

Immunology News

June 2023 | ISSN 1356-5559

Outstanding community

reaching new heights



BSI Immunology Awards:

celebrating exceptional
members

New clinical network:

join BSI-CIPN

Better research:

patient and public
involvement

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immunology

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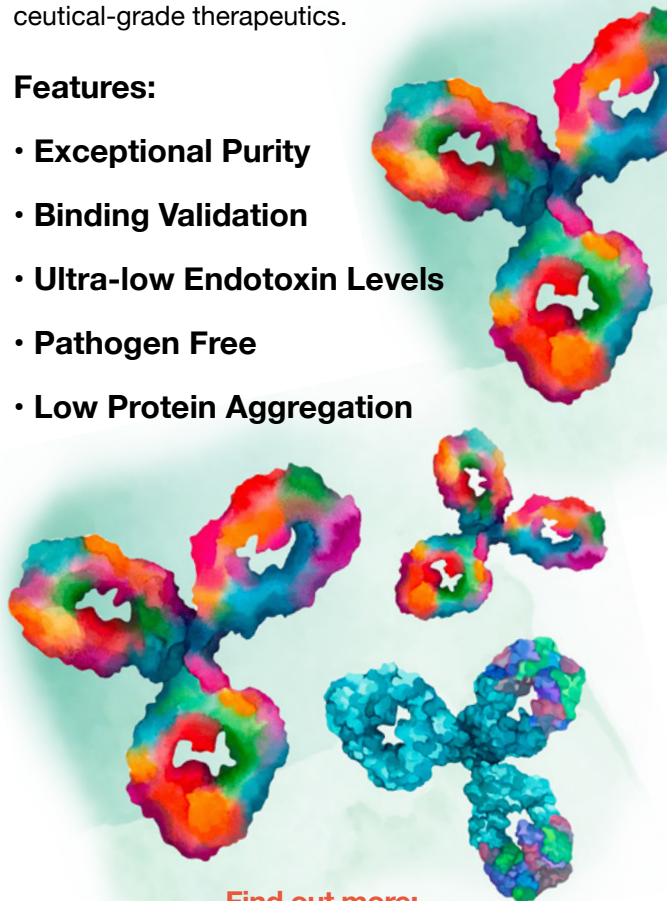


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Welcome to the summer edition of *Immunology News*! Through our membership magazine, we strive to put a spotlight on our members and amplify their brilliant work, as well as showcasing how we're supporting our immunology community and representing the field on a wider stage.

In this issue, we are very proud to shine a light on exceptional immunologists transforming the sector. We look back at our inaugural BSI Immunology Awards, both at the inspiring event and ceremony, and at the winners whose work is delivering positive outcomes for health in a variety of ways. We are also pleased to introduce immunologists who will help us continue our mission – the incoming BSI committee members!

In the representing immunology section, you will find a couple of articles on important BSI activities. Firstly, you can learn more about our recent report calling for a focus on immunogenicity for better public health. Then you can delve into the world of patient and public involvement with our reflections on our recent work for National Core Studies Immunity, including our new training programme designed to introduce researchers into the area.

And lots more in the rest of the magazine – I hope you enjoy reading it!

Teresa Prados

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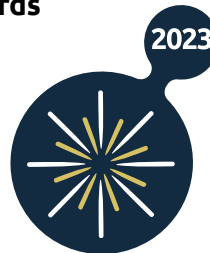
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VIEW FROM ... THE CHIEF EXECUTIVE



It's been another busy few months for the Society, with so many incredible highlights in this issue of *Immunology News*! As always, our team have been working hard to support our immunology community in driving scientific discovery and making a positive impact on health.

A particular highlight for me has been our first ever BSI Immunology Awards Ceremony. What can I say ... what a day full of immunology expertise, dedication and talent we had there! This inspiring event celebrating excellence in all strands of immunology took place in London in April and saw us welcome leaders from across the discipline to discuss the current opportunities and challenges facing the UK's life sciences sector. We then moved on to the long-awaited awards ceremony. Our huge congratulations go to all the

award winners whose efforts across the breadth of immunology activities – be that research, teaching, engagement – have made a hugely positive impact on our discipline. If the commitment, skill and knowledge that was in the room that night was anything to go by, the future of UK immunology is truly in safe hands. Thank you so much to those of you who attended and we hope you enjoyed the event as much as we did! You can find out more about the award winners on page 8.

I also want to encourage you to turn to pages 16–20 to discover a bit more about our award winners for Outstanding Contribution to the BSI, Professor Gary Entrican, and for Outstanding Contribution to Immunology, Professor Danny Altmann and Dr Victoria Male. They have all gone above and beyond to deliver for the BSI and for immunology, and you will be able to find out more about their work and incredible contributions. Lastly, I'd like to thank to our event sponsors, The Kennedy Trust, Miltenyi Biotec and Mabtech, whose kind support allowed us to host this event.

As I'm sure you all know, the BSI has been running committee elections over the past few months. I'm extremely pleased to welcome Professor Jessica Strid onto the Board of Trustees, alongside Dr Diyva Shah, who rejoins after a short hiatus and Professor Deborah Dunn-Walters who starts a second term of office. Our Board of Trustees is crucial to the successful running of the BSI and our ability to deliver for you all, and we're delighted to have individuals with such diverse expertise joining the committee. Thanks, from the whole BSI team, also go to those who are finishing their term of office across all committees, with a particular mention to our Trustees who are standing down, Professor Matthias Eberl (who stays involved with

us as our Public Engagement Secretary), Paul Harding and Professor Allan Mowat. You can read more about the elections, including the new people starting on our Member Representative Forum and Congress Committee on pages 5–6.

Another big highlight of the last three months has been the launch of the BSI Clinical Immunology Professional Network (BSI-CIPN), our dedicated network for those working in clinical immunology. It has been a long time in the making and is a result of our recent merger with the UK Primary Immunodeficiency Network. Through this new BSI group, our aim is to step up our activities championing clinical immunology to strengthen its voice in policy and public arenas while also fostering closer links between clinical practitioners and basic scientists. We're incredibly excited about the opportunities in this new area of work for us, which you can read more about on page 11. You'll also find information on this page about how to join BSI-CIPN and get involved in their activities.

Finally, I know you all, like me, will be looking forward with anticipation to this year's BSI Congress! We're so excited to welcome you all to Belfast for the first time for this event. You still have plenty of time over the summer to plan your abstracts, with a submission deadline of 4 September, so get writing!

As always, I'd love to hear any ideas, feedback or reflections you have on the BSI's work. Please don't hesitate to get in touch.

Doug Brown

Chief Executive,
British Society for Immunology
Email: d.brown@immunology.org



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- Predicting antiviral host immunity in the context of inborn errors
- Human genetic variation and variability of vaccine responses



Follow #BSI23 for updates!

BSI CONGRESS
4 – 7 December 2023
Belfast, UK

Keynote speaker:
Dr Ronald Germain
National Institute of Allergy and Infectious Diseases, National Institutes of Health, USA

www.bsicongress.com

SOCIETY NEWS

New BSI committee members

Following our recent call for nominations and elections for upcoming vacancies on our Board of Trustees, Member Representative Forum and Congress Committee, we are pleased to announce the following appointments. The turnout for these elections was almost 15% of the BSI membership; thank you to everyone who voted. We would also like to thank all the other fantastic candidates who stood for election.

Board of Trustees



DEBORAH DUNN-WALTERS
BSI General Trustee

Professor of Immunology, University of Surrey

Deborah will commence her new term in July 2023.



DIVYA SHAH
BSI General Trustee

Research Lead in Sites & Systems, Infectious Diseases, Wellcome Trust

Divya will commence her term in July 2023.



JESSICA STRID
BSI General Trustee

Professor of Cellular Immunology, Imperial College London

Jessica will commence her term in July 2023.

Member Representative Forum



ANNA ANDRUSAITE
BSI Forum Early Career Representative

Postdoctoral researcher, University of Glasgow

Anna will commence her term in July 2023.



JHANNA KRYUKOVA
BSI Forum PhD Representative

PhD student, University of Oxford

Jhanna will commence her term in July 2023.



CHLOE PYLE
BSI Forum Industry Representative

Senior Scientist, Virtus Respiratory Research

Chloe will commence her term in July 2023.

SOCIETY NEWS

Congress Committee

**EDITH HESSEL**

BSI Congress Committee General Member

Chief Scientific Officer, Relation Therapeutics

Edith will commence her term in July 2023.

Thank you

The end of this month sees some changes to the BSI committees. Shortly, BSI Trustees Professor Allan Mowat and Paul Harding will finish their terms of office with us, as well as Professor Matthias Eberl (who is now our Public Engagement Secretary). On our Member Representative Forum, we say goodbye to Dr Federica Villanova, Dr Faith Uwadiae and Dr Niamh Richmond. Finally, this year also marks the end of term of Dr Alex Spencer and Dr John Tregoning on the BSI Congress Committee. We would like to thank all of them for their incredible dedication and valuable contributions to the BSI. Our committee members are instrumental in ensuring the continued success of the Society. We greatly appreciate the time and energy they have put into supporting our activities. A huge thank you from everyone at the BSI!

Find out more

You can read the full candidate statement in the members' section of our website at www.immunology.org/new-bsi-committee-members-2023. We welcome them all to the BSI and look forward to working with them to provide a strong voice for immunology. The British Society for Immunology is here to represent all immunologists working in science, healthcare and industry. Our committees are vital in leading our work, making numerous decisions about how the Society is run, what activities we focus on and what support we provide to members. Find out more about our committees here: www.immunology.org/about-us/our-people/governance.

'Our committee members are instrumental in ensuring the continued success of the Society.'

BSI Member Representative Forum: here to represent you

The BSI Member Representative Forum is the place where the voice of our membership is fed into our activities. Chaired by Professor Jim Brewer, the 18 elected members come from all sections of the Society's membership. Their role is to act as our 'think tank' on issues relating to education and careers, public engagement, policy and public affairs, and communications. Forum aims to help the Society in implementing its strategic plan by providing a mechanism by which the views of the membership can be inputted into our activities.

Our most recent meeting in April covered a range of important topics for the Society. We started our discussion looking at the new BSI Public Engagement Strategy which aims to further our support for our members and lead the way for more innovative and impactful activities by the BSI. Our Public Engagement Manager, Erika Aquino, and our Public Engagement Secretary, Professor Matthias Eberl, presented the key elements and asked

Forum members to provide their views and feedback to ensure the Society continues to serve the needs of the immunology community.

We then dived into an in-depth look at our new training offering, which we are developing behind the scenes to offer valuable courses for current and future generations of immunologists to build essential skills and advance in their career. Our Training Manager, Cat Ridley-Hughes, set the scene on the different courses we have been building and Forum members shared their valuable ideas and perspectives on what would be important for different

career stages, areas and sectors.

Finally, Forum was given a brief overview of recent external affairs and outreach activities that the BSI has undertaken to communicate the voice of our immunology community to the wider world.

