, mechanistically, publication in the 1960s and 1970s was much harder.

There was no internet; hence searching the literature for references required constant trips to the library. Access to a competent PA to help with this was therefore paramount.

But a golden era scientifically?

On the other hand, the primitive experimental technology available was counterbalanced by the fact that:

- so many straightforward experiments were waiting to be done
- the global pool of immunologists was vastly smaller as noted by Nossal
- the concept of immune regulation had just emerged following initial reports of autoimmune disease in patients with primary immunodeficiency states (4),
- MHC restriction (first described by Doherty and Zinkernagel) explained how T cells could recognise intracellular pathogens like viruses
- there was no/minimal competition from industry and little pressure to delay publication until the provisional patent had been submitted
- obtaining grant funding was easier: on reading a draft of this paper, Jon Sprent reminded me that when securing his first grant in the USA around 1980, the success rate from the NIH was about 45%, but when he left in 2005, it was around 12%. I could not find comparable figures for NHMRC project grants, but I am confident it was also higher around 25% whereas now, of course the success rates for their replacements are even less than 12%. There were also Block grants to major institutes followed by Program grants which were introduced in the late 1960s and late 1970s respectively, neither in existence come the end of 2021.

There were also Block grants to major institutes followed by Program grants which were introduced in the late 1960s and late 1970s respectively, neither in existence come the end of 2021.

I would therefore venture to suggest that it was easier on scientific but not technical grounds to publish in those days, with one proviso; to wit that it was preferable to be working on T cells post the discovery of the 'two cell system' (by Miller and Mitchell). During the early 1970s, the adaptive T cell-dominated world was divided into two camps, one run by the 'MHC restrictionists' and the other by the 'T-B collaborationists who included the 'suppressionists' and initially outnumbered the former 3:1. I cast my lot in with the latter until the first wave of suppression came to an abrupt end in

On the clinical front, the American Journal of Medicine occupied first place followed by the New England Journal of Medicine, the Lancet and JCI.

the late 70s when no one could find the 'I-J' gene. Publishing on B cells, however was more difficult to make a living out of unless one was working with the Director of the Hall Institute himself, or on chickens with the likes of Noel Warner (when at the Hall Institute) and Max Cooper (USA).

Since getting grants was easier, some of us – to cite Jon Sprent -

"found science to be more fun given that one was less worried about having to sell your house if your last grant was unsuccessful. What's more, because technology was then so primitive by modern standards, as a chief investigator you could get by doing experiments with just a couple of people, thereby often leading to papers in the best journals with a small handful of authors in striking contrast to today."

Funding bodies still direct where you publish

Success in publication also depended on the number of journals prepared to accept immunological gems and the weighting placed on them by funding bodies. In the 1960s and 1970s there was one Science (the province of Americans) and only two Natures (Nature and Nature New Biology), although the head office of Nature was in London, giving 'colonials' who had fought alongside the British in two World Wars better access. The solo Cell Press journal (cf 50 today) welcomed molecular biologists, but not us. The Journal of Experimental Medicine was therefore the third string to our bows. The Editorial Board was prepared to accept two and even three papers at a time if devoted to the same theme and it therefore became vital to secure a place on the Rockefeller University's OK list. Remember that the redoubtable Henry Kunkel from that institution blackballed the originator of the 'danger hypothesis' after she published a paper with her dog as a co-author. Should one fail with JEM, then one would turn to Cellular Immunology (which has since fallen from grace) followed by the Journal of Immunology or the newly minted European Journal of Immunology, depending on whether friendlier referees were located in the USA or Europe. Immunological Reviews (then called Transplantation Reviews) was the prime place for an invited review from the sole editor, Goran Moller from Sweden. At a meeting in the 1970s, I remember having a drink with a Norwegian colleague who told me his offer of a review to chain-smoking Moller had been unsuccessful despite being sweetened by a carton of cigarettes. If one was working on phagocytes or exocytes, Blood was a reasonable option. On the clinical front, the American Journal of Medicine occupied first place followed by the New England Journal of Medicine, the Lancet and JCI.

Impact factors and H-indices did not exist. Overall, the limited range of acceptable journals available compared to nowadays made publication a challenge, although I remain convinced that if one was working in a recognised centre on a topical subject in what was then a small immunological world, publication, provided good secretarial help was available, was not too hard. Moreover, the turn round of papers by the major journals was relatively quick if my memory is correct, despite the lack of rapid publication outlets like Science Express. The reason, Jon Sprent surmises, is that: "most of the reviewing was done by senior scientists themselves: they would often give a simple yes or no to the paper, leading to many papers being rejected or accepted outright with little or no revision needed. Whereas now, chief investigators are much busier, so they hand papers for review over to their many postdocs or students who feel compelled to prove to their boss how informed and intelligent they are by tearing the paper to shreds and asking for more experiments, hence the massive emphasis on supplementary figures which almost no one bothers to read."

The role played by funding bodies in determining where one submitted articles, I suspect has not changed for the 'wet lab' scientists. For the 'dry lab' people, however, life is now easier while the 'wet lab' folk work out how to access the MRFF and similar funding sources.

The role played by funding bodies in determining where one submitted articles, I suspect has not changed for the 'wet lab' scientists. For the 'dry lab' people, however, life is now easier while the 'wet lab' folk work out how to access the MRFF and similar funding sources.

Risky original versus bandwagon Research

The topic of one's research likewise posed a problem for us in the 1960s. Since track record was (and of course still is) paramount when submitting grants, should one continue to roll out pot boilers on topical bandwagons or run the risk of rejection with a really novel project (Fig.2)(5)? When making that decision remember that Nature originally rejected Hans Krebs' first paper on the glucose (Krebs) cycle since it was deemed to be 'too novel'.

In the event that you accept the challenge of creating a new paradigm, you will receive a tick from Jan Klein whose tongue-in-cheek advice cited in the introduction was 'it must be fashionable'. The reason for his approbation is that the real point of his paper was to 'savage' bandwagons and pot boilers and uphold the importance of originality.

The referee problem: are you a fair reviewer?

There is one comment of Klein's on which I would like to elaborate, namely the issue of referees and the associated peer review process. To paraphrase Jane Austen, 'it is a truth universally acknowledged that a single referee can sink any paper independently of the number of authors when in search of an outlet for their work.'

Were the referees in the 1960s more sympathetic than now? As noted above, I believe so since the immunological world was so much smaller and the risk of 'knowingly' offending so much greater.

Nevertheless, rest assured that the following quotation from a 2021 paper in Academia Stack Exchange did apply to the 1960 and 1970s as well:

"The reasons that a referee rejects a paper are virtually unlimited. He is wrong, she does not care. He is busy, she is right but explained it badly. Whatever!" (6).

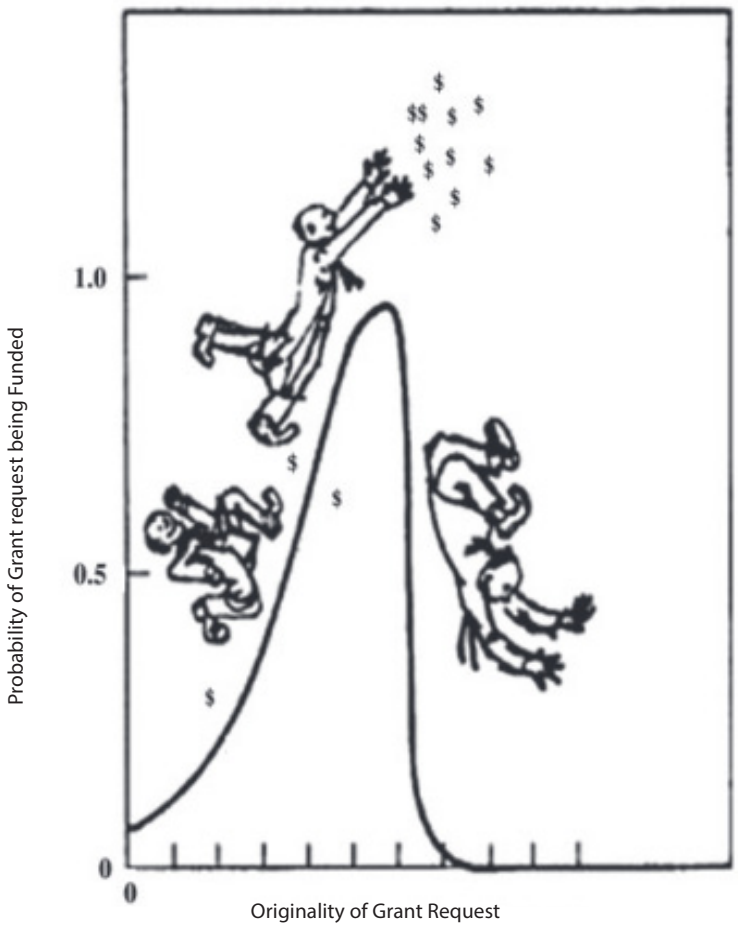

FIG. 2. THE FATE OF KREBS' ORIGINAL ATTEMPT AT PUBLISHING THE BIOCHEMICAL CYCLE NAMED AFTER HIM.

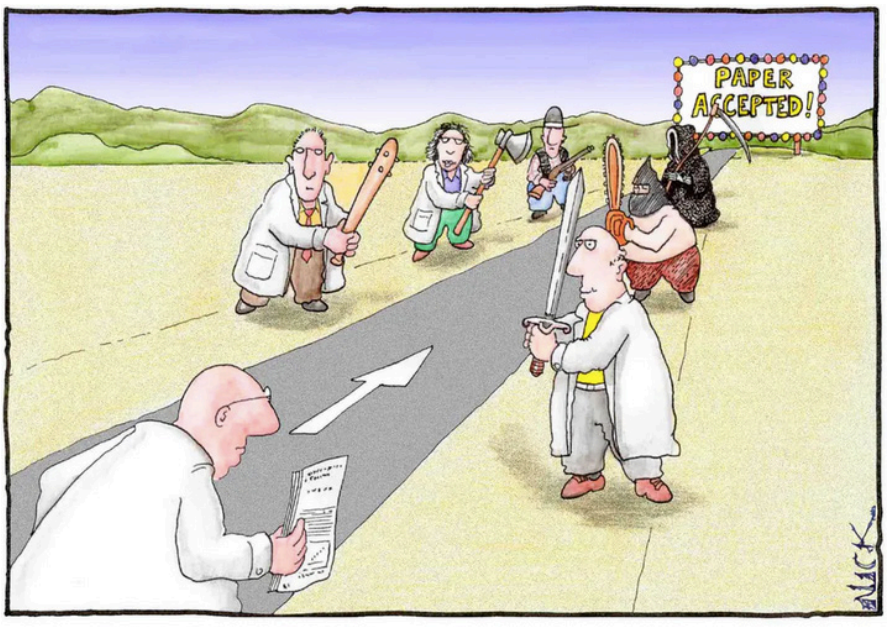

FIG.4.A CARTOON OF THE ROAD TO PUBLICATION FROM 2013.

Moreover, we were also accustomed to receiving letters of rejection worded in time honoured fashion:

"Thank you for submitting your manuscript entitled 'Are Tregs old hat?'

Despite the fact that the content is topical, we regret to inform you that your article is not of sufficient interest to our readers to warrant taking up space in this prestigious journal due to the high volume of submissions we receive. We therefore recommend you consider submitting your manuscript elsewhere. Further argument or telephone calls are unacceptable. We sincerely hope that you will continue to offer us other manuscripts in the future".

Not mentioned in this sample letter is the infuriating situation that still so often occurs, to wit that after conducting four months of additional experiments to satisfy referee one, referee two who originally accepted the manuscript now rejects it. The one advantage you do have now, however, is being able to heed Hitler's advice recorded on video when his article submitted to 'Ecology' was rejected for the seventh time:

"We might as well have submitted to Nature or Science" and to the referees: "Kill them all now."

