Issue 129 | June 2023

BSHI
British Society for Histocompatibility and Immunogenetics
Promoting Science and Education in Transplantation

The BSHI report for research
NEWSLETTER
in Histocompatibility and Immunogenetics

Sponsored By:
- Alpha Biotech Ltd
- CareDX
- Immucor
- Miltenyi Biotec
- Savant Ltd
- SPT LabTech
- StemCell Technologies
- VH Bio Ltd

Amy De'Ath
BSHI Research Executive Secretary
UK NEQAS for H&I

Science Watch

Clinical recommendations for post-transplant assessment of anti-HLA (Human Leukocyte Antigen) donor-specific antibodies: A Sensitization in Transplantation: Assessment of Risk consensus document.

Lefaucheur C, Louis K, Morris AB, Taupin JL, Nickerson P, Tambur AR, Gebel HM, Reed EF; STAR 2022 Working Group.

American Journal of Transplantation. 2023(1):115-132

Introduction

This meeting report, published in the American Journal of Transplantation in 2023, summarises the findings of the Sensitization in Transplantation: Assessment of Risk (STAR) 2022 working group. The previous STAR reports, in 2017 and 2019, focused on patient risk evaluation for memory or primary alloimmune responses and examined the utility of assays to determine risks. This report provides clinical practice recommendations on how to use donor specific antibody (DSA) measurements in a holistic manner with graft function in the post-transplant follow-up of patients in kidney, heart, lung and liver transplantation based on expert assessment of quality and strength of evidence.

The recommendations address three key questions and offer guidance regarding: the post-transplant evaluation and clinical application of DSA status (either preformed or de novo), the relevance of post-transplant DSA for the diagnosis of antibody mediated rejection (ABMR), and the relevance of post-transplant DSA in risk stratification and outcome.

1) Clinical implications of positive post-transplant DSA detection according to DSA status

Recent studies have focused on improving the risk assessment of DSAs through consideration of high-resolution HLA genotyping when assigning DSA, considering timing (either pre-transplant or de novo post-transplant) and attempting to establish whether post-transplant DSA relates to outcome. This has allowed the recognition of distinct risk ABMR endotypes and timing to ABMR occurrence, as well as disparate allograft outcomes.

Kidney

- Post-transplant DSA evolution identifies 3 clinical patterns: persistent preformed DSAs (detection of preformed DSAs within 3 months post-transplant), resolved preformed DSAs (no detection of preformed DSAs within 3 months post-transplant) and de novo DSA.
- Patients with persistent preformed DSAs displayed the highest risk of ABMR and allograft loss.
- DSA detected at >3,000 MFI or DQ specificity were more likely to persist post-transplant.
- The association of preformed DSAs with kidney allograft loss was confirmed. Even weak DSAs <3,000 were associated with worse survival.
- A repeat HLA mismatch in re-graft patients in the presence of a preformed DSA also increased immunologic risk.

>> Continued on Page 4

CONTENTS

Editorial by

Mohammad Ali Rafique

Welcome to the second BSHI Newsletter of 2023. I'd like to thank all those who reached out with comments on the revamped look; the feedback shows that it has been received well! Having attended the BSHI Digital SIG and Higher Training Meeting during the past few weeks, I was pleased to see both events had good attendance and full of good content; any volunteers to write these sessions up for the Newsletter would be welcomed so please email newsletter@bshi.org.uk if you are interested. This edition is slightly shorter than normal, but we still have several interesting articles including a virtual laboratory tour of Glasgow and a ScienceWatch feeding back from the STAR working group 2022.

Submissions to:
Mohammad Ali Rafique
Email: **newsletter@bshi.org.uk**

Advertising Enquiries to:
Mark Lobb
Tel: **0113 206 4579**
Email: **newsletter@bshi.org.uk**

BSHI Corporate Members

- Alpha Biotech Ltd
- CareDX
- Immucor
- Miltenyi Biotec
- Savant Ltd
- SPT LabTech
- StemCell Technologies
- VH Bio Ltd

Deadline for submission of articles

Vol 130, Issue 3 – 23rd July 2023

Vol 131, Issue 4 – 23rd October 2023

Vol 132, Issue 1 – 23rd January 2024

JBL Cycle 85 Submission 23rd July 2023

Information

British Society for Histocompatibility and Immunogenetics.

A company limited by guarantee. Company No. 6078396. Registered in England and Wales at Executive Business Support Ltd, City Wharf, Davidson Road, Lichfield, Staffs. WS14 9DZ.

Registered Charity Number: 1123760

ISSN 13552937 (On line)
9 771355 293003 >

ISSN 23975458 (Print)
9 772397 545006 >

BSHI Chair Report

Dear Colleagues

We're now well into May and it's starting to feel a lot more like summer. In my house it's GCSE and A level season and I have to say I'm looking forward to the middle of June when we can all relax again! I heard this week, there's a new Supernova in the beautiful Pinwheel Galaxy which is only 21 million light years away. It can be seen in the northern hemisphere with just a 4inch diameter telescope and although fascinating, I struggle to get my head around the distances!

Since our last Newsletter, the Organ Utilisation Group, which was established by the Secretary for Health and Social Care in England to make recommendations on how to maximise the potential for transplantation from both living and deceased donors, have published a report: Honouring the Gift of Donation – utilising organs for Transplant – Summary report of the Organ Utilisation Group.

https://www.gov.uk/government/publications/honouring-the-gift-of-donation-utilising-organs-for-transplant/honouring-the-gift-of-donation-utilising-organs-for-transplant-summary-report-of-the-organ-utilisation-group

The report, published in February 2023, makes 12 recommendations to achieve the best use of available resources, drive improvements and support innovation. H&I services will again be critical to the success of the recommendations made in this report. I am pleased that we have now completed the summary report following the BSHI Workforce Planning Survey and this report will be available on the BSHI website. I hope this document will be useful for the H&I Community at a local level and will help to improve awareness of workforce issues in H&I at a national level too.

In April I attended a successful and interesting EFI Conference in Nantes. The theme of the conference was "Big Data In Immunogenetics At The Crossroad Of Care, Tools, And Research". It's clear that effective data management will lead to improvements in patient care. This was also apparent from the very successful BSHI Digital SIG that took place on 17th May. Look out for more reports from the EFI Conference in the next Newsletter.

Planning for our own BSHI Conference on 12th-13th September is now well underway. The conference will take place in the Park Regis Hotel, Birmingham again this year, so we will have an opportunity to improve the conference experience for delegates, following feedback from last year. The theme of this year's conference is "Collaboration" and the Birmingham & Barnsley local organising group have put together an exciting programme with some interesting speakers.

In this Newsletter we welcome a new corporate member, SPT Labtech and we continue our tour of H&I labs, with a visit to the lab in Glasgow. Andrew Blair gives us an insight into the repertoire of tests performed by the lab and the clinical services supported. The visit ends with a lovely section from the lab's newest recruits Katie, Laura and Caitlin, who are busy completing their IBMS Specialist Portfolios.

Amy De'Ath's Science Watch is an excellent summary of the recent publication in the American Journal of Transplantation this year *"Clinical recommendations for post-transplant assessment of anti-HLA (Human Leukocyte Antigen) donor-specific antibodies: A Sensitization in Transplantation: Assessment of Risk consensus document. Lefaucheur et al"*. This meeting report summarises the findings of the Sensitization in Transplantation: Assessment of Risk (STAR) 2022 working group and will be particularly relevant as we move towards the first Imlifidase facilitated deceased donor kidney transplants.