If you would like to raise any issues for your Member Representative Forum to discuss at an upcoming meeting, please contact your relevant representative – you can find a list on our website at www.immunology.org/forum. Alternatively, you can email our Director of External Affairs, Jennie Evans, at j.evans@immunology.org, who can pass the message on.

'We then dived into an in-depth look at our new training offering, which we are developing behind the scenes to offer valuable courses for current and future generations of immunologists to build essential skills and advance in their career.'



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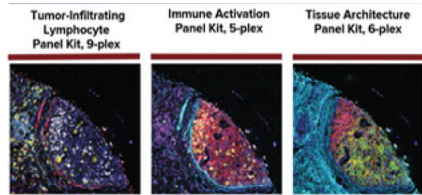
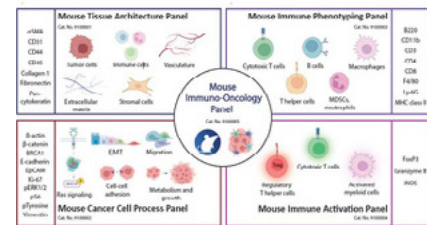


Figure 1. Human breast cancer tissue showing...
Figure 2. Human breast cancer tissue showing...
Figure 3. Human breast cancer tissue showing...

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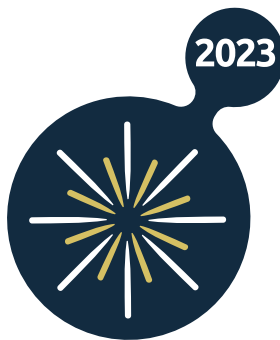
- Antibodies/Multi-Specific Binders
- Vaccines
- Cell Therapy
- Gene Therapy
- RNA Technologies
- Protein Engineering
- Small Molecules

SOCIETY NEWS

BSI Immunology Awards: celebrating our exceptional community

On 20 April, we revealed the winners of our inaugural BSI Immunology Awards. We created these brand new awards this year to champion the remarkable achievements of individuals and teams shaping the future of immunology.

Eleven winners in eight categories were announced at a ceremony as part of our 'Transforming the immunology landscape' event. The event was an opportunity for the immunology community to come together to hear about the extraordinary work being undertaken by their peers and discuss the future challenges and opportunities across the spectrum of immunology research and application.



BSI IMMUNOLOGY AWARDS

"What a night of immunology celebration!"

Congratulations to our Winners!

BSI Outstanding Ambassador for Immunology Award –
Professor Danny Altmann, Imperial College London
Dr Victoria Male, Imperial College London

Outstanding Contribution to the BSI Award –
Professor Gary Entrican, University of Edinburgh

BSI Research Excellence Award –
Professor Lucy Walker, University College London

BSI Early Career Research Excellence Award –
Dr George Robinson, University College London

BSI Outstanding Team Award –
Northern Ireland Multiple Sclerosis Research Network,
 Queen's University Belfast / Belfast Health and Social Care Trust

BSI Diversity and Inclusion Award –
Tomi Akingbade, University of Cambridge
Dr Donald Palmer, Royal Veterinary College

BSI Public Engagement Award –
Professor Sheena Cruickshank, University of Manchester

BSI Immunology Teaching Excellence Award –
Dr Sophie Rutschmann, Imperial College London
Dr Tom Wilkinson, Swansea University



BSI Outstanding Leadership Award

No winner was announced for this category due to the overall lack of diverse representation in the submissions received, in particular the lack of women nominees. This decision was taken after careful consideration and thorough consultation with the BSI Nominations Committee and the judging panel. This is not a reflection of the quality or merit of individuals nominated – we greatly appreciate their outstanding leadership work, and the time and effort spent by those who nominated them.

BSI Chief Executive Dr Doug Brown presented the awards and paid tribute to all the researchers working hard to ensure that immunology continues to flourish as a field. "We are thrilled to recognise the achievements of these extraordinary individuals," he said. "Each of them dedicates their time and expertise to shaping the future of immunology, in many cases away from the limelight. Their efforts will ensure a brighter future for our field."



"The @britsocimm awards were such a special event. A treat to meet the other nominees, and congrats to the winners!"



Dr Melanie Lee, Chief Executive Officer, LifeArc.



Fiona Lethbridge, Senior Press Manager, Science Media Centre
Panel Moderator: Dr Doug Brown, Chief Executive, British Society for Immunology

Panel discussion. Fiona Lethbridge, Professor Tracy Hussell, Lynn Laidlaw, Dr Stephen Oakeshott, Professor David Leslie, Dr Doug Brown (L-R).

Before the awards ceremony we heard from an exciting line-up of world-class and influential speakers, including our keynote Dr Melanie Lee (Chief Executive Officer, LifeArc) and a panel discussion on delivering on opportunities and addressing the challenges in UK life sciences.

"Many congratulations to all the nominees and winners. We have fantastic immunology colleagues and it is so nice to be able to celebrate this. You are all awesome"

Thank you!

Congratulations to everyone who was nominated, shortlisted, or won an award, and many thanks to all those of you who took time to nominate someone. A huge thanks also to our judges and the BSI Nominations Committee.

Thank you also to our sponsors of the 'Transforming the immunology landscape' event: The Kennedy Trust (Principal Sponsor), Miltenyi Biotec (Sponsor) and Mabtech (Supporter).

We are very much looking forward to continuing to recognise the exceptional people enabling immunology to thrive in future years, and we hope to continue to see many of you as part of this journey.

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Find out more

You can see details of all the winners at <https://bit.ly/410IfTy> and find out more about the exceptional people working in our field by reading interviews with the winners of our Outstanding Ambassador for Immunology and Outstanding Contribution to the BSI awards on pages 16-20.



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SOCIETY NEWS

BSI-CIPN: a new professional network for clinical immunology in the UK

We are delighted to have launched the BSI Clinical Immunology Professional Network (BSI-CIPN; www.immunology.org/cipn) – a new network championing clinical immunology within the BSI. The BSI-CIPN was established as a result of the merger between the British Society for Immunology (BSI) and the UK Primary Immunodeficiency Network (UKPIN), which is now successfully complete.

The BSI Clinical Immunology Professional Network (BSI-CIPN) is an integrated and impactful professional network for individuals working within clinical immunology. We provide a strong voice for clinical immunology in policy and public affairs and support the immunology community to network and engage with each other across many disciplines.

In combining the expertise of the BSI and UKPIN, the network will foster closer links between clinical practitioners and basic scientists and strengthen the voice of clinical immunology in policy and public arenas. The BSI-CIPN will also share best practice through a range of resources and activities, including dedicated events, clinical sessions at BSI Congress, development of clinical guidelines, training provision and much more. By providing this strong platform for UK clinical immunology, our ultimate aim is to improve care for patients.

Who's involved?

The BSI-CIPN's membership includes over 100 professionals in the clinical immunology space including clinical immunologists, healthcare scientists, allergists, pharmacists and immunology specialist nurses.



British Society for Immunology

CIPN

Clinical Immunology Professional Network

The BSI-CIPN Steering Group chaired by Dr Sinisa Savic directs the activities of the network. Dr Savic also sits on the BSI Board of Trustees as a co-opted member to ensure the interests of the BSI-CIPN are represented.

How do I join?

Membership of the BSI-CIPN is open to professionals and medical trainees working within clinical immunology with applications subject to approval from the BSI-CIPN Steering Group. You must be a BSI member to join the BSI-CIPN, however, there is no additional cost to your membership to join the network.

As a BSI member, you can apply to join the BSI-CIPN by going to your dashboard and within the 'More About You' section, clicking 'Yes' to 'Interested in joining the Clinical Immunology Professional Network'. You'll be asked to provide a few words about your current work or career to explain that you are a professional working in clinical immunology.

As part of the BSI-CIPN, you will be able to connect and engage with professionals working across the clinical immunology sector.

Meet the BSI-CIPN Steering Group

Below you can see the members of the BSI-CIPN Steering Group.

- **Dr Sinisa Savic**, Chair
- **Dr Suzy Elcombe**, Deputy Chair
- **Dr Catherine Stroud**, Membership Lead
- **Sarah Denman**, Pharmacy Representative
- **Dr Lisa Devlin**, Industry Liaison
- **Jill Edmonds**, Nursing Representative
- **Dr Kimberly Gilmour**, Clinical/ Biomedical Scientist Representative
- **Prof Alex Richter**, Guidelines Lead
- **Dr Ravishankar Sargur**, Member
- **Dr Patrick Yong**, Training & Education Lead
- **Dr Manisha Ahuja**, Postgraduate Doctor in Training Representative
- **Position vacant**, Patient Group Liaison
- **Dr James Thaventhiran**, Conference Lead (Co-opted member)
- **Dr Austen Worth**, Paediatric Representative and PID Registry Representative (*Ex-officio* member)
- **Dr Claire Bethune**, CRG Representative (*Ex-officio* member)
- **Dr Sarah Goddard**, QPIDS Representative (*Ex-officio* member)

Save the date: BSI-CIPN conference 2023

The 2023 BSI Clinical Immunology Professional Network (BSI-CIPN) conference will take place in person at the ICC Belfast on **Monday 4 and Tuesday 5 December 2023** alongside the BSI Congress. This two-day event will offer the opportunity to hear from leading experts on the latest advances in clinical science and patient care and network with colleagues and peers.

We are delighted to be supporting the immunology community to network and engage with each other across many disciplines, driving forward scientific discovery and making a positive impact on health together. Find out more at www.immunology.org/events/bsi-clinical-immunology-professional-network-conference-2023.

Find out more

For further information about how to join the network, visit the BSI-CIPN website section at www.immunology.org/cipn.

If you have any questions about how the merger might affect you, please take a look at our FAQs at www.immunology.org/bsi-and-ukpin-merger-faq or get in touch with us by emailing CIPN@immunology.org.

