Immunology News

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Immunology in harmony:

How partnerships propel discovery

Goodbye to Prof. Leonie Taams:
Celebrating eight years as Editor-in-Chief

Culturing challenges:
Exploring *ex vivo* culturing for African Swine Fever research

Spotlight on 2025:
A look ahead for the coming year

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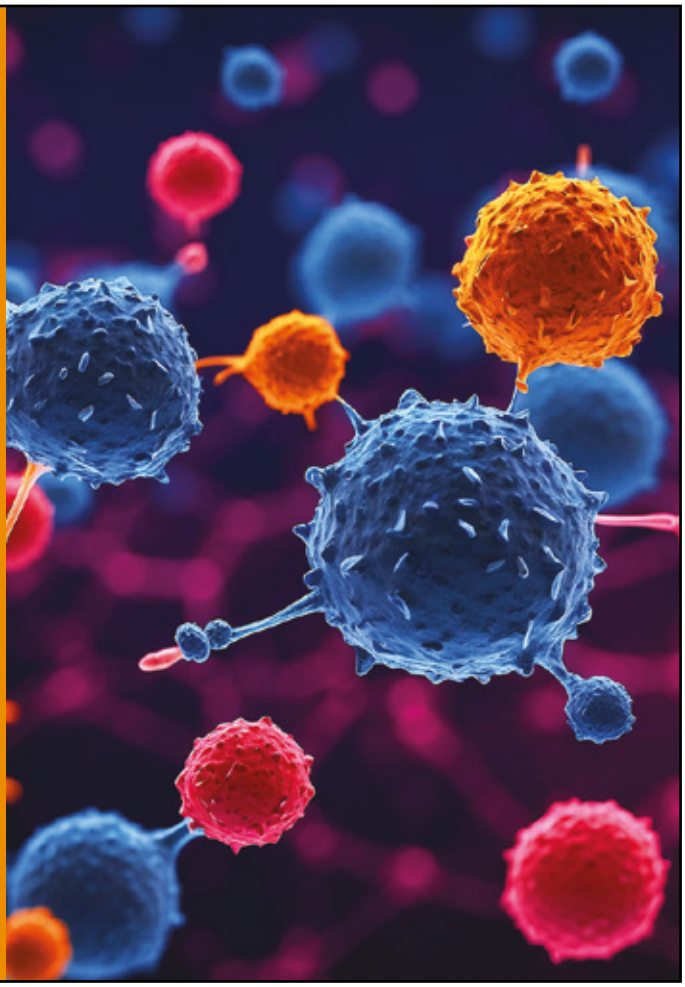

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MABTECH

Welcome to the winter edition of *Immunology News*!

In this issue, we celebrate many of the achievements of the past year and look ahead to the many exciting events that will be taking place in 2025. One significant event will be the end of Professor Leonie Taams' term as Editor-in-Chief of *Clinical & Experimental Immunology* (*CEI*). After eight years at *CEI,* Leonie shares her perspective on how the publishing landscape has changed during her time as EiC on page 16. And keep an eye out for an interview with our new Editor of *CEI*, Professor Claudia Mauri, in the spring issue next year.

At the BSI, we are always seeking new ways to foster collaboration among immunologists, and on page 14, Dr Amit Aggarwal explores the tangible developments that can be made between the NHS and industry – and how these partnerships ultimately benefit patients. And turn to page 12 for a fascinating summary of how Dr Priscilla Tng's research benefited from a BSI Career Enhancing Grant.

You can also find the latest news on our journals, details of how to get the most of your BSI membership through our careers support options, and exciting developments on the work of the BSI Clinical Immunologists Professional Network (BSI-CIPN).

Do get in touch with any news you would like to share in coming issues – we always love to hear from you.

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Contents

12 FEATURES:
Using *ex vivo* organ culture to study African swine fever virus

14 **Collaborate to innovate**

16 **Saying goodbye to the *CEI* Editor-in-Chief Prof. Leonie Taams**

05 **Waving goodbye to some of our committee members**
07 **An update on the BSI-CIPN**
11 **Looking ahead to 2025**
18 **Our first BSI Immune Therapies Summit**

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VIEW FROM …

THE BSI PRESIDENT

Welcome to the final issue of *Immunology News* for 2024, and what a year it has been! Despite there being no BSI Congress this year, the immunology community has continued to innovate, collaborate and drive the industry forward.

This year, I've had numerous opportunities to connect with our members, particularly in the past few weeks. Highlights included the BSI Immune Therapies Summit in Cambridge, an inspiring three days at the BSI Winter School in Sheffield, where I had the privilege of meeting the next generation of immunologists, and finally the BSI-CIPN Conference in Birmingham. One theme that was consistent across this diverse set of events was the passion and drive BSI members have for immunology. With the upcoming BSI Congress and numerous Regional and Affinity Group Events planned for next year, I look forward to meeting many more of you. If you see me at an event, please don't hesitate to stop for a chat!

It's clear from this issue of the magazine that the BSI is continuing to push forward, with the journal *Discovery Immunology* not only being indexed in Scopus this year, but also expanding its scope to be able to accommodate the important research from our veterinary immunologists (page 6). One of the most important ways the BSI serves the immunology community is through the provision of grants and financial support, and I'm delighted to see how a BSI Career Enhancing Grant had a tangible impact on the career trajectory of the brilliant Dr Priscilla Tng – you can read more about this on page 12.

We're also very sorry to say goodbye to Professor Leonie Taams, who has served as the Editor-in-Chief of *Clinical & Experimental Immunology* for an impressive eight years! Leonie discusses some of the transformations she oversaw in the journals and reflects on her time as EiC on page 16. Her legacy leaves the journal well-positioned for continued success, and we're excited to see her future contributions to the field. I want to take this opportunity to say a huge "thank you" to Leonie, and to welcome her successor, Professor Claudia Mauri, who we will meet properly in the next issue of *Immunology News*.

As BSI are always searching for new ways to foster connections across the immunology community, it's no surprise that cross-industry collaboration is mentioned more than once in this issue. Read Dr Amit Aggarwal's article on page 14, highlighting how collaboration leads to innovation in the UK healthcare industry. And on page 18, we explore how the BSI Immune Therapies Summit was able to bring together professionals from industry, academia and clinical spheres to collaborate, share information and begin to shape the future of the immune therapies field.

I hope you enjoy this issue and take pride in the remarkable progress the BSI community has made this year. Wishing you all a joyful holiday season, and I look forward to connecting with many of you in 2025!

Tracy Hussell
President,
British Society for Immunology
Email: president@immunology.org

'With the upcoming BSI Congress and numerous Regional and Affinity Group Events planned for next year, I look forward to meeting many more of you. If you see me at an event, please don't hesitate to stop for a chat!'

BSI Annual Review 2023–24

The BSI is pleased to publish our Annual Review, showcasing our activities and achievements over the last year. We are proud of the great progress made over the past 12 months, both in terms of the support and activities that we provide for our members and our work engaging with the wider world to ensure that immunology is centre stage. 2023 ended with a celebration of immunology at our BSI Congress in Belfast, with over 1,400 immunologists coming together to disseminate the latest research findings!

Throughout the year we continued to boost our members' careers through various grants and training, including our highly popular bioinformatics programme and tailored financial support of our Career Enhancing Grants. Other activity highlights include the consolidation of our journals as key publications in the field, with particular mention due to *Immunotherapy Advances* achieving its first ever impact factor of 4.1.

None of these achievements would be possible without the support of our members, who volunteer in a myriad of ways to support the ongoing work of the BSI. We're incredibly grateful to you all for your help and support throughout the year.

You can download the full Annual Review from our website at **www.immunology.org/annual-review** to discover more about how the BSI has made a difference for the immunology over the last year. You can also request a print copy from **membership@immunology.org**.

VIEW FROM ...

THE CHIEF EXECUTIVE

It continues to be a busy and exciting time at the British Society for Immunology and it's so inspiring to see how much brilliant work is going on across our membership! As always, we've pulled out some of the best bits in this winter issue of *Immunology News* – we hope you enjoy it.

Highlights for me are the articles on looking back over 2024 and looking ahead to 2025 (p11). This is a fantastic summary of the key achievements many of you have been involved in, as well as giving you a flavour of some of the BSI events we have coming up in 2025 that you can engage with. Our Regional and Affinity groups are as active as ever and if you haven't attended one of these events in the past I couldn't recommend them more highly – they're a great opportunity to hear about the latest developments in research as well as meet others in our community and build new connections and collaborations. And let's not forget, after a Congress-free year this year (due to the European Congress for Immunology being held), BSI Congress will return in December 2025 and I can feel the excitement brewing already!

