LabMedNews

Association for Laboratory Medicine

JUNE 2024

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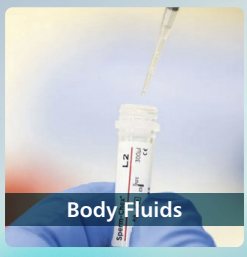

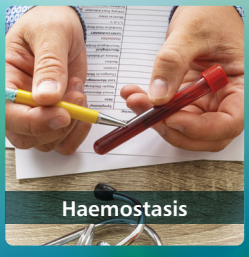

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Association for Laboratory Medicine

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CEO UPDATE

VICTORIA LOGAN

Chief Executive Officer

We begin working on a new strategy for the Association in July, shortly after the general election. This is an exciting time as we explore potential opportunities with our new name and brand.

Key to this will be our collaboration with stakeholders and other professional bodies. We continue to build on discussions following an invitation to contribute to NHS England's initiatives in digital pathology and sustainability. Notably, NHSE has confirmed that sustainability will be added to the Network Maturity Matrix, highlighting its growing importance. We are also working with NHSE to create open-access assessment criteria for sustainability accreditation schemes.

If you haven't already, take a look at our recently published annual review for 2023 to see the breadth of what our committees achieve. New for this issue of *LabMed News* is the committee spotlight feature in which Kam Chatha highlights the work of the Publications and Communications Committee.

In April, Michael Murphy stepped down from his role as Co-Editor-in-Chief of the *Annals* with Phil Monaghan, who will be joined in August by Paul Hamilton as fellow Co-Editor-in-Chief. I'd like to thank Michael for his many years of leading the journal as a high quality resource for researchers across the globe.

LTO-UK is celebrating its 20th anniversary this year. We are launching a drive to recruit new volunteers to coordinate and review our content and we are also planning impact evaluation research to secure new funding.

Make sure to log in to the Learning Academy, now accessible to all members. Among its new content you'll find cases, modules and genome sequencing course lectures. Thank you to Hazel Borthwick, who has completed her term as Director of Education, Training and Workforce, for all her work as a Director at LabMed and in overseeing the successful launch of this project.

Finally, we are thrilled to announce a new strategic partnership with Roche. Roche, a Gold sponsor at LabMedUK24, will collaborate with us over the next year, allowing us to benefit from their expertise in areas ranging from social value to AI. You can also read about Greg Innis's role as a STEM ambassador in this issue.

We look forward to seeing many of you at LabMedUK24. We are already planning for LabMedUK25, so please let us know what you think the programme should include.

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APPLY NOW FOR RESEARCH AND INNOVATION GRANTS

Applications for the Association for Laboratory Medicine annual Research and Innovation Grants are now being accepted by the LabMed Scientific Committee.

The purpose of the grant is to support high-quality, original, ethical research and innovation in Laboratory Medicine. Multi-disciplinary and/or multi-centre research is strongly encouraged as are applications that collaborate with industry and those that promote the values of the Association including innovation, sustainability and inclusion. Last year, we awarded projects recognising potential impact on healthcare inequalities.

Grants are open to all Ordinary members of the Association with total funding up to £20,000 available. The limit for each application is £8,000 and three to five projects will be funded. The application forms and guidance can be found in the documents section of the Association's website.

If you have any questions, please feel free to email the Deputy Director for Scientific Affairs, David C. Gaze.

The application deadline is midnight on Friday 9 August 2024.

Alexandra Yates, Director of Scientific Affairs
David C. Gaze, Deputy Director of Scientific Affairs

CALL FOR CONTRIBUTIONS TO THE LABMEDUK25 PROGRAMME

What do you want to see at LabMedUK25?

Which great speakers do you want to hear from?

The conference will take place in Manchester from 10-12 June 2025. The Conference and Events Committee will develop the programme from ideas submitted from members.

Suggest a topic, speaker or session idea here. Deadline: 28 June 2024.

GET INVOLVED WITH LABMED

Would you like to share your knowledge and learn new skills? Perhaps you'd like to become a Learning Academy Author or join the *LabMed News* team? Visit our website for some of the latest vacancies and voluntary opportunities available at the Association for Laboratory Medicine.

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COMMITTEE SPOTLIGHT

WHO IS OUR DIRECTOR OF PUBLISHING AND COMMUNICATIONS?

Kam Chatha, LabMed's Director of Publishing and Communications for the past six years, is due to announce the end of her term. She sat down for an interview to talk about her time as Director and what her successor can look forward to, including more resources and support than anyone in the role before.

"Now is the time it's getting exciting"

KAM CHATHA
Director of Publishing and Communications

According to Kath Hayden, "Kam has been instrumental in bringing together all our publishing projects to ensure that we link in the brilliant work our members are undertaking across all of our publications and our website. Kam brings enthusiasm and passion to the role, whilst ensuring that she actively listens to others' perspectives and takes time to understand where others are coming from. She is a pleasure to work with".

What are you working on at the moment?

A priority is our upcoming strategy day with SAGE for the *Annals*, which is the next step after the tender process last year. We plan to maximise the use of our publisher's resources to be more active in raising the journal's profile, increasing submissions and increasing income for the Association. The journal has been doing well and we're giving it more focus as we look to a future of Open Access publishing.

Why did you become Director?

I've been doing communications ever since I started as a Trainee: things like public engagement, joining the organising committee for Focus, and 'Meet the Scientist' at the Science Museum in Birmingham. I was interested because I don't think people know what we do; we sit in the back of the service because

we're not patient-facing. Almost everyone gets their bloods done but nobody knows what happens to them.

So my interest was representing us to outside the profession, as well as promoting all the good stuff we do within it, as I strongly believed members were doing so much. And I think the committee is a fabulous place to be; you make such good friends and a network. There's lots of mutual trust and respect, which is important because we're all trying to contribute.

Why get involved with the Association?

What matters most is patient outcomes, and it's underappreciated that our daily work is pivotal to that. We can improve someone's experience in hospital just by getting the right result to them promptly. After my own experience as a child with my mum in hospital, now that I'm in this position I want to do my best and ensure people experience us at our best. This is why the work LabMed members do is so important to promote. We help ensure patient care is as clinically safe as possible, and we keep striving to make it even better.

Who could be the next Director?

The role needs someone with fresh ideas, because the Association should be forever evolving to meet the different requirements of our members. I'd love to see us engage more with the next generation of clinical scientists because they're the ones who will shape what happens next.

What have been your biggest struggles over the past few years?

The Association and the needs of our members have changed and it's hard to keep up the investment needed in communications and publications. A lack of resources has made it harder to bring ideas to fruition. For example, understanding what a sustainable approach to publishing looks like. With recruitment of more expertise in the staff team we have gained more support so now is the time it's getting exciting.

What else do you do besides PubCom Director?

My biggest interest is the work I'm doing on artificial intelligence and bowel cancer screening, which I'm presenting on at LabMedUK24. I'm also working with the Ministry of Defence to roll out bowel cancer screening across their armed forces internationally. And more research; I've been doing research all along and I really want to thank Rousseau Gama who held the door open for me.

It's all about people giving you opportunities. If they don't, you can't walk through those doors to find out what's available. And on that note, I'd also like to thank Neil Anderson, who encouraged me to apply for this role. Bernie, Kath, Ian and Jane have all been very supportive too. And Steve Smith for the opportunities I've had since I became Director of bowel cancer screening.

"It's all about people giving you opportunities"

Conclusion

It will be hard for the Association to see her step down. As Rousseau Gama says, "it has been a delight to follow Kam's progression" and underpinning all her achievements "are Kam's drive, professional vision and charming ability to communicate efficiently and effectively". However, LabMed is also excited to welcome a new face to the directorship and will officially announce the vacancy at this year's AGM.