SOCIETY NEWS

A little too much or a little too little: a focus on primary immunodeficiencies

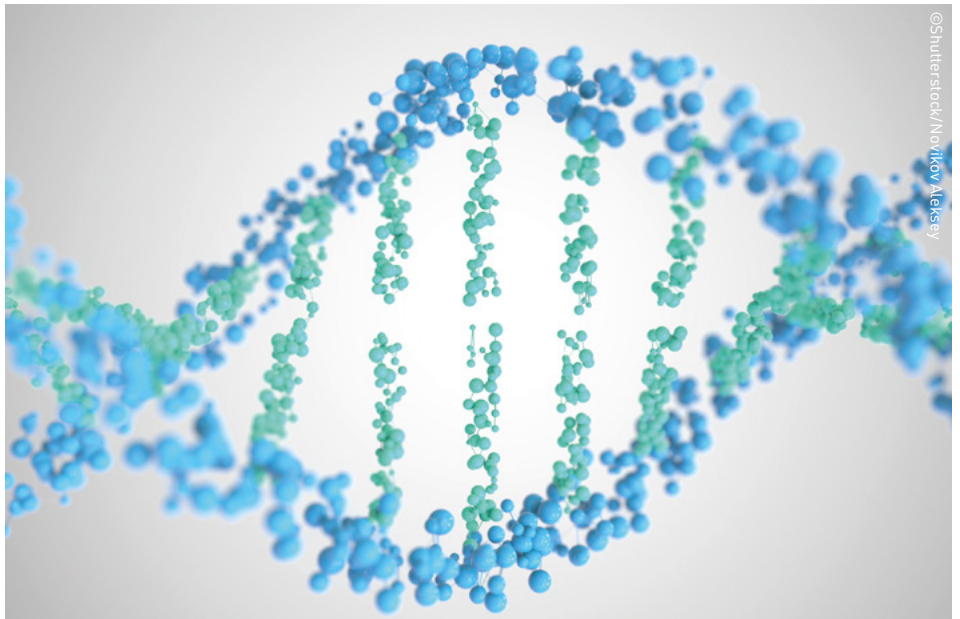
Every year on 22–29 April, World Primary Immunodeficiency Week offers the opportunity to promote awareness of primary immunodeficiencies (PID) among the public and policymakers, with the aim of encouraging the earliest possible diagnosis and promoting improved treatment and care for people living with PID. In this article, we explore the study of these rare conditions and their implications for understanding and manipulating immunological systems.

Defining primary immunodeficiency

Primary immunodeficiencies (PIs or PIDs), also known as inborn errors of immunity (IEI), are caused by mutations in single genes that affect the development and/or function of immune cells. As a result, patients with PIDs have increased susceptibility to life-threatening infections, which often require life-long or invasive therapeutic interventions. These include stem cell transplantation, gene therapy, prophylactic antibiotics, immunoglobulin replacement and administration of steroids.

Around 10 million people worldwide are thought to live with primary immunodeficiencies, with 70–90% of these cases still undiagnosed. Many of the infections associated with PIDs are common and easily treatable with antibiotics, so doctors may not always consider an underlying immune deficiency disorder as the cause. This can lead to delayed diagnosis and treatment, allowing infections to persist and recur, and increasing the risk of serious complications.

The advent of next-generation sequencing has enabled a surge in the identification of gene defects that cause PIDs and has massively expanded this research area, uncovering tremendous diversity in phenotypes caused by these defects. A total of 485 distinct defects are now included in the 2022 update on the classification of human inborn errors of immunity from the International Union of Immunological Societies (IUIS) expert committee,¹ a steep increase from the 430 reported in the 2019 update.



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Uncovering immune insights

The study of primary immunodeficiencies has introduced a revolutionary approach to connecting specific genetic abnormalities to immune system malfunctions in clinical contexts. This is significant because it demonstrates that a single gene defect can result in severe clinical outcomes, underscoring the critical roles of individual genes in human immunology. Consequently, PIDs have contributed to a greater understanding of the functions of genes, molecules, signalling pathways and cell types in immune defence and regulation, leading to improved treatments for immune-related diseases.

Perhaps most significantly, advances in molecular medicine as a result of PID research have implications beyond the relatively small number of people with rare primary immunodeficiencies. As PID research reveals more insights into the immune system, this knowledge may be leveraged to improve immunity and immune regulation in the general population.

Overall, the study of primary immunodeficiencies and the impact of genetic variants on immune function represents an exciting and rapidly evolving field, with the potential to improve our understanding of immunological systems and to develop new therapies for patients with immune disorders.



“IEI represent an unprecedented model to link defined single gene defects to immune dysregulation in clinical settings”

Dr Cindy Ma, Immunodeficiency Section Editor at *Clinical & Experimental Immunology*

SOCIETY NEWS

The Goldilocks effect: a little too much or a little too little

The BSI's official journal, *Clinical & Experimental Immunology (CEI)*, has a dedicated Immunodeficiency section led by Dr Cindy Ma, who heads the Human Immune Disorders Laboratory at the Garvan Institute of Medical Research in Australia. In time for World Primary Immunodeficiency Week at the end of April, *CEI* published a new Review Series entitled 'Inborn errors of immunity: The Goldilocks effect – susceptibility to diseases due to a little too much or a little too little'.

The series is edited by Dr Ma alongside Professor Stuart Tangye (also based at the Garvan Institute) and highlights new insights into primary immunodeficiency due to variants in genes that result in loss of function or gain of function of the encoded protein, and the arising disease outcomes.

This collection of reviews covers a diverse range of PIDs, including those caused by loss-of-function and gain-of-function gene defects in the complement pathway, JAK-STAT signalling, NF- κ B pathway, DNA-binding protein Ikaros and regulators of the actin cytoskeleton.

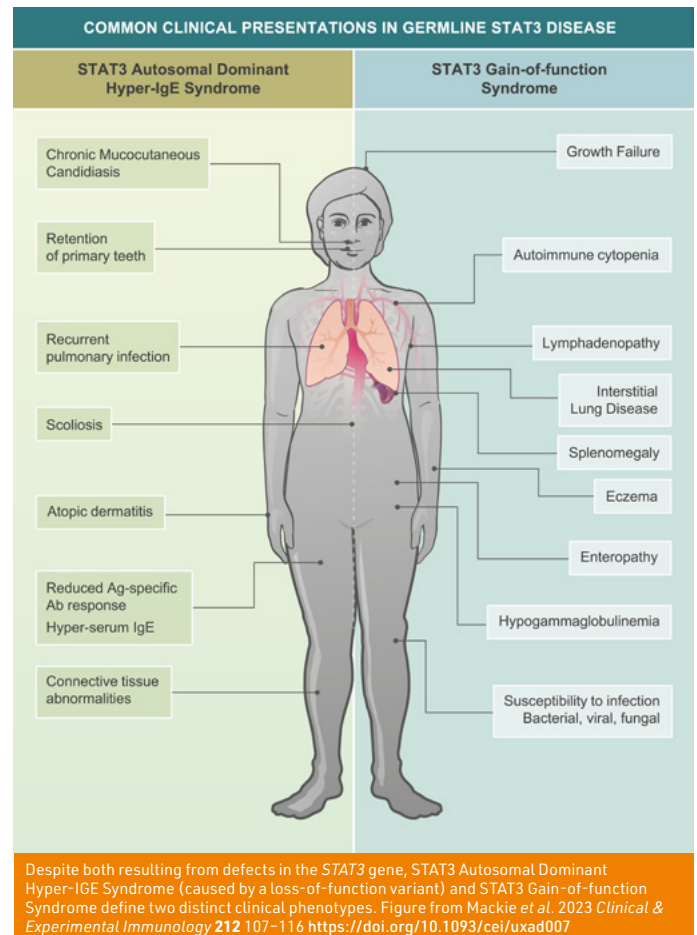
Comparing loss-of-function and gain-of-function variants in the same genes has provided important insights into the function of specific proteins. For example, the study of PID has been instrumental in elucidating the role of the transcription factor STAT3 as a critical signalling module in immune responses, metabolism and cancer.² The discovery of loss-of-function variants in STAT3 as a cause of recurrent skin and pulmonary infection established that STAT3 plays a critical non-redundant role in immunity against some pathogens. Conversely, gain-of-function STAT3 variants were found to cause cases of early-onset multiorgan autoimmunity, thereby supporting the idea that STAT3 function needs to be regulated to maintain immune homeostasis.

Find out more by reading the Review Series at <https://bit.ly/CEI-Goldilocks-effect>.

Jasmine Catmull,
BSI Marketing & Communications Officer



Clinical & Experimental IMMUNOLOGY



Call for papers: Immunotherapies for inborn errors of immunity

The BSI's official journal *Immunotherapy Advances* features ongoing Special Collections on high-interest topics in immunotherapy. This upcoming collection will explore the identification of immune pathways and novel therapeutics which may provide targeted treatment options for genetic immune defects.

Special Collection Editors:

- Professor Menno van Zelm, Monash University, and The Alfred Hospital
- Professor Rita Carsetti, IRCCS Bambino Gesù Children's Hospital
- Professor Hirokazu Kanegane, Tokyo Medical and Dental University Tokyo



Immunotherapy ADVANCES

The journal invites submissions of original research, reviews, commentaries and TrialsWatch articles that demonstrate the applications of new targeted therapeutics and contribute to our understanding of the immunotherapeutic treatment options for inborn errors of immunity. Visit <https://bit.ly/ITA-IEI-CallForPapers> to find out more and submit your work.

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1. Tangye et al. 2022 *Journal of Clinical Immunology* **42** 1473–1507 <https://doi.org/10.1007/s10875-022-01289-3>
2. Mackie et al. 2023 *Clinical & Experimental Immunology* **212** 107–116 <https://doi.org/10.1093/cei/uxad007>

BSI member discount

We are proud to offer BSI members a discount on publication fees. Those submitting to our hybrid journal, *Clinical & Experimental Immunology*, receive a 33% discount on Open Access charges. For our fully Open Access journals, *Discovery Immunology* and *Immunotherapy Advances*, we offer authors a discounted fee of £1,680.



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SOCIETY NEWS

Describing the impact of the National Core Studies Immunity Programme

We are proud to have supported National Core Studies (NCS) Immunity, one of the six National Core Studies set up by the Government Office for Science in 2020 to respond to important strategic, policy and operational questions about COVID-19.

As part of the BSI's commitment to supporting NCS Immunity's communications activities, we were commissioned to produce an impact report, setting out the long-term benefits of the programme as it came to its conclusion in March 2023.

The report sets out in detail how the programme achieved its aim of deepening our understanding of immunity against COVID-19, including how to predict individual risk and protect against serious infection, how to use vaccines most effectively, and how to prepare for future pandemics. It describes how the programme delivered rapid benefit to the public, how its teams forged new productive collaborations, and paved the way for future discoveries.

It also explains how patients and the public were involved to ensure the programme's research delivered maximum benefit to those in most need. NCS Immunity's patient and public involvement was delivered by the BSI, and a separate report we published in December 2022 describes this activity in further detail.

"I am immensely proud of how the teams that came together as part of NCS Immunity embraced the spirit of 'team science', and were determined to be more than the sum of each individual team's contribution", said Professor Paul Moss, Lead for NCS Immunity and Professor of Haematology at the University of Birmingham. "The full impact of their work will be felt long into the future and

am excited to see what further breakthroughs will come of the innovative techniques, the wealth of data and samples, and the new alliances that have been struck."

Amy Edmunds

National Core Studies Immunity
Communications Manager

Find out more:

You can read the full impact report at:
<https://bit.ly/3LQ0S8F>.

To find out more about the NCS Immunity's patient and public involvement, please visit:
<https://bit.ly/3nn70AJ>.

NCS Immunity was funded by UK Research and Innovation. Find out more about the programme at:
<https://bit.ly/4160wil>.