Also in this issue is an article from Amit Aggarwal who gives his perspective on the importance of partnerships between industry, academia and clinicians. We have been working hard in recent years to foster these cross-sector collaborations within immunology and will continue to grow this as we move into 2025 for the benefit of discovery science and in accelerating the development of new immune-based therapies.

As many of you will know, one of the new membership benefits we introduced a couple of years ago has been a huge success in supporting the career aspirations of our members. These are the Career Enhancing Grants and Priscilla Tng tells us on p12 how one of these grants has had a transformative impact on her career.

On p16 we have a Q&A with Leonie Taams reflecting on her time as Editor-in-Chief of the BSI journal *Clinical & Experimental Immunology* as she steps down after eight years in post. Leonie has made an outstanding contribution to the journal with her leadership taking the journal from strength to strength as the BSI's longest running journal.

And finally, we have included profiles of our Corporate Members in this issue (p22) which highlight what they do and how they play a vital role in the immunology ecosystem. We're incredibly grateful for their support and look forward to continuing to working with them into the future.

I hope you enjoy this issue and don't hesitate to reach out to me if you have any questions, comments or feedback on anything the BSI does, I'd love to hear from you!

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

Waving goodbye to some of our committee members

As the year draws to a close, so do the terms of some of our wonderful committee members. 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.

We would like to send our huge thanks to the following committee members who have been integral to the BSI's mission over their last few years working with us.

Robert Davies,
Board of Trustees (co-opted)

Mark Travis,
Groups Secretary

Edith Hessel,
Board of Trustees (co-opted)

Get involved

Want to find out more about how the BSI is governed?

Visit **https://www.immunology.org/about-us/our-people/governance** to learn about our Board of Trustees, or find out more about our Forum and committees.

Graham Cook,
Congress Committee (member)

James Harker,
Congress Committee (member)

Margarita Dominguez-Villar,
Congress Committee (member)

Sandra Sacre,
Congress Committee (member)

SOCIETY NEWS

Discovery Immunology hits another milestone

We are pleased to announce that *Discovery Immunology*, our broad-scope Open Access journal for new discoveries in cellular and molecular immunology, is now indexed in Scopus. Scopus, a leading abstract and citation database by Elsevier, serves as a key indicator of a journal's quality and impact within the academic community.

This is a significant development for the BSI family of journals, which also includes *Clinical & Experimental Immunology* and *Immunotherapy Advances*. It is also a crucial step in our vision to becoming an invaluable resource for the global immunology community. We'd like to thank our editorial board, led by Professor Simon Milling, for working hard to bring you high-quality articles from leading researchers worldwide. We also thank authors, reviewers and readers for their incredible support.

Discovery Immunology hit a major milestone in April when it was indexed in PubMed Central, one of the largest and most widely used repositories for biomedical and life sciences articles. Hitting these indexing milestones will enable us to bring our content to the wider global immunology community. It also published its first ever Special Collection in April, on checkpoint molecules in cancer immunotherapy.

Discovery Immunology publishes high-quality original research, reviews and short reports describing novel mechanisms controlling the immune response. We offer a quick turnaround from our supportive editorial team and, when accepted, your article would appear in PubMed Central and Scopus very soon after publication. We're proud to offer a 20% discount on publication fees in *Discovery Immunology* for BSI members.

We would like to use this opportunity to encourage our members and the wider immunology community to continue supporting *Discovery Immunology* by submitting your latest research. Thank you to all of those who have already published their work – your contributions are essential to the growth and reputation of our journal. You can also contribute to our journal by reading, sharing and citing our articles where appropriate, to help our content reach the widest possible audience.

Find out more

Visit the *Discovery Immunology* website: **https://academic.oup.com/discovimmunology**

Join the conversation online by following **@discovimmunol** on X and Bluesky

Discovery Immunology's scope widened to include veterinary immunology

The scope of our newest journal *Discovery Immunology* has been expanded to include veterinary immunology. By increasing the journal's scope to include veterinary science, veterinary immunologists can now submit research for publication in *Discovery Immunology*, allowing us to support a wider range of research opportunities and foster collaboration across disciplines. The learnings from veterinary immunology research could have significant implications for wider immunology research, furthering scientific knowledge.

In addition to this, we are pleased to welcome the addition of two highly qualified members from the field of veterinary immunology to the Editorial Board of *Discovery Immunology*.

Simon Milling, Editor-in-Chief of *Discovery Immunology*, said:

"Immunologists who use commercially important organisms to investigate mechanisms underlying the immune response often make discoveries that change our understanding of immunology. *Discovery Immunology* therefore welcomes submissions from the veterinary immunology community, just as we welcome submissions from those working with human samples or with model organisms. To highlight this, we have now welcomed two distinguished veterinary immunologists to our editorial board, and we have clarified the journal's scope. We are looking forward to publishing more veterinary immunology reviews and original articles in the near future!"

Wilhelm Gerner, Chair of the BSI's Comparative and Veterinary Immunology Group, said:

"We, from the Comparative and Veterinary Immunology Group, are delighted about the extension of the journal's scope. This provides a new avenue for veterinary immunologists to showcase their important research. The timing is perfect, given the rise in zoonotic infections, the increasing importance of large animal models, and the growing emphasis on One Health research."

We hope to expand the diversity of submissions to *Discovery Immunology*. Therefore, we'd like to encourage all our members to consider contributing to our journals. Profits from our journals are invested back into the BSI to benefit our members in the form of grants, travel awards, BSI Regional and Affinity Group meetings, our popular BSI Congress and other key initiatives. By submitting to one of our journals, you are supporting our work in all these areas and more.

Support the work of the BSI and submit your work by visiting **https://academic.oup.com/discovimmunology**.

SOCIETY NEWS

An update on the work of the BSI Clinical Immunology Professional Network (BSI-CIPN)

BSI-CIPN Steering Group meeting – September 2024

Thank you to the members of the BSI-CIPN Steering Group who attended our most recent Steering Group meeting online in early September. This was the first meeting of the group since the launch of the 2024–2027 BSI-CIPN strategic plan in July. There was much enthusiasm from Steering Group members to hear updates on how early stages of the strategy implementation are progressing, and to collaborate in troubleshooting issues that have arisen so far. The group had a packed agenda, with a big focus on training and education, a key thematic pillar of the new strategy.

The meeting kicked off with a presentation from Dr Samuel Chee, consultant clinical immunologist at Royal Preston Hospital and representative of the Association of Clinical Pathologists (ACP). Dr Chee presented his initial review of the BSI/ACP Clinical Immunology Training Days curriculum. This review has been initiated with an aim to improve the focus and the structure of the training days for future clinical immunology trainees. The work carried out by Dr Chee was comprehensive and thorough, setting the foundation for discussions on frequency, topics and location of training days discussed by the group.

During the meeting, the programme for the 2024 BSI-CIPN conference was also discussed. Here, members of the Steering Group heard programme updates from Dr James Thaventhiran (BSI-CIPN Conference Programme Lead), Professor Sinisa Savic (Chair of the BSI-CIPN Steering Group) and Jane Sessenwein (BSI Director of Events and Training).

Finally, the Steering Group went on to discuss some of the key issues facing clinical immunology practice. Some of the main discussion points included the need for national-level, multi-disciplinary teams to support diagnosis and treatment in complex clinical presentations.

The Steering Group meets every quarter, with the next meeting taking place in December 2024. Do reach out to us at **cipn@immunology.org** to find out more about the BSI-CIPN Steering Group or to suggest topics for discussion.

BSI-CIPN Clinical Guidelines Special Interest Group

The BSI-CIPN Clinical Guidelines Special Interest Group supports the development of evidence-based, patient-centred guidelines on issues related to clinical immunology practice. Recently, the group provided its first official endorsement for the NTM Network Standards of Care for people living with non-tuberculous mycobacterial (NTM) disease in the UK. The Standards outline the minimum level of care that people living with NTM disease should expect to receive in the NHS.

The Group also continues to support the BSI-CIPN to respond to clinically focused consultations and technology appraisals, drawing in additional expertise where needed.

An update on strategy implementation

The BSI-CIPN strategic plan sets the direction and priorities for the BSI-CIPN for the next three years from 2024 to 2027. The BSI-CIPN Steering Group and staff team have been working to drive and support implementation of priorities from the strategic plan and ensure alignment with the wider BSI strategy. Priorities include:

- Supporting the upcoming BSI-CIPN Conference
- Collaborating with partner organisations on training and education in clinical immunology
- Facilitating the development of the BSI clinical training offering
- Scoping policy and advocacy work, including mapping and evidence analysis on key issues
- Fostering connections between clinical and academic communities

The BSI-CIPN Steering Group will continue to work on reviewing and implementing the strategy over the coming months.