If you don't feel like going quite as far, I suggest you take a leaf out of Chapman and Slade's article entitled 'Rejection of Rejection: A Novel Approach to Overcoming Barriers to Publication' (7):

"Thank you for your rejection of the above manuscript. Unfortunately, we are not able to accept it at this time. As you are probably aware we receive many rejections each year and are simply not able to accept them all..." [It is worth a read].

There is, however, one situation you will not have to encounter in 2021. At the end of my doctoral studies in the UK in 1969, I was invited by the former head of Medicine from the Adelaide medical school where I trained to lunch with him at the Athenaeum Club in Piccadilly. On proceeding to the 'smoking room' after

> The current acceptance rate for NHMRC's much loved journals, Nature and Science is currently 8% and 7% respectively.

lunch, he introduced me to the editor-in-chief of a very well-known British journal (still in existence) who was sitting by the fire with a glass of cognac in one hand and a bunch of manuscripts in the other. He flicked through the first, shook his head, made a note and threw it into the fire. "No referees needed for him", said my host.

In conclusion, scientifically it was probably easier to publish, technically certainly not.

So where does that leave us? The current acceptance rate for NHMRC's much loved journals, Nature and Science is currently 8% and 7% respectively. Cell Press is too coy to publish their rates. I could not find any stats for the 1960s and 1970s, although I suspect that the success rate for Nature New Biology would have been significantly higher during its limited life. What's more Immunology is not the hand maiden of molecular biology but a burgeoning field that just uses molecular recipes for technical support of their experiments and is attracting more and more very smart young scientists to its ranks. Immunotherapy has become the 'fourth pillar' of cancer treatment, while there is now fierce competition from industry for places in the higher-ranking journals.

Is the depth of competition compensated for by the recent great increase in number of journals, both 'open 'and 'closed', bearing in mind that in 2019-2020 over 170 open access journals vanished from the Internet along with the data in them (8). I doubt it since most of us still prefer to run the gauntlet of peer review as opposed to the 'float-it-out-there-and-see approach in a journal of dubious merit.

From the scientific perspective, the 1960-1980 era wins by a short but significant head, although the contemporary scientist will no doubt demand an AI-derived algorithm to provide a definitive answer to the editor's question illustrated by the cartoon in Figure 4 (9). On the other hand, from the technical points of view (lab methodology and submission processes), publication is unquestionably much easier today. In that sense, the 'good old days' were in fact the 'bad old days' and not vice versa. ■

Tony Basten (President of ASI in 1978-79)

(on behalf of the <10% of ASI members who can recall the 1960s and 1970s)

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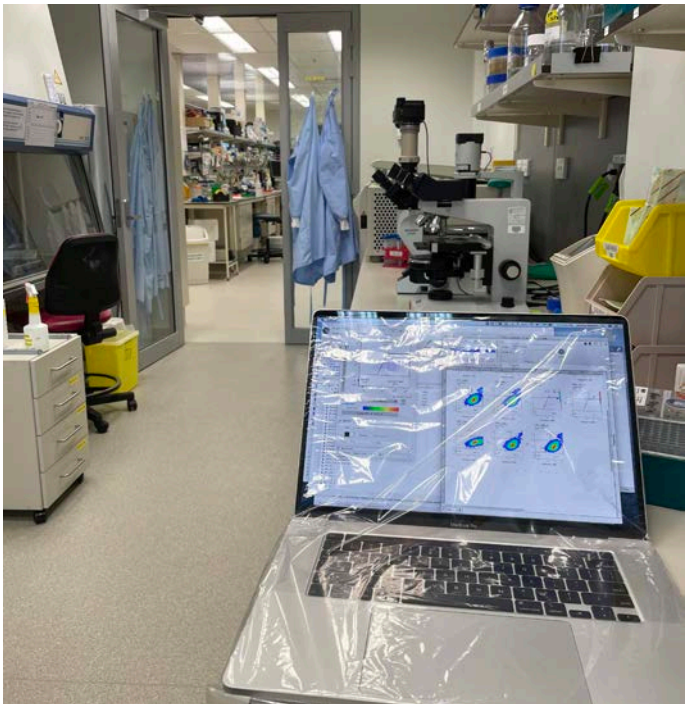
Lab Hacks

Thanks to the amazing ASI community for sharing their creative and ingenious lab hacks. Here are some of my favourites:

A 50ML FALCON TUBE IS THE PERFECT SIZE TO POP NEAR A WINDOW AND PROPAGATE PLANT CUTTINGS.
ELISSA DEENICK

LUGGAGE TAGS MAKE A CONVENIENT WAY TO KEEP TRACK OF WHAT'S IN YOUR -80 SHELVES.
DANIELLE PRIESTLY

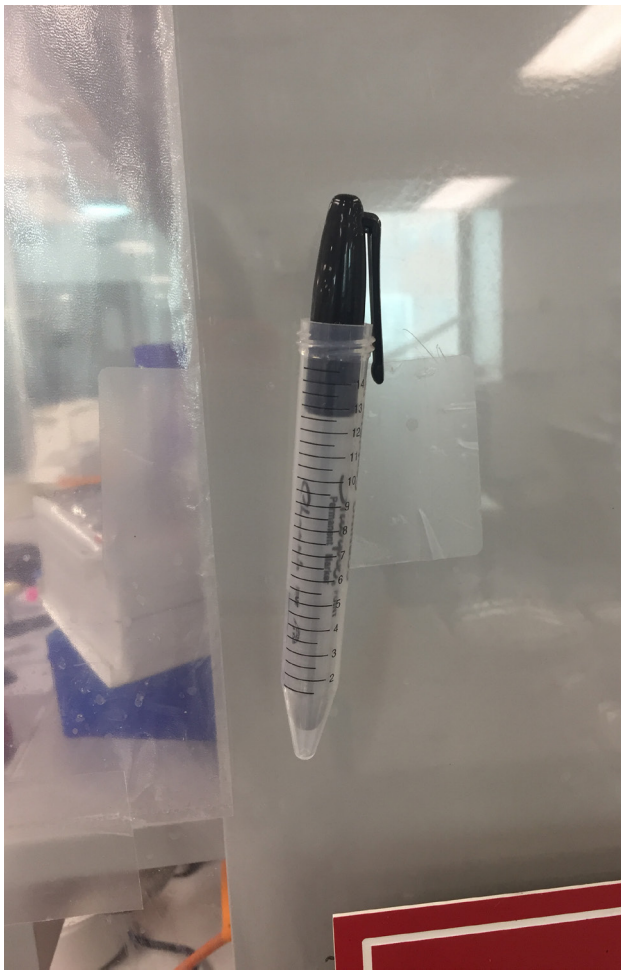
THE LID TO A PIPETTE TIP BOX CAN SERVE AS A SIMPLE BOAT TO HOLD LIQUIDS FOR MULTICHANNEL PIPETTES.
SHANE KELLY



BIN LINER IS PERFECT FIT FOR MAC BOOK PRO 16" WHEN USING MAC IN LAB. COVERS KEYBOARD AND SCREEN ALMOST PERFECTLY.
JOANNA ROBERTS

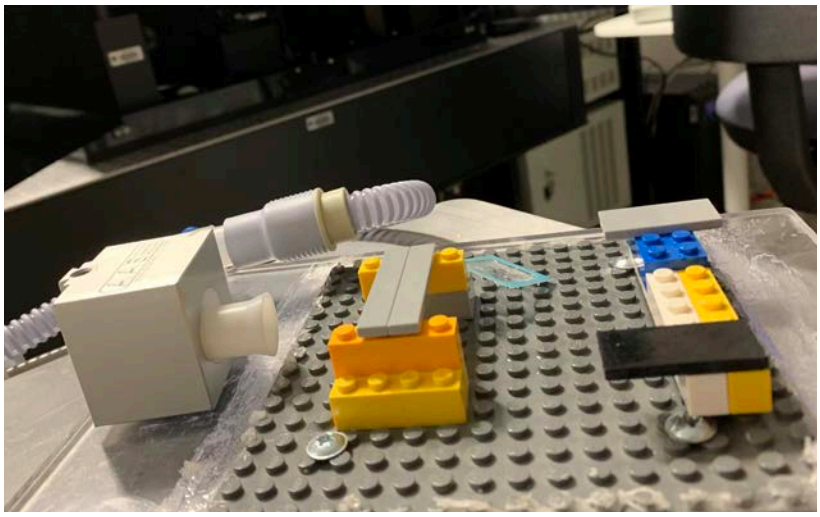
AQUARIUM PEBBLES KEPT AT -80C CAN SERVE AS A GOOD SUBSTITUTE FOR DRY ICE IF YOU DON'T HAVE ANY ON HAND. JUST MAKE SURE YOU PUSH THE TUBES DEEPLY INTO THE BEAKER. THE DETAILS ARE EVEN PUBLISHED (ISMALAJ ET AL. ANAL BIOCHEM, 2015)!

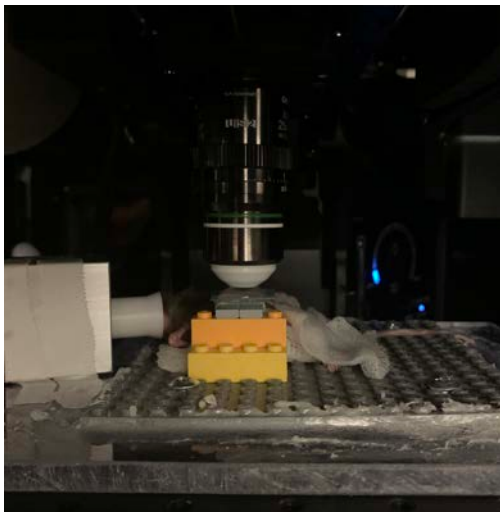
ASOLINA BRAUN



A 15ML FALCON TUBE MAKES A PERFECT HOLDER FOR A PERMANENT MARKER.
AMANDA RUSSELL

BUT THE WINNER IS ALI ZAID AT THE MENZIES HEALTH INSTITUTE QUEENSLAND, GRIFFITH UNIVERSITY, GOLD COAST CAMPUS FOR THIS EXTREMELY THRIFTY AND FUNCTIONAL CONTRAPTION::





AN INTRAVITAL MICROSCOPY IMAGING STAGE MADE FROM LEGO PARTS ("KINDLY DONATED" BY MY 7-YEAR-OLD) DRILLED AND SILICONE-SEALED ON A PLEXIGLASS PLATE I FOUND IN A BIN. IMAGE1: LEGO IMAGING STAGE. IMAGE2: SAME STAGE, WITH A MOUSE MOUNTED AND READY FOR 2-PHOTON IMAGING.

Women's Initiative Update

Women's Initiative Coordinator

Kylie Quinn
kylie.quinn@rmit.edu.au

In this column, I wanted to put a call out for mentors for the upcoming ASI mentoring scheme. After a tumultuous 18 months, this is a great way that more senior members can meaningfully support early career researchers (ECRs) in our community.

Disruptions from COVID-19 have driven a lot of our research networks online, allowing our community to keep in touch but some interactions have been more difficult to maintain. In particular, ECRs have lost access to opportunities for networking and mentoring. They've missed informal mentoring, incidental interactions with potential mentors in their normal work environments and opportunities to attend seminars, meetings and conferences, where essential networks are built.

One way that ASI is aiming to support ECRs over the remainder of 2021 is to provide a dyad and peer mentoring scheme. Mentoring is one of the most impactful actions you can take to support diversity and inclusivity in the workplace and ASI ECRs have been requesting access to this kind of scheme.