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:

Dipti Tiwari, Freelance Medical Editor and Reviewer, Singapore
Maisie Jackson, Trainee Clinical Scientist, London North West University Healthcare NHS Trust, London
Mariana Abdel-Malek, Metabolic Medicine Registrar, Charing Cross Hospital, London
Ishrat Naushen, Student, Queen Mary University of London, London
Benson Olowofoyekun, Student, Teeside University, Middlesbrough
Clement Akinnubi, Principal Laboratory Scientist, University of Strathclyde, Glasgow
Ella Freke, Trainee Clinical Scientist, St Thomas's Hospital, London
Gayan De Costa, Consultant Chemical Pathologist, Oxford
James Kelly, Senior Biochemist, Coombe Hospital, Dublin, Republic of Ireland
Iman Al-harthi, Resident, Oman Medical Specialty Board, Muscat, Oman
Maya Cox, Trainee Clinical Scientist, Luton and Dunstable University Hospital NHS Foundation Trust, Luton
Fatema Al Farsi, Oman Medical Specialty Board, Muscat, Oman
Ruqaiya Al dhuhli, Oman Medical Specialty Board, Muscat, Oman
Sara Al Ismaili, Oman Medical Specialty Board, Muscat, Oman
Aisha Mohamed, Speciality Registrar, Royal Liverpool University Hospital, Liverpool
Fatima Baker, Student, Imperial College London, London
Aaisha Al Balushi, Oman Medical Specialty Board, Muscat, Oman
Lizhen Ong, Senior Consultant, Singapore
Sara Elbireer, Student, Queen Mary University of London, London
Tahani Humood, Oman Medical Specialty Board, Muscat, Oman
Hanaa Al Lawati, Clinical Biochemist, Oman Medical Specialty Board, Muscat, Oman
Zawan Hamid Al Hasni, Oman Medical Specialty Board, Muscat, Oman
Hassan Allawati, Oman Medical Specialty Board, Muscat, Oman
Dunstan Rajendram, Principal Scientist, Public Health England, London
Musa Aliu-Yamah, SSCLS, King Fahad Military Hospital, Khamis Mushayt, Saudi Arabia
Juozas Butenas, Trainee Clinical Scientist, Imperial College Healthcare NHS Trust, London
Laura Bryant, Trainee Clinical Scientist, Queen Alexandra Hospital, Portsmouth
Dhanuvintha Tharmarajah, Student, Royal Stoke University Hospital, Stoke-on-Trent
Chloe Ayre, Trainee Clinical Scientist (STP), University Hospitals Birmingham NHS Foundation Trust, Birmingham
Meng Choo Leck, Senior Medical Laboratory Scientist, National University Hospital, Singapore
Marie Calligaris, Trainee Clinical Scientist - Immunology, Royal Sussex County Hospital, Brighton
Sampath Mudunkotuwa, Clinical Fellow, King's College Hospital NHS Foundation Trust, London
Natella Larina, Student, The Open University, Edinburgh
Ako Mohammed, Biologist, Nza Laboratory, Iraq
Shirin Kurbanova, Erciyes University Faculty of Medicine, Turkey
Julia Pennington, Resident, University of Bradford, Bradford
Johnson Soronnadi, Senior Biomedical Scientist, Manchester University NHS Foundation Trust, Manchester
Mohamed Elborei, Graduate Student/Assistant Lecturer, Al-Azhar University, Cairo, Egypt
Sutirtha Chakraborty, Consultant Chemical Pathologist, Haugesund Hospital, Haugesund, Norway

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ANNALS OF CLINICAL BIOCHEMISTRY LATEST RESEARCH ARTICLES

Check out this interesting article, newly published in the *Annals of Clinical Biochemistry:* Fenn J, Gill H, Starbrook L, *et al.* Salivary testosterone changes during oral glucose tolerance tests in overweight and obese men: postprandial or circadian variation? *Annals*. 2024; 0(0). doi :10.1177/00045632241249087

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

THE DON HENDERSON AWARD 2024

We were delighted to once again sponsor the Don Henderson Award in 2024.

This year's winners were Mill Hill School with their presentation 'Can AI replace teachers?'. Congratulations to all involved.

The Don Henderson Award is presented annually at the Schools Science Conference at the University of Westminster, an event which Association member Don Henderson was instrumental in establishing. This conference, organised by science4u, encourages students to study science. The Association have sponsored the award since 2011. Book tokens and a shield are presented to the school with the best report on a piece of research they have undertaken.

UK NEWBORN SCREENING LABORATORY NETWORK ANNUAL SCIENTIFIC MEETING

Friday 28 June 2024 – Millennium Point, Birmingham

New developments in Newborn Screening in the UK and the world map project, screening around the world, in celebration of International Neonatal Sreening day. Registration fee: £25. Registration closes: 10 June 2024.
Please email claire.manfredonia@mft.nhs.uk for more details.

CHANGE OF PUBLICATION DATE

From August 2024 onwards, *LabMed News* will be published on the 15th of the month. To guarantee publication, please submit your article by the 15th of the preceding month (i.e. 15th July for the August 2024 issue) to: editor@labmed.org.uk

We aim to be as flexible as possible and will try to accept articles up to the 1st 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 e-mail.

LABMEDUK24

INDUSTRY SPONSORED WORKSHOPS

TUESDAY 11 JUNE

12PM-12.30PM

Biohit

Urinary Dkk-3 as a CKD progression marker

Chronic kidney disease (CKD) is ranked fifth in the leading causes of death world-wide, and is rising. The individual course of CKD is highly variable, and current prediction models for CKD progression using eGFR, albuminuria and clinical history are rarely reliable. Dickkopf-3 (Dkk-3) is a stress-induced, pro-fibrotic glycoprotein secreted into urine from tubular cells – aptly described as a "kidney troponin" that can be measured by ELISA. Our talk will summarise the role of uDkk-3 which, to date, has proved to be an unprecedented biomarker of CKD development, progression of CKD, development of acute kidney injury (AKI), transition from AKI to CKD, as well as treatment response.

Speaker: Thomas Bernd Dschietzig, Head of Medical Science at Immundiagnostik

YourBio Health

Paradigm shifts in phlebotomy: providing reasonable adjustment for underserved patient populations

This session will address alleviating health inequalities through alternative blood collection systems and the verification of standard chemistry assays using small capillary sample volumes. We hope to open discussion around pre-analytical issues with capillary sampling and the interchangeability of patient results obtained from standard venous and capillary samples.

12.30PM-1.00PM

Mast Group Ltd

Faecal haemoglobin and calprotectin testing: The Good, the Bad and The Ugly

Join us for an introduction to the OC-Sensor faecal haemoglobin and calprotectin assays, featuring an overview of the current landscape of faecal testing and how the bad and ugly can become the good.

Speaker: Emily George, FIT Product Specialist, Mast Group Ltd

BeamTree

RippleDown: curated AI solutions for the Clinical Laboratory

Pathology laboratories generate enormous quantities of data. All this data has overwhelmed the capacity for human experts to review manually every report or every sample registration episode. As a result, your customers, patients, GPs, physicians, insurers don't always receive the benefit of your teams' expertise at scale. Pathologists, laboratory scientists, managers and people across the organisation are looking for the same thing: every patient encounter – every specimen, every test result, and every decision – should lead to the best possible outcome, with the most logical use of resources. They want to apply their expert knowledge to all lab process, every time.

WEDNESDAY 12 JUNE

1.30PM-2PM

Roche

Cobas mass spectrometry: the future of clinical mass spectrometry testing: transforming reference into routine

Binding Site

The EXENT System: transforming monoclonal protein diagnostics with an innovative mass spectrometry solution

Speaker: Nuno Barbosa

Siemens

Chronic liver disease: A diagnostic challenge

Speaker: Mark Pugh

EFLM LABX - CALL FOR NEW LABORATORIES TO JOIN THE PROGRAMME

The EFLM Laboratory Exchange (LabX) programme was set up after a survey of EFLM member countries in 2016-2018 which identified that there was a need for a more structured way to connect individuals seeking extra or specialist training opportunities outside their own country with laboratories able to offer training placements.