So, if we continue to have sunny days and clear nights, dust off those telescopes and get supernova spotting!!!

Deborah Sage

>> Science Watch - continued from Page 1

- De novo DSA develop due to blood transfusion, pregnancy, transplantation and immunosuppression minimisation, including switching from calcineurin inhibitors to mTOR inhibitors. Also, non-adherence is associated with the development of de novo DSA. In patients with suboptimal immunosuppression HLA epitope mismatch load assessment may further identify patients with a higher risk of de novo DSA development.
- Patients with de novo DSAs display a 25% to 53% incidence of subclinical ABMR at the time of de novo DSA detection. They also exhibit a higher risk of chronic ABMR than patients with pre-formed DSA.
- In patients with preformed DSAs, 31% to 50% develop sub-clinical ABMR within 3 months post-transplant. The incidence of subclinical ABMR is also high in patients with resolved preformed DSAs.
- The presence of circulating DSAs, either preformed or de novo, is associated with increased expression of ABMR-related transcripts in kidney biopsies showing no histologic signs of ABMR.
- Patients with de novo DSAs also have a significantly increased risk of kidney allograft loss compared with patients with other categories of DSA.

Heart

- 3% to 11% of heart transplant recipients have pre-formed DSAs at the time of transplant. HLA sensitisation is common due to prior cardiac surgery, administration of blood transfusion, the use of mechanical assist devices or from pregnancy in female patients.
- Patients with preformed DSAs and/or positive CDC crossmatches displayed significantly lower rejection-free survival in the first year after heart transplant.
- Patients with persistent preformed or de novo DSAs, especially those with DQ DSA specificity, have worse heart allograft survival than patients with transient DSA.
- There is some evidence to suggest de novo DSAs develop post-transplant in 10% to 30% of patients.
- Non-adherence is associated with de novo DSAs but the effect of different immunosuppressive regimes is largely unexplored in heart transplantation.
- HLA epitope mismatch score may identify heart patients with a higher risk of de novo DSA development.
- Both preformed and de novo DSAs were associated with an increased incidence of ABMR, cardiac artery vasculopathy (CAV) and heart allograft loss. However, patients with de novo DSAs had significantly higher risk of allograft loss than those with persistent preformed DSAs.

Lung

- De novo DSAs are associated with bronchiolitis obliterans syndrome, chronic lung allograft dysfunction (CLAD) and patient death.
- It is unclear whether pre-emptive treatment to eliminate DSA (plasma exchange and rituximab) early after transplantation leads to improved clinical outcome as spontaneous elimination of DSAs occurs frequently.
- HLA epitope mismatch scores may identify a higher risk of de novo DSA development.
- Other risk factors, such as the presence of Pseudomonas and acute cellular rejection were identified as independent risk factors for DSA development after lung transplant.
- Elevated levels of donor-derived cell-free DNA (ddcfDNA) before clinical diagnosis of ABMR were associated with a concurrent rise in DSA levels.
- The clinical impact of preformed DSAs is not well defined due to a lack of follow up data. However, some studies show preformed DSAs (complement fixing or >5,000 MFI) can predict poor patient survival within 1- year post-transplant. Longer term, DSA may be associated with prolonged mechanical ventilation and ABMR.
- Persistent preformed or de novo DSAs but not transient DSAs were negatively associated with allograft survival and increased CLAD.
- DQ DSA, whether preformed or de novo, were associated with an increased risk of CLAD and ABMR.

Liver

- Data suggest a negative clinical impact of both preformed and de novo DSA on liver transplant outcomes.
- Studies suggest an increased risk for rejection when higher MFI cut-offs for positivity were used or multiple DSAs were found.
- De novo DSAs are observed at a lower incidence than in kidney, heart and lung transplantation.
- De novo DSAs were associated with an increased risk of allograft loss, chronic rejection and allograft rejection alone compared with patients without de novo DSAs.
- DSA positivity, regardless of preformed or de novo status, was associated with more allograft inflammation and more allograft fibrosis.
- HLA epitope mismatch scores may allow the identification of liver patients with higher risk of de novo DSA development.
- Non-adherence and suboptimal immunosuppression can impact the incidence and risk of de novo DSA.
- Paediatric liver transplant recipients appear operationally tolerant after immunosuppression withdrawal. In those that developed de novo DSA this was a risk factor for acute rejection.

Future Directions

There is a lack of integration between DSA information, functional data, clinical parameters and histologic injury as a tool to guide clinical practice.

Areas to address to enable future comparisons include:

1. Standardisation of the criteria to define DSAs to enable meaningful comparisons.
2. DSA should be classified according to pre-existing or de novo, pre-, peri- or post-transplant as well as strength/titre and persistence.
3. Information such as DSA assessment, functional and clinical information at the time of biopsy should be recorded to assess impact on allograft injury.
4. High-resolution HLA genotyping would improve the correct assignment of DSAs and therefore clinical relevance of DSAs.
5. Standardised approaches to using HLA epitope/eplet mismatch scores should be defined with rigorous clinical validation across cohorts and organs.
6. The clinical utility of allograft biopsy in patients with persistent preformed and de novo DSAs, especially in the absence of allograft dysfunction, needs to be better characterised.
7. Non-invasive biomarkers such as ddcfDNA and T/B cell ELISPOT warrants evaluation to help with improved clinical risk assessment and for personalisation of immunosuppression post-transplant.

2) Relevance of post-transplant DSA assessment for diagnosis of ABMR, identification of different phenotypes of ABMR, and evaluation of treatment management of ABMR

The presence of circulating DSAs is one of a number of criterion for diagnosis of ABMR in solid organ transplantation. The presence of DSA should be considered in relation to histologic ABMR classifications. In addition, assessing the kinetics of DSAs during treatment of ABMR may identify patients at risk of lower response to treatment.

Kidney

- The presence of circulating DSAs is a key diagnostic criterion for ABMR in the Banff classification for kidney transplant rejection.
- Histologic ABMR in kidney allografts may exist in the absence of DSA as the association of non-HLA antibodies with ABMR lesions is increasingly reported..
- DSA-positive ABMR presents with more C4d deposition and increased risk of kidney allograft loss.
- Microvascular inflammation without C4d and DSAs is not classified as ABMR and may not always reflect antibody involvement but this needs to be further investigated in terms of triggers, clinical presentation, outcome and etiology.
- DSAs, when detectable in ABMR, display specific characteristics, including high MFI/titer, increased complement-fixing ability and predominance of IgG1 and IgG3 subclasses.
- Therapeutic strategies should be considered according to the clinical ABMR endotypes identified.
- DSAs are a frequently used as a biomarker to evaluate treatment of ABMR. Persistently high MFI DSA MFI has a negative impact on graft survival when associated with persistent poor graft function and inflammation.
- Complement-fixation (C1q) of DSAs, when positive after treatment of ABMR, was associated with lower clinical and histologic response to therapy.
- C1q of DSAs, whether it reflects higher quantity/MFI of DSAs or intrinsic capacity to activate complement, combined with assessment of DSA MFI or relative change in MFI may identify responders to desensitising therapy such as Imlifidase or eculizumab.
- C1q-fixing DSAs with clinical and histologic parameters may also identify ABMR patients at risk for increased transplant glomerulopathy and long-term kidney allograft loss.
- There is an absence of clinical trial data but adjunctive therapy (complement inhibitors, rituximab, splenectomy) might be warranted if the risk of kidney allograft loss is considered high (<30 days post-transplant with a high quantity of antibody and allograft dysfunction).