To set this up, we will use the Mentorloop online program. In Mentorloop, mentors and mentees are connected online and prepared for the mentoring relationship with materials accessed through the online portal. Mentors and mentees receive regular email prompts to ensure that the mentee's goals are clear, mentee/mentor expectations are clear, and the relationship is progressing. The scheme would run for 6 months from August 2021 to March 2022, and we will encourage mentors and mentees to meet around once a month for a mentoring discussion.

> One way that ASI is aiming to support ECRs over the remainder of 2021 is to provide a dyad and peer mentoring scheme. Mentoring is one of the most impactful actions you can take to support diversity and inclusivity in the workplace and ASI ECRs have been requesting access to this kind of scheme.

The program is well-adapted to online communication, which will allow mentors in both metropolitan and regional areas to mentor anyone, regardless of location. We will be inviting applications from mentees and prioritising applicants from diverse backgrounds, as a key aim with the scheme is to support diversity and inclusivity within our professional society.

To increase the value of the scheme, mentees will also be given access to each other, enabling them to build peer mentoring relationships and we will also hold several forums with a short talk on various topics from invited experts.

Finally, to support and acknowledge mentors, we will provide access to guide materials from Mentorloop to prepare you for the mentoring relationship and we will acknowledge our generous mentors on the ASI website.

So, if you are keen to support ASI's ECRs in this challenging time as a mentor or even just interested in more information, please get in touch by emailing kylie.quinn@rmit.edu.au. ■

Day of Immunology

Gabriela Khoury, Day of Immunology Coordinator

International Day of Immunology 2021

In 2021, the ASI hosted a number of engaging events for International Day of Immunology both online and in person. This included a virtual public lecture on COVID-19 Vaccines, a Science in the Pub event, a STEMinar for secondary students and a Science Fair. I'd like to personally congratulate all the organising committee members across Australia and New Zealand for their success in 2021. Please enjoy the highlights below and join us again in 2022.

Public lecture - COVID-19 Vaccines

Gabriela Khoury, Day of Immunology Coordinator.

The Science Behind Vaccination.

To celebrate the International Day of Immunology we hosted a virtual public lecture on the science behind COVID-19 vaccines on the 30th of April.

This highly topically event was an opportunity for the public to access accurate scientific information on COVID-19 vaccines and how vaccines work in general. People tuned in from around the world!

> This highly topically event was an opportunity for the public to access accurate scientific information on COVID-19 vaccines and how vaccines work in general. People tuned in from around the world!

The panel featured talented immunologists and public health researchers from around Australia and New Zealand. The event was chaired by Dr Shane Huntington OAM, exceptional science communicator and host of RRR Einstein a Go-Go radio show.

Dr Andreas Kupz, James Cook University, Australia.

Dr Kylie Quinn, RMIT University, Australia.

Prof. Graham Le Gros, The Malaghan Institute of Medical Research, New Zealand.

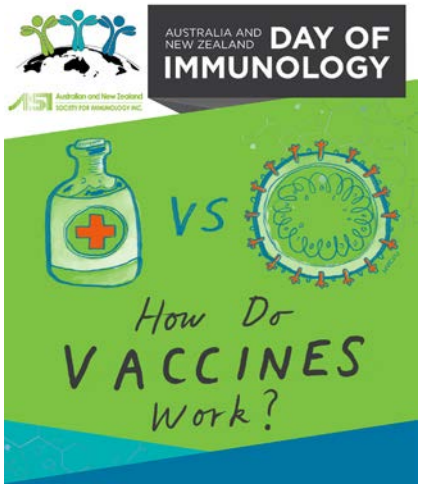
A/Prof Holly Seale, University of NSW, Australia.

Dr Andreas Kupz, kick started the event with a historical introduction to infectious diseases and our earliest vaccines. He covered the basic behind how vaccines work which led nicely into Dr Kylie Quinn's informative discussion on the COVID-19 vaccines available in Australia and New Zealand. Prof Graham Le Gros discussed vaccine developed and highlighted the importance of herd immunity. A/Prof Holly Seale focused on the factors which influences our decisions to get vaccinated against COVID-19. I even got to add a couple of interactive questions during the event!

I'd like to thank all of our presenters for their fantastic and educational presentations on vaccination. I was especially impressed by the stimulating questions asked by the audience and the clear responses by our panel members.

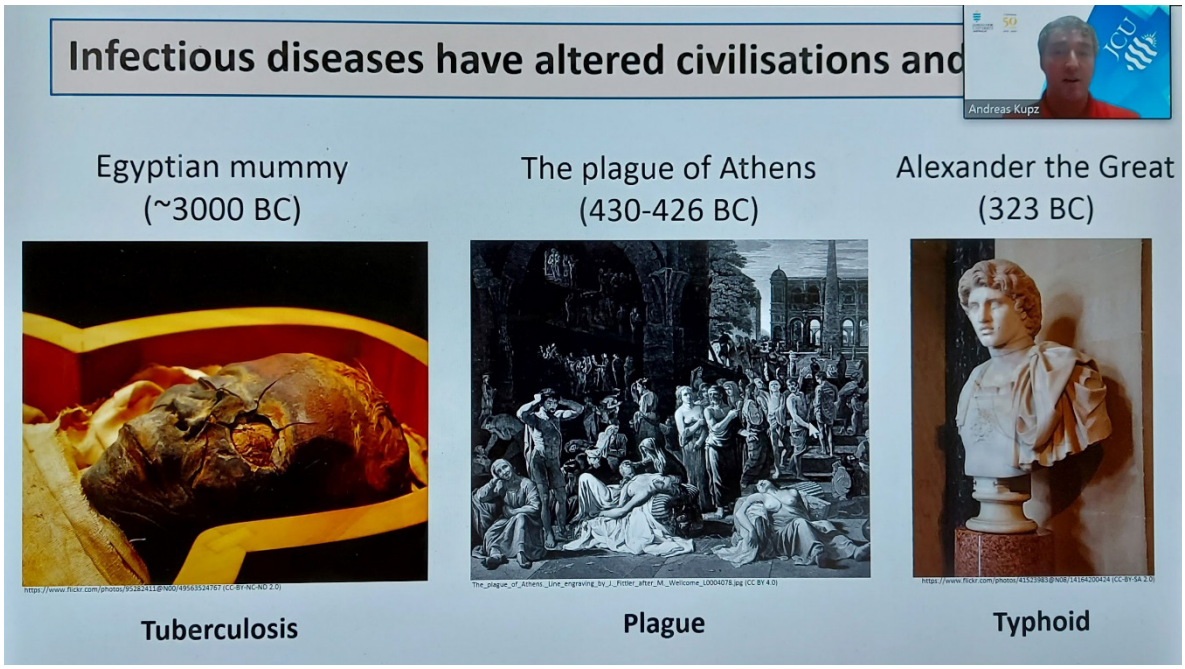
A BIG thank you to all of our sponsors and supporters of this event.

I'd like to acknowledge all of the committee members who contributed to this event. Special thanks to Wendy Danker, Fern Koay (Zoom moderating on the night), Hamish McWilliam (art work for social media campaign) and Inken Kelch (New Zealand live-stream event). Importantly, the committee members who recruited sponsors and supporters and help promote our event - Kim O'Sullivan, Sarah Sasson, Adrian Achuthan, Sam Adhikary, Mitra Ashayeripanah, Cyril Seillet, Ashleigh Poh, Nicola Principe, Severine Navarro, Denuja Karunakaran, Tabinda Hussain, Caitlin Tilsed, Catriona Nguygen-Robertson, Harini deSilva, Anya Jones, Natalie Borg, Poh Yi Gan, Ashley Firth, Anukriti Mathur, Emma Grant and Chris Harpur. This event wouldn't be possible with all of your help.

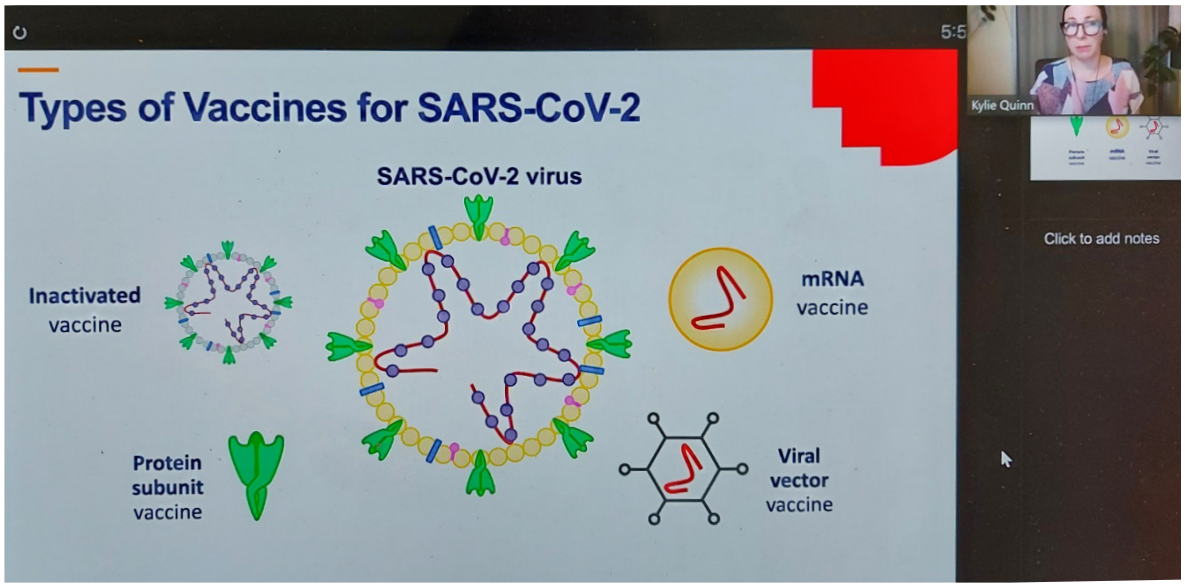


ART WORK BY HAMISH MCWILLIAM (PETER DOHERTY INSTITUTE).

If you didn't make it on the evening you can view the recording of this informative and engaging event online - Watch it here! ■



ANDREAS KUPZ TELL THE STORY OF INFECTIOUS DISEASES THROUGH HISTORY



KYLIE QUINN DISCUSSING THE TYPES OF SARS-COV-2 VACCINES AVAILABLE

Day of Immunology in Victoria

Timothy Gottschalk

As the world is adapting to a new "COVID normal" life, as did we with planning for our Day of Immunology High School Student Workshops this year. After having to cancel our entire program in 2020, it was clear that uncertainty and limitations would continue to restrict our in-person events, so in 2021, we opted to go online. One of the highlights of our past workshops was the opportunity for students to meet and engage with active scientists in academia, industry and adjacent fields, to gain a real-life perspective on what a career in science is truly like. This year, in conjunction with Federation University, Gene Technology Access Centre and Monash University, we presented a one-hour "Careers in Biomedical Science STEMinar" via zoom, aimed at senior high school students, teachers and current undergraduate

This year, in conjunction with Federation University, Gene Technology Access Centre and Monash University, we presented a one-hour "Careers in Biomedical Science STEMinar" via zoom, aimed at senior high school students, teachers and current undergraduate students.

students. The seminar, featuring a keynote address from A/Prof Misty Jenkins and talks from panellists Ashlea Bylsma (Medical Scientist), Dr Nathan Sherwell (Clinician), Dr Glenn Powers (Industry Scientist) and Catriona Nguyen-Robertson (Science Communications), provided the audience with the chance to learn about our speakers personal educational and occupational journeys as well as insight on some of the career opportunities and pathways available to Biomedical Science graduates. This was followed by an engaging panel Q&A session addressing topics from academic performance and subject

At its peak, we had over 130 live participants, with hundreds more registered to watch the recording.

selection in high school/university, to finding mentors and gaining work experience. At its peak, we had over 130 live participants, with hundreds more registered to watch the recording.