More information on the EFLM LabX programme can be accessed on the website.

We are actively seeking new laboratories to join the programme to offer training placements and you don't have to be a large or specialist laboratory to join.

For laboratories, joining the programme could give you a way to showcase an area of specialist interest/expertise within your own institution, meet and interact with enthusiastic young scientists from other countries and ultimately help share good practice across Europe.

To join the programme, you will have to register on the site including providing some details of your laboratory and institution. Once you have signed a 'contract of partnership' with the EFLM then you will be able to create a training placement and receive/respond to applicants. Instructions are available here.

For those interested in undertaking training in another European country, please visit this link for details of how to apply for placements. Bursaries are available from the EFLM if financial support is required – see here for details.

Figure 1 EFLMLabX project on EFLM website

I REMEMBER WHEN...

WILLIAM MARSHALL

The measurement of 'blood gases' was long a challenge to laboratory personnel and the interpretation of the results of measurements is still often regarded as problematic. The relevant measurements included in this topic are the partial pressures of oxygen and carbon dioxide in the blood, and the concentration of bicarbonate (strictly, total carbon dioxide). An early textbook (Maxwell I. *Clinical Biochemistry* (2e). Melbourne: Ramsay; 1925) describes assessment of a patient's total blood buffer capacity by giving the patient bicarbonate orally and continuing to do so until the urine becomes alkaline (Sellard's test). Van Slyke's method for the measurement of plasma alkali reserve – a technique requiring special apparatus and not suitable for routine use – is also described, as is a technique for measuring ammonia in urine. The apparatus, at least during its development, would have been crafted by the departmental glass technician – a highly skilled individual of a species I should imagine is now long extinct.

My 1937 copy of Harrison (Harrison G A. *Chemical Methods in Clinical Medicine* (2e). London: Churchill; 1937) – the definitive (and possibly the only) general textbook on the subject at the time, shows how quickly knowledge and technology were advancing. A whole chapter is devoted to 'Ketosis, Acidosis and Alkalosis', and the van Slyke method is described for the measurement of total carbon dioxide. This used the van Slyke apparatus and involved liberating the gas from plasma using a vacuum, with its volume being measured using a mercury manometer, great skill being required in its execution. And, until the introduction of selective electrodes, the calculations required to determine the results from the measurements look (at least to me) bewilderingly complex and require the use of experimentally developed nomograms.

Donald van Slyke (1883-1971) was perhaps the greatest innovator in this field. His career spanned three generations of clinical biochemists. He also developed techniques using the eponymous apparatus for measuring both the oxygen content and capacity of blood. These are described in detail in Varley's book

that may be remembered by older members of the profession as essential reading and understanding in preparation for the dreaded wet practical component of the (then) MRCPath examinations (Varley H. *Practical Clinical Biochemistry* (4e): London: William Heinemann; 1953).

Two other titans of acid-base measurements and their interpretation in the second half of the 20th century were Paul Astrup and Ole Siggaard-Andersen. Astrup developed the 'Astrup Micro Equipment' for the measurement of these various entities. 'Micro' it was not, being approximately the size of a small chest freezer on wheels. Compare that with the size and functionality of modern blood gas instruments.

It was appreciated that acid-base abnormalities could be either primarily metabolic (due primarily to a fall in [$HCO3^-$] as it buffered an increase in hydrogen ion concentration) or respiratory, due to a change in pCO_2. Astrup developed techniques for the measurements of plasma pH (actually hydrogen ion concentration but converted to pH) and pCO_2. Using these, he and Siggaard-Anderson developed the concept of 'standard bicarbonate', this being the measured bicarbonate concentration corrected for the small component due to any respiratory contribution. They also introduced the concept of 'base excess' (or deficit), reflecting the contribution of non-bicarbonate buffers (particularly proteins) to the buffering capacity of blood. Modern blood gas analysers provide both these values. However, the contribution of carbon dioxide to bicarbonate is relatively small and can usually be seen from comparison of the measured bicarbonate with the value expected for a given hydrogen ion concentration.

To my mind, these – particularly the base excess – are potentially dangerous concepts. Although base excess can be used to calculate the total amount of bicarbonate that is required to correct a metabolic acidosis, the general principle of management is to give small amounts and titrate these against the change in pH. Both standard bicarbonate and base excess are derived, not measured, quantities.

Nevertheless, critical appraisal of terms may have helped some laboratory personnel and clinicians to understand the apparent complexities of blood gas homeostasis, their disturbances, causes, physiological consequences and management. However, what I have never understood is the use of pH rather than hydrogen ion concentration. pH is the log (base 10) of the reciprocal of hydrogen ion concentration. It is dimensionless and gets smaller when [H^+] increases; are logarithms still used in elementary maths or even taught at schools? Varley paraphrases the view of Tom Whitehead, (the eminent Birmingham clinical biochemist best known for his work on quality matters) that 'a clearer indication of changes in the acid-base state is given by expressing any change in pH in nanoequivalents of hydrogen ions per litre and then dividing the change into respiratory and metabolic components'. For what it's worth, I have expressed a similar view in books and papers, as have various eminent practitioners, but all to no avail. No one has suggested a contrary view to me but perhaps I am missing something. Please let me know if I am.

CONDOLENCES

It is with regret that we must inform you of the sad news that Peter Sanders passed away on 16 February 2024. Peter was one of the founding members of the Association, seventy years ago. Messages to Peter's family may be forwarded to mike@labmed.org.uk

BEING A STEM AMBASSADOR

GREG INNISS
Roche Diagnostics UK and Ireland

I can honestly say that becoming a STEM (Science, technology, engineering and mathematics) Ambassador has been one of my career highlights so far and something that I should have done years ago. I'm hoping that after you read this article, it will encourage you to also sign up and volunteer some of your precious time and expertise to inspire the next generation of scientists.

My name is Greg and I have worked in the diagnostics field since leaving university all those years ago. I currently work for Roche Diagnostics UK and Ireland, and before this had the pleasure of working in our NHS as a Biomedical Scientist specialising in Clinical Biochemisty. That's the introductions done, now to the important part, why STEM work is so important!

I'm sure we all remember back to our school days and if you're anything like me, you probably had no clue what you wanted to do as a career. The thing is this is normal, we rarely have our lives mapped out at such a young age. But the important thing to get across to those at school is that there are multiple options available, with STEM careers being one of those. Breaking down some of the barriers and stereotypes that certain job roles have is vitally important, especially with minds that are so young. A simple conversation with children and young people about what subjects they could study and the different career pathways and opportunities can be so impactful and reinforce that STEM careers are achievable for all.

It was so easy to sign up and get involved. Once I had completed my online STEM Ambassador training and of course been DBS checked, I was ready to go. Luckily for me, my employer fully supports the work that STEM Ambassadors do, therefore I feel empowered to offer my volunteering services, which I now do on a regular basis.

My first official STEM activity was conducting mock interviews with students aged 14-16 years. Sometimes children just need a helping hand for them to realise how talented they are, which is definitely how I would summarise my experience of this event.

STEM LEARNING

I would say my favourite events to date are the business speed networking sessions. These sessions are designed to help inspire students about the range of career options and pathways open to them after finishing school. These sessions allow me to inform the students about all things diagnostic, and the range of careers available via the public and private sectors. It also just gives me the opportunity to tell the children why diagnostic testing is so important in the patient healthcare pathway.

The great thing about volunteering is that there are many different ways to get involved. Being an official STEM Ambassador does make it super easy as the STEM facilitators reach out on a regular basis when volunteering opportunities are available, but there is nothing stopping you reaching out to local schools and even universities to offer your services.

