LabMedNews

Association for Laboratory Medicine

FEBRUARY 2025

- Nominate someone amazing for our 2025 membership awards!
- London to host EuroMedLab 2027
- Book now for LabMedUK25 early bird savings
- Welcome to Daklapak, our new corporate member
- LabMed review of NSHCS
- Change is in the air and it's not all AI
- Balancing work and wellbeing
- Exercising compassion in a clinical world

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CONTENTS

Association for Laboratory Medicine

FEBRUARY 2025

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CEO AND PRESIDENT'S UPDATE

As we begin 2025, we are excited to share the themes of our new strategy for 2025–2029. The association's vision is to advance health and wellbeing in the UK through excellence in laboratory science and innovation. Over the next five years, we will focus on four key areas:

- **Digital readiness:** improve the preparedness of members to harness advanced technologies, driving innovation and improving patient outcomes.
- **Enhancing standards and guidance:** ensure best practices in laboratory medicine are applied consistently to improve patient care.
- **Promoting clinical scientists as leaders:** increasing their visibility, we aim to position clinical scientists as key in policymaking, research and public education.
- **Workforce development:** recognising the critical role of clinical scientists and medical staff in NHS transformation, we will prioritise workforce development and training.

We will collaborate closely with our committees and working groups to focus our efforts where they will drive the greatest impact in these priority areas.

Recently, we held our first patient centric sampling conference in Liverpool, promoting cross-sector discussions about innovative approaches to clinical sample collection for the benefit of patients. It was inspiring to see such engagement, and we aim to publish insights from this event soon.

Looking ahead, LabMedUK25 will take place from 9–11 June at Bridgewater Hall, Manchester. This event is an invaluable opportunity to step away from daily responsibilities, network and engage in shared learning. Book early to take advantage of the discounts. We look forward to seeing many of you there.

We are delighted to welcome Fen Sung to our Council as a non-executive director. With extensive experience in financial investment, Fen will play an important role in supporting the governance of our association. We also welcome Emma Stevenson (inaugural chair of the newly formed Biochemistry Education Group) and Adrian Park (lead editor of the Laboratory Medicine Learning Academy), you can find out more in the committee spotlight section.

Finally, we are thrilled to announce that EuroMedLab27 will be hosted in London! This prestigious event returns to the UK for the first time since 2005. We will be in Brussels (18–22 May) as we officially receive the handover.

VICTORIA LOGAN Chief Executive
KATH HAYDEN President

NOMINATE SOMEONE AMAZING FOR OUR 2025 MEMBERSHIP AWARDS!

Do you know someone who has made an outstanding contribution to laboratory medicine? We're now accepting nominations for this year's membership awards. Regional committees are invited to put forward nominees with a short citation (about 500 words) explaining why they should be celebrated.

Deadline: 22 April 2025

Council approval: May 2025

Emeritus membership

Emeritus membership is a special honour for those who have been part of the Association for at least ten years, have retired from full-time work and have made an outstanding contribution to our mission.

Fellow of the association

Becoming a fellow of the association is a prestigious honour, recognising long-standing members who have retired from full-time work and made a significant impact on the profession. To be considered, members must have at least ten consecutive years.

Fellows have made outstanding contributions in areas such as:

- Leading and driving change in laboratory medicine services at a regional or national level.
- Creating exceptional education and training opportunities for the profession.
- Establishing and developing a respected specialised service with a major impact.
- Raising awareness of the profession within the wider healthcare community over many years.

Honorary membership

Honorary membership is awarded to individuals who have made an outstanding contribution to laboratory medicine on an international level.

Let's celebrate the incredible individuals who have shaped our profession – get your nominations in!

MEET OUR NEW BIOCHEMISTRY EDUCATION GROUP CHAIR

Emma Stevenson, our new chair of the Biochemistry Education Group

What drew you to this position?

The role appealed to me because I am passionate about supporting the next generation of scientists and medics. As a graduate of the STP and HSST, and then as a supervisor of trainees on these courses, I have a good understanding of the challenges and opportunities of the scientist education and training programmes. As a member of LabMed, I have also personally benefited from the many educational and professional networking opportunities this organisation provides, and I wanted to give something back. I also liked that this is a new role in the organisation, so there is lots of scope to make it my own and have a real impact.

What do you hope to do within it?

I am looking forward to working with the Biochemistry Education Group to support trainee and qualified scientists and medics. We have a fantastic opportunity to provide relevant learning opportunities that reflect the needs of this dynamic profession, because we know that education must continue beyond graduation and throughout our careers.

I am also keen to start organising the annual training day because I know how important it is to trainees studying for their STP and RCPath exams. One of my first tasks will be to review the leadership training that we offer and see how we can best support trainees looking towards the next stage of their career.

What has your career journey been so far?

I always knew I wanted a career in healthcare science and I started in the NHS as a trainee biomedical scientist at Gloucestershire Hospitals NHS Foundation Trust. I didn't realise when I applied to university that there were different types of

degree and my biomedical science degree from Cardiff University wasn't BMS-accredited. Fortunately, my lab supported me to complete accredited top-up modules at the University of the West of England. After qualifying as a biomedical scientist, I completed the IBMS specialist diploma and really enjoyed the specialist knowledge aspects, so I switched to the clinical side of laboratory medicine as an in-service trainee in one of the first cohorts of the STP at the University of Manchester. I went straight from the STP to the HSST, which I completed this summer. I have been a principal clinical scientist in Gloucestershire since 2021.

Tell us something interesting about you outside of work (e.g. any strange hobbies/favourite pastimes/favourite TV shows or books etc)

Everyone who knows me knows I'm a massive Swiftie! This summer I flew straight from watching the tour in Edinburgh to Brighton for LabMedUK, which was very tiring, but I did manage to shake it off (sorry) and really enjoyed being part of the vitamin B12 debate session.

Is there anything else you would like to say to our members or that you would like them to know about you?

The LabMed Education Group wants to support our members, so I am happy to hear from anyone who has any feedback or suggestions – get in touch!

INTRODUCING ADRIAN PARK: NEW EDITOR OF THE LEARNING ACADEMY

We are excited to introduce Adrian Park, a dedicated member of the Association for over 20 years, as our new editor of the Learning Academy. With a rich background in training and an enthusiasm for advancing education in the specialty, Adrian brings invaluable expertise and vision to this position.

His career so far

Adrian's career journey began with his medical training at St Mary's Hospital Medical School, followed by general medical training and specialist training in chemical pathology and metabolic medicine at Imperial College. After earning his CCT in 2007, he became a consultant, initially splitting his time between Addenbrooke's Hospital and Bury St Edmunds before settling full-time at Addenbrooke's in 2009. Adrian's interest in chemical pathology was sparked during an SHO

continued on next page

post in Oxford, where he discovered an enjoyment for the speciality.

Adrian then began training in 2010 after becoming a local training programme director for chemical pathology in the East of England. Over the years, he has actively contributed to various training initiatives, including involvement in the Royal College of Pathologists' Trainee Committee for Chemical Pathologists and the Specialty Advisory Committee for Clinical Biochemistry.

Adrian has also played a part in developing e-learning platforms over the past four years, including contributions to the East of England's blended learning resources, the IFCC e-learning taskforce and the Pathology Portal. This experience makes him well-positioned to drive the evolution of digital training tools for laboratory medicine.

Goals for the future

In his new role, Adrian is committed to enhancing the e-learning experience for both trainees and trainers. He envisions a platform that not only supports exam preparation but also complements RCPath's learning maps and examination formats.

For Adrian, effective training is essential – not only to attract trainees to the specialty but also to ensure they succeed in their exams with less stress and more confidence.

Adrian is also keen to promote chemical pathology as a career choice, especially for medics who may not have considered it. He believes medics bring a unique perspective to laboratory work, fostering collaboration between laboratory teams and clinicians. He remarks that although it's a niche area, it's also incredibly valuable and rewarding.

Life outside of work

Outside of his professional commitments, Adrian's greatest focus is his family. With four children close in age, much of his free time is spent with them. When he does find a moment for himself, Adrian enjoys reading - particularly history books – and watching detective shows.

A message for our members

Adrian's message to members is clear: *"We are working hard to create a tool that benefits everyone – members, trainees and trainers alike. Feedback and support would be greatly appreciated."*

He also encourages members to get involved. *"There will be new roles and opportunities connected with this project, so if you're interested in contributing, we'd love to have the support."*

Interview by Jadyn Lansana
LabMed Editorial Assistant

LONDON TO HOST EUROMEDLAB 2027

We are delighted and honoured to announce that London has been selected to host EuroMedLab in 2027.

This year's EuroMedLab is being held in Brussels, where our president Kath Hayden, president-elect Ian Godber and conference and events director Sarah Robinson will officially announce this exciting news.

As the first UK-hosted EuroMedLab since Glasgow in 2005, this is a significant event to add to the calendars. We are thrilled to have the honour of welcoming laboratory medicine colleagues from across Europe to London.

We are very grateful to everyone who contributed to the bid. This is a fantastic opportunity to highlight the expertise of our association and the UK in laboratory medicine on a national and international level.

Why London for EuroMedLab 2027?

With over 50 LabMed members actively involved in various IFCC and EFLM groups and committees, we bring a wealth of expertise and collaboration to the table.

Our president-elect, Ian Godber, who will take on the role of president in May 2027, brings extensive experience in conferences and education. As well as the personal commitment and leadership from the current president and CEO of LabMed, we will be bringing a rich seam of experience and scientific eminence to support the educational content of the meeting.

"I am absolutely delighted that London has been selected to host the EuroMedLab 2027 Congress. We look forward to showcasing the best of laboratory medicine, bringing together the European scientific community in one of the world's most vibrant cities."