Heart

- The presence of circulating DSAs is not currently a diagnostic criterion but is being actively considered as such for ABMR diagnosis with DSA testing showing negative predictive value for biopsy-diagnosed ABMR.
- ABMR may exist in the absence of detectable circulating DSAs, possibly because of the binding of alloantibodies to the graft or in the presence of non-HLA antibodies.
- ABMR with positive DSA detection is associated with heart allograft dysfunction, with increased risk of future ABMR episodes and higher rate of allograft loss.
- Eculizumab treatment may significantly reduce the risk of ABMR in cases of high immunologic risk.

Lung

- Circulating DSA is now a Banff diagnostic criterion for ABMR in lung transplantation.
- There is a lack of data on how to differentiate acute from hyperacute and chronic ABMR.
- Some studies suggest that DSA MFI, titre and C1q-fixing capacity were significantly decreased after treatment for ABMR.

Liver

- The presence of circulating DSAs is diagnostic for ABMR.
- Some studies show that DSA-positive patients are more likely to have inflammation and fibrosis despite normal liver function tests.
- In patients biopsied at 10 years post-transplant fibrosis and inflammation were significantly higher in DSA and C4d-positive group.
- A chronic ABMR score was developed to predict allograft failure especially in patients with DSA >10,000 MFI.

Future Directions

1. DSA detection as part of the diagnostic criteria for ABMR in heart transplantation needs further study as well as consideration of non-HLA antibodies.
2. Better characterisation of the clinical phenotypes of histologic ABMR in the absence of DSAs is required.
3. Large multi-centre studies to assess the use of DSA testing in monitoring response to ABMR treatment are required.
4. The investigation of ancillary DSA testing (titer, complement, or isotype assays) in relation to allograft function, etc. to better predict post-treatment outcomes is required.

>> Continued on Page 7

BSHI Committee Members

Chairperson: Deborah Sage
Start: AGM 2020 *Finish:* AGM 2023
Email: chair@bshi.org.uk

Chair Elect: Olivia Shaw
Start: AGM 2023 *Finish:* AGM 2026
Email olivia.shaw@viapath.co.uk

Secretary: Dr Carla Rosser
Start: AGM 2021 *Finish:* AGM 2024
Email: secretary@bshi.org.uk

Treasurer: Corinna Freeman
Start: AGM 2022 *Finish:* AGM 2025
Email: treasurer@bshi.org.uk

Meetings Secretary: Helena Lee
Start: AGM 2022 *Finish:* AGM 2025
Email: Helena.Lee@mft.nhs.uk

Membership Secretary: Emily Ryan
Start: AGM 2021 *Finish:* AGM 2024
Email: membership@bshi.org.uk

Ordinary Members:
Rachel Smith
Start: AGM 2020 *Finish:* AGM 2023
Email: r.smith70@nhs.net

Dan Eggleston
Start: AGM 2022 *Finish:* AGM 2025
Email: daniel.eggleston@mft.nhs.uk

Jessie Martin
Start: AGM 2021 *Finish:* AGM 2024
Email: jessie.martin@addenbrookes.nhs.uk

Chair BPAG: Dr Richard Battle
Start: AGM 2021 *Finish:* AGM 2024
Email: richard.battle@nhs.scot

Chair BEB: Sarah Peacock*
Start: AGM 2018 *Finish:* AGM 2024
Email: sarah.peacock22@nhs.net

IT Consultant: James Robinson

Archivist: Richard Battle

BSHI Secretary Report – Carla Rosser

BSHI Main Committee meeting

23rd March 2023

Main Committee members in attendance:
Chair: Deb Sage (DS); *Chair Elect:* Olivia Shaw; *Secretary:* Carla Rosser (CR); *Treasurer:* Corinna Freeman (CF): *Chair BEB:* Sarah Peacock (SP); *Membership Secretary:* Emily Ryan (ER); *Meetings Secretary:* Helena Lee (HL); *Ordinary members:* Rachel Smith (RS), Jessie Martin (JM) and Daniel Eggleston (DE); Apologies from: *Chair BPAG:* Richard Battle (RB)

Chair's Report [DS]:

Equality, Diversity and Inclusion (EDI) H&I Stories – DS is coordinating short pieces about different career paths within H&I to promote these via the website.

Academy of Healthcare Science (AHCS) – Suggested that HSST trainees may be able to submit Leadership and Management assignments to the AHCS Leadership journal. DS to invite volunteers from the HSST trainees. The AHCS is aware of the challenges with STP equivalence and they are in discussion with the HCPC to review the process.

Secretary Report [CR]:

EBS Review – Improvements have been seen but there are still some issues to be resolved around support for IT issues.

Wiley Educational Resources – DS, RB and CR attended a meeting with Wiley to discuss their educational resources. Meeting notes and presentation slides were shared with the committee. It was felt that currently BSHI is not in a position to engage with these.

Treasurer's Report [CF]:

BSHI Conference – CF has reviewed the financial situation to ensure we have sufficient funds to make the required payments ahead of the BSHI Conference 2023. Currently it looks like there are sufficient funds but we need to consider ways to generate further income to the society.

Bursaries – a budget is to be set for each conference.

Bank Account Issues – there has been a request for further information from the BSHI bank account provider and CF is working with EBS to respond.

Membership Secretary [ER]:

Membership update – we currently have 349 active members and 24 new members.

Corporate membership – the committee approved a new corporate membership application from SPT Labtech. It was agreed that corporate members could also be granted access to the BSHI journal package following a member request.

Job Vacancy advertising – general guidance can now be accessed via the main homepage of the BSHI website due to a number of queries for assistance. Only vacancies relevant to BSHI members will be approved.

Email issues – there are unfortunately still ongoing issues with the BSHI website and MailChimp.

Retired members – a reminder that retired membership is available is now added to each newsletter email.

Honorary members – a nomination form is now available on the website and a reminder email will be sent ahead of the annual BSHI conference.

Meeting Secretary's Report [HL]:

BSHI 2022 – due to an error made by EBS, the incorrect income being reported at the AGM. This has now been corrected to £18,540 on a revised income report.

BSHI 2023 – the plans for this years conference are being developed with the organising committee. The conference will again be held at the Park Regis but the 2022 feedback has been taken on board and changes are being made.

BSHI Education Board (BEB) Chair's Report [SP]:

New HCPC standards – these are coming into effect in September 2023 and internal training schemes require a review.

>> Continued on Page 8

>> Science Watch - continued from Page 5

3) Relevance of post-transplant DSA for allograft prognosis and risk stratification

There is a need for biomarkers to optimise risk stratification of long-term allograft failure at the level of the individual patient. DSA testing currently represents the most advanced assay to measure recipient alloimmune response to the donor and can be considered as a relevant endpoint for next-generation clinical trials.