An update on policy

We're pleased to announce that the BSI-CIPN has joined the National Allergy Strategy Group (NASG) as a stakeholder organisation. The NASG aims to enhance the lives of people with allergies in the UK and advocate for improved allergy services across the NHS. Their goal is to ensure all allergy patients receive high-quality care with equal access, regardless of their location in the UK.

By joining the NASG as a stakeholder organisation, the BSI-CIPN gains a valuable opportunity to input into the work of the NASG, as well as being able to support and collaborate on the development of a UK allergy strategy.

'The BSI-CIPN has joined the National Allergy Strategy Group (NASG) as a stakeholder organisation.

Find out more

If you'd like to find out more about the work of the BSI-CIPN and our membership and partnership opportunities, please visit our website: **immunology.org/clinical/bsi-cipn** or email **cipn@immunology.org.**

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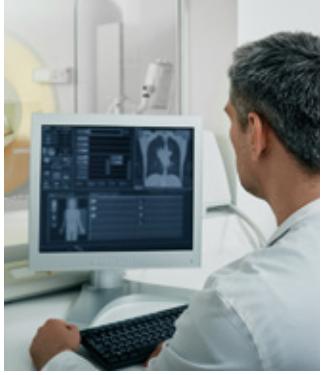

Become an ISO 15189:2022 Technical Assessor for UKAS

Medical Laboratories in the UK, and worldwide, are accredited to the standard ISO 15189 Medical laboratories – Requirements for quality and competence. **A new version of the standard was published in 2022, with a greater focus on clinical risk and the impact of laboratory services on patients.**

In the UK, it is the United Kingdom Accreditation Service (UKAS) which assesses and accredits laboratories to ISO 15189:2022. UKAS's network of independent technical assessors is a hugely important resource, which supports UKAS in delivering effective, technically-competent assessments.

UKAS uses technical assessors to assess all aspects of a laboratory service and is currently looking to increase the number of immunology technical assessors, to support timely delivery of assessments and ongoing assurance of the competence of immunology services. We are looking for experienced immunology staff, including Biomedical Scientists, Clinical Scientists, and medical consultants to join us, on a third-party contractual basis.

Becoming a technical assessor allows you to develop in-depth knowledge of ISO 15189:2022, develop your network by engaging with other assessors and accredited services, and support continual improvement of immunology services across the UK.

The role is a great opportunity for experienced staff currently working in laboratory services, as both the laboratory and the individual benefit from the experience and knowledge technical assessors bring from UKAS training and assessments. Many IBMS, RCPath and other professional body qualifications now include requirements relating to quality assurance; being a UKAS technical assessor supports the candidate in gaining relevant knowledge and experience for these qualifications.

Being a technical assessor is also a good opportunity for recently retired personnel to keep using their knowledge and skills to support continual improvement in medical laboratory service delivery across the UK.

Current UKAS technical assessors, when asked what the find rewarding about being a technical assessor said:

"It is really interesting to get out and see what other labs are doing, what equipment and methods are being used, get ideas for what might be good to implement in your own area and learn from others about how they solve problems and innovate."

"Becoming a technical assessor for UKAS has been the best form of professional development I have ever undertaken."

If you are interested in an informal discussion about the Technical Assessor role, or would like to apply, contact **Andy Green, UKAS Talent Acquisition Manager (technicalresources@ukas.com)** or **Al Bryant, UKAS Healthcare Accreditation Specialist (alyson.bryant@ukas.com).**

SOCIETY NEWS

From bioinformatics to immunotherapy: BSI's latest training developments

The British Society for Immunology (BSI) training team has been busy expanding and refining our course offerings to provide cutting-edge education across a range of immunology fields. We are excited to share the latest updates on our training opportunities, designed to meet the needs of our members.

New bioinformatics course

To address the increasing role of data science in immunology, we launched the 'Single cell and spatial omics' course in November.

Delivered by the Glasgow Bioinformatics Core, it equips participants with the skills to master these powerful techniques. The first course sold out, and we are delighted to announce this course will return in 2025. Don't forget, BSI members receive a 50% discount on fees.

Flow cytometry: multiparametric design

November also saw the launch of the highly anticipated 'Flow cytometry: making sense of multiparametric design' course, led by renowned expert, Derek Davies. This online training helps wet-lab researchers understand and execute complex multicolour flow cytometry experiments.

The next course will take place in February 2025, with registration open on the BSI website. Spaces are limited, so apply early to avoid disappointment! BSI members receive a 30% discount.

Flagship immunology nurse training course

We are excited to announce our flagship Immunology nurse training course, launching in 2025. This first-of-its-kind programme offers specialised immunology training for these professionals, to enhance patient care and clinical practice. The first date of the course will be on 24 March 2025.

Bioinformatics training

We're delighted to announce that our ever-popular bioinformatics training offerings will continue in 2025. We now have four bioinformatics training courses available, and confirmed course dates for next year are below:

- Omic data analysis and visualisation using R: 6 February 2025
- Further omics, statistics and clinical data in R: 21 April 2025
- Omic data analysis and visualisation using R: 2 June 2025

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Stay connected with us via social media or through the BSI eNews newsletter to find out about future course dates for 'Essential command line bioinformatics and genome analysis' and 'Single cell and spatial omics' training.

Find out more

For any course inquiries or to discuss your training needs, please email **training@immunology.org**, or take a look at **immunology.org/training**. We look forward to welcoming you to one of our courses soon.

The BSI is now on Bluesky!

The British Society for Immunology (BSI) is pleased to announce that we have joined Bluesky to better connect with the immunology community.

In recent months, many of our members have started to use the social media platform Bluesky to build new connections, share their research, and champion the field of immunology. Because of this, we have created accounts to help amplify the voices of our members, share helpful updates on BSI activities, grants and events, and to raise the profile of immunology.

Follow us to keep up with all things BSI!

For general updates on our work, BSI events and our members, we will be posting from **@britsocimm.bsky.social**.

For information on the exciting research being published in BSI journals, you can find us at:
Clinical & Experimental Immunology: **@ceijournal.bsky.social**

Immunotherapy Advances: **@imtadvances.bsky.social**

Discovery Immunology: **@discovimmunol.bsky.social.**

And finally, for those looking to stay up to date with the work of the BSI Clinical Immunology Professional Network (BSI-CIPN), we'll be posting from **@bsi-cipn.bluesky.social.**

We're excited to add BlueSky to our social media presence – did you know we're also on **LinkedIn**, **X** and **Instagram**?

Do follow us to stay up to date with our work!

SOCIETY NEWS

BSI Member Representative Forum: here to represent you

The BSI Member Representative Forum gives our members the opportunity to input their thoughts into the activities of the BSI. Chaired by Professor Jim Brewer, the 18 elected members come from all sections of the Society and act as our 'think tank' for topics such as education and careers, public engagement and communications.

Our September meeting took place in person and began with a focus session exploring the upcoming new BSI strategy. We wanted to hear from Forum members on things they value within the BSI, but also things that they feel we could move away from to ensure we are serving our members as effectively as possible. This activity was highly beneficial as we heard thoughts and suggestions from across the entire Forum, which will be instrumental in helping us to devise our next strategy document.

Following this, we moved on to discussing animal research regulations in the wake of the recent change in government and potential upcoming changes in policy. We asked Forum members to share their thoughts on this aspect of the research process and how they feel they are being impacted. It was important to revisit this conversation to address current challenges and think about what the BSI could be doing and has done in the past to help improve the situation.

This interesting discussion was followed by a spotlight on clinical academics and the benefits that this professional category brings, led by our clinical representatives, Winnie Ip and Gareth Rhys-Jones. Forum members were told about the challenges that clinical academics are currently facing. Gareth and Winnie then shared, based on their experience, what they think the BSI could be doing to support clinical academics in overcoming these challenges.

The rest of the meeting covered future public engagement activity and a summary of recent BSI external affairs and outreach activities that we have been undertaking to ensure we are amplifying the voice of our immunology community.

Find out more

If you would like to raise any issues for your Member Representative Forum to discuss during a future 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** and she will pass on the message.

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SOCIETY NEWS

Looking ahead to 2025

We are looking forward to the variety of events we have coming up in 2025.

BSI Immunology Awards

At the beginning of next year, we will be bringing back our BSI Immunology Awards! These awards recognise those advancing the field and enabling immunology to thrive, and also help to further our mission to provide sector-leading support to immunologists from all levels and sectors. These awards provide our members with the opportunity to shine a spotlight on the exceptional people working tirelessly across many different areas to deliver positive outcomes for health in a variety of ways, including at different career stages and sectors.