Kath Hayden, president, association for laboratory medicine

WELCOME TO OUR NEW MEMBERS

The association is proud to introduce the following new members who have joined us since the last edition of *LabMed News*. Please extend a warm welcome to:

Daniel Taylor, trainee clinical scientist, Epsom & Helier University Hospitals NHS Trust, Carshalton

Laura Vanesa Sanchez Hincapie, trainee clinical scientist, St George's University Hospitals NHS Foundation Trust, London

Isabella Chance-Larsen, trainee clinical scientist, Shrewsbury and Telford Hospital NHS Trust, Shrewsbury

Gareth Hardisty, trainee clinical scientist trainee, NHS Lothian, Edinburgh

Charlotte Dodd, student, Manchester Metropolitan University, Manchester

Rohit Hirachan, trainee clinical scientist, Great Ormond Street Hospital for Children NHS Foundation Trust, London

Santosh Potamsetty, trainee clinical scientist, Blackpool Teaching Hospitals NHS Foundation Trust, Blackpool

Elizaveta Sokol, ST3 in metabolic medicine, Charing Cross Hospital, London

Sophie Rothwell Mason, senior clinical scientist, Manchester University NHS Foundation Trust, Manchester

Lewis Doyle, medical student, University of Dundee, Dundee

Callum Briody, student/medical laboratory assistant, University of West Scotland, Glasgow

Victoria Heath, clinical scientist/science communicator, freelance, Hertfordshire

Alan Cheung, trainee clinical scientist, Stepping Hill Hospital, Stockport

Aru Kanchana Wijesinghe, fellow in chemical pathology, Royal Surrey County Hospital NHS Foundation Trust, Guildford

WELCOME TO OUR NEW EDITORIAL ASSISTANT

Jadyn Lansana joined us as a trainee editorial assistant in October 2024, following the completion of her undergraduate degree in english literature with creative writing.

She provides administrative support and content reviews of our digital publishing project Lab Tests Online, conducts editorial checks on journal manuscripts, writes articles for the website and contributes to the management of social media uploads.

Jadyn lives in West London and is currently pursuing a master's degree in creative writing at Royal Holloway, with aspirations to publish a novel in the future.

ANNALS OF CLINICAL BIOCHEMISTRY LATEST RESEARCH ARTICLES

Check out this interesting new research article by J. Hall, H. Carlton and K. Shipman, recommended for reading by the editors-in-chief of the *Annals of Clinical Biochemistry*:

Benchtop centrifugation: An effective method for reducing lipaemia associated interference in grossly lipaemic samples?

Also recommended is this Editorial by William Bartlett on biological variation:

Biological variation data: An important old topic with new standards and new look resources

Click here to submit your work to the *Annals of Clinical Biochemistry.*

JOIN US FOR GLOBAL MED LAB WEEK 2025!

We're excited to celebrate Global Med Lab Week with the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) from 21-27 April 2025. This year's theme, 'Labs Save Lives', shines a spotlight on the incredible impact that laboratory professionals have on healthcare. Even though they often work behind the scenes, they are always at the heart of patient care and medical breakthroughs.

The IFCC is calling for audio and video contributions that share powerful stories, expert insights and the latest advancements in laboratory medicine. Contributions are needed by 7 March 2025.

Want to get involved? Head to the official website for more details on how you and your lab can contribute: https://globalmedlabweek.org/

Don't forget to follow @globalmedlabweek on Facebook and Instagram for updates. Show your support by tweeting, retweeting and posting with the hashtag #globalmedlabweek

Let's work together to raise awareness and celebrate the vital role we play in healthcare!

PUBLICATION DATE

LabMed News is published on the 15th of the month. To guarantee publication, please submit your article by the 15th of the preceding month (i.e. 15th March for the April 2025 issue) to: editor.labmednews@labmed.org.uk

We aim to be as flexible as possible and will try to accept articles up to the 1st of the month to be published if space allows. Otherwise they will be held over to the next issue. If we are aware that articles are imminent, this gives us more flexibility and we can reserve space in anticipation. If in doubt, please contact: Gina Frederick, lead editor, via the above email.

CIO CONVERSATIONS – STEWARDSHIP ACTIVITIES

Driving Change: How LabMed's investments supported the UK's First FTSE 250 B Corp

LabMed's investments are held with Tribe Impact Capital, the UK's first dedicated impact wealth manager. Here we highlight a case study from the portfolio demonstrating Tribe's engagement and stewardship activities with a company in the portfolio.

Three years ago, Tribe Impact Capital invested in Assura, a company focused on developing and managing healthcare buildings across the UK. Over this time, Tribe has engaged with Assura on various subjects, in particular their goal to become a B Corporation (B Corp). Tribe have had ongoing discussions with Assura's CEO and team about achieving this certification, including exploring the issuance of sustainability-linked debt. They provided both support and constructive feedback during their decision-making process.

In July, Assura held its annual general meeting, having already met the minimum B Corp score of 80 points. However, to achieve certification, they needed to change their articles of association. This required shareholder approval. Tribe collaborated with Assura's investor relations team and Group Counsel to draft the resolution. They also assisted with the explanation of the importance of B Corp certification to a major US Index investor.

Assura gained support from five of the largest proxy voting advisers in advance, and at the AGM, the resolution passed with a 99.98% vote. Assura is now the first listed FTSE 250 B Corp in the UK – a significant milestone.

Through LabMed's investments, the organisation is helping to drive forward stakeholder-aligned governance in UK business.

About Tribe Impact Capital

Tribe is the UK's first dedicated Impact Wealth Manager and offers discretionary and advisory portfolio management. Tribe was created in response to a significant increase in demand from individuals and charities who wanted to achieve both sustainable impact and a financial return from their invested wealth.

Tribe | IMPACT CAPITAL

For more information contact

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Wealth Manager
ciaram@tribeimpactcapital.com
0203 745 0989
www.tribeimpactcapital.com

INTRODUCTION TO THE NEW NATIONAL NEGOTIATOR

We're thrilled to welcome Vala Biggart as our new national negotiator for the association. We're immensely fortunate to have Vala as part of our team thanks to a recommendation from one of her colleagues. With experience as a union representative in a previous role and active involvement in union activities in her current position, Vala will bring invaluable expertise and passion to this role.

VALA BIGGART
FCS national negotiator

Vala's goals

Vala is eager to collaborate on the association's goals of enhancing healthcare scientist visibility among patients and colleagues alike. Within this new position, she is committed to ensuring that concerns and ideas raised by members are heard and addressed on a national level.

The journey so far

As a relatively young member in the earlier stages of her career, Vala recalls initially feeling nervous about stepping forward for the national negotiator role. However, her experiences during the pandemic provided opportunities for significant personal and professional growth. Being thrown in at the deep end with point-of-care testing on new COVID-19 wards, she honed her skills and nurtured her expertise. Since then, she has developed a special interest in inherited diseases, specialist endocrinology and mass spectrometry.

'Trade union is about its members, we are all the trade union. We have this wonderful and powerful framework to work together in improving our working conditions and ensuring high-quality, fair practice.'

Hobbies and interests

Outside the laboratory, Vala has a passion for collecting second-hand records, a hobby she's loved since her teenage years. "At the weekends, you can often find me scouring charity shops for them!"

A message to our members

To our members, Vala wishes to share this message: "Please feel free to get in touch for advice/support – even if we've never spoken before – I'm here to help."

Click here to visit our website for more information.

Interview by Jadyn Lansana, LabMed Editorial Assistant

BOOK NOW FOR LABMEDUK25 EARLY BIRD SAVINGS

Book before 11 April to benefit from our early bird prices. Priority will be given to trainees who are LabMed members for the training day. Members receive discounted rates at LabMedUK25. In order to get the discount, all invoices must be paid by 11 April or the booking will be cancelled and re-invoiced at the full rate.

Bridgewater Hall, Manchester – the venue for LabMedUK25 from 9-11 June 2025

Booking open

We were excited to launch the website for LabMedUK25 in January. With an exciting range of topics such as:

- Advances in AI and its role in healthcare
- Innovations in the diagnosis and monitoring of inherited metabolic diseases
- Cutting-edge insights into genetic POCT and traumatic brain injury POCT
- Addressing critical issues like health inequalities

We will also also run our popular plenary sessions:

- Presentations from global healthcare leaders, including insights from the 2025 UNIVANTS of Healthcare Excellence Award winners
- The highly anticipated International Award Lecture and the Freddie Flynn Lecture
- An interactive clinical case session featuring unusual cases selected from submitted abstracts

For full details on the exciting range of topics within the programme, please visit the website.

		Full price	Early bird price (until 11 April)
Training day	Members Non-members	£150 £195	£125 £150
LabMedUK25 one-day ticket	Members Non-members	£280 £500	£230 £450
LabMedUK25 two-day ticket	Members Non-members	£450 £600	£399 £550

WELCOME TO DAKLAPACK

by
James Hemmings, DaklaPack UK

DaklaPack are delighted to be a corporate member of LabMed.

DaklaPack is a leading provider of innovative packaging solutions, specialising in a wide range of industries, including medical and pharmaceutical sectors. With a focus on quality, reliability and compliance with industry standards, DaklaPack offers specialised medical packaging products that cater to the stringent requirements of healthcare providers and suppliers.

DaklaPack medical packaging offerings include a range of transport bags, shipping labels, custom blister packaging, pouch packaging and tamper-evident solutions. These products are designed to ensure the safe and secure delivery of diagnostic samples maintaining integrity throughout the supply chain. DaklaPack prioritises regulatory compliance, ensuring that their packaging meets global standards such as ADR and IATA regulations.

In addition to standard offerings, DaklaPack also provides tailored packaging solutions, including custom printing and branding, to meet the unique needs of their clients. Their focus on innovation, sustainability and customer service has made DaklaPack a trusted partner in the medical packaging industry.

At DaklaPack, we strive to do our part in addressing sustainability issues through our products and business practices. We see our position in the packaging supply chain as an important opportunity to innovate and work collaboratively to create positive, sustainable change. To do this, we've created our own Green Mission where we strive to have a sustainable alternative for every product we offer.

With teams located in Holland (Head Office), the UK, Belgium, France, Germany, Spain the US and China, we have the ability to supply companies worldwide.

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LABMED REVIEW OF NSHCS

by
KATIE HADFIELD
Director of education, training and workforce

The National School of Healthcare Science (NSHCS) manages the training and development of healthcare scientists across 40+ specialties, from apprenticeships to consultant roles. Its pioneering programmes aim to improve patient outcomes and promote multi-professional collaboration. At the recent Education and Training meeting, LabMed submitted the following response to the ongoing independent review of the NSHCS.

Adapting the HCS Workforce for NHS strategic shifts

As the NHS shifts towards community-based care, point-of-care (POC) testing is expected to expand significantly. Many POC teams, however, face staffing and resource challenges that hinder service growth and adaptation to new technologies. It is essential that POC be recognised as a distinct discipline, supported by multidisciplinary teams. The Healthcare Science (HCS) workforce should be equipped with data interpretation, coding, and AI/machine learning skills to promote the digital transformation in healthcare. Key recommendations include:

- Training opportunities for HCS across all disciplines to become experts in this field
- Providing baseline practical knowledge across the HCS workforce.
- Promoting knowledge-sharing, process standardisation, and collaboration with stakeholders like academic institutions, industry partners and the NHS.