The presence of post-transplant DSAs is a well-identified factor impacting allograft outcome but the threshold of MFI that correlates with allograft loss has not been established. Recently complement (C1q, C3d, or C4d) and isotype/subclass (IgG3) assays have demonstrated their potential to better predict allograft loss across solid organ transplantation.

Kidney

- Pre-formed DSAs that persist post-transplant are associated with poor kidney allograft outcomes (MFI >3000 were associated with decreased kidney allograft survival).
- Both class I and II DSAs were associated with kidney allograft failure.
- Repeated mismatched HLA antigens in re-transplantation are associated with increased risk of DSA generation and subsequent allograft loss.
- It is important to integrate the presence/MFI of DSAs as well as clinical and histologic parameters when predicting allograft loss e.g. iBox system.

Heart

- There is often a clinical need to cross HLA barriers in heart patients therefore clear risk stratification is required based on DSAs, the clinical status of the patient and the center's policy for risk-level acceptance.
- Assessment of crossmatch is important along with preformed DSAs for improved clinical risk stratification, as well as distinguishing preformed vs de novo DSA status.
- ABMR is frequent in allografts with CAV, and late or asymptomatic ABMR is associated with a higher risk for CAV.
- DSA was found to be an early predictor of poor clinical trajectory independent of other clinical and histologic confounders.

Lung

- Greater frequencies of DQ DSA and higher DQ cumulative MFI DSA were associated with ABMR.
- DQ DSA, when associated with ABMR, had more frequent allograft loss and CLAD.
- Patients with C1q-fixing DSAs displayed significantly lower 3-year rates of freedom from CLAD and allograft survival.
- Patients with persistent DSAs, DQ-specific DSAs and C1q-fixing DSAs experience a shorter time to CLAD and reduced CLAD-free survival.
- Patients with elevated DSA C3d-fixing ratio or MFI ratio had an increased rate of ABMR and displayed worst allograft survival than those with non–C3d-fixing and low MFI DSA.

Liver

- No defined MFI cut-off value that correlates with risk has been established although larger studies that used >5000 MFI found correlations with abnormal histology findings, fibrosis, ABMR and T cell–mediated rejection.
- The presence of DSA and relative MFI has been proposed to predict long-term liver allograft survival in patients with chronic ABMR lesions.
- Complement-fixing assays (C1q and C3d) can help predict the risk of liver allograft fibrosis as well as acute and chronic ABMR. However, there is little information on whether these assays can improve the prediction of liver allograft loss.
- The presence of DSA is being considered a potential biomarker for patients who should avoid immunosuppression weaning.

Future Directions

1. A rigorous assessment and comparison of non-invasive immune biomarkers with DSAs is required to evaluate whether DSA post-transplant development can be considered an endpoint in clinical trials and randomized-controlled studies.
2. The development of integrative predictive scores should be considered for all organs following the sample of iBox in kidney transplantation.

Conclusion

This report summarised current knowledge on the post-transplant evaluation of DSAs in kidney, heart, lung, and liver transplant recipients. The paper itself contains a useful summary table and grading of the recommendations made.

In addition, the STAR working group report identified gaps in current knowledge, such as the need for more studies to better define the clinical impact of persistent preformed DSAs in all solid organ transplant types, that should be addressed. It also provides directions for clinical investigations and trials in the future that will further refine the clinical utility of post-transplant DSA assessment, leading to improved transplant management and patient care.

>> BSHI Secretary Report - continued from Page 6

Research Exec Update – a full special interest group (SIG) programme is in place.

Higher Specialist Scientist Register (HSSR) – guidance for joining the HSSR has been written by Paul Wright (PW) and SP. This is available on the website.

CPDMe – guidance written by PW and SP was published in the newsletter and is also available on the website.

Julia Bodmer Award – No applications received.

NHS Pay Award – The IBMS have issued a public statement about the pay award with concerns about the implications for scientific staff pay progression if nurses pay scales were separated from other healthcare staff. BSHI to share this statement with members.

BSHI Professional Advisory Group (BPAG) Chair's Report [DS for RB]:

Antibody guidelines – the introduction section is waiting on final comments before being submitted to IJI. The organ specific guidelines are also nearly complete and are just being reformatted to align with the British Transplantation Society (BTS) format.

Imlifidase guidelines – BSHI facilitated a discussion in February about the Imlifidase guidelines. A recording is available and will be shared soon.

Work Force Planning – DS is just finalising the results from the survey. It is hoped the final document will be useful for local and national work force planning.

Equality, Diversity and Inclusion (EDI):

RCPath EDI meeting – attended by HL, a lot of discussion about the changes to the exam format and the impact on overseas candidates, particularly those for whom English is not their first language. SP to seek guidance from NSHCS about addressing EDI in BSHI/H&I training.

Academy for Healthcare Science EDI – the AHCS would like to collect data on EDI with a survey.

BSHI Website:

Introduction to H&I/BSHI – a new page has been created containing some general information for members and non-members.

Guidelines – the links to BSHI guidelines are to be moved ahead of the membership paywall.

Newsletter Team Report:

Newsletter Graphic Designer – a new graphic designer has been employed to produce the newsletter due to the previous designer retiring. The format of both the newsletter and the JBL has been revamped.

Committee Liaison – CF has agreed to be the committee liaison with the newsletter taking over from Franco Tavarozzi.

Any other business:

New Committee Members – welcome to Livvy Shaw (OS) and Dan Eggleston (DE) for their first full committee meeting.

LinkedIn – the BSHI account has been revived and we now have 206 followers! The account is predominantly being managed by SP so many thanks to her!

BSHI 2024 Expressions of interest – to send an email asking for expressions of interest for a BSHI 2024 organising committee.

Committee Leaver – many thanks to Rachel Smith (RS), who will now be leaving the committee, for all of her contributions.

BSHI Education Board Committee meeting

25th April 2023

BSHI Committee in attendance:
Chair: Sarah Peacock (SP); *TDE Chair:* Paul Wright (PW); *RE Chair:* Anthony Poles (AP); *RE Secretary:* Amy De'Ath (AD); *Chair of RCPath H&I Panel of Examiners:* Tracey Rees (TR); *IBMS Rep:* Liam Oates (LO); *BSHI Secretary:* Carla Rosser (CR); *ACS Rep:* Olivia Shaw (OS). **Apologies from: ESHI Rep: Deborah Sage (DS).**

BEB Chair's Report [SP]:

Julia Bodmer Award – Unfortunately no applications have been received.

HCPC Standards – awaiting guidance from the Association of Clinical Scientists (ACS) on their generic standards and whether or not a DBS check will be required. BEB will review the H&I standards once the generic ones are available.

Pathology Portal – collaboration between the Royal College of Pathologists and Health Education England (HEE) to develop an NHS wide training resource. DT and SP are working on the H&I content and will be looking to involve other BSHI members. Further information will be available when this has progressed.

BSHI Diploma and Level 7 Clinical Scientist Apprenticeship – this is now deliverable but requires a University partner to deliver the material so currently is only available in Audiology. For now, the BSHI diploma offers a viable route to ACS registration in H&I.

National School of Healthcare Science (NSHCS) update – Health Education England (HEE) is now an arm of NHS England within the Workforce Directorate. Berne Ferry has retired as Head of the NSHCS. A new formal training programme for STP trainers has been developed. NHS75 Schools Talk Ambassadors programme has been launched.