I feel that if just one child goes away feeling like a STEM career is now an option after a conversation, then my visit was worth it. I cannot recommend doing this more highly. I feel extremely proud to be part of the STEM Ambassador Team and hopefully I've played a small part in helping a new generation of STEM experts shine in the future!

For more information please visit the STEM Learning web page.

"I want to show as many young people as possible, starting with my two daughters, that STEM careers are achievable for all"

SUPPLIERS, SOCIAL VALUE AND SUSTAINABILITY IN THE PATHOLOGY NETWORK MATURITY MATRIX

ROB SHORTEN
Consultant Clinical Scientist, Department of Microbiology, Lancashire Teaching Hospitals NHS Foundation Trust

We know that the supply chain makes up a significant proportion of the carbon footprint of the services that we provide. You don't have to be in a lab for very long to notice the sheer volume of 'stuff' that we use: large, multi-component equipment, single use kits, harmful chemicals and tonnes of non-recyclable plastic.
We need to work with our suppliers to reduce this impact as far as is practicable. Therefore, I was delighted to represent the Association by speaking at BIVDA's Spring Sustainability Seminar in April. Approximately 25 individuals from a range of manufacturers and suppliers heard a day of talks from senior pathology leaders across the devolved nations. I highlighted that many lab teams genuinely want to do more to reduce their environmental impact but often don't know where to start. We discussed how professional bodies, such as our Green Champions (in collaboration with IBMS and RCPath) can help, as well as forming good relationships with our commercial partners. I gave an overview of my lab's experience with LEAF and stressed that while we should strive to make our labs as 'green' as possible, this is only one aspect of a complex specimen journey. I broached the topic of diagnostic stewardship, essentially doing the right test on the right patient at the right time. We all know that we process large numbers of low value and unnecessary samples every day. I was heartened to hear zero push-back from those present about doing fewer tests and there seems to be a rapidly growing enthusiasm to tackle the problem of climate change.

Each company present had a sustainability lead. Like us in the NHS, most had asked an existing team member to take on this role, and only one company had created a new substantive position. This highlights to us in labs, as in industry, that while progress is being made, there

is still a long road ahead. One attendee noted that if a sustainability lead is appointed, then others within the organisation feel that it is not their responsibility as this is 'taken care of'. I highlighted that, as part of LEAF, sustainability has been added to our lab's staff induction, highlighting how it is everyone's responsibility. A discussion was held around how this can be embedded into teams, as health and safety is now – it is everyone's responsibility.

Much of the discussions revolved around suppliers' requirements to use the Evergreen Sustainable Supplier Agreement. Many suppliers are at an early stage and calculating (and working to reduce) carbon footprints of complex multi-territory supply chains is no mean feat. One further hot topic is Social Value. Suppliers are now obligated to build this into tenders, and it is designed to 'help reduce health inequalities, drive better environmental performance, and deliver even more value from procured products and services'. Examples include the provision of educational opportunities, revitalisation of green spaces and working with local charities in the community of the NHS Trust. Much debate was had reading what social value was and how to include it in tenders. There often appears to be a disconnect between us in the labs, our procurement teams and our suppliers. The consensus was that we all should communicate much more to establish what is important to us and our communities. A final point of warning was made. There are strict rules in place to prevent departments asking for, and suppliers offering, financial incentives during tendering processes. There was much debate about where these lines lie and how to ensure that no rules are broken.

Finally, on another subject. You may be aware that environmental sustainability has very recently been added to the Pathology Network Maturity Matrix. Sustainability goals have been inserted into all seven domains, and it is up to us to progress our services towards 'thriving'. Whilst these are not being scored (yet), it is worth considering that 'green' services are often efficient, cheaper and of high quality. Moving towards a sustainable service is a win-win and we should embrace this challenge.

FUTURE PERSPECTIVES

THE HIDDEN BENEFITS OF A JOB MOVE...

KATY HEANEY

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Starting a new job is scary. Many of us get life validation through work, rightly or wrongly, and to opt in to changing the pillars of our work; the where, who with, the what, the responsibility; is a big change that can really impact our lives. There are benefits to be gained with changing jobs, not just promotion and ability to influence, but also with experiencing a different work-based culture and subsequently learning what our own work-place cultural priorities are, all of which help us grow and learn more about ourselves. While the Scientist Training Programme trainees have placements in other departments, I wonder now, with greater network working and more centralised management and executive functions, how many experience a placement in another work-place based culture?

What is a "work-place based culture"?

It certainly isn't anything I would have been able to describe as a trainee or a senior biochemist. There is a huge benefit of hindsight here and experiencing it or sharing examples of how it played out is the best way to describe it. The response to a crisis, for example, is a great way to try to understand the culture of an organisation. How did the department respond to a serious incident, an absolute shortage of stock, the ceiling falling in, sewage rising up from the floors, a member of staff falling unwell? Who is asked to lead in those situations and ultimately, who does lead? (As they might be different!) Who speaks up in meetings? Everyone, or above a certain grade, or those with bigger voices? When a decision is made – does the group collaborate and discuss, or is it made by one person? If the decision is wrong – how is this handled? All these situations can lead you to consider what is valued in your workplace; Integrity? Productivity? Decision making? Collaboration?

These reflections can be made about teams at all levels, cross team interactions, and all the way up to senior executives and boards. In fact many would say that the culture of the board is passed down to the teams on-the-ground, but I like to think that at least to a certain

extent a well-functioning, on the ground team can overcome a toxic leadership, but the risk of burn out, demoralisation and clashes is high.

How can experiencing different work-place based cultures help you personally learn?

Steps up the ladder will come with increasing responsibility, increased decision making and often an increase in people management. By moving from one work place to another, you may feel more than what is on paper change around you. Expectations of a senior clinical scientist in one department may be different from another, even if their job descriptions are largely the same. Regretfully the most learning often comes from experiencing something you don't like. Perhaps you felt closed down or not permitted to speak up or perhaps you were expected to speak up when you felt you didn't have the authority to do so. In some work places more decision making is done in corridor conversations than during formal meetings; an even harder issue to tackle with home working or multi-site working to factor in. Even simple change like how much detail is included in the minutes of a meeting reflect how information is passed on and the allowance made for someone being unable to be present.

The situations above present themselves as an opportunity for you to learn about yourself, and how you like to work. A bull in a china shop approach to changing them is not advocated here! But rather a more subtle approach of observing, listening and trying to understand what benefits it might create, against what you perceive is a loss. This is where I wish I had had more guidance when changing roles in my past.

Suggestions for supporting yourself in a job change

First impressions: Making the best first impression of yourself is important, so whatever you can do to prepare in advance is helpful. Understanding the department structure, who your key contacts are and using your job description and the interview questions, listing out what you already think key priorities might be. You are likely to be asked why did you leave? What was it like back there? Consider your answers in advance. Burning bridges isn't helpful in our close pathology community but balanced with a level of honesty allowing you to build new relationships at work is important.

Triggers: Wherever we have worked there will have been things we didn't like or would change given the chance. If you experience these things in the first few days or weeks, you are likely to react not just to the situation, but with all the baggage you carry from your old work-place. Awareness is key. Make a list of your potential trigger points and keep them in mind to try to avoid overreaction.

Tools to prevent being overwhelmed: There will be new faces, new names, new ways of working, new travel challenges and all whilst trying to fit in to what could also be a new house or new juggles with home responsibilities. All while trying to make a good impression and find where you can add value. I highly recommend *The First 90 Days* by Michael D. Watkins as a tool to support new jobs in a new department and for promotions within the same department, whether audio or visual this book really helped me and others I know with how to embrace a new role, with practical exercises to help you see the bigger picture of a new organisation and your place in it.