New Senior Editor of *Discovery Immunology*



Discovery Immunology is delighted to welcome its newest member of the Senior Editor team, Dr Philip Ahern. Dr Ahern is an Assistant Professor based at the Lerner Research Institute, Cleveland Clinic, USA, where his lab focuses on understanding how homeostasis between the intestinal immune system and the gut microbiota is established and maintained, and how disruption of this relationship leads to the development and exacerbation of inflammatory bowel disease.

He has served as Editorial Board member for *Discovery Immunology* since its launch in 2022 and is a longstanding member of the BSI and contributor to the journals.

Dr Ahern is currently leading a special collection for the journal with Senior Editor Dr Emily Gwyer Findlay, focusing on T cells at barrier sites. Check out the call for papers for more information: <https://bit.ly/3MM6b9r>.



#BSI wedding

Big congratulations to BSI members Dr Alexander Stewart and Dr Federica Orsenigo from University of Surrey who got engaged during BSI Congress 2021 in Edinburgh and got married on 6 May 2023.



Outstanding Contribution to the BSI:

interview with Professor Gary Entrican

Professor Gary Entrican has won our inaugural Outstanding Contribution to the BSI Award. Gary is Honorary Professor at The Roslin Institute at The University of Edinburgh. He was a Trustee of the BSI from 2004 to 2007 and held the post of BSI Congress Secretary from 2017 to 2021. We caught up with Gary to find out what it means to him to win this award.

Many congratulations on winning the Outstanding Contribution to the BSI Award! How did it feel to get this good news?

It feels amazing. It was totally unexpected – I didn't even know I'd been nominated. The BSI means so much to me and I've been involved with their work for so many years, and to be recognised in this way is above and beyond anything I expected.

For me, it's an affirmation that I've done something positive for the BSI and for my colleagues. It always means a lot to get this kind of acknowledgement from your peers.

In your role as BSI Congress Secretary, you oversaw two BSI Congress events and had to adapt in 2020 to running an online event. How did you cope with the challenges the pandemic posed?



The first set of challenges were the shifting goal posts. We had a planning meeting in early March 2020, and it was already noticeable travelling into London that things were quieter. We suspected there might be some sort of lockdown, but we didn't know for how long, so we continued getting everything lined up for an in-person meeting in December.

Of course, by June or July, it became clear that an in-person event was no longer an option. But we still wanted to do something really worthwhile for the BSI membership. Online meetings were by then becoming quite commonplace so we had to work hard to offer something unique that included COVID-19 and had an interactive element.

'The BSI means so much to me and I've been involved with their work for so many years, and to be recognised in this way is above and beyond anything I expected. For me, it's an affirmation that I've done something positive for the BSI and for my colleagues. It always means a lot to get this kind of acknowledgement from your peers.'

The uncertainty was the biggest challenge, and this remained right through to the end. Travel restrictions for speakers and delegates could change from one day to the next. It is easy with hindsight to forget how difficult that was at the time.

Throughout my career, the BSI Congress has always been such a big event in the calendar – there are very few I've not been to. It was important to me to play a role in continuing that tradition as Congress Secretary.

What role has the BSI played in your own career and how has this role evolved in recent years?

The BSI has been a huge part of my career. I went to my first BSI meeting in the first year of my PhD, in Kensington Town Hall. Those meetings, where you got to hear about everything that was going on in the field, were the chance to meet people for career progression and keep your finger on the pulse. It was at one of these meetings that I gave my first talk as a postdoc, which was quite daunting at the time! To be able to meet people from around the UK and globally working in all different areas of immunology was so valuable, and those opportunities simply wouldn't have been there without the BSI.

Of course, the BSI's activities have developed over the years to adapt to the changing demands of research careers in immunology. It's been great to see the increased focus on opportunities for Early Career Researchers, for example. I've enjoyed being a part of that evolution.

For me, what speaks volumes is that many immunologists remain members of the BSI even when their research and teaching activities are behind them. They feel part of a

'The BSI has been doing some great work on this, including their new Diversity & Inclusion Framework, which is a fantastic approach, and is something I've used in a number of contexts. The BSI has a large and strong membership, so can be a beacon for these values.'

community, and that is something the BSI has done really well to create.

You are a big champion of equality, diversity and inclusion (EDI). Why do you think this is so important for a field like immunology?

I actually think it's important in every aspect of life. I became interested in equality, diversity and inclusion in a previous role – I don't like discrimination and I don't like unfairness, so that was the hook for me.

As I got more involved, I began to understand that the principles of equality go far beyond the protected characteristics set out by the Equality Act. It's actually all about culture and behaviours and values. If the values of an organisation are not reflective of an environment that is accepting and supportive, then people end up having to watch their backs rather than looking forward. In science, you constantly need to be moving forward, so if you can't thrive in your place of work, then there is no progress.

The BSI has been doing some great work on

this, including their new Diversity & Inclusion Framework, which is a fantastic approach, and is something I've used in a number of contexts. The BSI has a large and strong membership, so can be a beacon for these values. Leadership by example is so important – you need to take people with you. You can't dictate to them.

You took a new direction in your career several years ago when you stopped active research, but you are still very much involved in immunology – how important was it to you to keep that connection?

That's right – though I was taking a new direction in my career, I wasn't ready to walk away from immunology, or to 'park' my scientific brain. I no longer do research but I have an Honorary Professorship at the University of Edinburgh and am now even more involved in teaching and other roles, such as on funding panels, which play an important role in supporting competitive research. They are time-consuming but very rewarding so I'm pleased that I have the time to do them.

What I have realised is that the skills I've gained in my research career are transferable to just about everything I do. Simple things like presentation skills and communicating information clearly and convincingly. These skills are particularly important for good leadership and can serve you in every aspect of life, both inside and outside science.

Interview conducted by **Amy Edmunds**



A celebration of immunology

Turn to page 8 to find out more about BSI Awards ceremony which was held on 20 April 2023. You can read more about the all the winners of the 2023 BSI Immunology Awards at <https://bit.ly/410lftY>.

BSI Outstanding Ambassadors for Immunology:

interviews with Professor Danny Altmann and Dr Victoria Male

Our inaugural Outstanding Ambassador for Immunology Award has been awarded jointly to Professor Danny Altmann and Dr Victoria Male, both at Imperial College London. You can read our interview with Danny below and find our interview with Victoria on the next page.

An interview with...

PROFESSOR DANNY ALTMANN



We spoke to Danny about his work demystifying the principles of immunity since the very early days of the pandemic, as well as his more recent work advocating for those with Long Covid.

What does it mean to you to win the BSI Outstanding Ambassador for Immunology award?

The BSI has played a big role in my professional life. I've been a member since I was 19 or 20, when I joined in order to



hear Rolf Zinkernagel talk at BSI Congress about the work he was doing on how T cells recognise infection. That was the moment I really became hooked on immunology and T cells. These days I try to do my bit to communicate about developments in the field and to be an ambassador, so yes, to win an award like this means a lot.

You worked tirelessly during the pandemic to communicate the science behind COVID-19 to the public via the media. What challenges did this present, and what positives were there?

It's been a long journey for all immunologists since December 2019. Before then, I would get maybe half a dozen requests a year for media interviews, but during the pandemic there were times when I was getting 20 or 30 requests a day to do interviews for TV and newspapers around the world. One of the first things you have to do is regulate how much time you spend on it. If I responded to every interview request, I'd have no time for research.

Another challenge is using the right language to communicate in different circumstances. You want to be clear and understandable but not patronising. Some interviews require you to avoid even the most basic scientific terms like 'virus' or 'antibody', while others want you to go into quite a bit of technical detail. It's been a learning curve to get that balance right.

Do you think areas like public engagement, communication, policy and government relations are becoming more integral to the scientist's role?

Yes, to a huge degree, and for very good reason. As scientists, we've always had to fill out that section in grant applications about how we're going to communicate our work and be answerable to the public, but now I think people realise why they have to really mean it, why they need to do it in spades.

The pandemic taught us that members of the public really do have an appetite to grasp our research, so why would you not want to respond to that and explain what you do with your days, and the impact it has?

I remember when there was a lot of debate about whether the UK would adopt legislation on 'immunity passports' and that felt to me like a very important time for scientists to speak up. Policymakers were trying to make decisions quickly about quite profound and complex things. Scientists could step in to remind people that different vaccines with different credentials were being used around the world, that immunity wanes and that some people may be unable to mount an immune response at all. There was layer upon layer of complexity and it felt incredibly important to be part of that conversation to avoid bad decisions being made.

There is a delicate balance to be struck: you want to be a good ambassador and communicator, but not be seen as political or as having an axe to grind. Sometimes your scientific answer might sound quite critical of current policy or advice. All this has, for many immunologists, been new territory.

Long Covid will continue to be an important topic for years to come, and this is a particular area of interest for you. Is it fair to say you balance two roles here: researcher and advocate? How do you manage that balance?

Communicating about Long Covid is different in so many ways to the kind of communication we did earlier in the pandemic. Back then, we were all united in our fear and our sense of danger, and everyone was looking to the scientific community for answers.

Now, a lot of people want to believe the pandemic is over so they can resume normal life, but at the same time we have this persistent chronic disease in Long Covid that is so much harder to grapple with and talk about. The topic has become quite polarising and sometimes toxic, so that my world is now full of rivalries and anger and bitterness. I sometimes feel caught up between the various camps, and the spirit of the debate is very different from that during the acute phase of the pandemic.

'There is a delicate balance to be struck: you want to be a good ambassador and communicator, but not be seen as political or as having an axe to grind'

At the end of the day, you want to be a good advocate for the science and for the patients, and sometimes that involves saying things that are quite uncomfortable. But we've raised the awareness so much already, partly thanks to the BSI and others, and there is so much more appetite now to have a measured conversation about these things. I think that scientists and their achievements are now valued much more than they were, and science correspondents have more clout with their editors to get these stories onto the front pages. This is all progress.

How do you think your work acting as an ambassador for immunology might evolve in future?

The role is evolving and progressing in ways I never foresaw, and still can't to some degree. I think we're in a much better place than we were in terms of lines of communication and having a shared lexicon. There are still challenges, of course – I will still have days where I get deluged with criticism for interpreting a paper in a particular way that upsets a certain group of people. The territory ahead is still quite uncharted but ultimately, more communication is better than less, and I for one look forward to doing more of it.

An interview with...

PROFESSOR VICTORIA MALE



We spoke to Victoria about her work communicating the evidence around COVID-19 vaccines, pregnancy and fertility, and how her role promoting science has changed during the pandemic.

The pandemic has brought immunology firmly into the limelight. What positives do you think this has led to? And what are some of the challenges?

What's really great is that suddenly people are interested in immunology. People with

no science background can now hold a conversation about T cells and B cells and different antibodies. That wouldn't have been possible five years ago.

Early on in the pandemic, when I was talking to people about the risks and benefits of vaccination in pregnancy, the vast majority of people didn't have an agenda. They simply wanted to make the best decision for themselves and their babies. It was fun and interesting to have these conversations. This time last year, for every unpleasant message I received, I got ten photos of babies from new parents saying thank you for giving me the information I needed to make a decision I felt comfortable with.