MAHSE Academic Liaison post – a new post has been created and someone is due to start in post shortly. The TDE will need to discuss the impact on the TDE committee structure once they have settled in.

RE Chair's Report (AP):

RE Update – the last meeting was held on 22/03/23. One ordinary member post has become vacant and will be advertised later this year to start after the 2023 AGM. AP will also be ending his term at this AGM.

Collaborative projects – the RE are actively seeking new collaborative projects using the SIGs to promote and welcome ideas.

Journal based learning – a new JBL format was introduced in Cycle 84 using a multiple choice format. The aim to provide more educational benefit.

SIG Update – the antibody SIG was held on 10/11/22 and was well attended (90 delegates) with positive feedback. The Digital Solutions SIG is open for registration and will be held on 17/05/23. A further SIG is due to be held in the autumn focusing on HSCT/chimerism.

British Society for Immunology grants – information was shared with the Heads of Laboratories.

BSHI 2023 – The RE is supporting the BSHI Conference local organising committee to develop the programme; most speakers have now been confirmed. They will also be reviewing and scoring abstracts in June.

Training and Development Executive (TDE) Chair's Report [PW]:

IBMS Specialist Portfolio/BSHI Post-Graduate Diploma Equivalency – a gap analysis has been carried out and a new guidance document has been written. This was ratified by the committee.

BSHI CoC Coordinator – PW requested to allow Charlene Hoad to continue in this post for a second term due to ongoing work to review the Certificate of Competence (CoC) curriculum. This was agreed by the committee.

BSHI Training Manager/Assessors forum – the meeting was held on 20/04/23. The recordings and/or slides will be shared shortly with those who registered.

Association of Clinical Scientists (ACS) Representative Report [OS]:

Virtual examinations – a request for candidates opinions on virtual examinations has been circulated.

ACS Applications – applications are continuing to be accepted throughout the year (no deadlines).

Institute of Biomedical Scientist (IBMS) Representative Report [LO]:

IBMS-BSHI review – work has been completed and Charlene Hoad will feedback to the TDE at the next meeting.

RCPath/Higher Training Representative Report [TR]:

Examinations – Part 2 examinations held on 13/04/23 and 14/04/23 with results expected in May.

End of Term – TR will be reaching the end of her term in June 2023 and declarations of interest have been requested by the Royal College. Many thanks from all on the BEB for all of Tracey's work during her term.

Any Other Business (AOB):

None

Meetings and events

BBTS Annual Conference 2023
10th September 2023 – 12th September 2023
Harrogate)

ESOT 40th Conference 2023
17th September 2023 – 20th September 2023
Athens, Greece

BSHI Conference 2023
12th September 2023 – 13th September 2023
Birmingham

ASHI Annual Meeting
15th October 2023 – 20th October 2023
San Antonio, USA

Glasgow

Virtual Laboratory Tour: Glasgow

Andrew Blair, H&I Glasgow

Welcome to Glasgow H&I! One of only two H&I labs in Scotland along with the H&I lab in Edinburgh. We are based in the West End of Glasgow and are situated at Gartnavel General Hospital which is lucky enough to be located next to a very scenic pond of which our lab overlooks!

Originally located at Glasgow Royal Infirmary, the lab has been active in the H&I community for many years, hosting BSHI Conferences in 2002 and 2011. Unfortunately the EFI Congress planned for 2020 was postponed due to Covid, going ahead as a successful virtual meeting the following year.

Some of the staff taking part in an organ transplant promotion.

The Glasgow lab supports stem cell, renal and cardiac transplant programmes and in addition performs a variety of disease association tests including for ankylosing spondylitis, abacavir hypersensitivity, coeliac disease and narcolepsy.

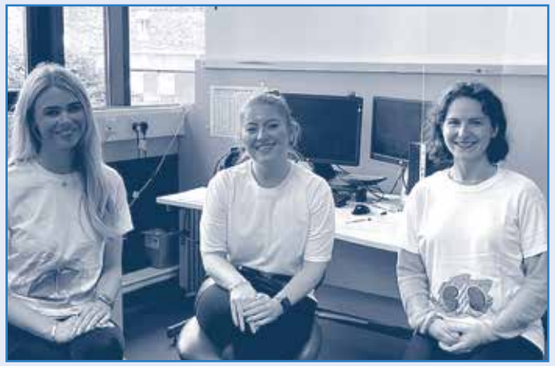
For solid organ transplant we support adult kidney transplantation for the west of Scotland for the Queen Elizabeth University Hospital, paediatric kidney transplantation for all Scotland at the Royal Hospital for Children and cardiac transplantation for all Scotland at the Golden Jubilee Hospital. The heart transplant unit has just achieved a record number of transplants – 40 in 2022 - 2023, making it the highest volume heart transplant centre in the UK last year. For stem cell transplant we support adult HPCT for all Scotland at the Queen Elizabeth University Hospital and paediatric HPCT for all Scotland at the Royal Hospital for Children.

The lab is divided into sections which staff rotate through regularly to ensure everyone gets to keep their competencies up-to-date and to keep each week feeling different! We all participate in an on-call rota and we are a very flexible team when it comes to helping one another with on-call swaps and helping out with day-to-day work when certain sections get particularly hectic!

We perform a comprehensive range of serological and molecular techniques including NGS, SSO, SSP, RT-PCR, HLA antibody testing, flow crossmatching and CDC crossmatching. The majority of our molecular work is performed by either NGS or SSO with SSP being used for B27/B57 testing and RT-PCR used for deceased donor on-call typing. HLA antibody testing is performed by Luminex and almost all our crossmatching is now done using the flow crossmatch with the CDC crossmatch just being phased out this year. We utilise virtual crossmatching where applicable when no DSA is detected using Luminex antibody testing.

Staff are supported in their training, with recent successes in Royal College of Pathologist exams and the BSHI Diploma.

Due to our increased workload, and a change in working hours by some staff, we were able to recruit three new staff members; Katie, Laura and Caitlin have been fantastic additions to the team and they were keen to give their perspective on their time so far in Glasgow H&I.



Hello! We're Katie, Laura and Caitlin and we are the newest permanent recruits to the H&I department here in Glasgow. We started in August 2022 and we have had a lovely welcome into the team. We each started our training within a different section of the lab, rotating every month into something new with the three main sections being flow crossmatching, antibodies and molecular. We have found starting together to be of much benefit as we've been able to support each other through each rotation. Our H&I colleagues have also been fantastic in training us and helping us with any questions we may have, as everyone is extremely knowledgeable. Alongside our training we've all started our IBMS specialist portfolio in H&I which has enabled us to develop our background and specialist knowledge. The lab has been great in supporting us through this with other CPD opportunities such as attending webinars and talks. In addition, we are no longer the newest additions to the lab, as we have a supernumerary trainee Clinical Scientist, Kerry, and for the first time the lab has taken on a university placement student , Maria and we've all been involved in the training programmes implemented, which has allowed us to share our new knowledge.

Laura Barr, Katie Harrison and Caitlin McColl.