Thank you to all of our speakers for making our very first online workshop event so engaging and inspiring. I would also like to acknowledge the Victorian Day of Immunology team, Dr Maria Demaria and Dr Gabriela Khoury for your advice and support, and a massive thank you to Stephanie Davison (Federation University) and Tony Chiovitti (GTAC) for your organisational input. ■

Day of Immunology New Zealand

By Anna Brooks (@DrAnnaNZ), Alicia Didsbury (@AliciaD_nz), and Inken Kelch

COVID-19 and how vaccinations can help us fight the global epidemic were the timely focus of this year's Day of Immunology (DoI). With infection numbers soaring globally and vaccine hesitancy on the rise, many of us believe that spreading awareness about the need for vaccination is more important than ever.

The ASI DoI team did a fantastic job organising a public presentation on COVID-19 vaccinations, allowing people from all around the world to hear accurate information from local experts. Being one of the few countries worldwide with no community transmission, we wanted to take this event to the public and allow our community in Auckland (NZ) to engage with the topic more actively. With the help of ASI members in Auckland we put on a trivia Pub Quiz followed by the screening of ASI's public lecture 'from the comfort of your pub' in our favourite local spot, the Old Government House at the University of Auckland.

> The ASI DoI team did a fantastic job organising a public presentation on COVID-19 vaccinations, allowing people from all around the world to hear accurate information from local experts.

The Pub Quiz content was kindly provided by ASI members at the University of Otago (shared by Emily Bisset) and presented by Dr Anna Brooks (Auckland Cytometry) to a crowd of 50 curious quizzers. Our guests were not only well entertained and tested on the latest growth of the Kardashian cluster but also picked up a few facts about the immune system on the way, and would probably agree that immunology is the 'centre of the universe' (quote: Dr Anna Brooks) by the end of the night.

The first prize of a $50 bar tab was claimed by a team of local 'Flow Pros' and the runner up team from the School of Biological Sciences won a popular set of immune cell-themed toys. We thank MediRay NZ for providing the prizes and refreshments on the night to keep our brain juices flowing and the pub staff for preventing anyone from developing Cenosillicaphobia (the fear of an empty glass).

There was a lot to take home from the night; next to all the exciting vaccine facts we captured from the lecture, we also learned about the challenges and opportunities of public engagement. All of the excellent feedback we received from the event suggests that this type of quiz be repeated, and the high level of interest in the lecture throughout our institution encourages us to bring immunology to the public on a more regular basis.

@DrAnnaNZ @DunbarLabNZ @ MedirayNZL https://t.co/79umbqIHFd ■

Day of Immunology in WA

By Nicola Principe and Caitlin Tilsed

On the 8th of May, the WA ASI Branch celebrated Day of Immunology by hosting a public forum, titled 'Meet Your Immune System!'. This was a fun, family friendly event with all the science content aimed at an upper primary level so everyone from kids to grandparents could be engaged and learn all about their immune system.

Dr Christian Tjiam (TKI) then tackled the biggest job of the day… explaining what vaccines are, how they work and the importance of memory immune response. He used the analogy of a castle and how the defenders of the fortress become better every time it is attacked by the same invaders. This was a simple yet effective way to explain such a difficult concept.

The day featured five short talks from local immunologists covering some of the key pillars of immunology. Dr Sonia Fernandez (UWA) kicked off by introducing all the immune cells in our body, using analogies like the first line of our immune defence such as the skin and hair being like the walls and windows of our house Robbers that try to break into the house are pathogens and the police force are our adaptive immune system coming to the rescue to scope out the intruders and stop them in their tracks!

Next up was Dr Lucy Farfaro (TKI) who talked about viruses and bacteria; what they actually are, how do they compare to other pathogens and the exact difference between the two as they can often be confused! Dr Christian Tjiam (TKI) then tackled the biggest job of the day… explaining what vaccines are, how they work and the importance of memory immune response. He used the analogy of a castle and how the defenders of the fortress become better every time it is attacked by the same invaders. This was a simple yet effective way to explain such a difficult concept.

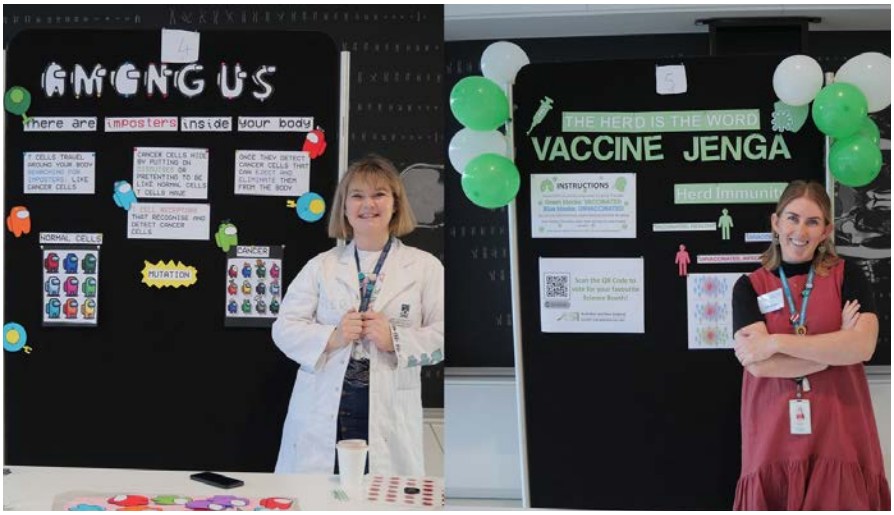
Our last two talks were about asthma and cancer, two diseases that everyone would have had experience with throughout their life, either personally or through someone they know. Ms Niamh Troy (TKI) talked about her research into childhood asthma and the advances in the field to prevent onset. Lastly Dr Jon Chee (UWA/NCARD) explained how cancer hides from the immune system, how immunotherapy activates T cells and how immune checkpoint blockade can be combined with chemotherapy to improve patient outcomes.

After the talks we held a Q&A session- and there were a lot of questions surrounding all topics, but of course the majority were about COVID-19and vaccines. All of the speakers were great at thinking on their feet answered tricky questions with simple yet thorough explanations. We received great feedback from the audience saying that all content was easy to understand, and they walked away amazed how their immune system works in combatting disease.

All of the speakers were great at thinking on their feet and ed tricky questions with simple yet thorough explanations. We received great feedback from the audience saying that all content was easy to understand, and they walked away amazed how their immune system works in combatting disease.

Alongside the talks we also hosted a Science Fair. PhD students and ECRs were invited to make an interactive display or game to explain their research or an immunology concept to children in an engaging and fun way. All of the stalls were a hit with the kids! The stalls we had explored T cell receptors and specificity using Among Us as a way to explain how T cells search the body for 'imposter' cancer cells (Caitlin Tilsed, NCARD); vaccine Jenga to demonstrate the importance of herd immunity as the tower with more vaccinated people is harder for the coronavirus to topple down (Jess Boulter, NCARD); what the components of blood

are and their role in the body, with visitors making their own vial of 'blood' to take home (Katherine Audsley, TKI); the different super powers of each immune cell and the opportunity to build your own immune cell



Overall, we had around 60 attendees, with quite a few families deciding to spend their Saturday morning learning about their Immune System. Luckily the WA lockdown ended the week prior and by the morning of our event most of the restrictions were rolled back!

(Kai Plunkett, TKI); and how we can detect antibody levels using immunological assays to work out whether someone needs a booster shot (Sonia McAlister, TKI).

Overall, we had around 60 attendees, with quite a few families deciding to spend their Saturday morning learning about their Immune System. Luckily the WA lockdown ended the week prior and by the morning of our event most of the restrictions were rolled back!

Thank you to the rest of the WA ASI Day of Immunology sub-committee for all their hard work in putting together the event; Hannah Newnes, Samantha Barnes, Ben Wylie and, WA ASI Councillor Bree Foley. Thanks to our speakers for creating engaging talks with the perfect content level for everyone to understand. Lastly, thank you to The University of Western Australia (UWA), Telethon Kids Institute (TKI), Curtin Health Innovation Research Institute, The National Centre for Asbestos Related Diseases (NCARD), Perron Institute, Lions Eye Institute and Kindness in Science for being in-kind supporters and to Scitech for providing free admission tickets as a door prize. We cannot wait to celebrate Day of Immunology with the WA community again next year! ■

Qld branch Update

Severine Navaro
severine.navarro@qimrberghofer.edu.au

Queensland Immunology has gone full throttle since the beginning of the year. So many exciting things have been brewing!

A big shout out to the amazing QIMR Berghofer Flow Cytometry and Imaging Facility Manager, Grace Chojnowski with her engagement with CYTO Women. This is a Program created just last year in celebration of International Women's Day by the International Society for Advancement of Cytometry (ISAC). It was conceived to encourage and support women to play an active role and take on leadership positions in the field of cytometry. Make sure to check them out here: https://isac-net.org/news/492447/Introducing-CYTO-Women.htm as well as the upcoming CYTO Virtual Congress June 8th-11th (https://cytoconference.org/) with many hot topics in immunology (https://cytoconference.org/featured-speakers/).

2021 Margaret Baird Lecture: Another one of our own was awarded this prestigious award, Dr Michelle Boyle from QIMR Berghofer. Michelle is an amazing advocate of equity in science and a fantastic role model. I cannot picture a better example to perpetuate Prof Margaret Baird's legacy. A recording of the lecture is available on the ASI website. Congratulations Michelle!

The Qld ASI Subcommittee has also been very active on multiple fronts. Here are a few examples:

Day of Immunology. A big thank you to everyone on the committee for your help with the amazing event organized by Dr Gabriela Khoury. The Public Lecture on COVID-19 Vaccines was a crushing success and it featured one of our own

BIG is turning 20! Last but not least, The Brisbane Immunology Group Annual Retreat is back! The long-awaited 20th anniversary celebrations will take place at Q1 Resort and Spa on Surfers Paradise on the 26-27th of August.

FNQ-Vaccine Expert – Dr Andreas Kupz from James Cook University. Andreas presented a fascinating historical overview of infectious diseases all the way back to Ancient Egypt and the early process of vaccine development.

In addition, A/Profs Simon Phipps (QIMR Berghofer), Victoria Eley (UQ & The Royal Brisbane and Women's Hospital) and myself were invited on ABC Radio Brisbane Mornings with Rebecca Levingston to talk about the importance of early microbiome and its role in immunity. It was a real treat to showcase the research and address questions from the public.

Queensland Seminars are going live! Major organisations through the state are now offering the opportunity to join in on their seminars and hear national and international invited speakers. This has been possible thanks to the committee who wished to foster exchange, networking and build capacity. The format has been a great success with attendees from The University of Queensland, Queensland University of Technology, Griffith, James Cook University, as well as The Queensland Children's Hospital, The Princess Alexandra and The Brisbane Royal and Women's Hospitals!

Our dynamic committee includes:

- Dr Andreas Kupz, AITHM – JCU
- A/Prof Emma Hamilton-Williams, UQDI
- Dr Jessica Loughland, QIMR Berghofer
- Dr Danielle Stanisic, Griffith University
- Dr Fernando Fonseca Guimaraes, UQDI
- A/Prof Antiopi Varelias, QIMR Berghofer
- Dr Sophie Curio, TRI
- Dr Ismail Sebina, QIMR Berghofer
- Srividhya Swaminathan, QIMR Berghofer
- Swathi Muralidhar, QIMR Berghofer
- And the very much appreciated administrative support from Jennifer Downie QIMR Berghofer!