Enhancing education and training through the NSHCS

The NSHCS, in collaboration with stakeholders, can ensure high-quality education by addressing current gaps and anticipating future NHS needs. Suggestions include:

- Incorporating POC testing governance and leadership into the STP and HSST curricula.
- Expanding digital/data skills training beyond formal programmes to benefit all HCS disciplines.

- Strengthening partnerships with professional bodies to ensure training remains relevant.
- Equipping STP and HSST with foundational skills for expanded roles, such as non-medical prescribing.

Developing programmes and equivalence pathways

To enhance the effectiveness of its programmes, the NSHCS should:

- Foster a stronger voice for trainers and employers to update content and assessments.
- Offer flexible delivery options, such as virtual placements, to accommodate diverse trainee needs.
- Formally recognise the equivalence process as a valid registration route and provide accessible resources for those pursuing equivalence.

Supporting small, specialist HCS disciplines

As well as aforementioned inequalities in training and education accessibility, smaller HCS specialties face consultant shortages and recruitment challenges. The NSHCS could centralise funding for HSST posts in high-risk areas, following the STP model, to safeguard these disciplines. Addressing high attrition rates from the HSST programme is critical to ensuring long-term workforce sustainability.

Improving collaboration with education providers

The NSHCS should work with higher and further education partners to optimise academic provision. Increasing virtual teaching greater efficiency in planning in-person sessions could reduce travel burdens and financial strain on trainees. Additionally, reviewing STP study budgets is essential to ensure trainees can afford accommodation, travel and further educational opportunities without inequality.

For our full detailed response, please see the article on the LabMed website.

STEP UP TO A LEADERSHIP ROLE – APPLICATIONS NOW OPEN

Are you passionate about shaping the future of laboratory medicine? We're looking for members to join our Council and help guide the direction of our association.

This is a fantastic opportunity to make an impact, represent your profession and build relationships with leaders in our field.

Applications are now open for:

- **Director of publications and communications**
- **Director of scientific affairs**
- **Deputy director of conferences and events**

Visit labmed.org.uk/getinvolved to apply online by 10 March 2024.

If you have any questions, please email mike@labmed.org.uk

CHANGE IS IN THE AIR AND IT'S NOT ALL AI

KATY HEANEY

POCT speciality lead, consultant biochemist, Berkshire and Surrey Pathology services and chief healthcare scientist, Frimley Health NHS Foundation Trust

What's next for pathology?

A scan of healthcare media would tell us that the most significant innovation for pathology will be artificial intelligence (AI), with very little on what other innovations may impact pathology services in the next 20 years.
At our winter executive away day at Berkshire and Surrey Pathology services we gave one of our workshop sessions over to sharing our own thoughts on our discipline's future and changes that may come about as part of considering a new build hospital in our network. Today I share some of those points, with a few from other learned colleagues for you to share back with your own teams.

Testing repertoire

The technology to find new markers is certainly benefiting from AI and is likely to see the creation of new tests in the next five years, but the technology of how these tests are conducted is also likely to diversify. Lateral flow technology for rapid results is useful if they provide the right sensitivity but requires significant governance support to ensure we are recording this data effectively. A desktop covered in individual lateral flows for various markers fills me with dread from a data collection point of view; how far are we from creating one QR code that includes all, or close to all, the steps to record a manual result into EPR?

Wearable technology has expanded significantly and combined with continuous monitors has the potential to dramatically increase the amount of pathology data we could receive on patients. How will our IT systems manage this volume of data? Does every single data point need recording, or will we look more at a rate of change or trends as data worth recording?

The use of pre-treatment genetics has been a matter for consultations and publications from NICE in the last two years and is likely to expand as more generic devices performing rapid PCR testing come onto the market. Scientific development teams are being diverted away from rapid respiratory testing and into a wider market for rapid genetic testing. I wonder if the NHS will ever reach a point of financially being able to afford

Change NHS: Submit your views, experiences and ideas for shaping the new 10 year health plan for England

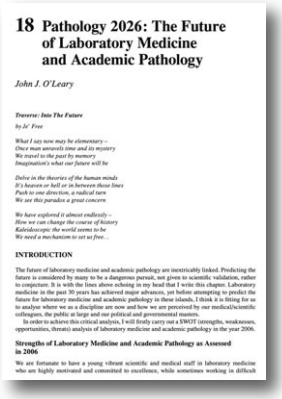
pre-emptive genetic testing for life-long potential consequences of the wrong medications, rather than just reactive in-the-moment testing? As a pathology community we must do all we can to record these results in a manner that prevents the need to repeat these genetic tests at subsequent readmissions or under other clinical situations.

The longevity of growing cultures was hotly debated at our away day. Will the workload for microbiology culture continue to grow? Will it diversify? Will it peak and then be replaced by rapid molecular testing with the addition of antibiotic-resistant strain-specific testing, allowing culture workloads to meet their peak and begin their decline, only to be required for the most unique, specific cases. With the increasing threat of antimicrobial resistance, total testing workloads may well increase, but the way in which we test will surely diversify, decreasing time to result and enabling better decision making in the first consultation.

Technology

As well as the AI buzz word, there are other technology advances to consider. In 2006, John J. O'Leary published with the Pathology Society an article entitled 'Pathology 2026; The Future of Laboratory Medicine and Academic Pathology'. An interesting read considering we will shortly have caught up with its timeline, but with a large focus on nanotechnology and the use of microchips. Point-of-care testing devices are certainly able to provide panels of results on much smaller blood volumes, but certainly in the main laboratory we mostly remain on a full 4.5 mL blood tube for analysis.

Different ways of achieving phlebotomy open new avenues to explore. Laser finger-prick devices to reduce use and waste created by single use lancet devices are sold as a less painful method for blood draw and are now available in the UK. I can



18 Pathology 2026: The Future of Laboratory Medicine and Academic Pathology

John J. O'Leary

Traverse: Into The Future
by Je' Free

What I say now may be elementary –
Once man unravels time and its mystery
We travel to the past by memory
Imagination's what our future will be

Delve in the theories of the human minds
It's heaven or hell or in between those lines
Push to one direction, a radical turn
We see this paradox a great concern

We have explored it almost endlessly –
How we can change the course of history
Kaleidoscopic the world seems to be
We need a mechanism to set us free…

INTRODUCTION

The future of laboratory medicine and academic pathology are inextricably linked. Predicting the future is considered by many to be a dangerous pursuit, not given to scientific validation, rather to conjecture. It is with the lines above echoing in my head that I write this chapter. Laboratory medicine in the past 30 years has achieved major advances, yet before attempting to predict the future for laboratory medicine and academic pathology in these islands, I think it is fitting for us to analyse where we as a discipline are now and how we are perceived by our medical/scientific colleagues, the public at large and our political and governmental masters.
In order to achieve this critical analysis, I will firstly carry out a SWOT (strengths, weaknesses, opportunities, threats) analysis of laboratory medicine and academic pathology in the year 2006.

Strengths of Laboratory Medicine and Academic Pathology as Assessed in 2006

We are fortunate to have a young vibrant scientific and medical staff in laboratory medicine who are highly motivated and committed to excellence, while sometimes working in difficult

attest personally that I found the laser less painful than a lancet, having tried one out myself last year. Robotic blood draw devices are being trialled and could expand the locations at which phlebotomy can take place without requiring our human phlebotomists to be in ten places at once, and allowing them to concentrate on our harder-to-bleed patients and paediatrics. Home sampling projects have been run by some pathology services for a long time to support those with long term conditions requiring annual or regular blood tests, and many of the tests bought in pharmacies or supermarkets are actually home sampling kits to be posted to a laboratory for testing.

This leads to questions on what more we can do in the laboratory to reduce down the blood volume required for testing. Miniaturisation of our assay volumes can only go so far with our current pipette tip shapes requiring dead volume for the uptake of fluid, but what if those were miniaturised on a large scale? Just how many blood tests could be achieved from a 30 µL blood drop collected at home in 20 years' time compared to now?

The first clinical trial of laboratory grown red blood cells transfused into another person took place in 2022. The RESTORE trial is a collaborative research trial between NHS Blood and Transplant and the University of Bristol and a number of other research facilities. The red cells are labelled

by radio-pharmacy and their lifespan monitored. US trials working with the military on artificial blood and red cells received large grants to further their research in 2024. Given the shortages of donations in recent years it would seem logical to continue to push into the production of artificial blood and blood products.

The repertoire of a rapid response laboratory

Working in a long-established network, we are well aware of the debate over which tests are available in a rapid response laboratory vs the hub. Even prior to the pandemic we had branched into the provision of rapid respiratory testing, albeit using a POCT process, but pandemic workloads forced us to change this into a hot lab set up to protect nursing time. We expect to see greater need for more infection testing in the rapid response laboratories. Multi-panel rapid molecular biology tests that provide results on positive blood cultures, for example, are in use now, although not quite established or funded well enough to have embedded themselves into our IT systems, and are subject to some debate on the pathological significance of some of their markers. The cost effectiveness of providing tests rapidly is a key part to decisions on repertoire but requires more than just reagent to reagent comparison. The greater picture of consequences on the patient's journey, hospital flow and the potential for nosocomial infection must all be considered and costing is difficult.

The inclusion of histopathology into a rapid response laboratory might be a shock to some. The use of markers to detect the edge of tumours to ensure sufficient margin has been excised (very basic language from me here!) while the patient is still on the operating table is in use in our network already and will need to be co-located with the theatre sites to provide the turnaround time needed. Rapid genetic testing for pharmacogenetic decisions is also likely to grow following either a POCT or rapid laboratory process for acute medicine decision making.

And also . . .

There are too many innovations for pathology services to mention here; CT scanning for post-mortems, expanded screening programmes, patient-led requesting and, of course, digital pathology, while rolling out now, is likely to continue to develop further. Drivers like sustainability agendas, changing disease prevalence and new medications like the weight loss drugs requiring different monitoring profiles will impact our repertoire needs. And if you are shouting at this article about something I didn't include, I would be delighted to hear about it.

The scheduled release of the NHS long-term plan in Spring 2025 has provided one of the best opportunities to date for NHS staff and the public to feed directly into its contents. The three key themes from the new Government healthcare policy provide huge opportunities for change in pathology. Change is certainly in the air and I encourage all to be curious and lean in, our expertise is needed.

Acknowledgement: To my Berkshire and Surrey Pathology Services colleagues for your insight and lively debate.