The kinds of people I talk to have changed a lot in recent months. Everyone who wanted to be vaccinated has now got the vaccine, so I'm spending more time talking to people who have quite strong preconceived notions about vaccines being a bad idea.

I made a very conscious decision early on, that I would rather take the time to talk to ten people who might never agree with me, if there was a chance one of those might be someone who genuinely wanted information. That has informed the whole of my approach.

As a busy researcher, how do you balance the role of carrying out the research, and the equally important role of communicating it?

I'm lucky that I have an enormous amount of support. My family understand that I'm doing something worthwhile, and that it might mean I sometimes spend an evening doing a podcast rather than spending time with them, for example. They have been fantastic in giving me the space and time to get on with it.

My university and funders have also been great. I'm funded by a pre-term birth charity called Borne (www.borne.org.uk) who have been really supportive. They recognise that ultimately my job is to prevent pre-term births, and that one of the ways I can achieve this is by ensuring people have accurate information about the dangers of COVID-19, and about the safety and effectiveness of COVID-19 vaccines.

In your experience, what is the key to having a constructive conversation about vaccines with a member of the public who is having doubts?

The first thing I do is to completely liberate myself from the idea that it's my job to persuade a person to get vaccinated. My job is to make sure they have the information they need to make a decision that they're happy with, one that's right for them and their family. This mindset helps open up a two-way conversation.

The second thing is to really listen and find out what it is they need from the conversation.

'Immunology is a fascinating puzzle for anyone with an enquiring mind. There are so many moving parts to it, and there's probably not a challenge like it anywhere else in science.'

This may sound obvious, but I was speaking to someone who was unsure whether to get the COVID-19 vaccine when she was breastfeeding. I asked her what it was that was holding her back and she explained that she didn't understand how a vaccine in her arm could protect her whole body. That wasn't at all what I expected her to be unsure about, and was absolutely something I could help explain!

What would you say to encourage a budding scientist to enter the field of immunology?

I've recently started going into schools again after taking a break during the pandemic, and when I talk to children now about vaccines, they immediately know what they are and, in most cases, think they're a good thing. So, in some ways, it's a much easier sell than it used to be!

Sometimes children have preconceived notions about what kind of person can be a scientist, so it's really important to stress that they can be a scientist no matter their gender, ethnicity, religion, or if they have a disability.

Whatever their interests are, there will be a place for them in science. Ultimately, getting this message across will make science a more diverse and welcoming place.

Becoming an immunologist is an opportunity to really make a difference, and we've just seen an amazing example of that in vaccine development and managing COVID-19. But there's more to immunology too – it's a fascinating puzzle for anyone with an enquiring mind. There are so many moving parts to it, and there's probably not a challenge like it anywhere else in science.

What future challenges do you see for anyone acting as an ambassador for immunology?

The odds are that I will see another pandemic in my lifetime, and my children will probably see more than one. We're in a potentially very good situation, in that we have new vaccine platforms and new ways of approaching vaccine trials. We could be entering a golden era of vaccination, but only if people want to get vaccinated. Ambassadors for immunology

will have an important role to play in helping people to understand the evidence so they can make informed choices.

Of course, being an ambassador doesn't necessarily mean dealing with the media – twitter and TV interviews won't be for everyone. Some people may be more comfortable working with MPs and decision makers, or in partnership with professional bodies. There are many ways someone can be an ambassador, and it's going to be fascinating to see how different people go about it in the ways that come naturally to them.

Interviews conducted by **Amy Edmunds**

A celebration of immunology

Turn to page 8 to find out more about BSI Awards ceremony which was held on 20 April 2023. You can read more about the all the winners of the 2023 BSI Immunology Awards at <https://bit.ly/410IfTy>.

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Measuring vaccine-induced immunogenicity:

Leveraging a COVID-19 legacy for improved public health

In April, the BSI published a new policy report which calls for further study of immunogenicity to improve the evaluation of the effectiveness and value of vaccines for the advancement of public health. We then met with policymakers, regulators, clinicians, researchers and industry at Parliament to present this report and explore the actions needed to leverage immunogenicity progress to protect and boost health for future generations. Here, our Policy and Public Affairs Manager, Matthew Gibbard, discusses the importance of the report, and its development and subsequent launch.

Pandemic preparedness

Borne out of roundtable discussions with experts from academia, industry, government, regulators and clinical medicine, the BSI report 'Measuring vaccine-induced immunogenicity: Leveraging a COVID-19 legacy for improved public health' lays out recommended interventions to cement the legacy from COVID-19 and ultimately, bolster the UK's pandemic preparedness and greatly benefit the NHS and the public.

The rapid development and deployment of vaccines during the COVID-19 pandemic enabled unprecedented scrutiny of the immune response following vaccination. This has begun to permit us a better

understanding of the components of immunity that confer short- and longer-term protection. There have also been parallel advances in the development of novel research and routine clinical diagnostic devices to measure elements of this immune response.

Lessons to be learned

The UK is at a critical juncture to learn lessons from the COVID-19 pandemic, to reform regulatory decision-making and clinical trial design. We have the opportunity to make vaccine development cheaper and easier to conduct, as well as continue point of care and home testing for immunogenicity as a legacy of COVID-19 to bridge the divide to real-world data. Utilising immunogenicity



MSD fully funded and attended the roundtable meeting. This report was fully funded by MSD and was fact checked for accuracy and balance only.

as a tool is key to all this potential progress.

We have a duty to build on the legacy from COVID-19 throughout science, research infrastructure and innovative working, and deliver the long-term benefits we know are possible to both patients and the country's wider public health. The key to securing this legacy will be the adoption of the recommendations that we have made in our report, to support future vaccine development and implementation by breaking down barriers between academia, industry, clinical medicine, regulators and government.

A welcome reception

To ensure the report's visibility among parliamentarians, the research community, and those who work in the science policy sphere, the BSI launched the report at an afternoon reception in the House of Lords. The event was kindly sponsored by the Lord Patel of Dunkeld KT, a physician and the former Chair of the House of Lords Science and Technology Select Committee. The meeting was fully funded by MSD.

Lord Kakkar, an eminent cardiovascular surgeon and former member of the Science and Technology Select Committee, spoke first to launch the report, welcoming the parliamentarians and scientists to the event, while highlighting the importance of immunology in improving public health. He noted that the accelerated progress in vaccine development from COVID-19 has led to an increased understanding of the immune response components that confer short- and longer-term protection from infection and disease severity.



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Importance of immunogenicity

Professor Alex Richter, Director of the Clinical Immunology Service at the University of Birmingham, who chaired the roundtable which formed the basis of the report, then addressed the audience. In her speech, she discussed the challenges and opportunities of measuring immunogenicity and talked through the report’s recommendations, how they link into each other, and how they will ultimately be able to come together to improve public health and the UK’s pandemic preparedness.

Dr Dilruwan Herath, medical director at MSD, also spoke at the event. In his speech, Dr Herath discussed the role of industry and noted that MSD is committed to supporting research that can help to improve the understanding of immunogenicity.

Attended by a wide range of

stakeholders, including policymakers, researchers, industry, regulators, and clinicians, the afternoon reception provided an opportunity to discuss the importance of immunogenicity research in a post-pandemic world, as well as to share their views on the report and its recommendations. By working together to leverage a COVID-19 legacy, we can deliver immense benefits to those most at risk, our vital research and clinical community, and our society.

Matthew Gibbard

BSI Policy and Public Affairs Manager
Email: m.gibbard@immunology.org

Report recommendations

Lessons from measuring vaccine-induced immunogenicity in COVID-19

- Immunogenicity research should be recognised as a central part of the UK’s pandemic preparedness plans.

Vaccines regulation and monitoring

- Regulators should clarify the laboratory evidence needed to bring a vaccine to market and what industry can do to collect these data.
- Decision-makers should clarify what post-marketing surveillance immunogenicity studies are required to inform the need for booster vaccines and prioritisation of at-risk groups.
- An agreed toolbox of companion diagnostics should be defined to support vaccine development, licensing and adoption.

Validation and standardisation of assays

- There should be a clear process for the development and monitoring of standardised, high-quality assays for immunogenicity that can be used as surrogates of vaccine protection.
- Guidance should be provided to the scientific community on standardisation requirements for assays and the steps required for developing international reference standard reagents.

Mucosal immunity

- We must prioritise research into the understanding and accurate measurement of mucosal immunity.
- We need to develop methods for predicting how well a vaccine will confer sterilising mucosal immunity and prevent onward transmission of infection.
- Regulators must clarify the regulatory requirements for vaccines designed to reduce transmission to stimulate research by industry into this area.

People with weakened immune systems

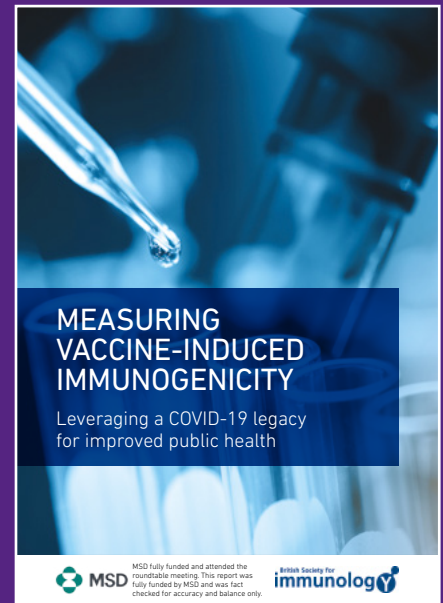
- We are urgently calling for more research on which assays correlate with protection for people who are immunocompromised.
- People who are immunocompromised should be included in licensing and post-marketing surveillance programmes for vaccines.
- Vaccine development should consider achieving successful immunogenicity in people who are immunocompromised.

Point of care and at-home testing

- A legacy of COVID-19 should be ensured through continued point of care and at-home testing for immunogenicity and recognise how this can be of use to post-marketing authorisation studies mandated by the MHRA to bridge the divide between immunogenicity studies and real-world data.
- We must ensure that there is proper government and industry support for the UK diagnostics sector through boosting capacity, inward investment and skills.

Leadership and co-ordination

- A UK vaccinology network based on pandemic models of working, with continued funding and strong leadership, should be established to devise and address key questions and challenges in immunogenicity.
- We must ensure that routes for knowledge transfer in a pandemic situation are clearly delineated with a focus on knowledge generation.
- Coordination within the UK’s antibody and vaccine development research community should be improved, and this should include mapping the UK’s academic innovation and capacity, as well as developing a virtual biobank of samples stored in UK laboratories.
- There should be template agreements drawn up in advance between academic research institutions, government and industry on compensation for components used in assay development and for intellectual property arrangements.
- There should be clear and transparent advice ahead of time from the Health and Safety Executive that allows UK researchers to provide their expertise in the event of another pandemic. This should be combined with establishment of a standardised and centralised portal for material transfer agreements.