BIG is turning 20! Last but not least, The Brisbane Immunology Group Annual Retreat is back! The long-awaited 20th anniversary celebrations will take place at Q1 Resort and Spa on Surfers Paradise on the 26-27th of August. This year's Jonathan Sprent Orator will be none other than Prof Ian Frazer AC himself! Profs Sharon Lewin, Si Ming Man and Sarah Robertson will be our Plenary speakers. The website is now live, don't forget to register: closing date 25th of June 2021. See you all there!

If you want to get involved with the committee or have great ideas or suggestions to promote the ASI Qld network, feel free to contact me at severine.navarro@qimrberghofer.edu.au. Until next time! ■

BRISBANE IMMUNOLOGY GROUP

20th ANNUAL RETREAT

26-27 August 2021

Q1 Resort & Spa
Surfers Paradise, Gold Coast, Queensland

Jonathan Sprent Orator

Professor Ian Frazer AC

Ambassador and Chair of Foundation Board, Translational Research Institute
NHMRC Leadership Fellow, Faculty of Medicine
Affiliate Professor, The University of Queensland Diamantina Institute
Affiliate Professorial Research Fellow, Institute for Molecular Bioscience

Plenary speakers

Professor Sharon Lewin
Peter Doherty Institute for Infection and Immunity

Professor Si Ming Man
The John Curtin School of Medical Research, Australian National University

Professor Sarah Robertson
Robinson Research Institute, The University of Adelaide

Abstract submission, registration and accommodation bookings open now

Closing date: 25 June 2021

Secretariat: Nancy Cloake
Phone: (07) 3362 0397
Email: events@qimrberghofer.edu.au

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Science in the Pub Tasmania

Andy Flies

Science in the Pub Tasmania held and in person "Going viral: viruses and vaccines" Day of Immunology event in Hobart on 29-April. The event featured three Tasmanian scientists giving short talks about immunology, viral vectors and COVID vaccine efficacy. Guna Karupiah (Associate Professor at the Tasmanian School of Medicine, UTAS) led off the event with an overview of how the immune system recognises and responds to viral infections. Andrew Flies (Senior Research Fellow at the Menzies Institute for Medical Research, UTAS) then described how his team is building an adenoviral vector vaccine for the Tasmanian devil facial tumour diseases and how several COVID-19 vaccines use similar viral vectors. Professor Katie Flanagan (Head of Infectious Diseases at Launceston General Hospital & UTAS) then covered COVID vaccine clinical trials and what we know about vaccine efficacy to date. About 50 people attended the event in person and enjoyed the free nibbles. There was a barrage of audience questions after the talks, with several audience members sticking around to ask additional questions after the event. The Facebook video stream has had 168 views to date. Thank you to Australian organisers of the #DoImmuno events! ■

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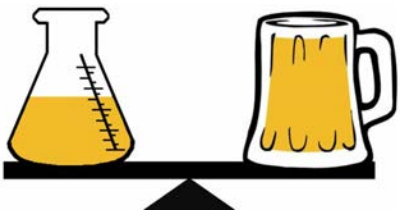
> There was a barrage of audience questions after the talks, with several audience members sticking around to ask additional questions after the event



Vale Professor Katharina Gaus

Prof. Stephen Turner, ASI President
on behalf of the ASI Executive Committee

With much sadness and regret, we inform our members of the passing of Professor Katharina Gaus.
Scientia Professor Gaus was a highly regarded ASI member who was widely recognised for her seminal contributions to the field, including as a regular invited speaker at ASI meetings.

Scientia Professor Gaus was a highly regarded ASI member who was widely recognised for her seminal contributions to the field, including as a regular invited speaker at ASI meetings.

She was an NHMRC Senior Research Fellow at the University of New South Wales, Head of the EMBL Australia Node in Single Molecule Science and the Deputy Director of the ARC Centre of Excellence in Advanced Molecular Imaging (2014-2020). Katharina received her PhD from the University of Cambridge in 1999 and led an independent research group since 2005. She was awarded the Young Investigator Award from the Australia and New Zealand Society for Cell and Developmental Biology (2010), the Gottschalk Medal from the Australian Academy of Science (2012), the New South Wales Science and Engineering Award for Excellence in Biological Sciences (2013) and the Khwarizmi International Award (2018).

We extend our most heartfelt and deepest condolences to Katharina's husband, family, her close friends and colleagues, who will all miss her dearly.

Regards,
Prof. Stephen Turner, ASI President
on behalf of the ASI Executive Committee ■

Vale article adapted from: https://mailchi.mp/immunology.org.au/vale-prof-katharina-gaus?e=e814b76b29

She was awarded the Young Investigator Award from the Australia and New Zealand Society for Cell and Developmental Biology (2010), the Gottschalk Medal from the Australian Academy of Science (2012), the New South Wales Science and Engineering Award for Excellence in Biological Sciences (2013) and the Khwarizmi International Award (2018).

Get to know our members - Peter Doherty

-Tea or coffee?
Black coffee till 1PM, then black tea.

Sweet or savoury?
Both: eat just about everything: savoury first, generally.

-What do you enjoy doing when you're not working?
Walk, listen to opera, read, take uninspired photographs, watch Scandinavian noir murders on TV. Much of my "working life" is currently taken up with writing books for "lay" audiences.

-Which immune cell is your favourite?
The killer T cell, of course.

-As a child, what did you want to be when you grew up?
As a very young child, I wanted to own a bait cart.

-If you weren't an Immunologist, what would you be?
After having been involved for a while in the public communication of, and advocacy for, science, it could be useful to train in psychology / psychiatry, then focus on trying to understand collective brain dysfunction and delusion.

-What was the first thing you did after finding out the news of your Nobel Prize?
Called family to warn them.

-Who inspires you the most?
Not sure I would name an individual but, in general, I find that people who think clearly, tell it as it is and make a significant effort to deal with real problems are admirable.

-What is your life motto?
When you're going through hell, keep going!

-What words of wisdom do you want to share with young and emerging Immunologists?
Be very skeptical.

-What is the best thing about being an ASI Member?
Hearing good science is always fun, and it's great to see bright young people gaining confidence, then emerging as substantial investigators.

-One of the major highlights of our annual conferences are of course the great Lafferty Debates! Which debate topic has been your favourite?
Haven't heard enough of them but remember Lafferty as a good friend who was always up for an argument and, right or wrong, would fight to the end. ■

Gordon Ada Awards

Andreas Kupz

Bio:
Andreas Kupz is an NHMRC Career Development Fellow at the Australian Institute of Tropical Health and Medicine (AITHM) at James Cook University. Andreas completed his M.Sc. in biology at Humboldt-University in Berlin and a PhD in microbiology and immunology at the University of Melbourne. He performed his postdoctoral training at the Max-Planck Institute for Infection Biology in Germany as an NHMRC CJ Martin Research Fellow. His interests include microbiology, immunology and infectious disease epidemiology. His current research focuses on vaccine development for tuberculosis. He is the co-chair of the 'Live Attenuated Vaccines' research community at the Collaboration for Tuberculosis Vaccine Discovery (CTVD) at the Bill and Melinda Gates Foundation.

Research:
Tuberculosis (TB) is the leading infectious cause of death globally with 1.5-2 million deaths annually. In Australia, TB is over-represented within Indigenous people, and our closest neighbour, Papua New Guinea, is suffering from one of the worst TB epidemics in the world. My research focuses on the development of a new vaccine against TB. Bacillus Calmette-Guérin (BCG), the only TB vaccine licensed for use in humans, prevents severe disease in children, but fails to protect against pulmonary TB in adults, the primary source of TB transmission. The mechanisms of BCG-induced protection against TB are largely unknown, and a more comprehensive understanding of immune correlates of protection is required to design an effective new TB vaccine.

My research over the last few years has culminated in the development of a rationally designed recombinant BCG strain which is currently undergoing pre-clinical testing and is supported for further product development by the global TuBerculosis Vaccine Initiative and the Gates Foundation.

Gordon Ada Award:
I used the 2020 Gordon Ada Career Advancement Award to cover publication costs associated with my research program to better understand BCG-mediated immunity against TB.

In two papers published in 2020, my group has shown that mucosal administration of recombinant BCG strains containing distinct virulence-associated genes from Mycobacterium tuberculosis is the most effective way to enhance efficacy of BCG (Muruganandah et al., Science Advances); and provides near sterile immunity against TB in the context of type 2 diabetes (Sathkumara et al., PNAS).

As a research fellow and MCR I have limited access to discretionary funding to pay for publication costs. The Gordon Ada Award 2020 has helped me to cover this shortfall. High quality publications are critical for my career development and international reputation. I thank the ASI for the recognition and believe that the Gordon Ada Career Advancement Award has further underscored my professional standing as one of Australia's pre-eminent young TB vaccine researchers. ■

Ali Zaid

I am a Research Fellow at the Menzies Health Institute Queensland on the Gold Coast, and I focus on viral infections that cause inflammatory diseases. I initially trained at the now Doherty Institute working on tissue-resident memory T cells, and then moved to the Gold Coast to pursue an odd fascination with innate immunity.

My work combines the study of immunopathogenesis in infections with mosquito-borne viruses with skin immunology, so my interests cover a range of mechanisms that take place between infection and disease. This, along with my passion for microscopy - in particular intravital imaging - helped me build collaborations with overseas research teams with similar interests.

The Gordon Ada award was a great way for me to nurture those relationships through regular visits to my collaborators in Brazil, where I organise graduate workshops in confocal microscopy and intravital / multi-photon imaging. Before COVID-19, I was getting ready to travel to the University of Sao Paulo and its sister campus in Ribeirao Preto to present my work, give a workshop and build upon these partnerships: But when borders closed and the situation in Brazil took a turn for the worst, I had to put that plan on hold.

> My work combines the study of immunopathogenesis in infections with mosquito-borne viruses with skin immunology

In that time, both my PhD students' work here was interrupted and some of their rather important experiments were cancelled as the University went into lockdown. Thankfully, being able to re-purpose the Gordon Ada award means that these experiments can be done, which will help my students complete their projects and put together the final pieces of their first-author papers. Although I'm very much looking forward to re-connecting with my Brazilian colleagues and rekindle our collaborations, I'm grateful to ASI for the opportunity to make the most of this award in a way that will help me advance in my work and my career as a researcher. ■

Fernando Fonseca Guimaraes

Understanding why our immune system cannot fight diseases like cancer is the heart of my research. Through uncovering some of the key mechanisms that disease cells use to hijack the killing action of a subset of our immune system - Natural Killer (NK) cells, our research has proved in pre-clinical models that some drugs can restore the NK cells role in this important fight against cancer. Developing a screening strategy that identifies which patients would benefit from this therapeutic approach, we can also personalise this treatment.

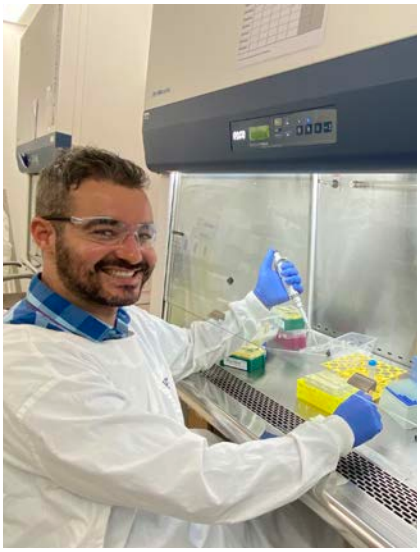
I completed my doctoral degree as the first graduate from the International PhD Program at Institute Pasteur (Paris, France) in 2012. During my PhD, I laid strong foundations for my academic career and became a key researcher in the field of Natural Killer (NK) cell response to systemic inflammatory response syndrome and sepsis in animal models and intensive care unit (ICU) patients. In Australia, to extend my knowledge in the areas of NK cell signalling and innate immunotherapy I joined QIMR and WEHI for my postdoctoral training, where I obtained an extensive track record of publications in top tier journals including Blood, Cell Death Dis, JEM, PNAS, Nat Comms and Nat Immunol, and was awarded the 2019 Researcher of the Year by CCA, 2020 QLD Young Tall Poppy Science Award and a 2020 UQDI Rising Star Award. I started to gain independence by attracting peer-reviewed funding

> My vision is to create NK cells with the ability to overcome the stealth tactics used by diseases to evade our natural immune responses

as e.g.: NHMRC ECF, an NHMRC New Investigator Project Grant, a NBCF Fellowship, 3 CCA PdCCRS Project Grants, and a US Department of Defence Award. My work in the identification of new regulators of optimal in vivo NK cell function has earned me peer recognition as an emerging leader in this field. My current projects at the University of Queensland Diamantina Institute aim to identify and translate the role of NK cells and develop novel immunotherapy approaches for different diseases.