Department of Health and Social Care themes

shift 1: moving more care from hospitals to communities

shift 2: making better use of technology in health and care

shift 3: focusing on preventing sickness, not just treating it

BALANCING WORK AND WELLBEING

EMMA MILER
Senior clinical scientist, Norfolk & Norwich University Hospital

As trainees in laboratory medicine, we know all too well the challenges we face. Balancing demanding workloads, preparing for exams, transitioning into professional practice and stepping into leadership roles can feel overwhelming. With these pressures, stress and burnout can become a real concern, impacting both our performance and wellbeing. That's why it's crucial to prioritise mental health and tap into the supportive structures available to us throughout our training.

One way I've found helpful in managing stress is through mindfulness techniques. For me, this might mean doing a guided meditation, spending a few minutes on a puzzle or just sitting quietly with a cup of tea to unwind. It's not always easy to carve out this time, especially with everything on our plates, but those moments of calm can make a real difference. If stress becomes overwhelming, don't hesitate to reach out to mentors, supervisors, or wellbeing services. I also find that talking to fellow trainees is incredibly reassuring. Whether it's through a WhatsApp group, Discord server, or contacting your regional trainee representative (find your trainee rep in the 'About Us' section of the LabMed website), it's comforting to know that others are facing the same challenges, and may be able to offer you some advice or a listening ear.

An initiative that's made a real difference for me are online regional tutorials. These monthly sessions are a great way to engage with the subject matter and to connect with other trainees. The tutorials are often led by trainees themselves, may be in collaboration with regional tutors, and provide a chance to reinforce knowledge while receiving structured guidance. Not every region has these tutorials yet, so if yours doesn't, why not consider setting one up yourself? Consider using some of the resources that Ben Nicholson listed in December's edition of trainees news, or start small by discussing a recent journal article together. It could be a valuable resource, as well as a way to build your local trainee community. The sense of camaraderie they foster helps to reduce isolation and reminds us that we're all in this together.

In addition to regional tutorials, another great way to contribute and grow professionally is by summarising NICE guidelines. This initiative provides an opportunity to engage with best practice while earning professional recognition. The Trainees' Committee welcomes continuing participation from trainees in this exceptionally worthwhile activity, which ensures that key points from best practice guidelines are readily available on the LabMed website. Contributors also receive a letter of acknowledgement from the director of scientific affairs and Clinical Practice Committee, which can be a valuable addition to your CPD portfolio. If you're interested in getting involved, email guidelines-summaries@labmed.org.uk for more information.

As Annie Cook, vice chair of the Trainees' Committee, said in the October edition of trainee news: "*Just say yes to opportunities that come your way, and if you feel there aren't any – create them.*" Stepping into new roles or trying something unfamiliar can feel intimidating, but I encourage you to take that first step. Leadership roles or starting a regional initiative can provide both personal and professional growth. Even if we feel stretched thin, these experiences help us grow and build connections.

Finally, it's important to be kind to yourself. With everything we have going on, it's easy to forget that we need to take care of ourselves. We deserve it. We're doing important work, and we need to allow ourselves the space to rest and recharge. Taking care of our mental health isn't a luxury – it's a necessity. So, whether it's through mindfulness, reaching out to a fellow trainee, or simply taking a quiet moment to yourself, remember that it's okay to pause and recharge. You've earnt it.

LABMED SCOTLAND SCIENTIFIC MEETING (IMMUNOLOGY)

In November 2024, on one of the coldest days of the year so far, biochemistry colleagues across Scotland descended upon the historical town of Stirling for the annual LabMed Scotland Scientific Meeting. Immunology scientists joined alongside with a parallel education day focused on discussing hot topics and key learning points from immunology centres throughout the nation.

NADIA SHAHID
Senior clinical scientist, NHS Greater Glasgow and Clyde

Antibody testing in myositis

Chris Sevier-Guy (NHS Tayside) kicked the day off with a review of idiopathic inflammatory myopathies (myositis). Myositis still remains a diagnostic challenge with patients presenting to and being managed by multiple disciplines (including rheumatology, dermatology, respiratory and neurology). Anti-Jo1 antibodies are the only antibody noted in the European League Against Rheumatism/American College of Rheumatology (EULAR/ACR) classification criteria; however, a number of myositis-specific and myositis-associated antibodies exist, with more being identified each year.

The immunology lab in Dundee routinely performs both indirect immunofluorescence (IIF) using HEp2 cells and a confirmatory myositis antibody line blot, and therefore used this data to carry out a retrospective audit comparing results from the two assays. There were two key take-home messages from the audit. Firstly, that HEp2 screening alone is not a reliable screen for myositis antibodies; however, if the HEp2 pattern matches autoantibody specificity, this can be useful to confirm positive line blot results. Secondly, isolated Ro52 antibody positive samples (e.g. from other testing sources) should be cascaded for an immunoblot, as a number of these patients were found to have additional myositis antibody positivity. I felt the last point was extremely useful and will be looking to incorporate this knowledge into my routine reporting.

Fran Henriquez, NHS GGC (Greater Glasgow and Clyde), continued the theme, giving a sobering talk highlighting a number of clinical cases where patients were found to be MDA5 antibody positive. MDA5 antibodies are associated

with dermatomyositis and a poor prognosis if there is also extensive lung involvement. Early detection and confirmation of the diagnosis is key; however, as the MDA5 antibody test is not offered in house, there were delays to diagnosis, and in two of the three cases presented, this was found to have had a significant impact on the patient's outcome.

Repatriating specialist testing can bring many benefits; however, as we all know this may not be possible due to laboratory and budget constraints. Fran highlighted a number of changes that were made within the department to improve myositis diagnostics as a whole, which included increasing appropriate testing i.e. test add-ons where clinical details are suggestive of myositis, and education of service users and laboratory staff. New improved laboratory instrumentation and processes were introduced to reduce IIF turnaround times and, whilst MDA5 antibodies are still a referral test, new positive results are now communicated urgently to requesting clinicians.

This is a reminder that timely results can enable therapeutic interventions with better clinical outcomes, but that even the smallest changes to laboratory practice can greatly benefit patients.

Allergy in Scotland – state of the nation

Liz Furrie (NHS Tayside, Highland, Lanarkshire, Ayrshire and Arran) continued the day with an extremely lively discussion reviewing allergy diagnostics across Scotland. There are seven centres across Scotland routinely measuring diagnostic tests for allergy and anaphylaxis (total IgE, specific IgE including arrays, allergen components and mast cell tryptase), all with vastly different repertoires and rules.

It was clear that each centre has key differences in approaches to allergen availability, reflex testing and reporting of allergy results, but that these differences are primarily dictated by the limited availability of dedicated allergy services across the country. Paediatric allergy is well served, and there are pockets of drug and venom allergy services across the country, but there is only one food allergy/ anaphylaxis service for adults in Scotland, and this only covers the West of the country. A stark reminder that although

Liz Furrie reviewed allergy diagnostics across Scotland

the laboratory may be willing, there still needs to be clinicians available to request the testing!

A national strategy for allergy diagnostics was proposed, covering reduction of total IgE testing 'of limited clinical utility?', a consolidation of the testing available in each centre, 'are specific IgE mixes worthwhile?' and a consensus on how these tests are reported 'to comment or not to comment?'. There is certainly further discussion to be had, but it will be interesting to see whether a national consensus can be brought about!

Improving coeliac disease diagnostics

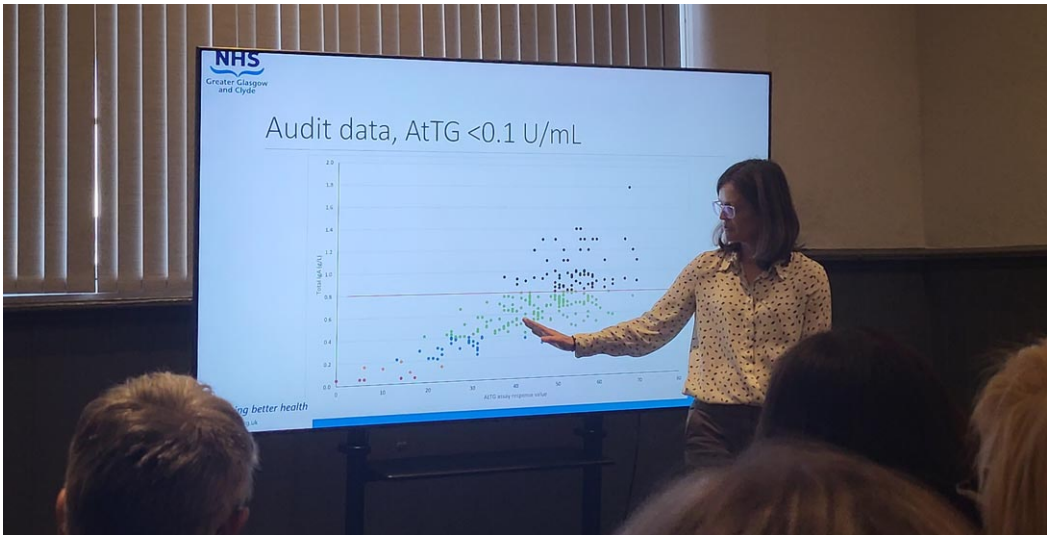
Testing for coeliac disease through the measurement of IgA tissue transglutaminase antibodies (TTG) remains one of the mainstays of most immunology laboratories, however, there is variation on how centres screen for selective IgA deficiency. Some centres routinely measure total IgA levels on all patients but this may not be feasible for larger centres with a higher sample throughput.

Data presented by Glasgow and Aberdeen highlighted cases where patients with selective IgA deficiency (<0.06 g/L) were found to be giving negative IgA TTG results but with measurable values. These patients were found to be subsequently positive for IgG TTG antibodies, but in some cases there was a significant delay in obtaining the final diagnosis.

The review showed that sole reliance on instrumentation flagging low response values or results as being 'unable to quantify' may not be as reliable as first thought. Even when a diagnostic test is established, well documented and has a high sensitivity and specificity, no test is 100% perfect and there still may be exceptions; users must communicate with labs when results do not fit the clinical picture.