“This British Society for Immunology report explains how we can unlock immunogenicity’s full potential by breaking down barriers between academia, industry, clinical medicine, regulators and government, and investing in our R&D sector to ensure that we have the funding, skills and capacity to leverage the legacy of COVID-19 for the ultimate benefits of public health and pandemic preparedness.”

Professor Alex Richter, Chair of the roundtable for this report and Director of the Clinical Immunology Service at the University of Birmingham



Find out more:
Read the full report:
<https://bit.ly/3WeZpw8>

Beyond sharing findings: patient and public involvement for better research

At the British Society for Immunology (BSI), we have been working towards equipping researchers with the necessary tools for effectively involving patients and the public in research. We managed the patient and public involvement (PPI) element of National Core Studies Immunity (NCSi) to facilitate involvement with COVID-19 research and, subsequently, designed and delivered tailored PPI training for the researchers involved. Here, BSI Public Engagement Manager and lead for PPI within the programme, Erika Aquino, details the impact and lessons of the NCSi PPI element and reflects on the importance of carrying out meaningful involvement with patients and the public.

National Core Studies Immunity (NCSi), one of the six National Core Studies set up in summer 2020 by the Government Office for Science, has been a key part of the UK's pandemic response, involving over 20 separate studies and more than 125 researchers at over 15 universities and other research centres. We are proud to have delivered the patient and public involvement (PPI) element of the programme, working closely with its management team and a panel of public contributors, with whom we then collaborated to design tailored training in the area to provide researchers with tools for effective PPI.

As the programme came to an end in April 2023, we now look back on the successes, challenges and improvements for future involvement with immunology research, and the value of co-creating training to deliver impactful outcomes.

Embedding involvement

In 2022, a panel of nine patients and members of the public was established to work alongside the research teams supported by NCSi for 12 months. The



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panel members had diverse experiences and backgrounds, including some with conditions that affect their immune system. Their overarching role was to offer insights, advice and feedback on the work being undertaken, ultimately ensuring that the research effectively met the needs of the widest possible range of people. Members met regularly with the research teams to discuss findings and implications. Through regular meetings with the research team, the panel helped draw attention to questions and issues that may not have been considered, such as the challenges of recruiting study participants from underrepresented communities.

"The panel tended to bring up ideas of diversity of our cohorts, which made us really push this agenda, although we have been devoted to this cause! It was a very positive experience and will influence the way I think in the future."

Management team,
National Core Studies Immunity

Capturing impact

Patient and public involvement in the programme had immense positive impact in a range of areas including the research delivered and the individuals involved. Importantly, it was also of crucial benefit to the public contributors, who reported feeling valued and recognised for their role within the programme.

"I'm proud to be a PPI member for National Core Studies and the BSI, thanks for taking me onboard."

Public contributor,
National Core Studies Immunity

All public contributors strongly agreed that they could contribute their feedback and reflections on the ongoing research priorities to the NCSi management team. The panel were grateful to the programme lead, Professor Paul Moss, and co-lead, Professor Doreen Cantrell, for always attending meetings and providing regular updates, and greatly appreciated the opportunity to ask questions and provide their feedback.

"Researchers were amenable to public contributors' questions, comments and suggestions and always replied with expanded explanations."

Public contributor,
National Core Studies Immunity

Continuous feedback drives improvements

Throughout the project, we used Padlet, an online anonymous feedback tool, to gain insight on how the meeting went and what could be done differently.

"The Padlet was a great way to surface issues and discuss them, many PPI groups don't have a process for that."

Public contributor,
National Core Studies Immunity

‘Building partnerships and nurturing relationships with mutual respect and trust takes time and resource but should not be seen as a barrier to involving patients and the public with research.’

For example, at the beginning of the project, the timing and fast pace of the meetings were noted as feedback, which was taken on board, rearranging them for more convenient times and reducing the agenda. The panel reported back that these changes enabled open and productive conversations with researchers.

Early in the project, the need for researchers to use accessible language and avoid complicated terminology was highlighted as important. We briefed presenters ahead of the meetings and provided feedback after so researchers could learn from their experiences and build their communication skills. Reflecting on this later in the project, panel members noted that presentations were clearer and easy to understand, and they praised researchers for explaining the complex science in an understandable way.

Fostering relationships is key to successfully working together

Another success was the strong relationships formed between the panel members and the BSI team. Key to successfully building rapport is trust, openness and listening to others to

have productive conversations. The BSI welcomed the opportunity to reflect on our own ways of working, as well as the wider immunology research culture, and actively engaged in a process of continuous adaptation and learning around PPI.

“I enjoyed seeing real-time research results from the teams. The best sessions were when the public contributors who were part of the research presented alongside the researchers, it was great to see that happening.”

Public contributor,
National Core Studies Immunity

“I think the BSI have been amazing here and the comments from people that they felt completely included are a testament to that.”

Management team,
National Core Studies Immunity

Influencing policy and research funding

Positively, all public contributors reported that they could provide their perspective on wider implications of the research on national COVID-19 public policy priorities.

However, there is still work to be done to ensure decision-makers involve public contributors and patients in policy discussions. Additionally, the BSI strives to promote the important role of PPI in research funding and how involving people with lived experiences in grant applications is vital for effective research. It is vital to focus on communication beyond research findings to effectively involve and make sure outcomes reach the people affected and their clinicians. We will continue to advocate for PPI influencing policy topics important to patients and the immunology community.

“In future, the BSI needs to keep on supporting PPI and involve patients and the public in additional research as the BSI is well placed.”

Public contributor,
National Core Studies Immunity

“The British Society for Immunology have an extraordinary culture of excellence, commitment, professionalism and support.”

Management team,
National Core Studies Immunity

First steps towards meaningful involvement

Many panel members cited that they were able to add meaningful input into the programme’s public engagement and communication activities. We worked with them to create public-facing infographics, co-author a report and deliver a public webinar.

Crucially, the panel and BSI also co-produced a training course for researchers



Successes

100% of public contributors reported positively that:



They could contribute feedback and reflections on ongoing research priorities



Their advice and guidance were respected and could influence the project



There was a clear role for PPI and supportive structures in place



They felt valued and recognised for their role as a patient and public contributor



Continual progress

Feedback was collected and comments discussed to **implement changes that drive improvement.**

“Gathering anonymous feedback is a great way to surface issues and discuss them, many PPI groups don't have a process for that.”

Public contributor, National Core Studies Immunity

Positive changes included:



Meeting times convenient for everyone enabled high average attendance of 80%



Comfortable pace of meetings allowed open and constructive conversations

Building relationships

Key to strong rapport is trust and active listening, which guides productive dialogues. The BSI welcomed the opportunity to reflect and engage in a process of continuous adaptation and learning around PPI.

“The BSI built relationships with us. I felt that I could reach out with any concerns and comments, both positive and negative. Thank you to all at the BSI for all that you are and everything that you do. You have been approachable, reflexive and it’s been a joy to be involved with you.”

Public contributor, National Core Studies Immunity



“The British Society for Immunology has an extraordinary culture of excellence, commitment, professionalism and support.”

Management team, National Core Studies Immunity

“We made space for conversations which delved into tensions inherent in big data research. It was great to have the time to do that productively.”

Public contributor, National Core Studies Immunity

about how to involve the public and patients in their research, and better understand the mindset and approach needed for effective and inclusive involvement. This course laid out the foundations in this area to help researchers start their PPI journey and provide them with the necessary tools to involve the public throughout the entire research cycle.

“My highlight has been co-developing the training to teach researchers about PPI.”

*Public contributor,
National Core Studies Immunity*

Co-production at its core

A group of five patient and public contributors worked closely with the BSI team to co-design an online course for the NCSi researchers, developing learning objectives, content and delivery methods, and including a practice run.

The researchers were also consulted on the content of the training to identify gaps in knowledge and how best to shape the course. The course allowed for peer-to-peer learning through sharing experiences and case studies of successful involvement.

Researchers wanted to improve their knowledge of how to reach the people most affected by their research and involve them in funding applications, and these topics were incorporated into the course. As well as practical skills of administering and coordinating involvement, a vital element for the public contributors was to role-model inclusive engagement and emphasise the importance of approaching involvement with a sincere mindset. Everyone involved inputted into a group agreement, in which they shared what

they need to enable them to participate and discuss what adjustments might be necessary to promote inclusive practice.

The journey is as important as the destination

The course focused on reflexive practice, where researchers were challenged to recognise how their own assumptions impact how they view PPI. Building partnerships and nurturing relationships with mutual respect and trust takes time and resource but should not be seen as a barrier to involving patients and the public with research. Equitable involvement requires fostering a culture where different types of knowledge and lived experiences are appreciated and can add value to research.

Positive feedback and room for improvement

Participants were asked to complete a questionnaire before and after the training to gather feedback and rank their confidence in accomplishing different aspects of PPI. Positively, confidence in all aspects increased after attending the course. Before the training, 48% of participants were not confident in building rapport and relationships with public contributors but after completing the course, 92% of participants reported feeling confident and very confident. Notably, 93% of attendees finished the course feeling confident in giving value to patient and public contributors, compared with 9% before the training.

Many of the researchers reported enjoying the helpful insights and advice from the experienced patient and public contributors as well as hearing useful

case studies from their colleagues.

The feedback highlighted areas for improvement too, including having more time for smaller group conversations and more information on how to monitor and report impact. There were useful suggestions of having separate introductory training with more practical guidance around recruiting patient and public contributors and running effective meetings. We look forward to further developing and improving the training, working closely with public contributors and the wider research community, and seeing more of our members and immunology community getting involved in this important part of the research process.

Erika Aquino

BSI Public Engagement Manager
Email: e.aquino@immunology.org

Find out more:

The positive impact of PPI on the programme and the research delivered are explored in depth in the report ‘Patient and public involvement in COVID-19 research: bridging the gap between theory and practice’. You can find out more and download the full report here: <https://bit.ly/3MUNHnn>.

For further information or any questions about the BSI PPI training course or our work in this area, please email e.aquino@immunology.org.



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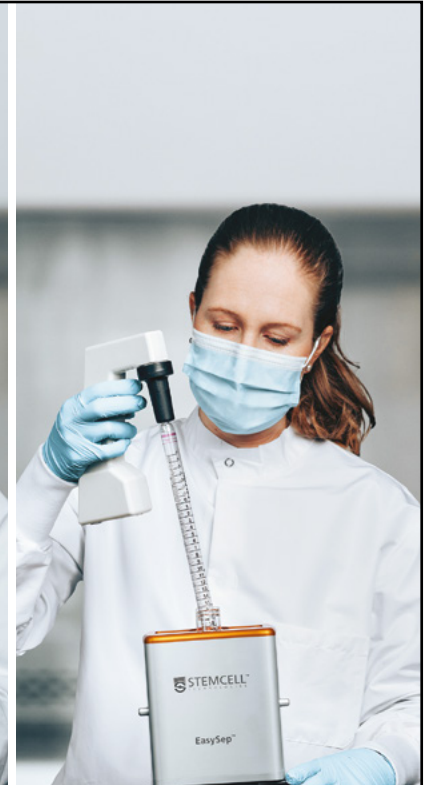


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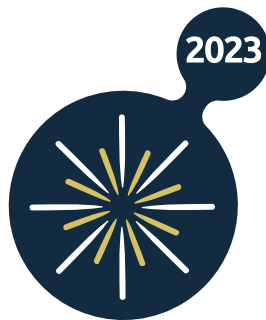
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Congratulations

This is the section of the magazine where we celebrate the achievements of our members. Our congratulations to all who are mentioned here.