BSI Congress 2025

The British Society for Immunology Congress is our flagship event attracting 1,500+ immunologists from around the world. The UK's top immunology conference will return next year in Liverpool from Monday 1 to Thursday 4 December 2025. Save the date!

BSI Regional & Affinity Group Events

We have lots of exciting events planned from our Regional and Affinity Groups for 2025, including those listed below. Keep an eye on our website for full details and news of additional upcoming events.

BSI Comparative & Veterinary Immunology Group
IMMUNE RESPONSES INVESTIGATED BY SPATIAL BIOLOGY ACROSS SPECIES
30 January 2025
Online

BSI Oxford Immunology Group
OXFORD IMMUNOLOGY SYMPOSIUM 2025
24 March 2025
Oxford, UK

BSI Aberdeen, Edinburgh, Tayside and West of Scotland Groups
SIGNET 2025
27 March 2025
Perth, Scotland

BSI Winter School – a great success!

Our wonderful delegates at the 2024 BSI Winter School enjoyed three days of fascinating immunology talks, discussions and activities. BSI Winter School brings students studying for a Masters in Immunology and those working at an equivalent level together to build their knowledge and skillset, supporting the development of the next generation of immunologists

Using *ex vivo* organ cultures to study African swine fever virus

There are many different routes into a career in immunology, and a vast range of possible career paths within the field. Immunologists often require a wide range of skills and knowledge to effectively adapt to the ever-changing landscape. Our Career Enhancing Grants provide flexible financial support to help immunologists grasp opportunities and tackle challenges along the way. Here, Dr Priscilla Tng describes how the grant helped shape her own research trajectory.

An unconventional route

My path into veterinary immunology is perhaps more unconventional than most. I began my career in the field of combat trauma care research in Singapore, before coming to the UK to undertake research on developing gene drive systems in mosquitoes. During my PhD I explored methods to engineer mosquito strains to be resistant to infection by the alphavirus chikungunya, and this sparked a broader interest in host–pathogen interactions. I then sought to combine my previous research experience with large animals, synthetic biology and host immunity by joining the African Swine Fever Vaccinology group at the Pirbright Institute. My post-doctoral project focused on developing a subunit vaccine for African swine fever virus, through the identification of immunogenic antigens.

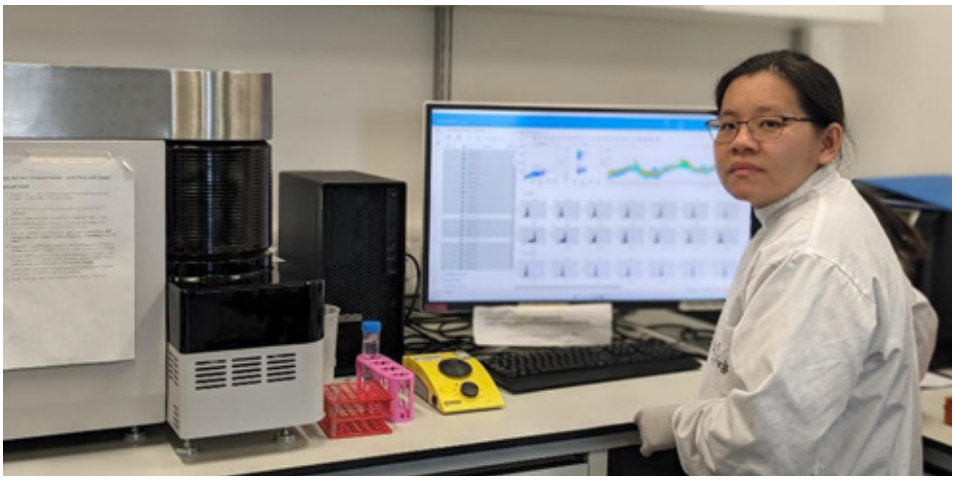
African swine fever

African swine fever virus is currently circulating in Africa, Asia, Europe and the Caribbean, and is a significant threat to the global pig population and the associated industries. The virus induces a haemorrhagic disease in pigs and wild boar that is almost always fatal. There are no treatments available, and no vaccines licensed for use in major pork-producing regions such as China, America and Europe. The main control measures involve culling and movement control of animals, which result in high economic losses and impact global food security. Furthermore, vaccine development is hampered by the complexity of African swine fever virus (its genome is six times larger than that of SARS-CoV-2) as well as a lack of African swine fever immunology research. Understanding the impact of the virus on a host's immune responses is crucial for developing effective interventions.

Advantageous organ cultures

Most recently, I have been exploring the fascinating area of *ex vivo* organ cultures, which enable us to study the heterogenous mix of cells outside the living organism. These organ-derived cultures allow us to study the effects of multiple virus strains separately in a single host, while preserving crucial cell-to-cell interactions. They are particularly useful for conducting detailed time-course studies, and for capturing time-sensitive processes such as host responses to viral entry and early viral replication in infection-relevant tissues – tasks that are challenging to achieve with *in vivo* studies. Organ cultures are by no means a complete substitute for *in vivo* studies, but they are a closer approximation than currently used *in vitro* methods. Although significant

> ‘The BSI Career Enhancing Grant enabled me to demonstrate the feasibility of using spleen-derived organ cultures to investigate the effects of African swine fever virus, and this early work became crucial in securing additional funding.’

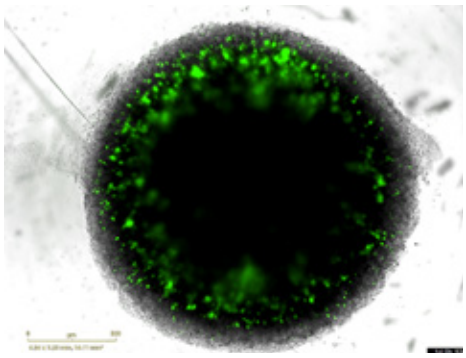


progress has been made in human and mouse immunology research using organ cultures, veterinary immunology is still in its nascent stages in this area. My focus is on the lymphoid organs, and in particular the complex dynamics of immune cell populations induced by African swine fever virus in these organs.

Embarking on this journey, I was motivated by the need to develop new approaches that could shed light on cell-to-cell interactions at the tissue and organ levels, with the ultimate goal of minimising the suffering of animals affected by this lethal virus. My observations led me to an important realisation: most studies focused on virus–host interactions in primary macrophage cultures, which are the primary target cells for the virus. However, at the tissue and organ level, African swine fever virus replicates mainly in lymphoid tissues such as the spleen.

A BSI boost

Ethical concerns surrounding animal use make it challenging to explore interactions at the early stages of infection in the spleen. This is where the BSI Career Enhancing Grant played a key role in reshaping my research trajectory. With the funding, I set out to establish if it was possible to derive viable *ex vivo* cell cultures from the pig spleen. Using waste tissues from pigs, I established both fresh and frozen-thawed cultures and assessed the presence and viability of organ-derived cell populations over time. I discovered that certain cell populations were more sensitive to culturing and freezing processes and determined that fresh cultures were more suitable for my research. These cultures allowed me to study the effects of African swine fever virus infection on immune cell populations for up to five days.



The grant not only facilitated the development of these cultures but also allowed me to enhance the existing immune cell phenotyping panels for these experiments. I was able to add new surface markers and intracellular cytokine markers that expanded the breadth and depth of my analyses. These helped to identify diverse infection profiles of different African swine fever virus strains and the differential infection rates between the strains in these cell populations. Spectral flow cytometry emerged as a valuable tool in this process, enabling a more nuanced analysis of the immune cell populations. I was able to develop my flow cytometry analysis skills and found myself delving into more sophisticated methods of analysis.

The pilot data generated through these improved methods proved to be invaluable, forming a foundation for advancing the understanding of African swine fever virus-induced lymphocyte population dynamics. The differences in infection profiles and cell preferences highlighted gaps that warranted further investigation to determine if specific immune cell populations afford resilience to African swine fever virus. Identifying and studying such cell populations may provide valuable insights for enhancing protective immune responses.

Further funding

The BSI Career Enhancing Grant enabled me to demonstrate the feasibility of using spleen-derived organ cultures to investigate the effects of African swine fever virus, and this early work became crucial in securing additional funding. Using the insights gained, I applied for the Biotechnology and Biological Sciences Research Council's Discovery Fellowship and was successful in my application. This further funding confirms the importance of the initial findings, not only as a catalyst for further exploration, but as a testament to the impact of the BSI Career Enhancing Grant on advancing my work.

The skills and knowledge I have acquired and refined during this period are building blocks that will be instrumental in shaping my career in veterinary infectious diseases. The grant not only fuelled my scientific inquiry but also enabled me to contribute to the refinement of techniques and methods in the field of veterinary immunology. These improvements are valuable for other researchers in porcine immunology and can be further developed and adapted for *in vivo* studies within the broader research field.