Louise Burnett (NHS Tayside) updated the group on the pan-Scotland study (funded by Thermofisher Scientific) which is looking at the diagnosis of coeliac disease in paediatric patients (<16 years old). The study is being led by NHS Tayside, although samples have been contributed by all centres across Scotland. The aims of the study are vast, but themes include determining cut-off values for tests,

Fran Henriquez going through Glasgow data showing how we set cut-offs to screen for IgA deficiency during coeliac testing



Jenny Nobes explaining iLFTs

the clinical utility of different autoantibodies, looking at associated conditions and comparing laboratory diagnostics against biopsy. Although the study is just getting underway, it was exciting to see how everyone's collective efforts might bring about valued information that will improve diagnostics for a still very much under-diagnosed condition.

Intelligent testing algorithms

Chronic liver disease is a significant cause of morbidity and mortality across the UK and can be hard to identify at an early stage. Liver function tests (LFTs) are routinely requested in primary care and are commonly abnormal; however, they are poorly investigated.

Use of intelligent LFTs (iLFTs) went live across NHS Tayside in 2018, with a pilot study in NHS Greater Glasgow and Clyde (NHSGGC) between 2021-2023, but what are they?

Intelligent LFTs involves the use of sophisticated algorithms to allow GPs to simply request one test (iLFTs) that will automatically prompt cascade testing based on the results of baseline tests. After all testing is complete, an outcome report can be issued collating the results and patient demographics, to give a probable diagnosis and indications for next steps (for example, referral to secondary care or management in primary care).

Jenny Nobes (Biochemistry, NHS Tayside), Justin Killick (NHS Tayside) and Lauren Hennessy (NHSGGC) shared data from both centres that had implemented iLFTs and showed that their use improves and increases community detection of chronic liver disease, including autoimmune liver disease, such as primary biliary cholangitis.

It was clear that intelligent testing algorithms such as this one have huge benefit and, although requiring a lot of support and engagement from primary and secondary care physicians, laboratories and of course, ICT services (!), could be the way forward to address a number of chronic diseases presenting in primary care.

Summary

Overall, this was an extremely useful and insightful day. It was a great chance to connect with immunology and biochemistry colleagues alike and to see the strides that different centres are making in improving their services and contributing to wider studies and projects.

Keep an eye out for details of the next meeting (later this year) and do remember these events are open to all members and non-members regardless of whether you are based in Scotland or not!

THE BSI-CIPN CONFERENCE

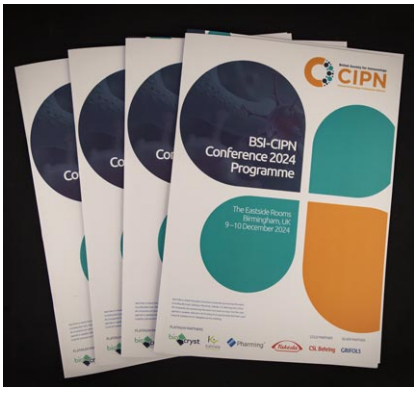
In December, clinical immunology professionals from across the country travelled to Birmingham to attend the second ever BSI-CIPN conference (British Society of Immunology – Clinical Immunology Professional Network). The BSI-CIPN was born out of a merger between BSI and the UK Primary Immunodeficiency Network (UK-PIN) in 2023. Medical, nursing, pharmacy and laboratory professionals joined together as one to network and share new insights which could shape our field in the future.

KATHRYN CHALLIS

Senior clinical scientist (immunology), University Hospital Southampton NHS Trust

The opening lectures kicked off the event strongly, discussing a breadth of nationally and internationally recognised scientific and clinical research such as complex immunodeficiencies, novel treatments and exciting work on newborn screening. The first of the plenary lectures was given by Klaus Warnatz, head of the division of immunodeficiency at the University Medical Centre Freiburg, Germany. He discussed complex Common Variable Immune Deficiency (CVID) in comparison to infection-only CVID, highlighting the key differences in presentation and early laboratory warning signs. Lung CT scans were recommended for all new CVID patients as this can identify interstitial lung disease prior to symptomatic presentation, allowing for earlier treatment. Klaus emphasised the challenges in differentiating CVID from other similarly presenting conditions (such as combined immune deficiencies), suggesting that next generation sequencing could assist in the future and that monogenic forms of CVID could potentially constitute their own conditions.

Smita Patel, clinical lead at Oxford University Hospitals, and Nicholas Peters, clinical lecturer at the University of Birmingham, followed with a talk discussing novel treatments for hereditary angioedema (HAE). The challenges in diagnosing and treating HAE were discussed, leading us to some data for patients treated with a CRISPR-Cas9 gene therapy targeting KLKB1 genes, in an exciting new development for this condition! To finish off the morning's series of lectures, David Bick from Genomics England told us how The Generation Study is trialling the use of newborn screening across the UK to identify children with conditions which must be treated within the early years of life. Current newborn screening in the UK only covers nine conditions and this doesn't yet include Severe Combined Immunodeficiency. The Generation Study has identified more than 200 conditions (including many immunological diseases) caused by changes to more than 500 genes which they aim to test



using cord blood or heel-prick testing. There are challenges within this study in terms of sensitivity, but the team is committed to following up patients over a large timeframe to identify both true and false positives, as well as ensuring any false negative patients don't slip through. This is an exciting discussion-provoking study which could see routine newborn screening in the NHS changing in the near future!

A short break followed the morning talks with endless supplies of tea, coffee and delicious snacks. This time was used by many for networking and taking a quick tour of the sponsors' stands to stay up-to-date with new technologies and products on the market.

Opportunities to hear from specialists

The afternoon sessions were divided into medical, laboratory science and nursing.

To begin the parallel session for laboratory science, Anna Shrimpton from Sheffield Teaching Hospitals demonstrated how allergy microarrays can be used in the clinical setting. Here she highlighted the differences between the ISAC and the ALEX assays, showing which context she would use each assay as they contain different numbers of native extracts and components and the units of measurement differ.
Allergy microarrays have been touted to be part of the future of allergy testing due to their cost and time saving features, however, they could lead to challenges when used outside the specialist setting as they can produce positive results to allergens which patients have tolerated well. As such, the theme of the presentation was that there is great potential for these tests when used cautiously and appropriately.

Later in the parallel sessions, Kathryn Challis, senior clinical scientist at University Hospital Southampton, presented work using the basophil activation test in the context of perioperative anaphylaxis.
This talk gave insights into the challenges with this relatively new test (sample stability, manual pipetting, high tube numbers for one patient) and how it's unlikely to be suitable for routine allergy testing, but rather could be a valuable contribution to the diagnosis of complex patients and the identification of possible safe alternative drugs. These talks were well attended by medical and laboratory professionals, clearly demonstrating the need for a network such as this to bring these teams together.

The chair, Siniša Savić, opens Tuesday's talks with an update on the BSI-CIPN

During the afternoon parallel session on Monday, we were treated to a talk about standardised high dimensional flow cytometry by John Grainger, deputy director of the Lydia Becker Institute of Immunology and Inflammation. This included an introduction to spectral flow cytometry which allows the full colour spectrum to be used without issues around compensation as seen with conventional flow cytometry. This technique could be used during research to identify "fingerprint" patterns in our immune cells that may be unique to specific immunodeficiencies or pictures of infection.

Daniel Payne, consultant clinical scientist at Tees Valley Pathology, followed this with a talk on mitigating clinical risk in the immunology laboratory. As "risk" is mentioned 85 times in ISO 15189:2022 with a focus on reducing clinical harm, this is a theme with which we must become familiar. Dan used several recent and relevant examples to highlight the key role the laboratory plays in reducing this risk and led interesting discussions on how to do so in specific scenarios, e.g. strategies to maintain competencies within a team and how to demonstrate this well. Topics presented within the medical and nursing streams included the role of a national MDT for complex CVID patients (we were able to watch a live example of this on the Tuesday), insights into setting up a new allergy and immunology service, and shared decision making and patient choice.

Day two: BSI-CIPN updates

Tuesday's talks began with an update on the BSI-CIPN from Siniša Savić, clinical director of Leeds NIHR-BioResource Centre and BSI-CIPN chair. The BSI-CIPN's mission is to lead delivery of excellence in patient care in clinical immunology, through education, training, advocacy and engagement, and research. Special interest groups have been formed to work on clinical guidelines and contribute to understanding of specific immunological conditions. Excitingly, Alex Richter, University of Birmingham and University Hospitals Birmingham, and David Lowe, Royal Free London, each pitched an immunodeficiency condition which currently lacks clinical guidelines for the group to focus on as their first project (Good's Syndrome and ALPS). The audience was then asked to vote on which condition had the most compelling pitch – we chose Good's Syndrome, swayed by the entertaining yet persuasive pitch specifically noting the regular confusion seen when other specialities encounter this condition. Within the last year, the BSI-CIPN has also contributed to national policy work such as the NHS 10-year plan consultation to advocate for development of the immunology workforce to ensure our patients' needs can be met. Plans for the future of the BSI-CIPN include holding this conference annually, providing collaborative education opportunities for trainees, supporting translation of research into clinical practice and driving work on clinical guidelines. There are many opportunities to contribute to any of this work, so please do contact the BSI-CIPN if you're interested in getting involved or just want to know more!

Symposiums, posters and abstract presentations

Alongside the scheduled talks, there were multiple other ways to learn from our colleagues. Several industry-sponsored satellite symposiums were held, giving further opportunities to hear from colleagues across the country on topics including HAE prophylaxis and treatment, reducing treatment burdens for patients with immunodeficiency and the diagnosis and management of activated PI3 kinase delta syndrome (APDS). Thirty-six fascinating posters were available to view throughout the conference which were submitted by both clinicians and laboratory scientists, giving a good spread of foci from research level pathophysiology, through to diagnostics, laboratory testing and therapeutic targets. These posters

Delegates at the BSI-CIPN conference

covered a range of subjects such as chronic urticaria, infections in immunodeficiency, penicillin delabelling and HAE treatments. We also saw four abstract presentations which gave great insights into current research, showing for example that protective COVID-19 antibodies are lost more quickly in severely obese patients and that CRISPR-Cas9 used to target the KLKB1 gene can provide long-term prophylaxis for HAE attacks.

During breaks and lunch, food was provided in the spacious Eastside Rooms where the conference was held, giving plenty of time to network, discuss talks that got you thinking, or peruse the posters. On Monday evening, we were treated to a delicious conference dinner in the beautifully festive setting of The Grand Hotel, providing further opportunities to network with colleagues.

This conference was an excellent opportunity to share recent insights in immunology, network with colleagues and learn about ways to get involved ourselves! The next BSI-CIPN meeting will be held in December 2025 – as an immunology clinical scientist presenting at this years' event, I'd highly recommend attending and exploring opportunities to get involved and contribute to future projects and meetings within the BSI-CIPN.