Building relationships: Do not underestimate the importance of making connections. If opportunities to get to know those working around you haven't been set up for you, then be proactive and organise them yourself. Ask for a short 1-1 or a 30 min online cuppa to get to know them. Generally, I avoid asking to share tea breaks for this purpose, as this is a persons downtime and you may not see the best of them at that time. There are great benefits to allowing space for 1-1 connections with new work colleagues to learn not just about them but about the workplace. Make sure you spread this out equally and I would avoid engaging in gossip or taking on the opinions of others without giving yourself an opportunity to form your own opinion. Listening to listen is key.

An independent support: Having someone you can sound board with, reflect with and support you brings so much benefit. It is different from a supportive line manager and there are benefits to it being someone outside of your department. A number of NHS Trusts now offer coaching or mentoring, either locally or through NHS regional initiatives. The Association offers a list of those willing to mentor. I myself have mentored through LabMed contacts and from other requests. I feel it is something that senior leaders in pathology should offer back to others in the profession and MS Teams has improved our ability to do this for a wider group. I would also advocate that when new staff join us, the opportunity of a mentor should be discussed and time within working hours should be made during that first 12 months and through any major change after that.

Other opportunities for job change

Taking on new roles and responsibilities without backfill or renumeration is not what I am advocating. Rotational leadership of a section or of a governance group/ committee can increase experience of the group without needing to work beyond a job description. Using job description addendums with good job planning can also help broaden experience. Secondments were something I was never aware of until five months into my second secondment. The first was three days a week, this one is two days a week. My old post is backfilled, but not necessarily by someone of my grade, so requires some team juggling of responsibilities. The opportunities in this space are significant; learning beyond our pathology discipline, working with other organisations and the networking experience provides a dramatic expansion of knowledge and understanding of the system. There are opportunities for secondments and fellowships in lots of places including the Chief Scientific Officer's office, NHS England, UKHSA and research and innovation roles and collaborations. So perhaps a full job change isn't for you, but if you wish to experience more or stretch yourself, a secondment is an opportunity to explore.

Leadership is for everyone

Whether your job title includes the word lead or not, we can all provide leadership. Learning from others, reflecting and asking at the right opportunity for decision making understanding is all part of growing as a worker and a human being. *The Dare to Lead* podcast with Brené Brown first began in October 2020 and has a wealth of inspiring and fascinating interviews with leaders from across the globe on their journey and reflections. Highly recommended!

"Integrity is choosing courage over comfort. It's choosing what's right over what's fun, fast or easy and it's practicing your values, not just professing them." Brené Brown

LabTestsOnlineUK

Association for Laboratory Medicine | IBMS | The Royal College of Pathologists
Pathology: the science behind the cure

Lab Tests Online-UK is 20!

This year marks the 20th anniversary of the launch of Lab Tests Online-UK. It's a good time to look back at what we've achieved in those two decades, where we're up to right now, and look forward to how the site and the function we serve will continue to adapt and grow in the coming years.

The Lab Tests Online (LTO) concept originated in the USA and was developed into a website by the American Association for Clinical Chemistry (AACC), where it launched in 2001. The ACB recognised the potential of the site at an early stage and were successful in securing funding from the Health Foundation and the Department of Health (England (DOH)) to develop a UK version of it. A lot of hard work, led by, amongst others, Mike Hallworth and Stephen Halloran, was undertaken to implement the project and get the site off the ground.

The launch event for LTO-UK in 2004. Left to right: Lynn Faulds-Wood, Dame Rosie Winterton and Mike Hallworth

News of the UK's pioneering work spread further afield and arrangements were made to work closely with colleagues across Europe and the European Diagnostics Manufacturers Association (EDMA) to share information and experiences so they could create their own versions of the site in their native languages and adapted for their own healthcare systems. Indeed, at this early stage, the possibility of a site specific for children was mooted and some preliminary work undertaken to establish this. Unfortunately, this didn't come to fruition.

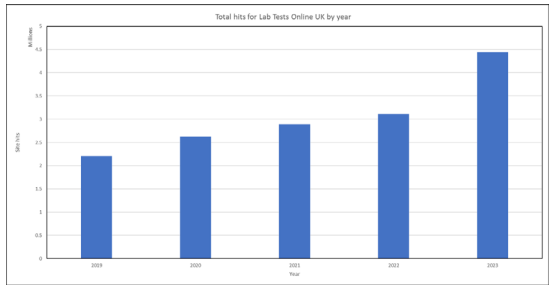
LTO-UK was officially launched at the Department of Health by the then Minister of Health, Dame Rosie Winterton, in June 2004 along with the highly respected and dearly missed TV presenter, consumer rights advocate and cancer campaigner, Lynn Faulds-Wood.

Members of the Board have changed. Founding Chair, Mike Hallworth, passed the baton on to Stephen Halloran, who then passed it on to Danielle Freedman who has been Chair since 2012. Funding was initially

from the Health Foundation and the Department of Health, but we have moved to the site being supported by grants from the ALM (ACB as was) and, as of 2012, from the RCPath and IBMS, as secured by Danielle Freedman, which is our current source of income. Writing and editing content is done entirely on a voluntary basis, as are all of the other functions of the Board (marketing, IT, etc.).

At the time of launch (and for most of the subsequent two decades) we were using the format of the LTO site in the US under licence, in terms of branding and editorial template. More recently, the AACC sold on their rights to LTO to a commercial organisation who then began using the platform to sell their own tests to patients in 2020. This goes against the underlying philosophy of the UK site of being impartial and non-commercial, so we decided to relinquish the licence to the American site. We have retained the name and format of the site as it exists now, but we can now continue to make progress, without being restricted by that licence.

The landscape has shifted in regards to the technology available for access to information in healthcare and patient engagement over the last two decades. For example, most people now have the means to access the internet via their phone any time of day or night. Patients have also had the freedom to access their medical records online for several years now, via the NHS App, which was introduced in 2018. The success of the App means that it now has five million users, allowing patients to view a wealth of information relating to their care, including all their blood test results. This means the need for LTO is even greater now than it was when we first launched. Just last year we successfully established links between the NHS App and LTO, enabling patients to go directly to the relevant page on our site for information on specific tests. To this end, we have seen the number of hits increase dramatically since this was introduced. We had already had links embedded in reports to view on GP information platforms (e.g. Systm1) and these accounted for a lot of our activity, but hits directed from the NHS App have resulted in a big increase in total hits since its introduction in the middle of last year. Projected figures for the first quarter of this year show this trend continuing.



Annual number of hits at the LTO-UK website by year

Furthermore, we also have hits from countries outside the UK. In the last year we have seen visits from users in countries as diverse as the US, The Philippines, Nigeria and Egypt.

Country	Users	New Users	Sessions
	4,307,459 % of Total: 100.00% (4,307,459)	4,353,452 % of Total: 100.07% (4,350,495)	6,047,246 % of Total: 100.00% (6,047,246)
1. United Kingdom	3,735,302 (86.06%)	3,756,380 (86.29%)	5,324,589 (88.05%)
2. United States	115,346 (2.66%)	115,180 (2.65%)	128,692 (2.13%)
3. India	89,354 (2.06%)	89,166 (2.05%)	98,473 (1.63%)
4. Nigeria	30,749 (0.71%)	30,569 (0.70%)	35,516 (0.59%)
5. Australia	26,434 (0.61%)	26,459 (0.61%)	29,307 (0.48%)
6. Ireland	24,105 (0.56%)	23,647 (0.54%)	27,839 (0.46%)
7. Canada	21,733 (0.50%)	21,544 (0.49%)	25,667 (0.42%)
8. Egypt	14,076 (0.32%)	13,642 (0.31%)	25,524 (0.42%)
9. Malaysia	11,833 (0.27%)	11,679 (0.27%)	14,276 (0.24%)
10. Philippines	11,355 (0.26%)	11,356 (0.26%)	12,768 (0.21%)