This preliminary work contributes to my research goals of understanding immune pathways and mechanisms that protect pigs from African swine fever virus. My aim is to identify targets that can help in the design of effective vaccines and to guide genetic selection for more resilient pigs. I am particularly intrigued by the variations in host responses to different strains of the virus, and this study lays the groundwork for further exploration in this area.

Advice for future applicants

It is with much gratitude that I acknowledge the British Society for Immunology's foresight in supporting early career researchers. This grant has played a vital role in advancing our understanding of immune cell population dynamics at the tissue level in African swine fever virus. It has helped me to build a path towards more refined experimental methods and, ultimately, effective interventions for African swine fever virus. As such, it has contributed to a future where compassion and knowledge converge for the advancement of veterinary science.

For anyone who is interested in applying for this grant, I recommend seeking feedback on your ideas from peers or mentors. Additionally, take time to consider how your proposed project addresses gaps or challenges within your field and how it contributes to solving real-world problems. This will not only strengthen your application but also increase the potential impact of your research. Finally, take the chance and apply – you never know what doors it might open.

Dr Priscilla Tng,
The Pirbright Institute

Grant scheme

Find out more about BSI careers support, including our grant offerings here: **www.immunology.org/careers/bsi-careers-support**

Find out more by contacting **careers@immunology.org**

Collaborate to innovate:

Partnerships with industry can deliver for patients

Partnerships between the NHS and industry can lead to tangible benefits for patients and the NHS. In this article, Dr Amit Aggarwal, Executive Director of Medical Affairs and Strategic Partnerships at the Association of the British Pharmaceutical Industry (ABPI), talks about how partnerships have developed and makes the case for greater ambition in partnership working, including in the field of immunology.

A history of partnerships

The UK healthcare industry has seen substantial change over the past 20 years, with game-changing technologies and treatment advancements from cell and gene therapy to AI-driven diagnosis.

A lesser-known – but no less important – advance occurred in 2008, when the Department of Health and Social Care and the ABPI established criteria for 'joint working' between the NHS and industry.

The term was highly specific and was defined as 'Situations where, for the benefit of patients, one or more pharmaceutical companies and the NHS pool skills, experience and/or resources for the joint development and implementation of patient centred projects and share a commitment for successful delivery.'

Joint working allowed, and continues to allow, some marked improvements to patient care at local level. One example was the 'Don't wait to anticoagulate' project between the then West of England Academic Health Science Network, Gloucestershire CCG, Bayer, and many others. In a 12-week period, it was estimated to have prevented 13 strokes.[1]

Since 2021, joint working has been supplemented with 'collaborative working' which gives companies and healthcare organisations the ability to expand the scope of how they work. Collaborative working, instead of only being for the direct benefit of patients, can have as its focus a benefit for the NHS – although it must, as a minimum, maintain patient care. This allows for projects that improve efficiency, for example by reducing patient waiting times for services. One example in a Health Board in Wales, reduced diagnostic test turnaround times for head and neck cancer by 32 per cent.[2]

Both joint working and collaborative projects must have the right governance and safeguards in place, and be in line with the strict requirements of the ABPI Code of Practice.

These requirements ensure that partnerships have clear objectives, with benefits to patients and the NHS at their centre. Partnerships must also be transparent, and transfers of value must be declared via our industry's Disclosure UK platform.[3] We have developed guidance, co-authored with the NHS Confederation, for anyone setting up a partnership. It includes practical resources on contracting, conducting and measuring the results of a successful partnership.[4]

Under the right circumstances, the King's Fund,[5] the Department of Health and Social Care (DHSC) and the NHS Confederation have acknowledged the value of external expertise in helping the NHS overcome challenges.

> 'Innovation is a team sport. We want as many patients as possible to benefit from the best that health innovation has to offer. That requires effective partnerships between the NHS and our innovative life science companies.'
>
> **Richard Stubbs, Chair, Health Innovation Network**

'Companies should play their part to help the NHS improve care and narrow the gap on health inequalities. By working together, companies and the NHS can do more to reach underserved communities than we could achieve alone.'

Bola Owolabi, Director of the National Healthcare Inequalities Improvement Programme at NHS England

The case for greater partnership

The recent Darzi review graphically illustrated the pressures the NHS is under, and referenced partnership as one route that can help the NHS deal with those pressures.

"For the NHS, partnerships with the life science sector for research or treatment too often fall into the category of 'important but not urgent'. It is doubtful that there is an NHS leader in the country who would not recognise that research and innovation are important. It has simply not been a high enough priority in a world where waiting lists are long, and finances are tight. But in the medium term, it is innovation that can make the NHS more sustainable."

NHS leaders have been exploring how they can partner with others to improve healthcare for the populations they serve for some time. Indeed, Integrated Care Systems (ICSs) were created with this mission in mind – to bring partners together to collaborate rather than compete, to prevent and treat ill health earlier rather than later, to address need rather than just demand. But with immense pressure on services and the people who work in them, change is hard. NHS staff often lack the time and 'head space' to drive change and improvement at the pace required. So, help is needed.

There is growing evidence that, with the right guardrails in place, partnerships deliver meaningful benefits to patients and services. We have a long-established library that now holds more than 180 examples of successful partnerships around the country.[6] This year, for the first time, we commissioned consultancy Carnall Farrar to systematically measure how NHS–industry partnerships support improved patient outcomes, using data from across the NHS.

Their report found that hospitals engaging in industry partnerships are up to 2.5 times more likely to follow NICE recommendations for prescribing clinically and cost-effective medicines more closely, compared to hospitals that do not.

Appropriate use of medicines closer to NICE guidelines was, in turn, associated with better outcomes for patients in the areas of care studied, keeping their conditions under better control.

There were also early indications that partnerships in Primary Care Networks (PCNs) were associated with improved disease management, such as blood sugar and blood pressure control.[2]

This is the first such analysis of NHS–industry partnerships conducted in this way and, while more work in this area is needed, the research gives us a glimpse of what might be possible if we can increase the scale and ambition of the partnerships we undertake.

Example of partnership in the field of immunology

Novartis worked with Leeds Teaching Hospitals to improve care for people with arthritis. The project created a completely new service – the first remote monitoring pathway in rheumatology in Leeds.

Alongside patients, the team developed a digital tool to help people with arthritis manage their condition. It also created a team to provide advice when needed, including rheumatology nurses and consultants.

The project has helped people struggling with arthritis to receive earlier care, and improved capacity in clinics. Find out more on the Novartis website.[7]

Projects like this, set up with patients at their heart, under the governance of the ABPI Code of Practice, have huge potential to improve healthcare. We would encourage NHS leaders in the field of immunology to explore them further.

'Collaborations between the NHS and the pharmaceutical industry can deliver benefits for patients, but their potential is still to be realised.'

Matthew Taylor, NHS Confederation

And finally

Health Secretary, Wes Streeting, has recognised the value of partnerships with industry at a national level. Announcing a government collaboration to tackle obesity with Eli Lilly[8] recently, he said: "Partnerships like this are key to building a healthier society, healthier economy and making the NHS fit for the future."

We believe that now is the time for a new relationship between the NHS and industry, focused on transformational – not transactional – partnerships. They are one way to take 'the best of the NHS to the rest of the NHS', as the Health Secretary has said is essential.

More examples of how industry is working in partnership with the NHS are available on the ABPI website.[6]

To speak to the ABPI about the possibility of a partnership with industry, contact nrastani@abpi.org.uk.

Dr Amit Aggarwal,
Executive Director of Medical Affairs and Strategic Partnerships, ABPI

REFERENCES

1. Health Innovation West of England. Evaluation case study: an evaluation of the Don't Wait to Anticoagulate project. https://rb.gy/5unz6f
2. Carnall Farrar, commissioned by the ABPI 2024 Partnering for progress: a data-driven analysis of NHS-industry partnerships (abpi.org.uk), p34. https://rb.gy/znjyn2
3. ABPI, Disclosure UK. https://search.disclosureuk.org.uk/
4. ABPI and NHS Confederation 2024 Accelerating transformation: How to develop effective NHS-industry partnerships. https://bit.ly/46BPaHt
5. The King's Fund, Anna Charles 2024 (blog) High hopes for NHS and life sciences industry partnerships, but what does it really take to make them a success? https://shorturl.at/nGDnD
6. ABPI NHS-Industry Partnership Case Studies Library. https://shorturl.at/ScP8d
7. Novartis, Leeds Teaching Hospital NHS Trust. https://shorturl.at/FV5oF
8. Gov.UK 2024 Press release: Landmark collaboration with largest pharmaceutical company. https://shorturl.at/YyCNd

Q&A with Leonie Taams

At the end of 2024, Professor Leonie Taams will be stepping down as Editor-in-Chief of *Clinical & Experimental Immunology (CEI)*, the BSI's longest running journal, after eight years in the post. We caught up with her to discuss her impressive career and reflect on her time working on *CEI*.