BSI Immunology Awards 2023

The eleven winners of the inaugural BSI Immunology Awards were revealed at a ceremony on Thursday 20 April as part of our 'Transforming the immunology landscape' event. The BSI Immunology Awards celebrate the remarkable achievements of individuals and teams shaping the future of immunology. We would like to congratulate all of the winners for this fantastic achievement. You can find out more on page 8.



BSI IMMUNOLOGY AWARDS

Congratulations to new Fellows

Both the Academy of Medical Sciences and the Royal Society have announced their lists of new Fellows for 2023. Congratulations to the following immunologists on being elected:

ROYAL SOCIETY

- **Professor Judith Allen FRS**, Professor of Immunobiology, Faculty of Medicine, Biology and Health, University of Manchester
- **Professor Bryan Charleston FRS**, Director and CEO, Pirbright Institute
- **Professor Michael Dustin FRS**, Kennedy Trust Professor of Molecular Immunology at the University of Oxford and Director of Research of the Kennedy Institute of Rheumatology
- **Dame Sarah Gilbert DBE FMedSci FRS**, Said Professor of Vaccinology, Pandemic Sciences Institute, University of Oxford

ACADEMY OF MEDICAL SCIENCES

- **Professor Susan Hopkins CBE FMedSci**, Chief Medical Advisor, UK Health Security Agency
- **Professor Helen Lachmann FMedSci**, Professor of Medicine and Honorary Consultant in Amyloidosis, University College London
- **Professor Claudia Mauri FMedSci**, Professor of Immunology, University College London
- **Professor Robin May FMedSci**, Professor of Infectious Diseases, University of Birmingham and Chief Scientific Advisor at Food Standards Agency
- **Professor Matthew Snape FMedSci**, Vice President, Clinical Development Paediatric and Maternal Vaccine, Moderna
- **Professor Carola G. Vinuesa FRS FMedSci**, Principal Group Leader, Francis Crick Institute
- **Professor Gavin Wright FMedSci**, Senior Group Leader, University of York



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BSI Career Enhancing Grant

Congratulations to those who successfully obtained funding in the latest round of the BSI Career Enhancing Grant. Over £56,000 was awarded in this round of funding to 16 BSI members from across the UK, covering a wide range of projects from generating pilot data to attending training courses. The next round will be in autumn 2023. Find out more about the awardees here: <https://bit.ly/3q9wT37>.

BSI Communication & Engagement Grant

We are delighted to fund the following projects in the most recent round of our Communication and Engagement Grant.

Dr Joanna Giles, from Aberystwyth University, has been funded to carry out a project during British Science Week. 'Celebrating vaccines and herd immunity' uses interactive activities, including BSI resources, to engage with local communities.

Rebecca Jeffery, from the Kennedy Institute of Rheumatology, has been funded to run 'The gut florists' stall at Glastonbury Festival about the gut microbiome and its role in health and disease.

Dr Nadia Terrazzini, from Brighton University, has been funded to run a drop-in event at a local community centre for the public on 'Childhood vaccinations: opening conversation in the city of Brighton'.

The next deadline is Sunday 1 October 2023. For more details, visit <https://bit.ly/3ZHt3LN>.

New Professor of Pathology at University of Cambridge

Congratulations to BSI member **Professor Adrian Liston FMedSci** who has been appointed as Professor of Pathology at University of Cambridge. The Liston-Dooley Lab works on the interface between regulatory T cells and the tissues, focusing on developing new tools to reveal novel biology.

The Department of Pathology of the University of Cambridge shared: "Professor Liston has an outstanding track record of innovative research, often with direct clinical relevance, particularly in how the immune system impacts brain function and health. He is equally committed to excellence in teaching and promoting a positive research culture based on equality, diversity and inclusivity. We very much look forward to welcoming him to our Department in April this year and to working with him in the years to come."



We would love to hear from you about your achievements. Have you or a colleague recently received grant funding, passed your PhD viva or accepted a new appointment? If so, let us know by emailing media@immunology.org.

Introducing the BSI Teaching Affinity Group: a forum for immunology educators

The Teaching Affinity Group of the British Society for Immunology (BSI) is a dedicated group focused on promoting excellence in immunology education and nurturing the next generation of immunology educators. Under the leadership of its first co-chairs, Professor John Curnow from the University of Plymouth and Dr Nigel Francis from Cardiff University, the Group aims to create a supportive community for educators and researchers in immunology. Here John and Nigel tell us about the Group's aims, future plans and how to get involved.

Rooted in education

The Group evolved following a couple of informal meetings at successive BSI Congresses. Although initially conceived as an initiative to address the need for a specialist group focusing on immunology education, the remit has expanded following these initial discussions. Beyond the focus on education in a rapidly evolving higher education sector, the primary aims of the group are to ensure that BSI members are kept up to date on innovative teaching practices and that curricula are relevant and engaging for students at all levels of study.

The Group helps provide a platform for educators and researchers involved in immunology teaching to connect, collaborate and share their experiences, knowledge and resources. These networking opportunities will help create a stronger, more cohesive community of immunology educators. The BSI Teaching Affinity Group also offers support for immunology educators in their career progression, providing opportunities for professional growth, training and recognition.

A collective voice

Sharing best practices is a central tenant of the group, and in facilitating the exchange of best practices, we aim to improve the overall quality of immunology education. This includes the development and dissemination of innovative teaching approaches, authentic and engaging assessment techniques, and resources that cater to diverse learner needs and preferences. Looking to the future term, we will

act as a collective voice for immunology educators, advocating for the importance of immunology education and its relevance to broader scientific and medical disciplines.

This work will be overseen by the newly appointed committee helping to support our work as co-chairs. You can take a look at the inaugural committee on the Group's webpage.

A positive start

Our first formal meeting was held via Zoom, where former winners of the BSI Immunology Teaching Excellence Award were invited to present their teaching innovations. This was followed up with a breakfast meeting at the BSI Congress 2022 (Liverpool) where the initial aims of the group were outlined to around 50 attendees. The response was overwhelmingly positive, with many members expressing an interest in joining and supporting the group. Anyone who is interested in joining the Group can do so via their BSI membership dashboard (please go to 'More about you' and select 'Teaching Affinity Group') or by contacting the committee members.

The future looks bright

The future of the group is an exciting one with several projects already planned to help design immunology curricula for different disciplines and dissemination of these ideas via a session at the BSI Congress 2023 in Belfast. We will also be working towards a blended two-half-day conference/workshop in 2024. More details of these will be circulated by the BSI closer to the time.



By offering opportunities for networking, collaboration, and sharing best practices, the BSI Teaching Affinity Group strives to enhance the quality and impact of immunology education across all levels of academia and industry. We are very keen to expand the reach and impact of the group and welcome ideas from the BSI membership to help enhance immunology education across the BSI network – we'd love to see many in the community get involved!

Professor John Curnow and
Dr Nigel Francis

BSI Teaching Affinity Group Co-chairs

Find out more

You can find out more about the BSI Teaching Affinity Group and get involved with their activities here: www.immunology.org/bsi-teaching-affinity-group.

Immune Update

The BSI journals

A round-up of new research published in the British Society for Immunology's official journals. Discover the latest immunology from *Immunotherapy Advances*, *Clinical & Experimental Immunology* and *Discovery Immunology*. Members can access these journals free of charge at www.immunology.org/journals and benefit from discounted publication fees.

Discovery Immunology

Wild mouse bone marrow – a unique composition and phenotype

Bone marrow is an important source of immune cells in mice and has been extensively studied in laboratory mice. However, recent studies have raised concerns about how well findings from laboratory mice can be applied to humans. In this study, Muir *et al.* collected bone marrow samples from wild mice from an isolated population in Scotland, and conducted an in-depth analysis to characterise the cellular make-up of bone marrow for wild mice, compared with laboratory mice. They found that the wild mouse bone marrow differs in every cell

type assessed, including both myeloid and lymphoid cells, in particular finding increased proportions of KLRG1⁺ CD8⁺ T cells, diminished CD11b expression and an



enlargement of the eosinophil compartment.

This demonstrates significant distinction between wild and lab mouse bone marrows that may provide a better understanding of the role of the immune system in a natural environment.

Muir *et al.* 2023 *Discovery Immunology* 2 1 kyad005 <https://doi.org/10.1093/discim/kyad005>

This article is the first in *Discovery Immunology's* upcoming special collection, 'Ecoimmunology'. See our call for papers for more information: <https://bit.ly/42VCs3V>

Clinical & Experimental Immunology

PEPITEM modulates leukocyte trafficking to reduce obesity-induced inflammation

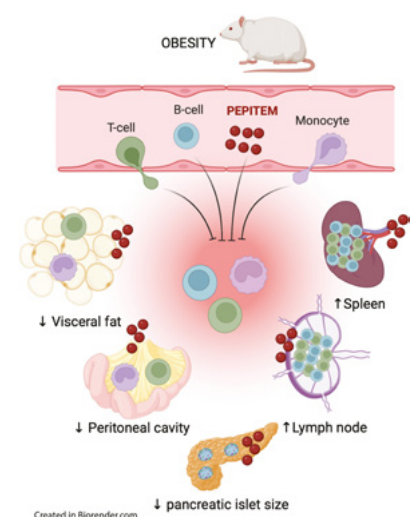
Obesity and obesity-related diseases represent a significant health and economic challenge globally, but little is known about the inflammation associated with obesity and how it drives pathology.

Pezhman *et al.* investigated how the immunopeptide PEPITEM affects pancreas homeostasis and leukocyte trafficking, with the aim of potentially establishing an alternative, complementary treatment for inflammation related to obesity. The researchers observed for the first time that therapeutic administration of PEPITEM in mice was found to decrease pancreatic islet size, and modulate leukocyte mobilisation and T-cell trafficking, therefore potentially reversing the effects of obesity induced inflammation on certain tissues.

This highlights PEPITEM as a potential novel treatment for systemic inflammation experienced in obesity that could lessen the impacts of obesity on pancreatic homeostasis. Further research is now needed to fully understand the mechanism by which PEPITEM regulates pancreatic islet size and function, and if this is uncoupled from lipid storage.