Source of LTO-UK website hits by country 2023

Throughout our launch, development and progress since has been driven by some of the real big beasts of our profession over the years, and we have some insights from some of these big names here:

LTO-UK remains the thing I am most proud of in my professional career, and it has been great to see it flourish under Stephen Halloran and Danielle Freedman, who followed me as Project Chair. I am confident that LTO-UK still has a major role to play in health education, patient liaison and promoting our profession and that it will continue to meet the needs of patients and health professionals in its third decade.
Mike Hallworth (Founding Chair, LTO-UK Board)

Having edited the Annals of Clinical Biochemistry for 16+ years, I was equipped to identify skilled & reliable authors who would join me in rewriting LTO content to reflect UK NHS medicine and laboratory practice. My initiative to extend LTO across many countries in Europe proved enjoyable and rewarding. We launched in Brussels and followed it with annual editorial meetings in a sequence of hosted 'LTO countries'. My congratulations to Danielle Freedman and her diligent editors and authors for the wonderful work they have done in enhancing the presentation, depth and breadth of this valuable service to the UK public.
Stephen Halloran MBE (Chair, LTO-UK Board)

I've been a member of the board of Lab Tests Online UK since it started. It's one of the best projects with which I've ever been involved. High points during that time have included the launch, the positive comments from patients, and the technical achievement of introducing contextual hyperlinks from individual reports to the knowledge in LTO-UK. The last of these is one of the key building blocks that will improve the value of reports to patients ... and professionals. It's been a wonderful journey, and there's lots more to explore. Have a look, promote it to your patients... and offer to write a page on an area that interests you.
Jonathan Kay (long-standing Board Member)

I feel very privileged to have been a member of the Board of Lab Tests Online-UK for nearly 20 years and took over as the Chair in early 2012, following on from Stephen Halloran. I have seen the transition from the original website to the new website. This started the transformation that opens up enormous advances for LTO-UK. The transfer of the licence from the LTO-UK site to the Association for Laboratory Medicine has opened up a wealth of opportunities for the development not possible with the previous limitations. The Board is actively working on plans for the development of the site in the short, medium and long term. Without all the editors, authors of articles, the supporting staff, Members of the Board and obviously the Association for Laboratory Medicine, the IBMS and RCPath we wouldn't have been able to get this far, and the future is looking increasingly rosy.
Danielle Freedman (current LTO-UK Board Chair)

Board members at the tenth anniversary event. Left to right: back row; Rebecca Powney, Sally Stock; front row: Stuart Jones, Danielle Freedman, Jonathan Kay

Going forward, we are reviewing our branding to fit in with a more current perception of what we do, particularly with the access via the NHS App. We are also considering other ways to engage with our target audience of patients and carers, so that they are aware of the site and how vital a resource it is in helping them to understand the information at their fingertips relating to their healthcare.

Our limited resources mean we are somewhat constrained in how we can realise some of our ambitions and increase our profile, so we may need to seek additional sources of income. However, our ethos will always remain the same: providing up-to-date, peer-reviewed information for patients in easy-to-understand language in order to empower them in having a say in their own healthcare journey.

It has always been exciting and fulfilling to be involved with LTO-UK and the future looks very bright indeed!

If you'd like to be a part of our ongoing development, we're currently looking for volunteers to help with reviewing our content and coordinating our peer review process. Alternatively, if you would like to help promote LTO-UK at your hospital or even within your own GP surgery feel free to ask for our promotional card, which you can either print out or share digitally.

Contact us for further information

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

NI REGIONAL SCIENTIFIC MEETING MARKS RETIREMENT OF TWO ESTEEMED MEMBERS

JENNY HAMILTON
Department of Clinical Chemistry, Southern Health and Social Care Trust

To mark the retirements of two of our most esteemed members, Maurice O'Kane and Tom Trinick OBE, an evening Scientific Meeting was organised in the Dunsilly Hotel on 24 January 2024.

The first speaker was Peter Sharpe, Consultant Chemical Pathologist in the Southern Trust (SHSCT). Peter provided us with an update on management of hyperlipidaemia and the many new and emerging drug therapies available for treating patients suffering from both genetic and non-genetic lipid disorders. He discussed the use of the QRisk 3 algorithm for predicting risk of cardiovascular disease, and how patients with a risk >10% should be on cholesterol-lowering therapy. However, it is also appropriate at times to put patients with risk scores <10% onto similar therapy after taking other risk factors into account, such as family history, renal function, and the presence of inflammatory conditions, to name but a few. Adherence to guidelines was discussed, with the NICE guidelines not being as stringent as the European guidelines in terms of providing a low enough target for LDL cholesterol levels. The Cardiology team in SHSCT tend to prefer working towards the targets laid out in the European guidelines and provide more aggressive therapy to reduce LDL cholesterol levels as low as possible.

Peter went on to discuss the therapeutic agents available for controlling cholesterol levels, discussing both the older agents and newer agents that are now available to the NHS, including PCSK9 inhibitors (evolocumab, alirocumab), inclisiran, Vazkepa (icosapent ethyl) and bempedoic acid. He described the pros and cons of each treatment and the clinical trials data, such as the REDUCE-IT trial, which was being used to show their efficacy in various population groups.

Lipoprotein (a) or Lp(a) was discussed as a marker of early atherosclerosis and its use as a screening tool for recommending aggressive cholesterol-lowering therapy.

Potential new treatments for high levels of Lp(a) are in phase 3 trials.

Familial hypercholesterolaemia (FH) is an autosomal dominant disorder affecting approximately 1 in 270 people in Northern Ireland. If undiagnosed, it has a high rate of premature cardiovascular morbidity and mortality. Peter described the clinical signs and symptoms that would indicate when a diagnosis of FH should be suspected, and the various genetic mutations that have been linked to the disease. He finished his presentation by discussing the various targets for lipid-lowering in these patients using some of the drugs he had previously mentioned.

The second presentation entitled 'Always look at the Big Picture' was given by Paul Hamilton, Consultant Chemical Pathologist in Belfast Trust (BHSCT). Paul participates in the Lipid service in BHSCT and presented a case he had come across at one of his clinics. This patient was also attending Osteoporosis and Haematology clinics for seemingly unrelated conditions. However, Paul decided to look at the clinical picture as a whole to see if there was some common disorder that could link all the conditions in this patient.

The patient had a family history of FH and was on lipid lowering therapy for this condition, although appeared to be fairly resistant to treatment, with LDL levels that remained moderately high. Although FH genetics were negative, Lp(a) was moderately raised at 123 nmol/L. In terms of osteoporosis, the patient had low bone density, was prone to fractures and was on Vitamin D therapy. The patient was found to have splenomegaly, and haematology tests for viral screen and blood film were unremarkable. On closer inspection of the blood results, the patient had demonstrated a consistently low platelet count for many years and also had a low folate.

Putting the unexplained symptoms all together – hypercholesterolaemia, osteoporosis and splenomegaly – could there be a unifying diagnosis? A lysosomal storage disorder was a possibility.
A lysosomal enzyme screen was sent off and came back showing an extremely high plasma chitotriosidase level, along with an undetectable level of leucocyte acid sphingomyelinase. This pattern indicated a biochemical diagnosis of acid-sphingomyelinase deficiency (ASMD, Niemann-Pick Type A/B). The test was repeated and the results confirmed.

Attendees at the meeting. Photo courtesy of Elinor Hanna

Plasma palmitoyl phosphocholineserine (PPCS) is a biomarker associated with Niemann-Pick Type A/B. PPCS levels were grossly elevated, along with levels of lyso-sphingomyelin. In terms of genetic testing, Niemann-Pick is an autosomal recessive disorder. The patient was found to have two defects in the SMPD1 gene. The combination of these provided a diagnosis of Niemann-Pick Type B.