Photographs used in this article by kind permission of the BSI

VACANCY – LEAD EXAMINER FOR THE IMMUNOLOGY FRCPATH PART 2 PRACTICAL EXAM

We are seeking a clinical scientist for the role of lead examiner for the Immunology FRCPath Part 2 practical exam. The lead and deputy examiners together deliver the practical exam twice a year. The role is for five years. More information can be found here.

This is a rewarding role in which you can keep your knowledge up to date, develop your leadership skills and increase your professional network. You would initially work alongside the current lead examiners, learning about delivering the exam and managing the question bank.

To find out more, or if you are just curious, please contact Rachel Wheeler:
Tel: 0208 725 5106 or Email: rachel.wheeler@stgeorges.nhs.uk

LabTestsOnline

by
IAIN WOODROW
Deputy marketing lead, LTO-UK

For this edition of *LabMed News*, we're channeling Lord Kitchener from the famous army recruitment poster from 1914. We've had a couple of long-serving members of the editorial team standing down recently and are looking for people to take over these duties. These individuals are responsible for ensuring that the content of the site is both factually correct and written in a way understandable to the person in the street.

We're looking for assistant editors to cover a range of specialties and individual topics within specialties. As with all our contributors, these are voluntary roles and time commitment should be no more than two or three hours a week. You can claim CPD points for the work and you can have real input into how the site and the organisation behind LTOL-UK develops over the coming years. It's a very interesting time, with major developments afoot for LTOL, so this is a great opportunity to become involved. This is especially relevant to anyone interested in scientific writing and communication and who is keen on public engagement with science.

How to get involved

Join the editorial team

If you are interested in contributing to the vital work of the editorial team to keep the website up to date and to introduce new material please contact us for more information.

Contribute articles

We also accept contributions for articles for our front page. These tend to be on topical news stories that relate to aspects of laboratory medicine (see our current landing page for the sort of thing we are looking for).

Contact

Email: enquiries@labmed.org.uk
Website: labtestsonline.org.uk

I REMEMBER WHEN...

EPONYMS PART II

WILLIAM MARSHALL
Emeritus reader in clinical biochemistry, King's College London

In the previous edition of *LabMed News*, I briefly discussed the work of Robert Graves. Probably equally familiar as Graves' disease is Hashimoto's disease, an autoimmune condition that can cause transient hyperthyroidism but inevitably leads to, and is the major cause of, hypothyroidism.

So, who was Hashimoto? Not a great deal is known about him. Hakaru Hashimoto (1881-1934) was a Japanese physician. It was examination of four thyroid glands from patients with hypothyroidism that led to his describing 'struma lymphomatosa' in 1912. His account was published in German, as was apparently typical in those days, in Archiv für Klinische Chirurgie – not, perhaps, a first line surgical journal outside Germany. He abandoned his academic career to return to his home town, joining the family's general practice as a general physician making home visits in a rickshaw. Only some time after his death was the importance of his description of what transpired to be the major cause of hypothyroidism appreciated by the wider medical world.

The only other eponym associated with thyroid disease that I have been able to find is de Quervain. Fritz de Quervain (1868-1940) was a leading general surgeon with wide interests who published prolifically and wrote a major surgical textbook. He also described an uncommon tenosynovitis that is known by his name – a painful inflammation of the tendons on the radial side of the thumb. De Quervain's thyroiditis has the more descriptive but less memorable names of giant cell thyroiditis and subacute granulomatous thyroiditis – an illustration of how eponyms can be a useful shorthand.

Like the thyroid, the adrenal glands are a rich source of eponymous conditions. The adrenal glands were first described in the 16th century, by a French physiologist, Bartolomeo Eustachi (I guess the same anatomist that described the eustachian tubes). His work was suppressed by the Catholic Church and, it was not until the 1930s that interest in the adrenals started to develop. Their importance was first formally established by Thomas Addison (1795-1860) who linked pathological destruction of the adrenals with a wasting disease with vomiting and characteristic bronzing of the skin, leading inevitably to death. The most frequent cause of Addison's

disease in those days was tuberculosis, but is now autoimmune disease. Some of the glands of Addison's patients are preserved in the Gordon Museum at Guy's Hospital. Addison had a distinguished career, working also on pernicious anaemia (Addison-Biermer syndrome), but developed bouts of severe depression in later life and died by suicide, throwing himself from a window.

Adrenal overactivity, Cushing Syndrome, is named after Harvey Cushing (1869-1939), an American neurosurgeon. Purists use the term 'syndrome' for the condition whatever the cause, and reserve Cushing disease for when the cause is a pituitary ACTH-secreting tumour. Cushing made many advances in neurosurgery and taught numerous surgeons both in the US and abroad. He served in field hospitals in WW1 after America joined the war in 1917. Far less well known among his achievements is his introduction into the US of Scipione Riva-Rocci's sphygmomanometer.

A sphygmomanometer had been invented by one Samuel Siegfried Karl Ritter von Basch (what a splendid moniker) in 1881 but involved the use of a mercury column and was clumsy to use. Riva Rocci's instrument was simpler to use and became a widely used tool for measuring blood pressure and indeed did much to promote the importance of hypertension in human disease. And what name is linked to the characteristic sounds that indicate systolic and diastolic pressures? Another eponymous physician, the Russian Nicolai Korotkov. But I am straying from my endocrinological brief – though doing so once again reminds us how physicians and surgeons often made contributions in several, often disparate, topics in scientific medicine.

Although criticised by some, the use of eponyms can act as a useful shorthand for lengthy pathological descriptions of conditions. A good example is Nelson syndrome, the hyperpigmentation that may occur after bilateral adrenalectomy, due to the increased secretion of ACTH that occurs as a consequence. It is more than ten words longer than the eponym! Dr Don Nelson, an American physician, described this syndrome as recently as 1958. He was also an athlete, participating in more than 300 triathlons.

Schmidt syndrome is a multiple endocrine disorder that constitutes any of autoimmune ovarian failure, autoimmune type 1 diabetes, autoimmune thyroid disease and autoimmune adrenal failure or a combination of these. It was first recognised by the German pathologist Martin Benno Schmidt (1863-1949) in 1925 (though the concept of autoimmunity had not been recognised at that time). Schmidt syndrome, termed type II, is the most common of these rare conditions. Two other types of autoimmune polyglandular syndrome (another mouthful) have now been described, but I and III are regarded as subtypes of type II by some authorities.

A further eponymous, endocrine-related condition is Zollinger-Ellison syndrome, typically caused by a pancreatic or duodenal gastrinoma, and one of the family of neuroendocrine tumours (NETs). It's principal manifestation is severe peptic ulceration and diarrhoea. This condition was first described as recently as 1955 by Robert Zollinger and Edwin Ellison of Cleveland, Ohio.

Finally, also in the gut, we have the Verner-Morrison syndrome, another of the NET family, having as the major symptom profuse watery diarrhoea. This was also first described relatively recently (1958), presumably as with gastrinomas because the assays for these hormones were not available hitherto. I regret that I have been unable to find any information on Drs Verner and Morrison – perhaps a reader can help here?

EXERCISING COMPASSION IN A CLINICAL WORLD

DENISE COOK
Head of quality, governance, learning and development, Berkshire and Surrey Pathology Services

Compassion is a universal value because of two truths – it is highly likely that we have all experienced compassion, no matter our cultural background, upbringing, or the different paths our lives take, and compassion is universal because it is the care that flows naturally from a deep part of ourselves, to those who need it, regardless of status, wealth, ethnicity, age or gender. Compassion binds us together, creating a sense of interconnectedness and belonging.

Compassion enables us to cope with our own and others' illness, pain, fear and uncertainty at times when we least expect it.

Since the time of the COVID-19 pandemic, it has been acknowledged that compassion may be the most powerful intervention that can be offered in healthcare.

Research in workplace compassion has arisen in parallel with global movements to nurture compassion across our communities and wider afield. Compassion in an organisational context can be understood as having four elements:

- **Attending**
  Paying attention to the other, being present and noticing suffering.
- **Understanding**
  Understanding what is causing distress, through appraisal of the cause, active listening and dialogue to achieve shared understanding.
- **Empathising**
  Having an empathic response, mirroring feelings, having a felt relation with distress without being overwhelmed by those feelings ourselves.
- **Helping**
  Talking intelligent (thoughtful, wise and appropriate) action to help relieve the suffering.

In the fast-paced, high-pressure environment of our healthcare systems, the importance of compassion is sometimes overshadowed by the sheer volume of tasks that must be completed. Physicians, scientists, nurses,

therapists and other healthcare providers frequently find themselves under significant stress, with increasing workloads, financial constraints, high vacancy and sickness rates, tight schedules and the general growing demands of the healthcare system. Yet, in the midst of this, the role of compassion in healing cannot be overstated. Compassion is not merely a soft skill or a supplementary aspect of care – evidence shows that it is foundational to the therapeutic process and improving patient outcomes.

The power of compassion in healing

Research has shown that compassionate care leads to better patient satisfaction, improved adherence to treatment, lower levels of anxiety and stress and faster recovery times. Moreover, compassionate communication has been linked to reduced burnout among healthcare providers, enhancing job satisfaction and fostering a more positive work environment.

The challenges of compassion in a clinical world

Despite its profound benefits, practicing compassion in a clinical setting is not without challenge. The reality of our system is that it is often more transactional than relational. Clinical encounters are frequently brief and focused on diagnoses and treatments, leaving little room for deep emotional connection.

The system pressures and demand stretch our time and energy, leaving us feeling disconnected from the very reason we entered healthcare; to care.

Regrettably, we are also now experiencing compassion fatigue. The constant exposure to suffering, particularly in high pressured, high demand or end-of-life situations, can lead to emotional exhaustion. Over time, this causes burnout and disengagement, making it harder for us to maintain an empathic approach.

Cultivating compassion in healthcare

To foster compassion in healthcare, systemic and individual changes are needed. At an organisational level, our systems must recognise the importance of compassion and integrate it into their training, policies and work flows. This means not only encouraging staff to engage with patients and colleagues on a

human level but also creating environments that allow for such engagement. Examples may include providing more time for patient interactions, reducing administrative burden and ensuring that staff support systems are in place to address the emotional toll on healthcare work.

On an individual level, we need to cultivate compassion by regularly practicing self-care and emotional resilience techniques. Mindfulness, reflective practice and peer support groups are some ways that healthcare providers can replenish their emotional reserves. By taking care of their own well-being, staff and teams are better equipped to take care of their patients.