My vision is to create NK cells with the ability to overcome the stealth tactics used by diseases to evade our natural immune responses. These new 'super-killer' cells could be given to patients, enabling them to generate a stronger immune response and improving health outcomes. The Gordon Ada Career Development Award is an incredibly valuable contribution to our immunotherapy research and the advancement of our laboratory's vision.

I am also recruiting talented PhD students to join my group in Brisbane to explore my vision that "awakening the cure inside us is possible through research" (E-Mail: f.guimaraes@uq.edu.au / Twitter: @Fer_NK_nando) ■



Career Advancement Awards

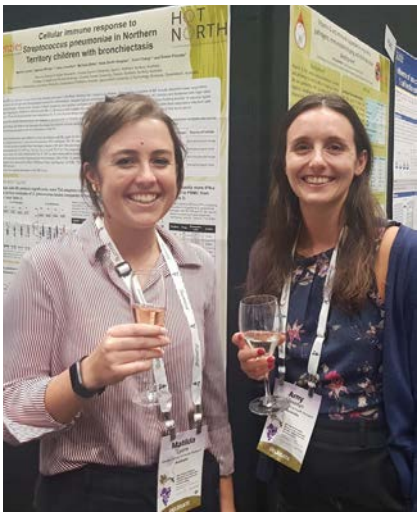
Amy Bleakley

I am currently a research assistant within the Child Health Division at Menzies School of Health Research. I developed a keen interest in the fascinating field of immunology during my undergraduate studies at the University of Plymouth, UK. Since then I followed my heart and now husband to the beautiful tropics of Darwin where I was drawn to Associate Professor Heidi Smith-Vaughan's laboratory research team which is dedicated to providing biological evidence for the respiratory health management of Aboriginal and Torres Strait Islander (Hereafter, respectfully Indigenous) children. This has shaped my research focus which aims to understand the infant immune responses underlying susceptibility to acute respiratory infections (ARIs).

I now lead the laboratory components of two randomised control trials evaluating perinatal vitamin D supplementation and antenatal vaccination as key preventative strategies against ARIs among Indigenous children. I was recently accepted into a PhD program at Charles Darwin University, commencing in early 2022. My PhD project, under the primary supervision of Dr Michael Binks, aims to characterise cord and neonatal immune responses to live challenge with common paediatric respiratory pathogens with a focus on the mechanistic immunomodulatory role of vitamin D supplementation. Recently we have written a review, along with Associate Professor Paul Licciardi, describing the current knowledge and knowledge gaps regarding the innate immunomodulatory properties of vitamin D in the context of paediatric ARIs. Evidence reported in this review highlights the nuances associated with vitamin D mediated immune responses and we believe this will inform future vitamin D related immunology research and guide the therapeutic potential of vitamin D against ARIs (check out our review here: https://www.mdpi.com/2072-6643/13/1/276).

Evidence reported in this review highlights the nuances associated with vitamin D mediated immune responses and we believe this will inform future vitamin D related immunology research and guide the therapeutic potential of vitamin D against ARIs

I am extremely delighted to be a recipient of the Career Advancement Award, which has provided me with a valuable and exciting opportunity to travel to A/Prof Paul Licciardi's laboratory at the Murdoch Children's Research Institute (MCRI). The visit is due to take place in the second half of this year, travel restrictions permitting! During this visit, I will receive training from experienced immunologists to advance and develop my flow cytometric and cell culture skills. The award also supports the purchase of important flow cytometry analysis software critical to my ongoing immunology research. This award will ensure I assimilate the skills necessary to begin my PhD studies and I would like to thank ASI for their support. ■



Amy Prosser

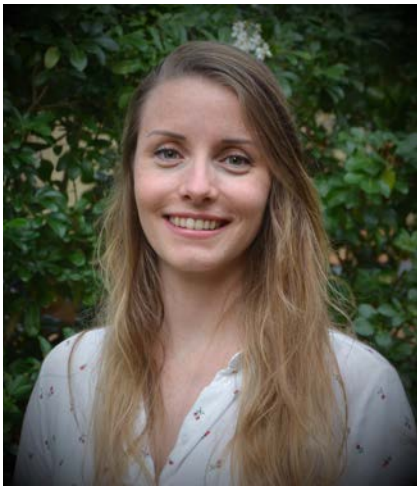
I was extremely grateful to receive a Career Advancement Award from ASI in December 2020. These awards are a fantastic initiative and showcase the flexibility of the society in helping their members through these difficult times. I'm in the final year of my PhD at The University of Western Australia under the supervision of Prof Michaela Lucas, Prof Axel Kallies, A/Prof Silvana Gaudieri and Prof Gary Jeffrey. As part of the Immunology and Transplantation Lab, our small team is associated with the Western Australian Liver and Kidney Transplant Service, which uniquely places us for translation of our findings into clinical practice. We have several talented microsurgeons who perform extremely technically challenging solid organ transplants in mice for us to investigate the immune response to transplantation.

> These awards are a fantastic initiative and showcase the flexibility of the society in helping their members through these difficult times.

I've previously worked in many areas of immunology as a research assistant however transplantation has been my focus for the last 6 years. Overcoming end-stage organ disease by replacement of a damaged organ is one of the greatest modern medical achievements and a fascinating field of immunology to work in. For many organ transplant patients however, this often does not result in a lifelong cure. Chronic rejection remains one of the primary causes of low long-term survival, though the immunological mechanisms underpinning this are poorly understood. Additionally, the obligate lifelong immunosuppressive treatments prescribed to these patients have significant adverse side effects and remain ultimately ineffective at preventing rejection. We are working on understanding chronic rejection and other immunological barriers to successful solid organ transplantation in order to improve outcomes for organ transplant recipients.

This Career Advancement Award has provided me with invaluable financial support. Since receiving it, I've been able to finish key experiments and write the manuscripts that will be included in my thesis. I have recently had a first author article published in Cell Reports titled "Dynamic changes to tissue-resident immunity after MHC-matched and MHC-mismatched solid organ transplantation", which includes data that would not have been possible to collect without this award. This support has been instrumental in allowing the completion of my PhD without compromising the quality or impact of our work that may have occurred due to a lack of funding. Further developing our findings will bring new knowledge to the understudied field of solid organ transplantation immunology, and potentially improve outcomes for organ transplant patients. ■

> We are working on understanding chronic rejection and other immunological barriers to successful solid organ transplantation



Anouk von Borstel

I am very grateful to have been awarded the ASI Career Advancement Award. This award will help me to undertake pilot experiments aiming to integrate my passion for B cells and gamma delta (γδ) T cells. I am hopeful that this work will lay the foundation for future grant and fellowship applications.

During my BSc and MSc studies, I developed a passion for human immunology research, particularly its application in the discovery of novel diagnostic tools and therapies. This is why I decided to do my PhD on B cells at the University Medical Center Groningen (the Netherlands). I studied the antibody (Ab)-independent role of (unconventional) B cell subsets in rheumatic autoimmune diseases and how their phenotypic and functional characteristics could aid in predicting future disease relapses in patients (von Borstel et al. Rheumatology 2019a, 2019b, and Frontiers Immunol. 2019). During this time, my fascination for unconventional immune cells and their role in health and disease was triggered. Hence, I decided to move to Australia to join Professor Jamie Rossjohn's lab at Monash University in 2018 to do more fundamental research. Since then, I have been working in the group of Dr. Martin Davey (Head, Immune Surveillance laboratory, Biomedicine Discovery Institute) to unravel the role of γδ T cell subsets in infectious diseases.

> This award will help me to undertake pilot experiments aiming to integrate my passion for B cells and gamma delta (γδ) T cells.

With this award I wish to study the interplay between B cells and γδ T cell subsets and how they work together to

help protect humans from Plasmodium parasite infection, the etiological agent of malaria. γδ T cells seem to interact with B cells, as they are known to induce Ab isotype switching of B cells and can utilize Ab-dependent cytotoxicity in response to Plasmodium-infected erythrocytes. However, these facets have been primarily established in animal models and many fundamental questions remain unanswered as to how human B cells can mediate γδ T cell biology, and vice-versa. Through several collaborations established by Dr. Martin Davey, I have access to human malaria patient samples after repeated P. falciparum infections. Using these cohorts, I am aiming to unravel the interplay between γδ T cells and B cells in malaria. ■

Claudia Stocks

My name is Claudia Stocks and I have recently relocated from Brisbane (and the Institute for Molecular Bioscience) to take up a postdoctoral research position at the Singapore Centre for Environmental Life Sciences Engineering (SCELSE). Moving internationally at any time is surely a challenging and stressful experience, so you can imagine the compounding difficulties I encountered attempting to do so during a worldwide pandemic. Consequently, I was incredibly grateful to be the recipient of an ASI Career Advancement Award to assist in covering the costs of this move, as I embark on this exciting new chapter in my scientific career. This award was instrumental in lowering the stress and financial burden of the relocation and has allowed me to focus on enjoying the adventure and experience.

The flight from Sydney to Singapore was certainly unlike any I have ever experienced. After walking through an entirely empty airport, my partner and I boarded the plane as the only 2 passengers in our Economy section! After a very peaceful flight, we made it to Singapore. Everything was very efficient and well managed, and thanks to the well-controlled COVID situation in Australia, we were only required to briefly self-isolate and return a negative test result before being allowed to leave quarantine.

> I was incredibly grateful to be the recipient of an ASI Career Advancement Award to assist in covering the costs of this move, as I embark on this exciting new chapter in my scientific career.

Whether it's the world-famous Marina Bay Sands, the stunning Gardens by the Bay, or the quintessential hawker centre dish of 'chicken rice', Singapore sure does not disappoint. After two weeks of exploring our new home, I was very excited to finally start my first day at SCELSE. I am now working in the laboratory of Associate Professor Kimberly Kline, examining interactions between the persistent human pathogen Enterococcus faecalis, and the innate immune system, specifically neutrophils. This work represents a step outside my comfort zone of macrophages and uropathogenic E. coli, but nonetheless falls very squarely in my key research interest of host-pathogen interactions. I am currently reading up on all things neutrophils and E. faecalis, and greatly look forward to learning new techniques, meeting new people and starting up intriguing new experiments in the lab. Thank you again to ASI for this award and the enhanced opportunities it has provided during this challenging time. ■

Emma Grant

Hi, I am Emma, an ARC DECRA Fellow at La Trobe University and an Adjunct Research Associate at Monash University. I am an Early Career Researcher, ~5 years post-PhD, I work part-time, as a primary carer to my young daughter and am passionate about understanding immune responses towards viral infections. I completed my PhD in 2015 at the University of Melbourne under the supervision of Prof Katherine Kedzierska, where I investigated CD8+ T cell responses towards influenza viruses. Following this, I was awarded an NHMRC CJ Martin Fellowship, allowing me to relocate to Cardiff University, Wales, UK and continue my research under the supervision of Prof David Price. I returned to Australia in Jan 2018, where I joined the laboratory of Prof Jamie Rossjohn under the supervision of then A/Prof Stephanie Gras. In 2019, I followed A/Prof Stephanie Gras as she established her own laboratory at Monash University, following which I took an 8-month break for maternity leave. I returned to work part-time in Jan 2020 and within 3 months we were on restrictions and in lockdown due to COVID-19. After a rather "unprecedented" year, I was humbled to receive an ARC DECRA Fellowship, and then relocated with Prof Stephanie Gras to La Trobe University where I continue my research part time. To say the last few years of my research career have been exciting, and at times disruptive, is an understatement!