What drew you to apply for the position of Editor-in Chief, and what did you hope to achieve?

I've been involved in the BSI for a long time – since I first came to the UK. I started out a member before I then became part of the Programme Committee, which I was part of for 10 years. I have also held the position of Trustee. Through those various roles I realised how important it is to support the work of the BSI and how important the journals are in funding many of the BSI's main activities.

When I found out that a new Editor-in-Chief for *CEI* was needed, I submitted an application as I wanted to give something back to the BSI. Despite having no editorial experience, I felt very well supported in the role and I've been doing it for eight years so clearly I have enjoyed it.

What would you say is unique about *Clinical & Experimental Immunology* and why is a journal like this necessary and important for the field?

One important feature of *CEI* is that it's a Society journal. This is important for the BSI, but it also fosters a sense of community. Another unique feature of *CEI* is that its primary focus is translational immunology. I think this is important because translational immunology takes a lot of time and there are limitations in doing it well. You need to be a translational immunologist to understand the challenges as well as the opportunities of translational immunology. I believe that this is what *CEI* is well placed to do. An additional aspect is that we're not focused on one particular disease area. The journal covers many different disciplines as well as featuring interdisciplinary research.

After eight years in post, what are you most proud of?

I'm proud that the journal is still going strong in a changing landscape. It has increased its visibility and we're still attracting hundreds of submissions each year.

Another thing I'm proud of is the fact that we have increased the number of section editors. We have clear sections dedicated to areas that were attracting a lot of submissions and were therefore more relevant to the immunology community.

Other things I'm proud of are that we have diversified the editorial board. We now have an even split of genders across the associate editors. We also introduced an early career researchers editorial board, which has contributed to much more engagement and activity within the editorial board. I think that a lot of people appreciate that *CEI* is a Society journal and that we should all support it.

Additionally, we have close links with the Editors-in-Chief of the other BSI two journals *Immunotherapy Advances* and *Discovery Immunology*. We all collaborate to exchange information, keep each other up to date, and learn and share good practice. That's a positive development.

A final thing I'm very proud of is the support from the office. The editorial office at the BSI is amazing.

> 'We have diversified the editorial board. We now have an even split of genders across the associate editors. We also introduced an early careers researchers board, which has contributed to much more engagement and activity within the editorial board.'

You have led the journal through a rapidly changing publishing landscape, what challenges do you see *Clinical & Experimental Immunology* facing in the future?

I think there are challenges because, as you say, the landscape is changing. Many more journals have arisen with different motivations, all of whom are competing for submissions. It is important to remain visible as a high-quality journal and maintain our strong and long-standing reputation both now and in the future. This is something we can never take for granted.

Artificial intelligence poses another challenge. It is important that the checks and balances behind paper submissions are rigorously upheld to ensure the academic integrity of submissions.

> 'There is a real opportunity for immunologists to help identify ways to intervene in more diseases or disorders than we previously anticipated. Advances in technologies present another opportunity, as they help us look at the tissue in more detail to understand what is going on in health or during inflammation, infection or malignancy.'

And more broadly, what would you say are the biggest challenges facing the field of immunology?

I would prefer to focus on the biggest opportunities for the field of immunology. Increasingly we realise that almost all diseases have an immunological component or an immunological mechanism behind them. Our understanding has become very detailed, and I think there is a real opportunity for immunologists to help identify ways to intervene in more diseases or disorders than we previously anticipated. Advances in technologies present another opportunity, as they help us look at the tissue in more detail to understand what is going on in health or during inflammation, infection or malignancy.

I also think computational biology brings new opportunities in allowing us to link up data between diseases and spot patterns that the human eye or the human brain cannot compute. Interdisciplinary research is another advance that is becoming increasingly embraced and supported because of the recognition of team science. Together we can make much more rapid advances than we were able to 20 years ago.

You've been heavily involved in BSI activities throughout your career, what are some of your highlights?

There are so many. Congress is always a highlight. For me, a particular highlight was the joint conference between the Dutch Society for Immunology and the British Society for Immunology, which we repeated in Liverpool a few years later.

Another highlight has been as a Trustee, seeing how the Society and the Board changed over a short period of time, and has become much more professional. I think it's a good role model of how learned societies could and should work. That has been great to see and it's nice to be part of it.

What is the best advice you could give to early career researchers?

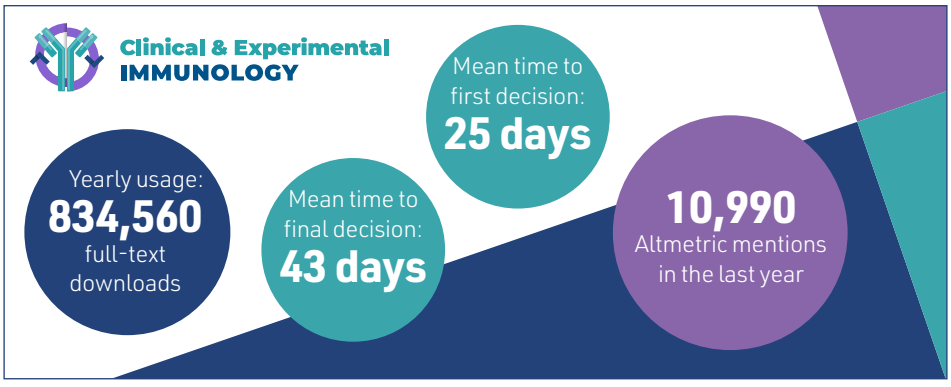
Do what you enjoy, and you will enjoy what you do. If an opportunity arises, always explore it. You don't have to do it, but at least see if you can make it work. Opportunities don't necessarily always appear, so don't take them for granted. Ask questions around it to make it work.

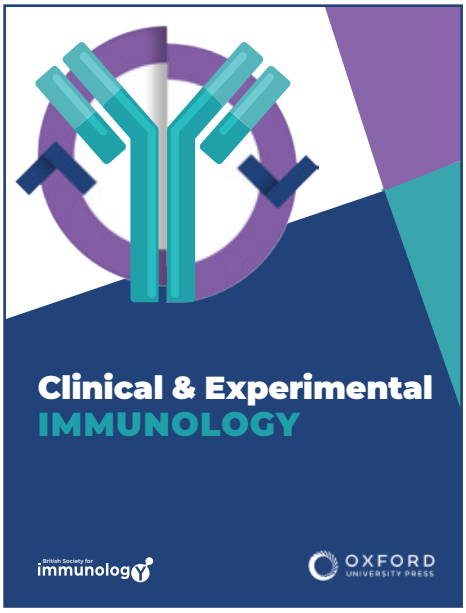
Another piece of advice is to always seek advice. Problems and decisions are not always only for you to solve. Talking them through with a peer, senior person, or mentor can really help give shape, direction or confidence to whatever it is you're struggling with.

What's next for you? What are you looking forward to?

I've already picked up my next role. I've become Head of the School of Immunology & Microbial Sciences at King's College London. I have been doing this already for a year and it becomes difficult to manage both roles at the same time.

Even though I'm stepping down, I look forward to supporting my successor in their new role, but also seeing them take the journal to the next level.





New Editor-in-Chief

We'll be getting to know the incoming Editor in Chief of *CEI*, Professor Claudia Mauri, in the spring issue of *Immunology News*. Claudia is based at University College London and is Professor of Immunology in the Division of Infection & Immunity, where her research focuses on harnessing the regulatory properties of B cells in the therapy of autoimmune disease.

Clinical & Experimental IMMUNOLOGY

SOCIETY NEWS

In pictures: **Our first Immune Therapies Summit**

This November, we hosted the first ever BSI Immune Therapies Summit, bringing together experts from industry, academia and clinical spheres to discuss the latest developments in immune therapies.

The Summit took place at Hinxton Hall, Cambridge, and saw over 140 professionals from across the field come together to discuss challenges in the field, network and hear from leading experts. Cross-disease collaboration that encompasses industry, research and clinical disciplines is rare, and we are proud to have brought together a diverse range of delegates during the Summit.

It was a fantastic event, where attendees forged new collaborations, shared intel on challenges and developments in the field, and inspired one another with their stories.

"The event offered a great variety of topics, encompassing both autoimmune diseases and cancer. I really appreciated this approach, as it bridged two fields that are often treated separately."

In numbers:

143 attendees

2 days of world class immunology

5 Plenary sessions

8 Collaborative parallel sessions

4 Short talks

13 expert speakers

"It was very interesting to gain insight of how things worked at other companies and how people from academia approached the questions compared to people from industry."