ASMD is a lysosomal storage disorder that causes a deficiency in ASM, leading to accumulation of sphingomyelin and subsequent tissue foam cell infiltration. The condition was first identified in 1914 by Albert Niemann and differentiated from Gaucher's disease in 1927 by Ludwig Pick. In Type A disease, the patient has little or no enzyme, causing hepatosplenomegaly, CNS impairment and death by the age of three. Type B is usually less severe and has a variable prognosis. It is characterised by hepatosplenomegaly, lung disease, liver failure and skeletal abnormalities. The mean life expectancy for a patient with Niemann-Pick Type B disease is 33 years old. The patient is currently being considered for enzyme replacement therapy.

This interesting presentation explored the concept of a more encompassing approach to patient management, whereby it can be extremely beneficial to look at the whole patient picture, rather than having separate specialties focussing on the individual aspects.

Personal tributes to the retirees followed the scientific presentations

By Maurice J O'Kane's retirement from the NHS by Mark Lynch, Western Health and Social Care Trust

Maurice retired from the NHS last September after almost 40 years of dedicated service. The last 30 years were spent as a single-handed Consultant Chemical Pathologist in the Western Health and Social Care Trust in Northern Ireland.

Maurice remains a hugely respected figure in Chemical Pathology not only in Northern Ireland but also in the UK, Europe and indeed worldwide. Indeed, at his retirement function he was described by his Consultant colleagues as simply a "legend".

Maurice completed his medical degree in Edinburgh in 1985, where he then worked as a JHO in internal medicine and surgery. He then took up a post as SHO in internal medicine at the Royal Victoria Hospital in Belfast and then worked as Registrar/ Senior Registrar under Elizabeth Trimble, completing his MD in 1994 and gaining his vocation in Chemical Pathology.

He worked as a Research Fellow for several years in France, returning with his left-hand drive Peugeot in 1996 to take up his Consultant post at Altnagelvin Hospital in Derry.

He set up the Diabetes care team, Lipid Clinic Service and established the NI cascade screening service for FH. He was the Clinical Lead for Blood Sciences, Associate Medical Director and Clinical Director of Pathology Services.

In the wider UK he served as the Associate Editor/Deputy Editor/Joint Editor-in-Chief of the *Annals of Clinical Biochemistry*, Director of Clinical Practice and Chair of the Clinical Sciences Review Committee and Committee member of the ACBLM.

He was a member of the European Federation of Laboratory Medicine Working Group: Test Evaluation and a member of the IFCC-WASPaLM Working Group: Value proposition for Laboratory Medicine.

Maurice was and remains heavily involved in research with interests in biochemical aspects of diabetes mellitus, lipid disorders and point-of-care testing. His research outputs have contributed to national and international guidelines on diabetes self-management and laboratory quality management. His research leadership roles

included: Clinical Director of the Centre for Personalised Medicine: Clinical Decision Making and Patient Safety; Director of the N. Ireland Clinical Research Network [NICRN] [During the COVID-19 pandemic, this included the successful delivery of high priority COVID-19 studies and a COVID-19 vaccine study]; Chief Executive Officer of the Clinical Translational Research and Innovation Centre [CTRIC].

Maurice was a member of many clinical trial steering and Research Funding Grant Review committees. He served as a peer reviewer of research grant applications for a range of research funding bodies including the UK National Institute for Health Research, Hong Kong Medical Research Council and South African Medical Research Council.

Maurice has over 100 peer reviewed publications – from macro AST in 1990 to FH screening programmes in press. He has published on lipids, diabetes, Alzheimers, metHb, tumour markers, quality indicators, RA, SAH, telemedicine, myeloma, brain function, big data, BNP, COVID-19, antibiotic prescribing, POCT and adjusted calcium. He has also written several book chapters including one on POCT in the latest edition of Tietz.

Maurice was also heavily involved in under- and postgraduate medical student teaching on blood test result interpretation, lipid disorders and diabetes. Maurice is also a Professor in Biomedical Sciences at the Ulster University, giving lectures on clinical decision making and diagnostic test theory.

In the laboratory he served as Head of Department for nearly 30 years. Maurice is a proven forward thinker and innovator and his laboratory was one of the first in the UK to gain CPA accreditation and introduce Q-Pulse. He developed one of the first in-house glucose meter EQA schemes and POCT teams. During the COVID-19 pandemic, Maurice played a pivotal role in both research and in setting up testing in the region.

Maurice O'Kane and Tom Trinick OBE. Photo courtesy of Elinor Hanna

Maurice is one of the nicest and best people anyone could ever meet. A wise man of great intellect, work ethic, calmness, generosity, modesty, wit, good humour and humanity. Maurice has more than done his bit for the NHS and all his colleagues and friends who were fortunate enough to know and work with him wish him all the very best in the future.

Professor Tom Trinick OBE

By Kathryn Ryan, Consultant Chemical Pathologist, South Eastern Health and Social Care Trust

Tom attended Portora Royal School in Enniskillen and then Queen's University Belfast, where he studied Medicine and completed an intercalated degree in Pathology.

He progressed rapidly through his postgraduate exams to start as a Consultant Chemical Pathologist in the Ulster Hospital in 1988. During his training Tom completed an MD and spent time training with George Alberti in Newcastle. He, along with Pooler Archbold, had been handpicked to study Chemical Pathology and were the first Consultants to complete training and take up posts in this specialty in Northern Ireland.

Tom worked as a consultant in the Ulster Hospital (which became part of the South Eastern Health and Social Care Trust, SEHSCT) for about 33 years.

He talks with great enthusiasm about medical takes, interesting patients and staff interactions but his work in Ards Hospital, both in acute medicine and more recently at outpatient clinics, is a particular highlight.

Tom is perhaps unusual for a chemical pathologist as he thrives not only on the clinical conundrum but also in the acute scenario. He is able to think quickly and intervene with the right emergency treatment. This skill has been honed during his work with the Territorial Army. He was a commissioned officer for 19.5 years and deployed in Iraq, Afghanistan and Uganda; he also worked in the Ebola response humanitarian mission to Sierra Leone. His bravery and courage are unquestioned. His service was recognised with the award of an OBE in the New Year's Honours in 2015.

Alongside his clinical work Tom has led the laboratory service in SEHSCT for many years, supporting and advising chief executives and medical directors on all aspects of diagnostics. He oversaw the design and build of the fabulous laboratory and the splendid tea room which staff continue to enjoy. The fact that the facilities are now over 10 years old but still fit for purpose is testament to Tom's ability to look forward and embrace development.

His quest for innovation led to many years of successful collaboration with Ulster University and a visiting professorship. More recently he supported the Siren Study and was involved in COVID-19 clinical treatment trials.

Tom is a natural leader and used this to great effect in his chairmanship of GAIN, Guidelines and Audit Implementation Network, which was a Northern Ireland Department of Health initiative to develop regional guidelines for a range of conditions. He also chaired the Northern Ireland Royal College of Pathologists Council and has provided wise counsel over his career to us as a regional group in Clinical Biochemistry.

Tom, as your ACB(NI) colleagues and friends, we want to extend our thanks for your very significant contribution to Clinical Biochemistry in Northern Ireland. You have contributed by your presence, presentations, support, wisdom and good humour. We wish you well as you retire and hope that you will continue to join with us from time to time when new adventures allow. We look forward to hearing of how much you are enjoying retirement and of the new opportunities you encounter.

LABMED SOUTHERN REGION AND UK NEQAS CLINICAL CHEMISTRY MEETING

Following in the footsteps of the London Marathon, friends and colleagues old and new descended on London on Monday 22 April 2024 for the LadMed Southern Region meeting which was jointly organised with UK NEQAS Clinical Chemistry to celebrate the career of Les Perry, Consultant Clinical Scientist, South West London Pathology.