The majority of my career has been dedicated to influenza virus research, which is still a huge passion of mine.

I have identified and characterised human CD8+ T cell responses towards both seasonal and pandemic influenza virus strains. I have also worked on Cytomegalovirus (CMV) Human Immunodeficiency Virus (HIV), Epstein Barr Virus (EBV) and Hepatitis C Virus (HCV). In 2020, following my return from maternity leave, our laboratory turned our attention and expertise towards researching the novel SARS-CoV-2 virus, the causative agent of the ongoing COVID-19 pandemic. During this research, I have been able to design and drive research projects, supervise others team members and provide intellectually towards various studies by our collaborators. This has so far culminated in my first co-senior publication and a co-first author publication in immunity.

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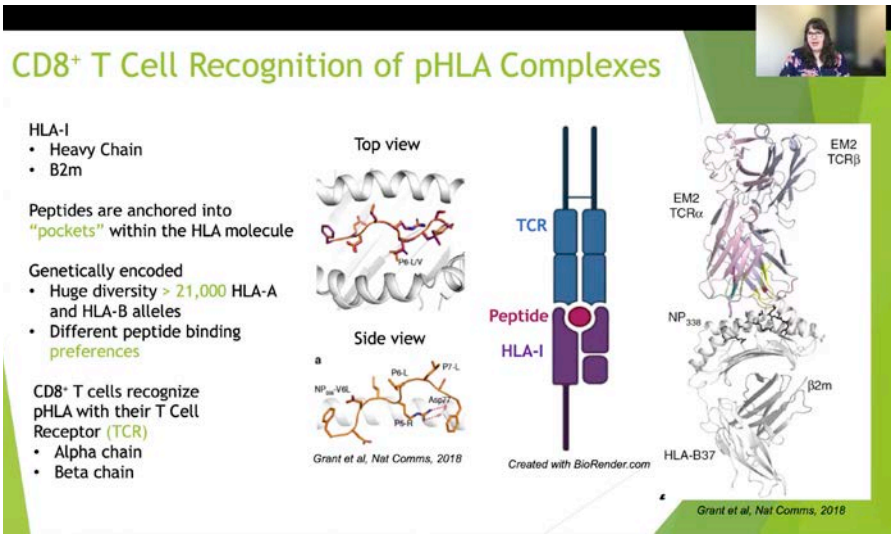
Despite the multiple disruptions of previous years, I feel I am finally getting back towards my pre-maternity leave momentum. However, as one would expect, returning to research while also being a primary carer does have its challenges, and I will be using this generous Career Advancement Award from ASI to alleviate some of these.

Firstly, I am very lucky to be able to work part time in an attempt to find that "balance" we all look for. To help me drive my research career, my toddler attends childcare 4 days a week, allowing me to work 0.8 FTE. Although childcare is a significant cost to our family, the benefits to my career and her development are undeniable. Therefore, I will use a portion of this career advancement award to cover ~ 2 months of out-of-pocket childcare expenses.

Next, due to my role as primary carer, the potential for overseas travel for conferences and netowrking is extremely limited. However, one of the few silver linings of the ongoing COVID-19 pandemic is that the majority of conferences are being held virtually. To make the most of this opportunity, I submitted an abstract containing our recent work on SARS-CoV-2, which was selected for a talk at the American Association of Immunologists (AAI) Annual meeting, a large US based immunology conference. I will use the remaining funds from my Career Advancements Award to cover the registration cost of attending this conference. I have already recorded my talk, and will be presenting it this coming weekend (at the time of submitting this article), with my session starting at 3am on Sunday morning!

Overall, I am incredibly grateful to ASI for this career advancement award, which I consider has made a significant contribution to by career progression in these unexpected times. ■



Niamh Troy

I am a final year PhD student in the Systems Immunology Team at the Telethon Kids Institute and The University of Western Australia. I started my PhD in 2016, after working as a Research Assistant for two years, and took a break in 2019 to have my son.

My research focus has two main aims: 1) to advance our understanding of the role of the host immune response to respiratory viruses in asthma inception and exacerbation and 2) to harness the innate immune system to increase resistance to these infections in the high-risk early postnatal period. I am achieving these aims with the application of bioinformatics and gene network analyses.

My research focus has two main aims: 1) to advance our understanding of the role of the host immune response to respiratory viruses in asthma inception and exacerbation and 2) to harness the innate immune system to increase resistance to these infections in the high-risk early postnatal period.

In a world-first clinical trial carried out with collaborators in Brisbane, treating infants that were high-risk for asthma with a bacterial-derived therapeutic protected them against severe lower respiratory infections (sLRI) during their first winter of life, published in the Journal of Allergy and Clinical Immunology (JACI) which can be found here. Defining the mechanisms of this increased sLRI-resistance has been my focus for the past few years. My findings show that the treated infants had a number of key protective changes in their innate immune response to lipopolysaccharide (bacterial stimulant) including; boosted interferon responses, regulated inflammatory responses and improved pathogen-sensing and signaling. These findings were submitted to an awesome journal 2 weeks ago and have not (yet) been rejected by the editors!

The ASI Career Advancement Award has provided me with financial support at a critical stage in my career and will have a huge positive impact on my PhD completion. It has enabled me to focus on finalizing and submitting my final results chapter for publication prior to thesis submission, a huge milestone considering I have been looking at this data far longer than my 2.5-year-old! This has had a huge knock-on effect as I have submitted abstracts based on this chapter to 3 upcoming international conferences in 2021. And I was able to contribute to the most recent round of NHMRC grant writing, which could potentially provide my salary next year (5% chance is still a chance… collective giggle). I am endlessly grateful to the ASI for this award and for the quick and adaptable response to the pandemic to deliver for the ASI community. ■

Nicola Principe

I am a PhD student at the National Centre for Asbestos Related Diseases (NCARD), University of Western Australia (UWA). I completed a Bachelor of Science with a double major in Physiology and Pathology at UWA in 2017 and continued with a Honours degree with NCARD. During my Honours, I gained a love for research, lab work, scientific discovery and importantly, T cells!

I am interested in how changes in T cell phenotype and repertoire diversity contribute to a successful anti-tumour immune response. Work from my Honours led to a first author publication on how dynamic increase in effector memory, tumour-specific CD8+ T cells predicted successful immune checkpoint blockade outcomes in murine mesothelioma. I am now investigating T cell changes post chemotherapy, which I hope will inform more efficacious chemo-immunotherapy combinations for the treatment of mesothelioma. I utilise different techniques such as flow cytometry, T cell receptor sequencing, and more recently single cell sequencing.

I am grateful to be part of a fantastic team supervised by Dr Jonathan Chee, Dr Joost Lesterhuis, Dr Alison McDonnell and Prof Anna Nowak at NCARD. Through NCARD I also have a unique opportunity to study longitudinal blood and pleural fluid samples from mesothelioma patients undergoing chemo-immunotherapy combinations. I am very excited because chemo-immunotherapy is a promising treatment for mesothelioma, and results from my study could potentially impact the design of biomarker studies in an upcoming phase III clinical trial.

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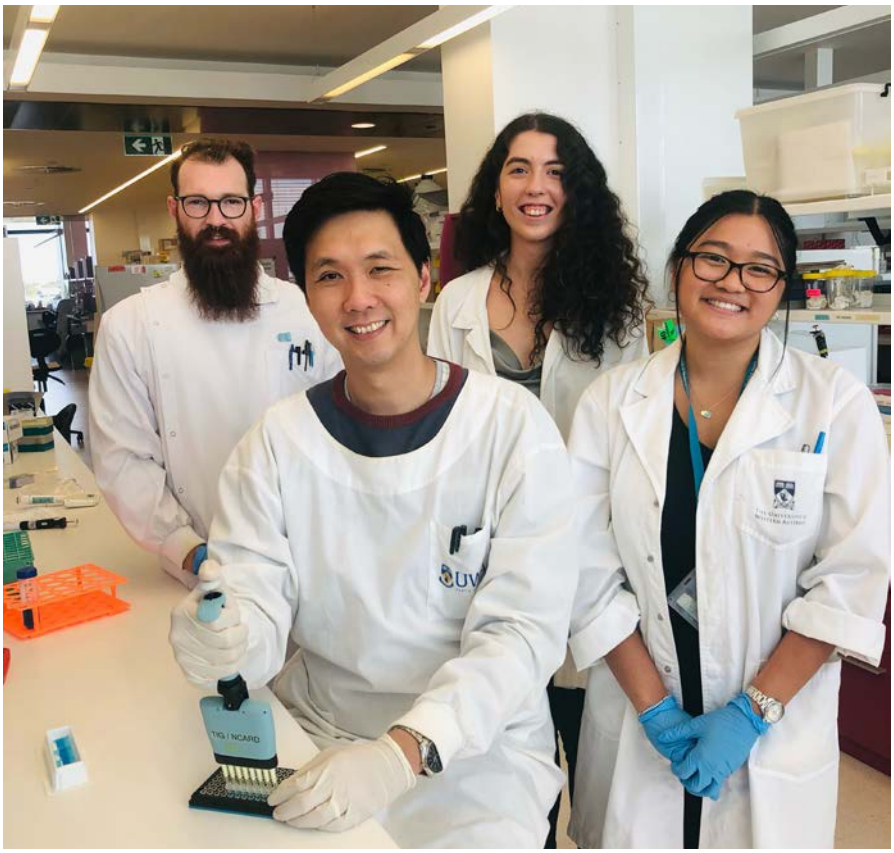
I am fortunate to have received Cancer Council WA Honours, PhD scholarships and a UWA Richard Walter Gibbon Medical Research scholarship that have supported my academic journey so far. I also enjoy being part of multiple initiatives within the scientific community. I am the student representative on the UWA School of Biomedical Sciences and a part of the QEII Medical Centre and WA ASI branch committees. In addition, I founded the 'Kindness in Science' initiative alongside 3 other PhD students. We were successful with a UWA Alumni Fund 'Activate!' grant application, and are currently running a series of workshops for PhD, Honours, Masters students and EMCRs on how to become kind scientists. The topics covered include mental health and self-care practices, developing and maintaining an equitable, diverse workplace, sustainability in science, and effective science communication to the general public. I also love teaching high school students multiple scientific and lab-based activities at the Harry Perkins Biodiscovery Centre, and produced a flow cytometry lesson for one of their programs.

I greatly appreciate being a recipient of an ASI Career Advancement award. This award will not only support my research but the advancement of my academic career. To find out more about our work at NCARD or Kindness in Science, check out our twitter pages! @NCARD_research, @kindscientists ■



Sarah Sandford

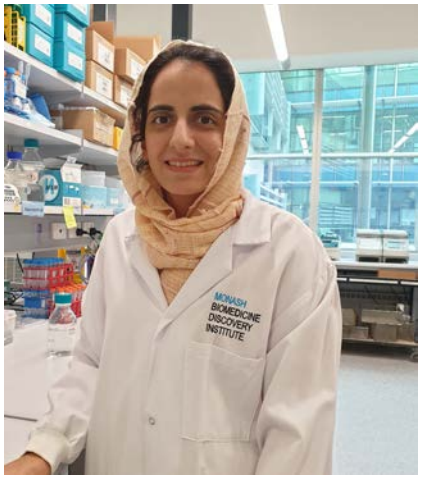
I am a 3rd year PhD student in Professor Scott Mueller's lab at the Peter Doherty Institute for Infection & Immunity in Melbourne. Originally from Aotearoa New Zealand, I earned my Bachelor of Biomedical Sciences (Hons) with A/Prof Jo Kirman at the University of Otago, studying T cell responses to prototype vaccines against mycobacterial infection.