"Most valuable was the chance to connect and discuss with delegates you might have not thought of connecting with otherwise"

Stay tuned for more information for the next BSI Immune Therapies Summit!

FUTURE FOCUS

Careers support for BSI members:

Immunology is a growing and dynamic discipline, and those working in the field require a huge range of skills and knowledge to effectively adapt to the ever-changing landscape.

Championing careers is one of the BSI's core priority areas, and we support the career development of our members through grants, support schemes, events and resources. Find out more about our support and how we might be able to support you.

Grants

BSI Career Enhancing Grants are designed to provide flexible financial support to help immunologists grasp opportunities and tackle challenges in their path. We aim to support BSI members in all sectors of immunology in the first 15 years of their career, including those looking for a career beyond academia, such as industry and clinical setting.

With this grant we can offer funding of up to £5,000 for any type of career-related activity that will help members go a step further in building their skill set and advancing their professional development. Examples of how to use the funding include:

- A pilot project to support a larger grant application
- Overseas lab visits to learn a new technique
- Training in leadership to support their career development
- Funding a secondment to explore a career outside academia, such as in science communication
- New equipment to carry out research that wouldn't be covered with their usual funding
- Anything else that might support career development!

There are two application deadlines per year, one in March and one in September.

The BSI offers grants for members to support their attendance at conferences through travel grant and grants for carers, supporting members with the cost of caring responsibilities that would prevent them from attending one of our events, or if members require support/care while attending a large event. This year it has included BSI organised events such as the BSI-CIPN Conference and BSI Regional & Affinity Groups Conferences, and the opportunity to apply for a travel grant to attend scientific conferences and seminars in the UK and across the world.

We also offer financial support to medical students who are planning to undertake a formal immunology-related placement in a selected laboratory for their medical elective. Medical electives can provide key experience for budding researchers who wish to acquire cutting-edge skills and develop laboratory experience within the UK or overseas.

Mentoring scheme

The BSI Mentoring scheme pairs up senior members of the sector with early career immunologists for 12 months to support career and personal growth. Previous mentees have looked for support with taking the next steps in their career, finding the right work/life balance, transitioning to a new sector – for example from academia to industry, and how to set up new collaborations.

Applications for the 2025 scheme have now closed, but keep an eye out for the opportunity to be part of the 2026 cohort in autumn 2025.

BSI Winter School

In 2025, the BSI is running our popular Winter School, taking place in early December in Sheffield. Immunology MSc students (and equivalents from industry and other areas) will be gathering to hear from some of the UK's leading immunologists discussing their latest research findings across a range of topics, take part in career panels and network with each other.

Resources

Alongside our careers support through grants, events and schemes, the BSI offers additional support to develop members' careers.

Our training courses for current and future generations of immunologists build essential skills and help to advance their career. Our currently running training courses include flow cytometry and various bioinformatics courses.

We have pre-recorded webinars, guides and resources on various aspects of careers support, including how to get your research published and careers in immunology webinars showcasing different careers. All our webinars are accessible for free to BSI members.

We also have a jobs board and funding opportunities page on our website, with details on open opportunities across the sector.

Find out more information about our careers support offer and how the BSI can help you here: **https://www.immunology.org/careers**

Chris Snowden-Smith,
BSI Careers and Engagement Officer

Congratulations

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

European Research Council

Congratulations to the following BSI members who have been awarded 2024 Starting Grants from the European Research Council. These grants will help almost 500 researchers from 24 countries to set up their own teams and conduct research on the topics of their choice.

- **Jason Cosgrove**
  Fuelling innate immune cell development
- **Evangelos Giampazolias**
  Deciphering host–microbiome interactions in anti-cancer immunity
- **Richard Timms**
  Deciphering the regulatory logic of the ubiquitin system

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Royal Society Royal Medal

We would also like to extend our congratulations to BSI members, **Professor Sir Ravinder Maini** and **Professor Sir Marc Feldmann**, who jointly received the Royal Society's Royal Medal for their work on treating rheumatoid arthritis with anti-TNF therapy. Their research demonstrated for the first time that monoclonal antibodies could successfully treat a severe disease. This work has transformed autoimmune disease treatment and improved the lives of many people worldwide with rheumatoid arthritis and other immune conditions.

National Teaching Fellowship

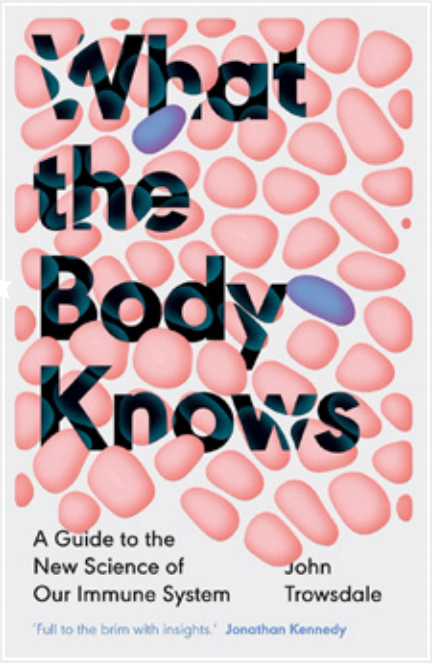
Dr Sophie Rutschmann, BSI Careers & Education Secretary and Reader in Immunology at Imperial College London, has been awarded one of fifty-five new National Teaching Fellowships by Advance HE. This is a high honour, with the Fellowship recognised as the most prestigious individual award for excellence in teaching in UK higher education, recognising outstanding achievement in learning and teaching.

Royal Society Career Development Fellowship

BSI member, **Simone Webb**, has been selected for the Royal Society's first cohort of Career Development Fellowships. The Fellowships are aimed at rewarding scientific excellence in groups who may typically be underrepresented in UK STEM academia.

Your next Immunology read

Congratulations to BSI member Professor **John Trowsdale** on the publication of his new book, *What the Body Knows: A Guide to the New Science of Our Immune System*. The book explores how the immune system protects us, and how our bodies invest huge resources to keep it running.



Babraham Research Campus appoints new Chief Scientific & Innovation Officer

Congratulations to BSI member and member of the *Immunotherapy Advances* Editorial Board, **Dr Louise Joplin** on her appointment as Chief Scientific & Innovation Officer at Babraham Research Campus Ltd. This new role will see Dr Joplin continue to accelerate fundamental life science research for talent development, population health benefit and wealth creation.

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.

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TRAINING PROGRAMME

Bioinformatics for wet-lab immunologists

Build your skills and confidence with highly rated courses, starting with the essentials for complete beginners

Highly rated training!

With over **1,200** attendees since 2020, it has a mean rating of **9.4/10** for content and delivery.

INTRODUCTORY COURSE:

Omic data analysis and visualisation using R

"I've been on other R courses and this was the best by far as I actually finished it feeling a lot less scared of R and omics generally!"

All online!

www.immunology.org/training

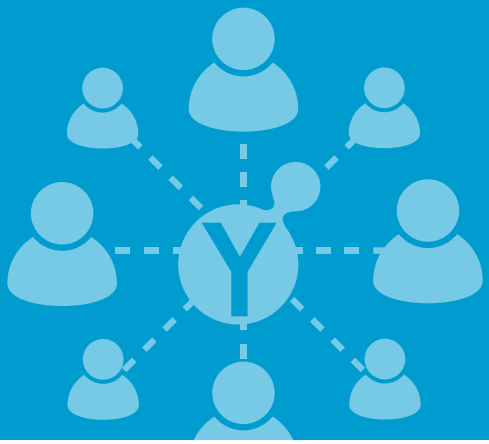
Glasgow Bioinformatic Core

British Society for immunology

The programme has been developed and is delivered by the Glasgow Bioinformatic Core.

Corporate Members

The British Society for Immunology runs a Corporate Membership scheme with the aim of strengthening our relationship with industry and furthering our charitable objectives. We thank our Corporate Members for their support and contribution to scientific and clinical immunology and we are pleased to highlight their activities here. Corporate support is vital to the British Society for Immunology, enabling us to engage with immunologists to support their learning and advancing the science of immunology. For more information on the scheme, visit **www.immunology.org/corporate-members** or contact Becky Dempsey at **b.dempsey@immunology.org**.



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Immune Update

The BSI journals

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Discovery Immunology

RAM is required for RNA cap formation and gene expression

T cell activation triggers blastogenesis, followed by proliferation and differentiation. Blasts are characterised by an increased size and a more prominent cytoplasm that distinguishes them morphologically from inactivated cells. Accordingly, their characteristic fast proliferation cycles require several days of preparation before clonal expansion occurs. Such preparation requires increased transcription, RNA processing and translation to generate large amounts of proteins. These processes largely depend on RNA capping, mediated by RNMT (RNA guanosine N-7 cap methyltransferase) upregulation in T lymphocytes.