Compassionate communication skills should be taught as part of any training programme, with a focus on empathy, active listening and understanding non-verbal cues. Additionally, training in cultural competence is essential to ensure that all patients feel seen and valued at all times.

Conclusion: compassion as the heart of healthcare

In a clinical world that can often seem dehumanising and driven by data, compassion is the force that restores the human element to healthcare. It is the thread that connects the science of medicine with the art of healing, reminding both us and patients that health is not just the absence of disease but the presence of understanding, connection and care.

Exercising compassion in the clinical world is not always easy, but it is always necessary. By prioritising compassion – not only in patient interactions but throughout the healthcare system – we can create a more holistic, effective and compassionate model of care. This shift will ultimately lead to healthier, more satisfied patients and a more fulfilled, resilient healthcare workforce, ensuring that compassion remains at the heart of healing.

Reference

West, M.A; *Compassionate Leadership* 2021.

THAMES AUDIT COMMITTEE MEETING

On 12 November 2024, the Thames Audit Group convened its biannual meeting at Weston House, London. Chaired by Peter West, the event brought together leading clinical biochemistry professionals to discuss audit findings, share expert insights and establish standards for improving patient care.
The meeting began with Ellen Ridler and Heather Stoddart presenting findings from their Regional Audit of Hypertension Investigations. They received 14 responses from various labs (teaching hospitals, district generals and specialist). Their presentation explored key areas such as the availability and implementation of formal guidance for hypertension investigations; investigations for various secondary hypertension disorders, such as Cushing's, phaeochromocytoma and paraganglioma and primary hyperaldosteronism and the availability of electronic order profiles/care sets to streamline hypertension testing. The findings stimulated a lively discussion on best practices, culminating in agreed standards, which are now available on the LabMed website.

GIFTY GEORGE
Senior clinical scientist (biochemistry), East Kent Hospitals University NHS Foundation Trust

Members of the TAG committee

The first guest speaker for the afternoon was David Taylor, consultant clinical scientist and director of the SAS Urine Steroid Profiling Laboratory, who delivered an engaging talk on the presentation, diagnosis and management of phaeochromocytoma/paraganglioma (PPGL). He provided insights into the heritability and genetics of PPGL, emphasised the role of biochemistry in the diagnosis, particularly plasma metanephrines testing and its correlation with genetic profiles. His talk underscored the growing importance of personalised medicine in managing endocrine disorders.

The second guest speaker, Sophie Barnes, consultant clinical scientist and director of the SAS Aldosterone/Renin Service, provided valuable insights into diagnostic approaches and considerations for screening and confirming primary hyperaldosteronism. Her presentation covered laboratory-testing methods for aldosterone and renin, protocols for confirmatory tests and advanced techniques for localisation, offering a comprehensive overview of best practices in the diagnosis and management of this condition. She concluded her presentation by highlighting the RASH initiative (Renin and Aldosterone Standardisation and Harmonisation), a collaborative effort involving laboratories, UK NEQAS and clinical teams, including endocrinologists, surgeons and radiologists. The initiative aims to harmonise and standardise testing, as well as develop a consistent approach to investigating primary hyperaldosteronism.

The Thames Audit Group announced its next audit would be on therapeutic drug monitoring, led by Emily Leach. Overall, the event was a great blend of learning, discussion and networking. Special thanks are due to the speakers for their fascinating talks, Abbott for sponsoring the event and the Thames Clinical Biochemistry Audit Committee for organising the day and ensuring its resounding success.

CARDIAC MARKER DIALOGUES MEETING

The sixth Cardiac Marker Dialogues meeting, Cardiac Biomarkers in Real Time – experiences and opportunities, took place on 26-27 September 2024 at the Hilton Hotel in Glasgow. During this two-day meeting, several highly esteemed speakers delivered talks on the current innovation and research in the world of cardiac markers.

GEORGIA CONRICH-WILKS

Trainee clinical scientist
Greater Glasgow and Clyde

Day one

The meeting opened with a session discussing the benefits and challenges of using a single sample rule out (SSRO) strategy for acute myocardial infarction (MI) from the perspective of an ED physician, cardiologist and the laboratory. To introduce the topic, Professor Body showed how SSRO has evolved over time, from his seminal paper on how the limit of detection of a high sensitivity cardiac troponin (cTn) could be used as an early 'rule out' cut-off, to its now integral role in accelerated diagnostic pathways (ADP) for MI risk stratification.

However, as cardiologist Professor Mills touched upon in his talk, lack of standardisation between cTn platforms can impact the effectiveness of ADPs in reducing hospital admissions and contributes to the challenge of identifying which patients require follow-up. Professor Collinson provided the laboratory's perspective, speaking on the problem of laboratory turnaround times in ADPs. He also gave a great overview of why, statistically, SSRO protocols are clinically safe despite high imprecision at the rule out cTn cut-off.

The second session of the day focused on the real-world consequences of using ADPs. Both Dr Khand and Dr Li presented evidence from randomised controlled trials demonstrating the safety of ADPs. However, Dr Khand reflected on whether current hs-cTn laboratory and point of care (POC) methods have the analytical precision to discern the small value changes used in ADPs.

Professor Jaffe went on to discuss the differences between how cTn is utilised in the US compared to Europe. His talk highlighted how drastically the diagnostic performance of cTn can differ depending on

the patient cohort, particularly in women who are more likely to present atypically. Professor Twerenbold then introduced machine learning methods, which incorporate additional clinical parameters into risk calculations as a means of increasing the efficacy of cTn in rapid rule-out of MI. The POC machine learning algorithm he presented identified over twice the number of patients eligible for early rule-out than when troponin results were used alone, whilst maintaining comparable safety.

The last session of the day focused on the potential improvement that POC provides to the utility of cTn, particularly in early rule out pathways. Moberg Aakre introduced some of the important characteristics to consider when validating POC cTn assays, before presenting evidence on the real-world impact of POC on discharge rates. Professor Apple built upon the analytical aspects of POC implementation, considering the comparability of whole blood and plasma samples, POC precision around rule out cut-offs and the lack of standardisation inherent to immunoassay measurement of cTn.

After some harrowing statistics on the impact that missed ED wait time targets has on patient mortality rates, Professor Than then showed some preliminary results from a RCT introducing POC hs-cTn into practice in New Zealand. Despite the extra time required for ED staff to process POC cTn samples, he spoke on how decreased length of stay can potentially decrease 'non-value' time that nurses spend with patients, in addition to reducing high acuity bed blocking and facilitating earlier treatment.

Day two

Professor McEvoy kicked off the first session of day two by presenting evidence on the need for sex- and age-specific cut-offs for NT-proBNP. They found that the 97.5th percentile for healthy men and women diverged around puberty before converging again at 50 years of age, when NT-proBNP rises steadily with age in both sexes. This generated interesting discussion around how we define a healthy population for deriving reference ranges, particularly in the older age groups.

Professor Christenson then introduced us to the state-of-the-art for natriuretic peptide measurement, particularly how variable

Fred Apple, Rick Body, Nick Mills and Paul Collinson discuss single sample rule out

glycosylation of the target epitopes can affect NT-proBNP detection. It was interesting to hear how glycosylation contributes to variation between assays and the concentration of natriuretic peptides in patients with obesity. Dr Lee concluded the session by showing how CoDE-HF, which utilises a machine learning algorithm that considers additional clinical parameters such as renal failure and obesity, improves upon the diagnostic accuracy of using NT-proBNP concentrations alone.

Assistant Professor Wittfooth started the next talk by introducing us to the concept of cTn fragments, and how they can be used to increase the specificity of cTn for AMI. It was fascinating to see her data on a novel cTnT assay that detects only long cTnT fragments, effectively eliminating the cTnT increases attributable to end stage renal disease seen on traditional hs-cTnT assays, which detect total cTnT.

Professor Christenson then returned to the stage to provide an update on the status of the IFCC Workgroup for cTnI standardisation. Over the years, the workgroup has successfully reduced the difference between cTnI concentrations between assays from 30- to approximately 1-2-fold and has now developed new commutable reference material (RM8121) to further aid in the harmonisation of cTnI assays.

After some thought-provoking break-out discussion on POC implementation, validation of hs-cTn assays and biomarkers in chronic disease and gender, the meeting concluded with a panel discussion,

Chief scientific officer for Scotland, Catherine Ross, opened day two

reflecting on how the cardiac marker field has evolved and where the speakers saw the future of the cardiac markers going. Whilst many of the innovations discussed above were highlighted, they also hoped that the future would bring better utilisation of the prognostic information in cTn measurement and the possibility of utilising other biochemical and genetic markers to aid in determining patient prognosis.

Closing remarks

Whether a clinician, laboratory or industry professional, I think all attendees would agree that Cardiac Marker Dialogues was an incredibly thought-provoking and valuable meeting, and that we look forward to the next one.

THE DIGGLE MICROBIOLOGY CHALLENGE

These questions, set by Mathew Diggle, are designed with trainees in mind and will help with preparation for the microbiology part 1 FRCPath exam.

Question 46

Which of the following statements about *Mycoplasma pneumoniae* is correct?

A) It possesses a rigid cell wall containing peptidoglycan.
B) It uses flagella for motility.
C) It produces a toxin called Community Acquired Respiratory Distress Syndrome (CARDS) toxin.
D) It is easily visible under light microscopy.
E) It cannot survive intracellularly in host cells.

The answer to this question will appear in the next issue of LabMed News.

Question 45 from the December issue

True or false. An exotoxin is produced by:

A) *Neisseria meningitidis*
B) *Clostridium perfringens*
C) *Staphylococcus aureus*
D) *Corynebacterium diphtheria*
E) *Neisseria gonorrhoeae*

Answers

The following are true:

B) The various forms of *Clostridia* are prime examples of bacteria that produce exotoxins. Commonly found in decaying vegetation and soils, this gram-positive, rod-shaped, anaerobic spore-forming *bacterium previously named Clostridium Welchii* can produce more than 17 different bacterial exotoxins.

C) Functioning as important virulence factors in related infectious diseases and food poisoning in humans and animals, *S. aureus* produces a variety of exotoxins, such as leucocidins, hemolysins and enterotoxins.

D) Secreted mainly by *Corynebacterium diphtheriae* but also by *Corynebacterium ulcerans* and *Corynebacterium pseudotuberculosis* is the exotoxin Diphtheria toxin, which causes diphtheria. Symptoms include swelling of the neck or area surrounding the skin lesions, fever and pharyngitis.