I moved to Melbourne in 2018 to start my PhD, investigating the role of intestinal stromal and immune cell subsets during acute and chronic viral infection, with a focus on resident memory T cells (TRM). This work continues to engage my interest in the factors underlying memory T cell responses, and I have found that TRM formation and maintenance differs between the small and large intestine after viral infection. Better understanding of how these memory populations form and are maintained is essential to developing methods to protect against gut infections.

I planned to use the funds from this award to attend the International Congress of Mucosal Immunology Conference (ICMI) held in Seattle, USA in 2021. Though international travel is unlikely this year, when it is safe to do so I look forward to engaging and sharing my work with experts in intestinal immunology beyond Australia.

> My goal is to continue to develop understanding of mucosal immunity, and how it can be harnessed to better protect against infectious disease.

As I am coming up to the end of my 3rd year of my PhD, I will also take the opportunity to visit overseas labs to search for prospective postdoctoral positions. My goal is to continue to develop understanding of mucosal immunity, and how it can be harnessed to better protect against infectious disease. I would like to thank ASI for presenting me with this award and can't wait to network with other ASI members at the end of next year! See you at ASI 2022 in Melbourne! ■



Tabinda Hussain

I was very fortunate to win the ASI Career Advancement award, which not only came at an important time in my PhD, just at the start of my 3rd year, but also at a rather difficult stage in my personal life, just when I was returning to lab from a maternity leave. I study at Biomedicine Discovery Institute, Monash University, and will (hopefully) be submitting my thesis early next year. My research is focused on one of subsets of CD8 T cells, the virtual memory T (TVM) cells.

TVM cells become senescent and accumulate with age and therefore may be responsible for some of the age-related weakening of immune responses. I am interested in how TVM cells, which function quite like an innate immune cell, are responding to infections and how the subset is maintained through the course of ageing. TVM cells are a relatively newly defined CD8 subset, it is quite exciting to find out how properties that are historically attributed to conventional memory CD8 T cells are exclusive features of the TVM subset.

I am very thankful to ASI for this award as it allowed me to focus better on my research with some peace of mind. It not only eased some of the financial pressure from childcare payments, but also gave me confidence in my own abilities and skillset that I could win such an award. This reassurance is quite needed when you are returning to work after spending four months with a little one and feel like you have forgotten everything you knew about science. ■

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News from the Education SIG

Maria Demaria
maria.demaria@monash.edu

We are going to keep this update from the Education SIG short and sweet as we are all deep in the midst of teaching!

Currently we are planning our next event, a winter workshop to be held in early July. Please keep an eye out for an email with more information shortly. At the end of the year, we will also be part of the ASI combined SIG annual meeting, to be held on Thursday 9th of December so please save the date!

Continuing our introductions of our state and regional representatives

We featured some of our representatives in the March newsletter. In this issue, we have the pleasure of introducing you to Maurizio and Gabriela, our representatives for South Australia and the Northern Territory, respectively.

Currently we are planning our next event, a winter workshop to be held in early July. Please keep an eye out for an email with more information shortly. At the end of the year, we will also be part of the ASI combined SIG annual meeting, to be held on Thursday 9th of December so please save the date!

A/PROF MAURIZIO COSTABILE, EDUCATION SIG REPRESENTATIVE FOR SA

A/Prof Maurizio Costabile, is an Associate Professor of Biochemistry and Immunology Education at the University of South Australia (UniSA) in SA. At present, he is the Dean of Research at Education Futures at UniSA. He is a teaching-focused academic who co-leads the teaching-research educational group within Clinical and Health Sciences at UniSA. He has won multiple local, national and international teaching awards. His interest in teaching is in developing novel approaches to enhance student learning of biochemical and immunological concepts. He has published multiple aspects of his educational research and is keen to collaborate with other like-minded academic staff.

Dr Gabriela Minigo, PhD is a lecturer and researcher at Charles Darwin University and an Honorary Research Fellow at Menzies School of Health Research in Darwin. She teaches immunology and haematology at undergraduate and postgraduate level. Her research focuses on cellular immune responses in infectious diseases, particularly malaria.

DR GABRIELA MINIGO, EDUCATION SIG REPRESENTATIVE FOR NT

She feels passionate about sparking student's interest in the complexities of the immune system and encouraging life-long learning.

Achievements corner

We are pleased to report the following achievements amongst our members:

- Dr Roula Kyriacou (RMIT) and Dr Samy Sakkal (VU) for receiving citations from the Australian Awards for University Teaching (AAUT (see image below)). The AAUT awards are the nation's most prestigious award for teaching so it is pleasing to see our members rewarded for their sustained excellence in teaching.

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Every newsletter, we will be showcasing and celebrating the achievements of our SIG members. Please email me (maria.demaria@monash.edu), or your state and regional regional representative, before the next newsletter deadline if you have any achievements that you would like us to celebrate.

We look forward to seeing you at our upcoming events! ■

The IUIS corner

J. Alejandro Lopez
alejandro.lopez@qimrberghofer.edu.au

International Union of Immunological Societies

Here is a brief update of the news coming from IUIS. If you wish to follow the news coming directly from the IUIS, visit the www.iuisonline.org and/or register for the Newsletter through this link here.

You can also follow IUIS activities on Twitter: twitter.com/iuis_online

And/or Facebook: www.facebook.com/IUISorg/

Michelson Prizes 2021

The Michelson Prizes are annual awards of $150,000, which support young investigators under the age of 35 who use disruptive concepts and inventive processes to significantly advance human immunology and vaccine and immunotherapy discovery research for major global diseases. The Prizes are funded by the Michelson Medical Research Foundation and overseen by the Human Vaccines Project -- the application window for the 2021 Prizes will run from April 1 – June 18, 2021.

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The 2021 Michelson Prizes will be looking for research proposals in two areas:

- Human Immunology and Vaccine Research: The committee will be looking for research to tackle the current roadblocks in human vaccine development and expand our limited understanding of key immune processes fundamental to successful vaccine and immunotherapy development.
- Climate Change and Human Immunology: The committee is looking for research that expands our understanding of climate change's potential effects on immune function with a particular interest in research that will directly translate into vaccine and immunotherapy development to mitigate its impact.

Further information in website: https://www.humanvaccinesproject.org/michelsonprizes/

IUIS as a non-sate actor at WHO

The WHO Executive Board decided to maintain IUIS in official relations with WHO. IUIS's status as Non-State Actor for WHO was renewed for another three years. We are proud to continue collaboration towards WHO's mission to promote health, keep the world safe, and serve the vulnerable.

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IUIS-Immunopaedia Frontiers Webinar Series

Immunology without Borders webinars continue to offer very interesting opportunities to learn from the experts directly. Some of the recent seminars available online include

Antonio Lanzavecchia, "Immunology taught by Plasmodium falciparum" https://youtu.be/YytDEyfCraA

Qian Zhang, "Inborn errors of type I IFN immunity in patients with life-threatening COVID-19" https://youtu.be/v1vwNnXjGLw

Claudia Mauri, "Regulatory B cells and gut-microbiota: an intricate acting balance in autoimmunity" https://youtu.be/swWBqsgPmmY

Details of all other seminars are available in this link: https://iuis.org/webinars/

Planned IUIS meetings

- FAIS 2021 (Virtual)
  August 1-5, Online
  https://www.faisafrica.com/
- EFIS 2021 (Virtual)
  September 1-4, Online
  https://eci2021.org/
- IUIS Council (Face-to-face)
  October 29-31, Varadero, Cuba
- ALACI 2021 (Face-to-face)
  November 1-5,
  Varadero, Cuba
  https://iuis.org/events/alaci-2021/
- FIMSA 2021 (Hybrid mode)
  October 31 - November 3,
  Busan, Korea
  http://www.fimsa2021.org/

IUIS 2022 - Countdown to Cape Town

www.iuis2022.org

Preparations for the IUIS 2022 International Congress of Immunology in Cape Town are well underway! Don't forget the dates: August 15-20. We aim for a cutting-edge programme covering all areas of immunology. We are looking forward to welcoming the world's immunology community to Cape Town, South Africa. To ensure high scientific quality, the Scientific Programme Committee, consisting of 30 international experts from all across the globe and covering various immunology fields, met for the first time to put together the main programme. During this very productive two-day meeting, we selected topics and speakers for the symposia and plenaries. A big thank you to everybody involved!

We are 17 months away but mark your calendars for IUIS 2022 and check iuis2022.org for regular updates!

IUIS 2025. Vienna, Austria, August 17-22, 2025

For further information on oncoming events, visit https://iuis.org/events/ ■

We aim for a cutting-edge programme covering all areas of immunology. We are looking forward to welcoming the world's immunology community to Cape Town, South Africa.

Publications of Interest

Our Sustaining Members

ImmunoCult™ Human CD3/CD28 T Cell Activator (https://www.stemcell.com/immunocult-human-cd3-cd28-t-cell-activator.html)
Yang R. et al. (2021) Galectin-9 interacts with PD-1 and TIM-3 to regulate T cell death and is a target for cancer immunotherapy. Nature Communications.
doi: 10.1038/s41467-021-21099-2

EasySep™ Human CD4+ T Cell Isolation Kit (https://www.stemcell.com/easysep-human-cd4-t-cell-isolation-kit.html)
Minnis D. et al (2021) The neutrophil antimicrobial peptide cathelicidin promotes Th17 differentiation. Nature Communications.
doi: 10.1038/s41467-021-21533-5

EasySep™ Human CD3+ Positive Selection Kit II (https://www.stemcell.com/easysep-human-cd3-positive-selection-kit-ii.html)
Zhou J. et al (2021) The ubiquitin ligase MDM2 sustains STAT5 stability to control T cell-mediated antitumor immunity. Nature Immunology.
doi: 10.1038/s41590-021-00888-3

CRISPR Synthetic Guide RNA Services (https://www.genscript.com/crispr-cas9-single-guide-RNA-and-ribonucleoprotein.html)
https://msphere.asm.org/content/6/2/e01286-20
Author et al, year: Zhou et al., 2021
Full title of article: A Spontaneous rapZ Mutant Impairs Infectivity of Lytic Bacteriophage vB_EcoM_JS09 against Enterotoxigenic Escherichia coli
Title of journal: mSphere, 6(2)
Doi: https://doi.org/10.1128/MSPHERE.01286-20

Peptide Service Portfolio (https://www.genscript.com/peptide-services.html)
https://www.nature.com/articles/s41586-021-03387-5
Author et al, year: Yu et al., 2021
Title of journal: Nature, 592(7854), 433-437
Doi: http://doi.org/10.1038/s41586-021-03387-5

ORF cDNA Clones and Custom Clones (https://www.genscript.com/genEZ-molecular-clones.html?src=ReferenceNew2)
https://www.nature.com/articles/s41589-020-00702-5
Author et al, year: Liauw, Afsari, & Vafabakhsh, 2021
Title of journal: Biophysical Journal, 120(3)
Doi: http://doi.org/10.1016/j.bpj.2020.11.965

Humanized mice (https://www.ozgene.com/services/humanized-mice/)
Dewan et al., (2021). Generation of an HLA-DQ2.5 Knock-In Mouse. Immunohorizons.
doi: 10.4049/immunohorizons.2000107
Knock-in mouse model (https://www.ozgene.com/services/knock-in-mice)
Lai et al., (2021). p300 Serine 89: A Critical Signaling Integrator and Its Effects on Intestinal Homeostasis and Repair. Cancers (Basel).
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