Training & Development Executive Update

Position	Name	Until	Email
Chairperson	Paul Wright	Sep-25	Paul.wright@liverpoolft.nhs.uk
Secretary	Felicity May	Nov-26	Felicity.May@wales.nhs.uk
BSHI Diploma Co-ordinator	Fiona Powell	Sep-25	fiona.powell3@nhs.net
STP Co-ordinator	Anna Barker	Nov-26	Anna.barker@mft.nhs.uk
RCPath Trainee Representative	Clare Collins	Sep-25	Clare.collins@nhsbt.nhs.uk
Meetings Secretary H&I Specialist	Kirti Mepani	Nov-23	Kirti.Mepani@nhsbt.nhs.uk
Meetings Secretary Higher Training	Amy De'Ath	Aug-24	Amy.De'ath@wales.nhs.uk
Academic Liaison	Natalia Diaz Burlinson	TBC	Natalia.DiazBurlinson@mft.nhs.uk
Trainee Representative	Kirsty Clark	Nov-24	kirsty.clark@nhsbt.nhs.uk
BSHI Certificate of Competence Co-ordinator	Charlene Hoad	Apr-26	Charlene.Hoad@viapath.co.uk
IBMS representative	Liam Oates	Mar-24	Liam.Oates@wales.nhs.uk
Ordinary Member	Jennifer Lord	Dec-23	Jennifer.Lord@mft.nhs.uk
Ordinary Member	Sharon Vivers	Sep-24	Sharon.Vivers@anthonynolan.org
Ordinary Member	Emma Holmes	Sep-25	Emma.Holmes@nhsbt.nhs.uk

HCPC Standards of Education and Training

IBMS have specified that an enhanced DBS check is completed as part of education provider's application process. This is to comply with requirements of Section 2.4 of the HCPC Standards of Education and Training (SETs). There are currently no changes to ACS policy to date, however the TDE/BEB will be vigilant for any changes impacting Clinical Scientist applications.

Higher Training / RCPath

The Higher Training Day took place 18-19th May. Interactive sessions were particularly well received and the timing of the event earlier in the year gave candidates more time prior to the deadline for Part 1 applications. Feedback from this year's Part 2 exams centred on the lack of formal training days geared towards part 2 preparation. The TDE propose that mentoring from consultant-level colleagues is the most appropriate support for Part 2 level and will explore options on how this can be supported.

IBMS

Guidelines for equivalency have been ratified by the BSHI BEB. These guidelines will clarify which elements of the BSHI Diploma require completion for equivalence. BSHI is currently formalising updates to the document.

BSHI Diploma

We currently have 26 active trainees. Vivas will remain on virtual platform for 2023. Two remaining sessions are planned this year (see below). All coursework will need to be completed and signed off before applying for viva. The next training day is planned for 5th October 2023 and will be virtual.

Viva Week
19th - 23rd June 2023
13th – 20th October 2023

Viva Application Deadline
19th May 2023
15th September2023

Work Submission Deadline
7th April 2023
4th August 2023

STP

A new representative is joining the University of Manchester in June. The role is anticipated to contribute to lecturing in STP programme, however the full scope of the role and relation to the TDE is to be confirmed. IACC for next year will remain the same, 2024 will be the last year of old curriculum. It has now decided not to introduce work-based assessments, instead, there will be national standards for the conduct of assessment.

BSHI Certificate of Competence

The review of the CoC curriculum is underway. This will include a gap analysis to differentiate the CoC, IBMS and BSHI diploma. Guidance on applying for extensions is planned.

JBL CYCLE 84

Phillpott, M., Daga, S., Higgins, R., Lowe, D., Krishnan, N., Zehnder, D., Briggs, D. and Khovanova, N., 2022. Dynamic Behaviour of Donor Specific Antibodies in the Early Period Following HLA Incompatible Kidney Transplantation. Transplant International, 35, p.10128.

Scoring

CPD points will be awarded as follows:

10 correct	*3 points*
7 – 9 correct	*2 points*
4 – 6 correct	*1 point*
<3 correct	*0 points*

Question 1	**How many distinct donor-specific antibodies (DSA) response groups were there?**	**Answer**
Option 1	Three	
Option 2	Four	
Option 3	Five	**Correct**
Option 4	Six	

Question 2	**What type of machine learning was used to classify the DSA responses?**	**Answer**
Option 1	Supervised Learning	
Option 2	Unsupervised Learning	**Correct**
Option 3	Semi-Supervised Learning	
Option 4	Reinforced Learning	

Question 3	**Which DSA response group was associated with the highest early acute rejection rate?**	**Answer**
Option 1	No response	
Option 2	Fast modulation	**Correct**
Option 3	Slow modulation	
Option 4	Sustained	

Question 4	**Which DSA response group was associated with the highest five-year graft failure?**	**Answer**
Option 1	No response	
Option 2	Fast modulation	
Option 3	Slow modulation	
Option 4	Sustained	**Correct**

Question 5	**How many patients were required for double filtration plasmapheresis?**	**Answer**
Option 1	68	**Correct**
Option 2	78	
Option 3	88	
Option 4	133	

Togninalli M, Yoneoka D, Kolios AGA, Borgwardt K, Nilsson J. Pretransplant Kinetics of Anti-HLA Antibodies in Patients on the Waiting List for Kidney Transplantation. J Am Soc Nephrol. 2019 Nov;30(11):2262-2274. doi: 10.1681/ASN.2019060594. Epub 2019 Oct 25. PMID: 31653784; PMCID: PMC6830788.

All CPD returns to be made by the BSHI website link.

Question 6	What is the recommended monitoring interval of donor-specific antibodies for patients on the waiting list?	Answer
Option 1	3 months	
Option 2	4 months	
Option 3	6 months	
Option 4	Individualized	Correct

Question 7	Which patient group showed greater fluctuations in their HLA antibody levels?	Answer
Option 1	Previously transplanted	Correct
Option 2	Previous pregnancy	
Option 3	Previous transfusion	
Option 4	No previous immunizing events	

Question 8	What was the MFI threshold used in this study to distinguish negative and positive SAB result?	Answer
Option 1	> 500 MFI	
Option 2	> 1000 MFI	Correct
Option 3	> 2000 MFI	
Option 4	> 5000 MFI	

Question 9	What was the minimum number of assay measurements for patients to be included in this study?	Answer
Option 1	One	
Option 2	Two	Correct
Option 3	Three	
Option 4	Four	

Question 10	What was the main difficulty to cluster patients on the basis of statistical properties related to the HLA antibody kinetics?	Answer
Option 1	Age	
Option 2	Gender	
Option 3	Irregularly sampled time-series	Correct
Option 4	Waiting time	

JBL CYCLE 85

Comparison of NK alloreactivity prediction models based on KIR-MHC interactions in haematopoietic stem cell transplantation

Adèle Dhuyser, Thomas Remen, Michaël Pérès, Vitalina Chamberlain-Evans, Neda Nemat-Gorgani, Arnaud Campidelli, Sandra Clément, Marie Thérèse Rubio, John Trowsdale, Alice Aarnink and James Traherne
Front. Immunol., 02 March 2023, Sec. Alloimmunity and Transplantation, Volume 14 - 2023 | https://doi.org/10.3389/fimmu.2023.1028162

Scoring

CPD points will be awarded as follows:

10 correct	*3 points*
7 – 9 correct	*2 points*
4 – 6 correct	*1 point*
<3 correct	*0 points*