Knop *et al*. demonstrate that RAM (RNA-activating mini protein/RAMAC) is a cofactor that upregulates and stabilises RNMT activity during T cell activation. Conditional RAM deletion reduces $CD4^+$ cell activation, proliferation and protein synthesis, however, to a lesser degree than RNMT conditional KO, demonstrating that RAM is not its only regulator. Finally, transcriptome analysis of RAM-deleted $CD4^+$ T cells show differential expressions in genes related to cell signalling, metabolism, amino acid biosynthesis and apoptosis. Further analysis of these gene families will undoubtedly increase our understanding of T cell function and regulation.

Knop *et al*. 2024 *Discovery Immunology* **3** kyad021 **https://doi.org/10.1093/discim/kyad021**

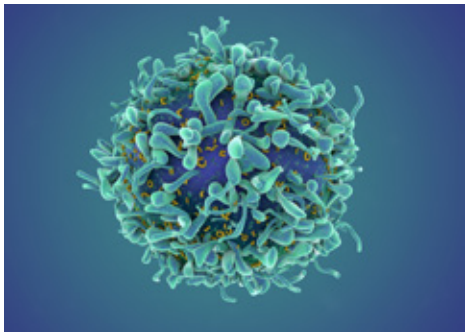
Clinical & Experimental Immunology

Clinical and cellular phenotypes resulting from a founder mutation in IL10RB

Interleukin-10 (IL-10) is an anti-inflammatory cytokine that signals via the IL-10 receptor which is composed of two subunits, IL-10Rα and IL-10Rβ. In this paper by Mao *et al*., a novel loss of function mutation in the gene encoding the IL-10Rβ subunit *IL10RB* was associated with the development of very early onset inflammatory bowel disease in one person. Inborn genetic errors such as this one can cause dysregulation of the immune system, predisposing some people to autoimmune and autoinflammatory diseases. Further investigation of the IL-10Rβ deficiency indicate that it likely originated around 1500 years ago, in an indigenous Ecuadorian population.

The researchers found that complete IL-10Rβ deficiency reduced overall numbers of $CD4^+$ and $CD8^+$ T cells but enhanced levels of Th17 cells within the $CD4^+$ T cell compartment. Levels of naïve B cells were increased during IL-10Rβ deficiency whereas memory class-switched B cells were diminished in the patient under investigation.

This research emphasises that limited population diversity and founder effects can contribute towards autosomal recessive inborn errors of immunity, with the authors advocating for large-scale genetic testing to enable timely and appropriate clinical intervention.



Mayo *et al*. 2024 *Clinical & Experimental Immunology* **216** 113–119 **https://doi.org/10.1093/cei/uxad085**

Immunotherapy Advances

EVCIA to determine relative immunogenicity in psoriasis

Plaque psoriasis is chronic, relapsing and remitting condition which causes raised, inflamed patches of dry skin; however, treatments are underdeveloped and largely focus on symptom management. Biologic medicines are used to specifically target the immune system, such as TNF-α, and generate an immune response towards an antigen, a process known as immunogenicity. Typically, immunogenicity is measured through the humoral response towards specific antigens, but the process begins at the cellular level.

In the AVT02-GL-302 study, researchers conducted an *ex vivo* comparative immunogenicity assessment (EVCIA) on participants with moderate-to-severe chronic plaque psoriasis who either received the reference product (RP), Humira®, or switched between the RP and the biosimilar AVT02, both biologics which target TNF-α. Peripheral blood mononuclear cells were collected at multiple time points to assess cytokine release and Th-cell proliferation. The study found *ex vivo* cytokine release and Th-cell proliferation to be similar between those who received the RP exclusively and those who switched between the RP and the biosimilar AVT02. Overall cellular immune responses were elevated following re-exposure to keyhole limpet hemocyanin across all time points.

These findings support the interchangeability between the RP and AVT02 as anti-TNF treatments for inflammatory diseases like chronic plaque psoriasis. The sensitivity of the novel EVCIA suggests that measuring cellular immunogenicity could be a valuable predictor of the overall immunogenicity of biologic therapies.

Richter *et al*. 2024 *Immunotherapy Advances* **4** ltad029 **https://doi.org/10.1093/immadv/ltad029**

Around the journals

A summary of some of the latest papers from the world of immunology written by ECR board members of our official journals and the BSI Editorial Coordinator.

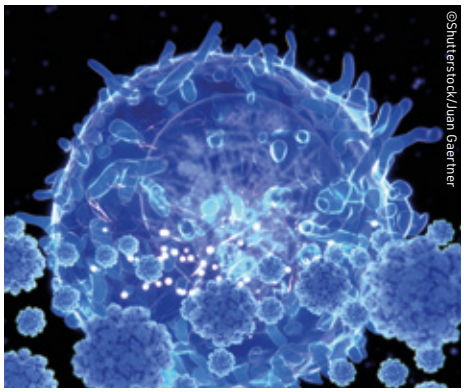
Targeting IL-2 signalling to prevent immune-mediated pregnancy loss

Regulatory T (Treg) cells are essential for immune tolerance during embryo implantation, and deficiencies can result in early pregnancy loss. This study explored whether IL-2, complexed with JES6-1 anti-IL-2 antibody (IL-2/JES6-1), could increase Treg cell populations and improve pregnancy outcomes in an abortion-prone mouse model.

IL-2/JES6-1 treatment notably reduced foetal loss from 31% to 10%, with only a slight reduction in foetal weight and no effect on placental structure. Similar improvements were seen in healthy pregnancies, suggesting this approach may extend beyond high-risk cases.

These findings indicate that expanding uterine Treg cells via targeted IL-2 signalling could be a promising therapeutic strategy to prevent immune-mediated pregnancy loss, meriting further clinical research.

Foyle *et al*. 2024 *The American Journal of Pathology* **111** 2128–2149



Imbalance of B-cell subpopulations in the microenvironment of sarcoidosis or lung cancer

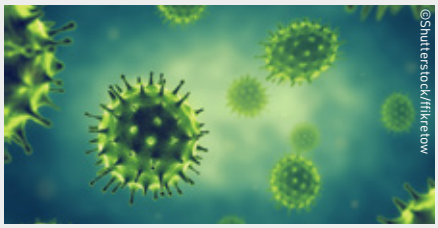
This study examined B-cell profiles in sarcoidosis (SA) and lung cancer (LC) by analysing lymphocyte-related haematological parameters and B-cell populations in peripheral blood (PB) and lymph node (LN) samples.

SA patients had higher proportions of naïve B cells and CD21 low B cells in their lymph nodes compared to LC patients, but lower levels of class-switched memory B cells in these regions. In peripheral blood, SA patients showed a higher median proportion of non-switched memory and transitional B cells, but the lowest levels of class-switched memory B cells. LC patients, in contrast, had higher levels of RE-LYMP and AS-LYMP, markers of activated lymphocytes.

These findings reveal distinct B-cell profiles between SA and LC patients, with differences in dominant B-cell subpopulations and their distribution between circulation and disease sites. This relocation of B-cell subtypes to disease microenvironments suggests B cells may act as immune response modifiers, potentially shaping disease-specific immune regulation.

Raniszewska *et al*. 2024 *Cells* **13** 1274
DOI: 10.3390/cells13151274

Low BTLA and LAG-3 levels as potential biomarkers for long-term metabolic health in HIV/HCV coinfection



This study examined whether baseline levels of immune checkpoint proteins could predict metabolic disorders, such as type 2 diabetes and dyslipidaemia, in individuals with HIV/HCV coinfection after successful HCV clearance. Immune checkpoint proteins, typically upregulated in these patients, were assessed before treatment to determine their association with metabolic risks five years post-therapy.

The study followed 80 individuals with HIV/HCV coinfection and advanced liver disease for five years after HCV therapy. Baseline plasma samples were analysed for immune checkpoint protein levels, and metabolic outcomes.

Results showed that 26% developed metabolic events, and 46% had increased TyG index over time. Low baseline levels of BTLA and LAG-3 were strongly associated with a higher likelihood of metabolic events and TyG increases. Other checkpoint proteins also showed inverse associations with TyG.

In summary, low baseline levels of BTLA and LAG-3 may predict a greater risk of post-treatment metabolic disorders, serving as biomarkers for long-term metabolic health in HIV/HCV coinfected patients.

Martin-Elscolano *et al.* 2024 *Frontiers in Pharmacology* **15**
DOI: 10.3389/fphar.2024.1341612

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