Pezhman *et al.* 2023 *Clinical & Experimental Immunology* 212 1 1–10 <https://doi.org/10.1093/cei/uxad022>

You can read the press release from the University of Birmingham here: <https://bit.ly/3C85vp0>



Immunotherapy Advances

Stratification of PD-1 blockade response in melanoma

Immunomodulatory drugs have revolutionised cancer therapy over the past few decades; for example, the use of checkpoint inhibitor therapies to target coinhibitory PD-1 and CTLA-4 pathways. However, the effectiveness of this treatment option can vary greatly between patients.

In this study, Edner *et al.* used immunophenotyping of blood samples from 20 patients with advanced melanoma before

and after treatment with the PD-1 blocking antibody pembrolizumab to track response and progression of the disease. They found that individuals responding to PD-1 blockade were characterised by increased CD8 T cell proliferation following treatment, while progression was associated with an increase in CTLA-4-expressing Treg. Further analysis revealed differences in the biomarkers between those that responded well to

treatment and those that didn't.

These results suggest flow cytometric analysis of blood samples could be used to monitor clinical response to PD-1 blockade immunotherapy for rapid treatment decisions.

Edner *et al.* 2023 *Immunotherapy Advances* 3 1 ltad001 <https://doi.org/10.1093/immadv/ltad001>

Around the journals

A summary of some of the latest papers from the world of immunology. Written by Edd James, Louisa James and Donald Palmer.

The X-linked epigenetic regulator UTX controls NK cell-intrinsic sex differences

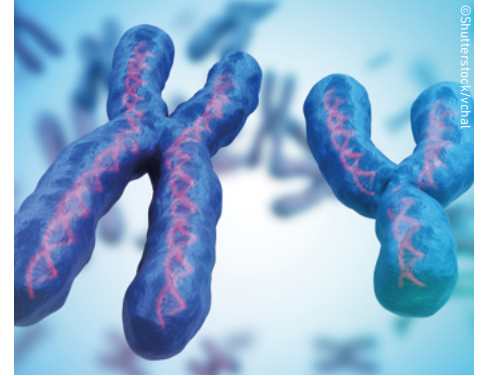
Immune responses to viral infections are generally more robust in females compared with males. Hormonal differences likely play a role, however, the molecular basis for this difference is unclear. Here, Cheng and colleagues show that natural killer (NK) cells play a critical role in this difference.

Despite males having increased numbers of NK cells, they produced lower levels of interferon- γ when stimulated *ex vivo* and impaired killing of target cells. Examining the gene expression on the X chromosome showed that *Kdm6a*, which encodes the

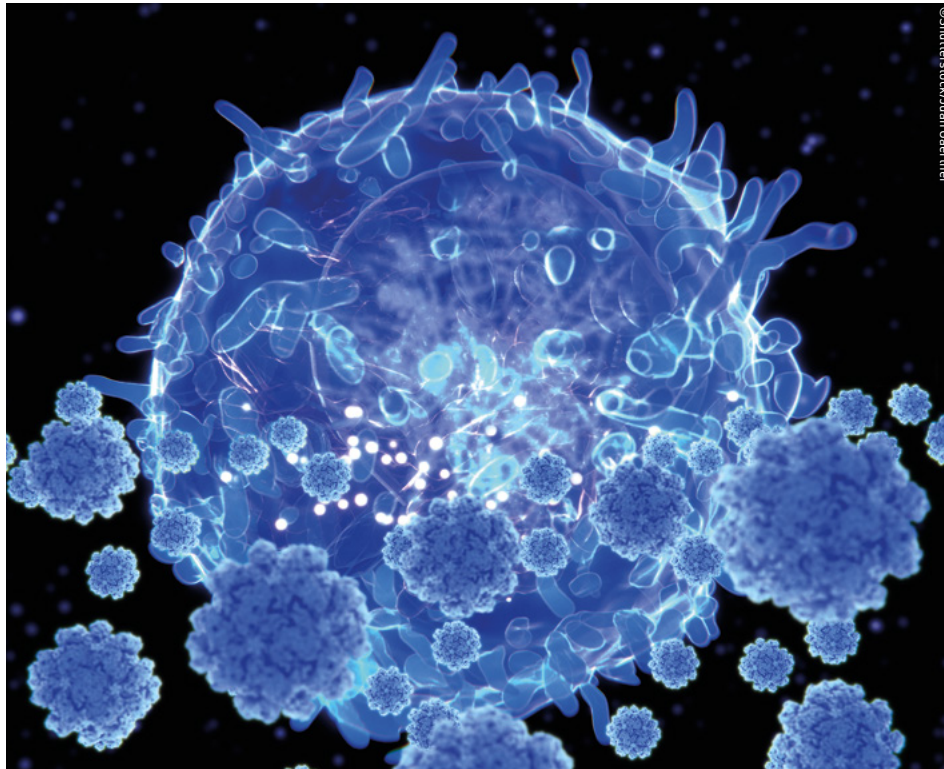
protein UTX and is an epigenetic regulator, escapes X inactivation increasing expression in females. Importantly, in female mice, if one *Kdm6a* allele is deleted, NK cells increase in number and exhibit impaired function like that observed in male mice.

This highlights the important role of UTX in the molecular basis of sex differences in the immune system.

Cheng *et al.* 2023 *Nature Immunology* **24** 780–791



Impaired JAK-STAT pathway signalling in leukocytes of older people



T follicular regulatory cells (Tfr) are critical for regulating antigen-induced antibody responses while preventing autoimmunity.

Le Coz *et al.* established a model system to determine the contributions of T regulatory cells (Treg) versus T follicular helper cells (Tfh) to the human Tfr pool. They found evidence of clonal sharing between Tfr and both Treg and Tfh. The absence of a clonal relationship between Treg and Tfh suggested that both Tfh and Treg contribute separately to the Tfr pool. Transcriptomics analysis confirmed this dual contribution and identified key differences between Tfr that originate from Tregs versus those originating from Tfh.

The authors found that Treg-derived Tfr were located largely within the follicular mantle and have suppressive capacity, suggestive of a primary role regulating autoreactive T cells. In contrast, Tfh-derived Tfr, which could be distinguished by CD38 expression, were located within the germinal centres and have suppressive activity but retain the ability to augment antibody production.

Le Coz *et al.* 2023 *Science Immunology* **8**
DOI: 10.1126/sciimmunol.ade8162

Maternal diet modulates the infant microbiome conferring immunity to respiratory infection

Environmental stresses in early life can predispose individuals to various disorders in later life. Indeed, poor maternal nutrition during pregnancy increases susceptibility to severe lower respiratory infections in early life.

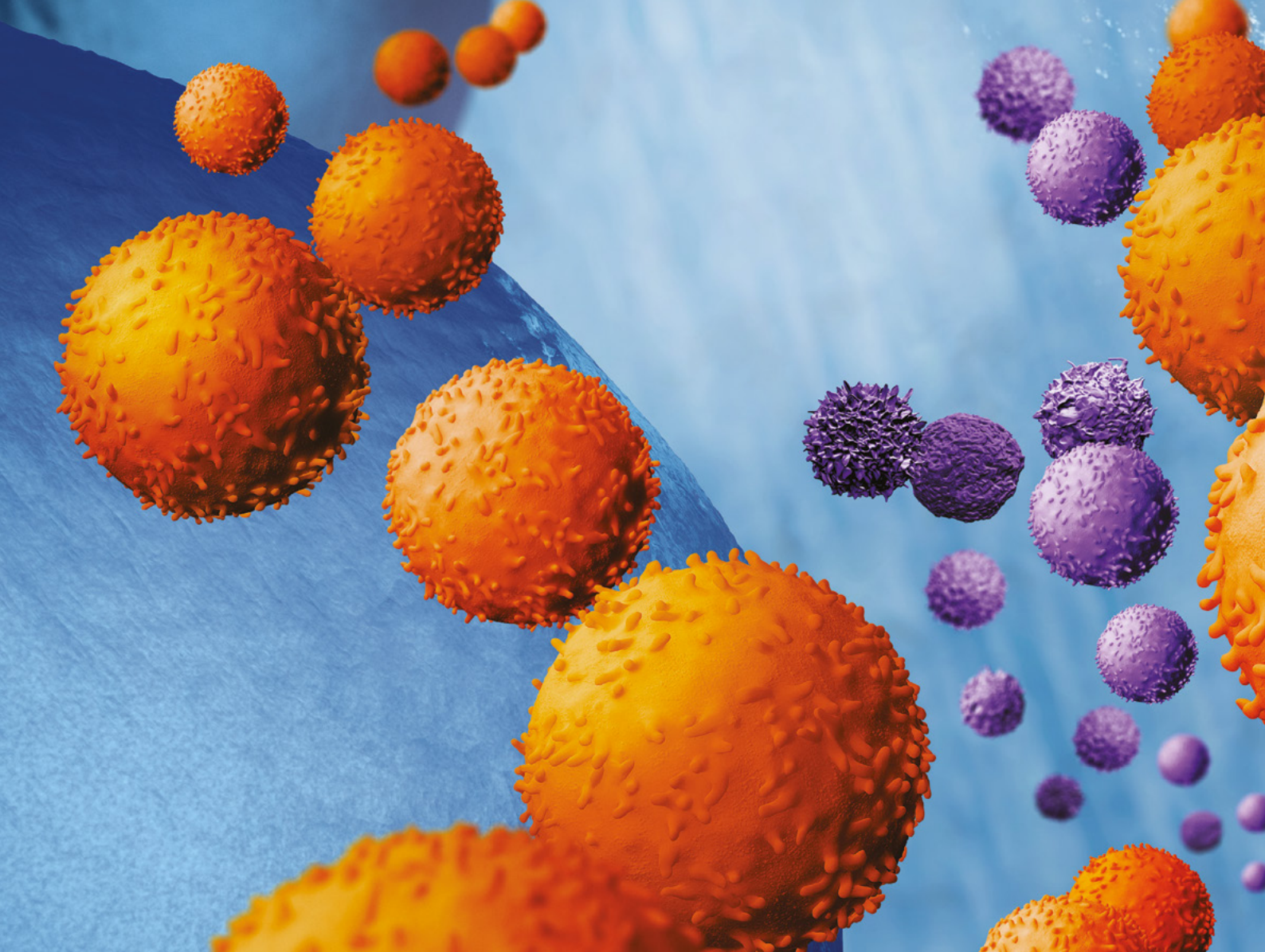
Sikder *et al.* further explored this phenomenon with the observation that viral infection of neonatal mice that were reared on a low-fibre diet during pregnancy exhibited severe lower respiratory infections associated with a type 2 inflammation along with airway remodelling. Associated with a reduction of plasmacytoid dendritic cells and Tregs in the

lung of infected mice, which is necessary to prevent this disorder, further studies revealed that this is due to a decline in the intestinal production of the DC growth factor Flt3L. Mechanistically, the low-fibre diet altered both the microbiome of maternal milk along with the intestine of neonatal mice resulting in alteration of Flt3L production.

Overall, these studies highlight the possible impact of maternal diet towards the aetiology of various immunological disorders.

Sikder *et al.* 2023 *Immunity* **56** 1098–1114





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