Question 1	Which two independent cohorts did the study recruit?	Answer
A	35 genoidentical and 43 haploidentical pairs	
B	F43 genoidentical and 35 haploidentical pairs	
C	43 genoidentical and 35 unrelated pairs	
D	33 haploidentical and 45 genoidentical pairs	
		Correct =

Question 2	Which of these KIR genes are considered to occupy the same locus?	Answer
A	KIR2DL2 and KIR2DL3	
B	KIR3DL2 and KIR3DL3	
C	KIR3DL1 and KIR3DL2	
D	KIR2DS3 and KIR2DS5	
		Correct =

Question 3	Which two pairs of HLA genes were used for linkage disequilibrium validation?	Answer
A	HLA-A~C and DRB1~DQB1	
B	HLA-C~B and DQB1~DPB1	
C	HLA-C~B and DRB3/4/5~DRB1	
D	HLA-C~B and DRB1~DQB1	
		Correct =

Question 4	WWhich of these is NOT one of the models investigated in the study?	Answer
A	Ligand-ligand	
B	Education	
C	Missing receptor	
D	Allelic polymorphism	
		Correct =

Question 5	KIR-B content models stratify scores into three groups. What are they?	Answer
A	Poor, Neutral, Good	
B	Neutral, Better, Best	
C	Not Best, Better, Best	
D	Neutral, Good, Excellent	
		Correct =

JBL CYCLE 85

Submission deadline 23rd July 2023

Comparison of NK alloreactivity prediction models based on KIR-MHC interactions in haematopoietic stem cell transplantation

Adèle Dhuyser, Thomas Remen, Michaël Pérès, Vitalina Chamberlain-Evans, Neda Nemat-Gorgani, Arnaud Campidelli, Sandra Clément, Marie Thérèse Rubio, John Trowsdale, Alice Aarnink and James Traherne
Front. Immunol., 02 March 2023, Sec. Alloimmunity and Transplantation, Volume 14 - 2023 | https://doi.org/10.3389/fimmu.2023.1028162

Scoring

CPD points will be awarded as follows:

10 correct	*3 points*
7 – 9 correct	*2 points*
4 – 6 correct	*1 point*
<3 correct	*0 points*

All CPD returns to be made by the BSHI website link.

Question 6	**Which amino acid residues are present at position 245 of the TM-domain of KIR2DL1?**	**Answer**
A	Cysteine or arginine	
B	Serine or arginine	
C	Cysteine or threonine	
D	Methionine or threonine	
		Correct =
Question 7	**In the haploidentical cohort, which inverse correlation was the least strong of these four?**	**Answer**
A	2DL2/3-C1/Educ-2DL2/3	
B	3DL1-Bw4/Educ-3DL1	
C	3DL2-A3/11/Educ-3DL1	
D	2DL1-C2/Educ-2DL1	
		Correct =
Question 8	**How many models were tested in total?**	**Answer**
A	6	
B	12	
C	20	
D	27	
		Correct =
Question 9	**Which factor was the only one to be significant in both cohorts?**	**Answer**
A	OKIR2DL1 245C/R dimorphism	
B	KIR Cen-B content	
C	THLA-B leader dimorphism	
D	3DL2-A3/11 interaction	
		Correct =
Question 10	**What was the median follow-up for the genoidentical cohort?**	**Answer**
A	23 months	
B	10 months	
C	18 months	
D	13 months	
		Correct =

Call for case studies

This notice is an update on the process for submission of case studies for publication in the Newsletter.
The purpose of publishing case studies in the Newsletter is to highlight interesting cases from individual H&I laboratories that the communinity as a whole would benefit from in terms of training and education or to generate discussion. We all stand to learn from each others' experiences.

There is no template for the submission. As a guide, it should be approximately 1000 words in length and at least at a level appropriate for inclusion in a portfolio for the Association of Clinical Scientists. Cases should include only a brief description of laboratory tests and focus primarily on the interpretation of results in the clinical context and their impact on patient management. Essentially, the more unusual and informative it is the better. Key learning points should be identified in order to highlight the educational value of the case.

Cases equals prizes!

As a replacement for the CPD prizes previously awarded for achievements in Journal Based Learning, the BSHI Education Board will now award a £25 book token for each case selected for publication in the Newsletter.

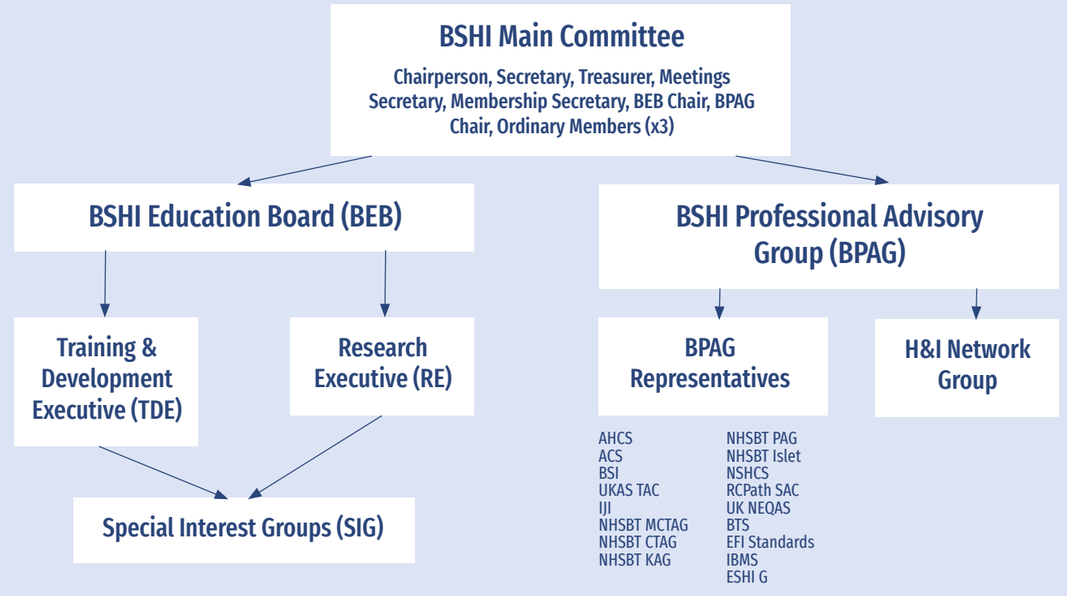
Submission process

Please send your submission to the BSHI Secretary, Carla Rosser (secretary@bshi.org.uk). Cases will then be reviewed by at least two members of the Education Board to assess suitability for publication. No more than one case study will be published in each Newsletter but if there is more than one suitable case submitted for one edition then cases my be held in reserve for publication in subsequent editions.