Les has been a strong supporter of UK NEQAS over the years and has chaired our Immunoassay Specialist Advisory Group for a very long time! Laboratory Medicine should be indebted to him for his ideas and knowledge that have guided the EQA Schemes over the last decade or so.

The programme was organised to be themed on topics that Les is passionate about, namely endocrinology and supporting Trainees. We were honoured that many of the 'great-and-good' turned out to support this meeting and I am sure everyone in the audience realised that they were in for a treat! The meeting itself was not just a celebration but contained example after example of really sound, solid science which emphasised the strength of the pioneering work that came out of the UK leading and pioneering immunoassay and endocrinology.

You can read the full meeting report here.

RACHEL MARRINGTON

Deputy Director and Consultant Clinical Scientist, Birmingham Quality (UK NEQAS)

Left: Les Perry showing a timeline of endocrine analytical testing. Right: Speakers of the day: (back row right to left): Gwen Wark, David Halsall, Brian Keevil, Cathie Sturgeon, Finlay MacKenzie and Bill Fraser. Front: Les Perry)

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 42

Humans are the only reservoir of infection of the following:

A) Botulism *(Clostridium botulinum)*
B) Staphylococcal food poisoning *(Staphylococcus aureus)*
C) Bacillary dysentery *(Shigella dysenteriae)*
D) Salmonella gastroenteritis *(Salmonella enterica)*
E) Clostridial food poisoning *(Clostridium perfringens)*

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

Question 41 from the April issue

Considering the importance of the vaccines available to the population, are the following statements true or false regarding the rubella virus?

A) The rash of rubella is similar to that caused by parvo and enteroviruses.
B) It is teratogenic.
C) Congenital rubella is charaterised by eye, ear and heart defects.
D) Congenital rubella is diagnosed by the finding of rubella-specific antibody in the cord blood.
E) Infants with congenital rubella pose a great infectious risk.

Answers

The following are all true:

A) The rash of rubella is similar to that caused by parvo and enteroviruses.
B) The rubella virus is teratogenic.
C) Congenital rubella is characterised by eye, ear and heart defects.

The following are all false:

D) Congenital rubella is diagnosed by the finding of rubella-specific antibody in the cord blood of infants.
E) Infants with congenital rubella pose a great infectious risk.

DEACON'S CHALLENGE REVISITED

NO 31. ANSWER

As the half life of a radionucleotide is 20 hours, at the end of how many complete days will the activity have fallen to less than 2% of the initial value?

Radioactive decay follows the first order rate equation:

$$\log_e A_t = \log_e A_0 - kt$$

where A_0 = activity at zero time = 100%

A_t = activity at time 't' = 2%

k = decay constant

The decay constant is related to the half life ($t_{1/2}$):

$$t_{1/2} = \frac{0.693}{k}$$

Therefore, $k = \frac{0.693}{t_{1/2}} = \frac{0.693}{20} = 0.0347\ h^{-1}$

Substitute values for A_0, A_t and k into the first order decay equation and solve for 't':

$$\log_e 2 = \log_e 100 - 0.0347\,t$$

$$0.693 = 4.605 - 0.0347\,t$$

$$0.0347\,t = 4.605 - 0.693 = 3.912$$

$$t = \frac{3.912}{0.0347} = 112.7\ h$$

Divide by 24 to convert from hours to days:

$$t = \frac{112.7}{24} = 4.70\ \text{days}$$

Therefore at least five complete days must elapse before the activity will have fallen to less than 2% of the original value.

Exam tip: The first order rate equation for radioactive decay (and the relationship between half-life and decay constant) is the same for drug elimination, clearance of a tumour marker etc.

Question 32

Routine use of the Cockroft-Gault equation has now been replaced by eGFR estimates normalised to a body surface area of 1.73 m^2. However, sometimes it is still used to calculate creatinine clearance for some renal dose adjustments. In 1976 Cockroft and Gault studied the relationship between creatinine excretion, age and body weight. They plotted the 24 h urinary creatinine excretion (mmol/24 h) divided by body weight (in kg) on the y axis against age on the x axis. The intercept on the y axis (i.e. y value when x = 0) was 0.248, whereas the slope was -0.0018. Derive an equation which can be used to calculate creatinine clearance (in mL/min) from plasma creatinine (µmol/L), body weight (in kg) and age (in years).

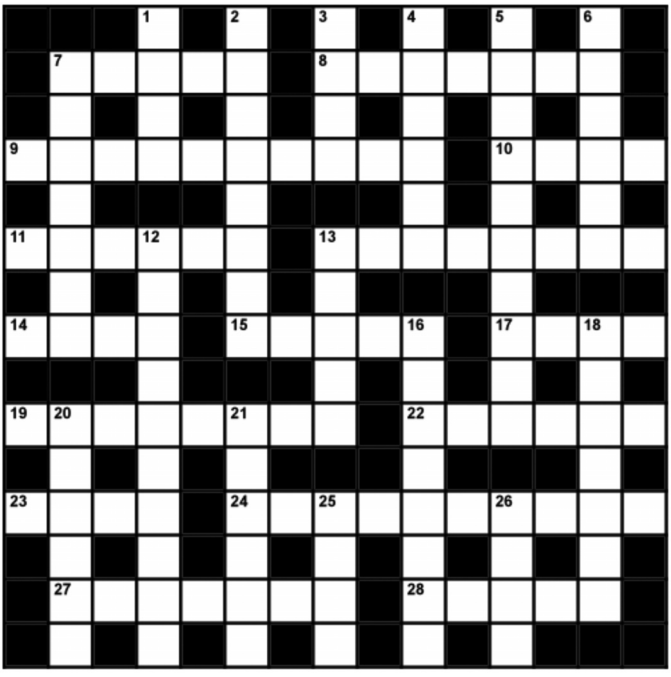
THE CROSSWORD BY RUGOSA

Across

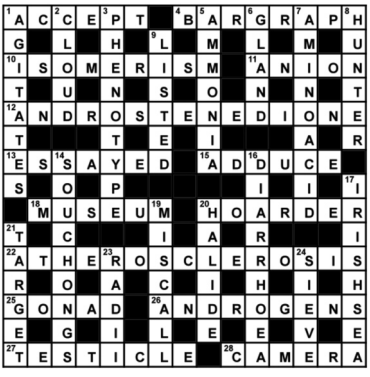
7 Customarily retains opening made by surgeon (5)
8 Cold holds dispersed oil in stable suspension (7)
9 Seventeen elements make up the arrears (4,6)
10 Turn in bad data transmission rate (4)
11 Base gangster meets Hindu goddess (6)
13 Post bearing thanks for shared composite organ (8)
14 Match secured by left-winger (4)
15 Result of condensation in Chesterfield lab (5)
17 Type of examination of the mouth (4)
19 Course has zero information re an infectious agent (8)
22 Data transmitters could be decommissioned but decision lacking (6)
23 Execute while away (4)
24 Learned in a fashion about a neurotransmitter (10)
27 Difficult competition (not open) related to division (7)
28 Fungal infection resulting from asthenia has gone (5)

Down

1 Single fish (4)
2 A situation below standard for cadger (8)
3 Brit – free without penalty (4)
4 Injured playmates not yet for possible transfusion (6)
5 Chemical link 014? (6,4)
6 Regulate commercial fair (6)
7 Bird splashes about tail first (7)
12 Completely destroy uninhabitable structure without first breaking up (10)
13 No helpful advice turned up describing climbing implement (5)
16 Contemplate treatment of 28 with spirit dressing (8)
18 Gas about domain name without end (7)
20 Cross-examine doctor, screen out self-evident statements (6)
21 Agrees to allocations (6)
25 Stone jar (4)
26 Secure state (4)



SOLUTION FOR APRIL'S CROSSWORD



SUDOKU ... THIS MONTH'S PUZZLE

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

SOLUTION FOR APRIL

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

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