The following are false:

A) As a gram-negative bacterium, *N. meningitidis* is an endotoxin producing bacterium. The endotoxin is a lipooligosaccharide (LOS) and is a major cause of meningococcal sepsis which is associated with an overstimulation of the cellular immune response.

E) Harboring numerous fimbriae and the gonococcal endotoxin lipooligosaccharide, *N. gonorrhoeae* does not express any potent exotoxins. If gonorrhoea goes untreated, it can cause complications such as pelvic inflammatory disease.

DEACON'S CHALLENGE REVISITED

NO 35. ANSWER

A plasma sample contains 140 mmol/L of sodium and 95% water by volume. Neglecting sodium binding by plasma proteins, calculate the apparent plasma sodium concentration determined from measurements with an electrode system which responds to water sodium (a) in undiluted plasma and (b) in plasma diluted 1 in 20 with water.

a) If the plasma contains 95% water i.e. 95 ml per 100 mL

Then 1 litre will contain 950 mL of water

and the concentration of sodium in plasma water will be 140 mmol/950 mL

1 mL of plasma water will contain $\frac{140 \text{ mmol sodium}}{950}$

and 1 L will contain $\frac{140 \times 1000}{950} = 147.4$ mmol

So that the concentration of plasma sodium measured will be **147 mmol/L**

b) If the plasma is diluted 1 in 20 with water (equivalent to 0.05 L plasma diluted to 1 L)

Amount of sodium in 1 L of dilution = 140 x 0.05 = 7.0 mmol

Amount of water in 1 L of dilution = Water in 0.05 L plasma + water added

= 0.95 x 0.05 + (1 – 0.05)

= 0.0475 + 0.95

= 0.9975 L

Concentration of sodium in water = $\frac{\text{Amount of sodium (mmol)}}{\text{Amount of water (L)}}$

= $\frac{7.0}{0.9975}$ = 7.018 mmol/L

Apparent concentration in undiluted plasma = Measured concentration x dilution

= 7.018 x 20

= 140.35 mmol/L (140 mmol/L to 3 sig figs)

NB. With direct ISEs, the sodium concentration is measured in the volume of plasma water present. An indirect ISE does not consider the real proportion of plasma water present prior to dilution so that discrepant results are obtained if the proportion differs e.g. due to hyperproteinaemia or hyperlipidaemia.

Question 36

A specimen of spinal fluid from a patient who had suffered head trauma was noted to be bloodstained. The CSF protein was found to be 1,183 mg/L on clear colourless supernatant after centrifuging (no scan done). The CSF contained red cells 10,200 cells per cubic millimeter.

As the diagnosis was not clear, the doctors looking after the patient wondered how much of the CSF protein may have come from the traumatic tap. On the same day, the patient's serum total protein was 73 g/L and the RBC from the full blood count was 4.5×10^{12} cells/L.

Estimate the percentage of the measured CSF protein that may have come from the serum.

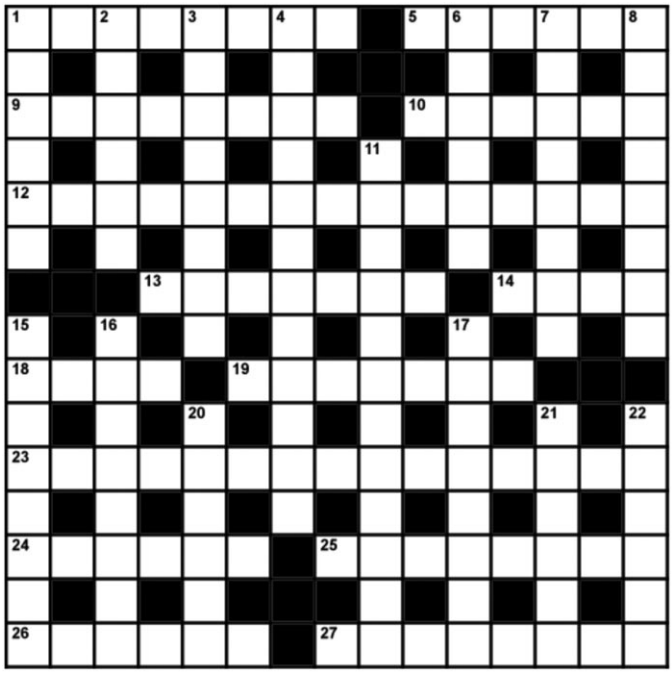
THE CROSSWORD BY RUGOSA

Across

1 Differentiate satisfactorily, arrange ignoring social element (8)
5 Russian scientist father, opposed to love, banished sweetheart (6)
9 Part of the CNS thus contains alarm, suppressing initial response (8)
10 Reported delay of some gravity (6)
12 Non-cardiac part of circulation? Pity my matchless confusion! (9,6)
13 Arranges beforehand gifts without number (7)
14 Metal press (4)
18 Excitement in the operating theatre (4)
19 Inculcate representative in New Latin (7)
23 Data for diagnosis: parameters follow written recommendation (9,6)
24 Most dull and uninteresting about editors' lost love (6)
25 Emotional outpouring, no time limits, cry freely (8)
26 Pound store order for alcohol (6)
27 Sensory organ complex tape recorder readout (8)

Down

1 Agree seating (6)
2 Areas of interest from factual short piece of writing? (6)
3 Trainers order rest to contain persistent dull pain (8)
4 Monitoring investigation makes men fractious (12)
6 Group headed away from 11 disturbance (6)
7 Tie off vessel on leaving urogenital operation (8)
8 Eager to leave unorthodox vegetarianism to get essential nutrients (8)
11 A chelated dye can be made from this colourless liquid (12)
15 Hard case disrupted party game (8)
16 Face fine distributing stimulant drug (8)
17 Spreading locally, however possibly via veins (8)
20 Fast rough sport takes energy (6)
21 Self-seeker carelessly confuses categories (6)
22 Repair semi or similar structure (6)



SOLUTION FOR DECEMBER'S CROSSWORD

SUDOKU ... THIS MONTH'S PUZZLE

	R					E	C	
Y					H			
T			I	S				M
		I					R	
	Y						E	
	C					H		
C				E	T			R
			R					H
	S	M					T	

SOLUTION FOR DECEMBER

S	M	C	R	T	H	Y	E	I
E	I	R	Y	S	M	H	C	T
T	Y	H	I	E	C	R	S	M
I	S	Y	E	R	T	C	M	H
C	H	E	M	I	S	T	R	Y
R	T	M	H	C	Y	S	I	E
Y	E	S	C	H	I	M	T	R
H	R	T	S	M	E	I	Y	C
M	C	I	T	Y	R	E	H	S

OBITUARY

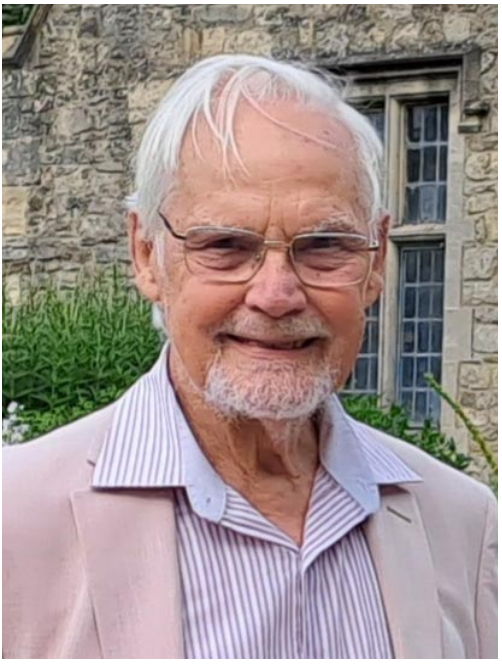
HOWARD G. J. WORTH

1939-2024

Howard Worth was educated at the Mercers' School, London and Newcastle University, which led to postgraduate studies at Kingston University, then gaining his PhD at Royal Holloway College, University of London. After a two-year post-doctoral period where he studied the chemistry of carbohydrates, he was appointed as a lecturer at Aberdeen University, studying the application of liquid chromatographic methods to lipid analysis collaborating with renal physician Dr M McLeod at the Forester Hill campus.

His career in the NHS started when he moved to take up an appointment as a senior biochemist at Birmingham Women's Hospital in 1971. Tom Whitehead was at that time developing a WHO initiative in Birmingham to improve the quality of biochemical testing and laboratory management in countries where clinical biochemistry was less developed as a discipline. This work, and Howard's connection to Birmingham, led him to being invited to join a team embarking on a significant overseas project throughout the 1980s. He travelled to several countries in Latin America, the Middle East and Africa.

He moved to a principal biochemist post at Northwick Park Hospital in 1975. Here, he collaborated with Fred Mitchell (q.v. 70th anniversary edition of *LabMed News*) in the evaluation of the newly developed 'discrete' as opposed to 'continuous flow' analysers in Fred's MRC Clinical Research Centre, which was located within the hospital campus. Howard was very generous with his time. He promoted the training of clinical biochemists not just in his own hospital but throughout Northwest London. His encouragement and mentorship were



enjoyed by all those who sought it. Howard formed lasting friendships with many of his colleagues which endured throughout his career. Usually a mild-mannered man, Howard was nevertheless much exercised by faceless bureaucracy. Indeed, he reserved his most creative expletives for describing his setbacks in the customer service department at British Telecom!

In 1981 he was appointed consultant clinical scientist at King's Mill Hospital in Sutton-in-Ashfield near Mansfield where he took an active role in the association, serving as secretary of the scientific committee and as a member of the education committee. He undertook seminal work in workforce planning, identifying a serious demographic problem requiring a huge increase in

recruitment to maintain clinical scientist posts in the NHS. During his time at King's Mill, Howard demonstrated his management skills and was much sought after to chair hospital development projects. He was a popular member of the consultant staff with his medical colleagues. He continued to add to his many publications. His textbook *Metabolic Pathways in Medicine* was published jointly with David Curnow, a lifelong collaborator. He was also a contributor/editor to *Fundamental Toxicology* (RSC publications) and *Chemical Safety Matters* (IUPAC).

He and his second wife, Cristina, retired to New Romney on the south coast in 2010 where he kept an open house for his many friends. Always proud to be a Londoner, he became, in retirement, Chair of the Mercers' old school and was a member of the Reform Club.

Howard was immensely proud of his daughter and two sons who are pursuing very successful diverse careers. He will be remembered particularly for the personal and educational help he gave to his colleagues.

R.H.

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