Chair, BSHI Education Board

The British Society for Histocompatibility & Immunogenetics (BSHI) Organogram

Committee, Sub-Committees & Working Groups 2022



BSHI Committee Organogram v5 [September 2022]
British Society for Histocompatibility and Immunogenetics, Company No: 6078396, Registered in England and Wales, Executive Business Support Ltd, City Wharf, Davidson Road, Lichfield, Staffordshire, WS14 9DZ. Registered Charity No. 1123760

BSHI Education Board Membership 2023

Position	Name	Until	Email
Chairperson	Sarah Peacock	AGM 2024 (2nd term)	Sarah.peacock@addenbrookes.nhs.uk
BSHI Secretary	Carla Rosser	AGM 2024	carla.rosser@nhsbt.nhs.uk
Chairperson of TDE	Paul Wright	2025	Paul.wright@liverpoolft.nhs.uk
Chairperson of Research Executive	Anthony Poles	2023	Anthony.Poles@nhsbt.nhs.uk
Research Executive Secretary	Amy De'Ath	Aug 2025 (2nd term)	Amy.De'ath@wales.nhs.uk
Chairperson of RCPath panel of examiners in H&I	Tracey Rees	As required	Tracey.Rees2@wales.nhs.uk
BSHI representative to ACS	Olivia Shaw	As required	Olivia.Shaw@viapath.co.uk
BSHI representative to IBMS	Liam Oates	Mar 2024	Liam.Oates@wales.nhs.uk
Co-opted member: UK member of EFI Education Committee	Deborah Sage	As required	Deborah.Sage@nhsbt.nhs.uk

BSHI Training and Development Executive Membership 2023

Position	Name	Until	Email
Chairperson	Paul Wright	Sep-25	Paul.wright@liverpoolft.nhs.uk
Secretary	Felicity May	Nov-26	Felicity.May@wales.nhs.uk
BSHI Diploma Co-ordinator	Fiona Powell	Sep-25	fiona.powell3@nhs.net
STP Co-ordinator	Anna Barker	Nov-26	Anna.barker@mft.nhs.uk
RCPath Trainee Representative	Clare Collins	Sep-25	Clare.collins@nhsbt.nhs.uk
Meetings Secretary H&I Specialist	Kirti Mepani	Nov-23	Kirti.Mepani@nhsbt.nhs.uk
Meetings Secretary Higher Training	Amy De'Ath	Aug-24	Amy.De'ath@wales.nhs.uk
Academic Liaison	Natalia Diaz Burlinson	TBC	Natalia.DiazBurlinson@mft.nhs.uk
Trainee Representative	Kirsty Clark	Nov-24	kirsty.clark@nhsbt.nhs.uk
BSHI Certificate of Competence Co-ordinator	Charlene Hoad	Apr-23	Charlene.Hoad@viapath.co.uk
IBMS representative	Liam Oates	Mar-24	Liam.Oates@wales.nhs.uk
Ordinary Member	Jennifer Lord	Dec-23	Jennifer.Lord@mft.nhs.uk
Ordinary Member	Sharon Vivers	Sep-24	Sharon.Vivers@anthonynolan.org
Ordinary Member	Emma Holmes	Sep-25	Emma.Holmes@nhsbt.nhs.uk

BSHI Research Executive Membership 2023

	Position	Name	Start	End	Contact details	Comments
1	Chairperson (Officer)	Anthony Poles, NHSBT Filton	AGM 2020	AGM 2023	Anthony.Poles@nhsbt.nhs.uk	First term
2	Secretary (Officer)	Amy De'ath, Welsh Blood Service, Cardiff	AGM 2019	AGM 2025	Amy.De'ath@wales.nhs.uk	Second term Cannot be reappointed in 2025
1	Ordinary Member	Winnie Chong, National H&I Service Development, NHSBT Colindale	AGM 2020	AGM 2023	winnie.chong@nhsbt.nhs.uk	Second term. Cannot be reappointed in 2023
2	Ordinary Member	Stephen Weston, Leicester General Hospital	AGM 2019	AGM 2025	stephen.weston@uhl-tr.nhs.uk	Second term Cannot be reappointed in 2025
3	Ordinary Member	Emma White, Barts	AGM 2020	AGM 2023	emma.white36@nhs.net	First term
4	Ordinary Member	Thomas Turner, Anthony Nolan	AGM 2020	AGM 2023	Thomas.Turner@anthonynolan.org	First term
5	Ordinary Member	Sarinder Day, Southmead Bristol	AGM 2020	AGM 2023	Sarinder.Day@nbt.nhs.uk	First term
6	Ordinary Member	Paul Wright, Manchester	AGM 2021	AGM 2024	Paul.A.Wright@mft.nhs.uk	First term
7	Ordinary Member	Ying Lee, NHSBT	AGM 2021	AGM 2024	Ying.Li@nhsbt.nhs.uk	First term
8	Ordinary Member	Eva Santos, Hammersmith	AGM 2022	AGM 2025	eva.santos@nhs.net	First term

The two officers of the RE are the Chairperson and RE Secretary, there are also a maximum of 8 ordinary members. The two officers of the RE are the Chairperson and RE Secretary, there are also a maximum of 8 ordinary members. The tenure of RE committee members is three years. However all members are eligible for immediate reappointment subject to maximum tenure of six years after which time the member will step down.

BSHI representatives to other professional societies/ organisations, updated Feb 2023

Organisation	Member's Name	Term of office	Ends	Email/tel. no
Academy for Healthcare Science Professional Bodies Group	Deborah Sage	As required	N/A	Deborah.Sage@nhsbt.nhs.uk
Association of Clinical Scientists	Olivia Shaw	As required	N/A	olivia.shaw@viapath.co.uk
British Society for Immunology BSHI Affinity Group	Amy De'Ath	3 years (second term)	2025	amy.de-Ath@wales.nhs.uk
UKAS Med Lab TAC (Previously Clinical Pathology Accreditation (UK) Ltd)	Fotini Partheniou	3 years	Jun 2024	Fotini.Partheniou@liverpoolft.nhs.uk
International Journal of Immunogenetics	Amy De'Ath	3 years (second term)	2025	amy.de-Ath@wales.nhs.uk
NHSBT Multivisceral and Composite Tissue Advisory Group	Gemma Brewin	3 years	2025	gemma.brewin@nhs.net
NHSBT Cardiothoracic Advisory Group	Delordson Kallon	3 years	2024	dkallon1@nhs.net
NHSBT Kidney Advisory Group	Richard Battle	3 years	Jun 2025	Richard.battle@nhs.scot
NHSBT Pancreas Advisory Group	Arthi Anand	3 years (second term)	2025	arthi.anand@nhs.net
NHSBT Pancreas Advisory Group – Islet Steering Committee	Arash Akbarzad-Yousefi	3 years	2025	arash.akbarzad-yousefi@nhsbt.nhs.uk
NSHCS Life Sciences Themed Board	Sarah Peacock	As required	N/A	Sarah.peacock@nhs.net
Royal College of Pathologists H&I Specialty Advisory Committee – BSHI representative	Richard Battle	As required	Sept 2024	Richard.battle@nhs.scot
Royal College of Pathologists H&I Specialty Advisory Committee – Chair	David Turner	3 years	Oct 2024	david.turner@nhs.scot
UK NEQAS Quality Assurance Advisory Panel in Immunology	Elizabeth Wroe	3 years (second term)	2025	Elizabeth.Wroe@nhsbt.nhs.uk
British Transplantation Society	Arthi Anand	3 years	2025	arthi.anand@nhs.net
European Federation for Immunogenetics Standards Committee	Katy Latham	As required	N/A	Katy.Latham@nhsbt.nhs.uk
Institute of Biomedical Sciences	Liam Oates	As required	Mar 2024	Liam.Oates@wales.nhs.uk
European Board of Transplant Immunology (ESHI Diploma)	David Turner	8 years	2025	david.turner2@nhs.net