LabMedNews

Association for Laboratory Medicine



Join us for EuroMedLab in London in 2027

OCTOBER 2026

- Making every test count – white paper
- *Annals* editors say farewell ... and hello
- National Pathology Week 2026
- Abstract submission and registration open for EuroMedLab London 2027
- AI in clinical biochemistry
- LabMed National Audit Day
- Becoming a trade union rep: new Learning Academy guidance
- Meet the EDI Working Group

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TYPICAL VALUES	Icterus (I)	
	Appearance scale	mg/dl
Level 1	-	<2
Level 2	+	2 - 4
Level 3	++	4 - 10
Level 4	+++	10 - 20

TYPICAL VALUES	Lipemia (L)	
	Appearance scale	mg/dl
Level 1	-	<50
Level 2	+	50 - 100
Level 3	++	100 - 150
Level 4	+++	150 - 200

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Association for Laboratory Medicine

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MESSAGE FROM THE PRESIDENT



IAN GODBER

President

As we head into the Autumn and the days get shorter, LabMed members have a lot to look forward to including regional meetings across the country and the return of the Leadership and Management Training Course, which will be held this month in Kent. We're also holding our annual National Audit Meeting again in November as well as a free Training Day the following day at the Royal College of Pathologists. I'll hopefully meet many of you there.

Details will be released soon regarding the scientific programme for EuroMedLab which we'll be hosting in London in May 2027; it's hoped that we'll attract over 10,000 delegates from across the world to meet at the Excel conference centre in East London in what I'm sure will be the most successful EuroMedLab to date. We'll not be hosting our own LabMedUK next year in order to accommodate EuroMedLab, but I'm pleased to say we will be organising three of the parallel sessions within the meeting and the provisional programme looks excellent. This issue of *LabMed News* contains the key dates you need to take note of for abstract submission and early registration. We're also encouraging members to consider applying for EFLM Awards and details of bursaries will also be published soon.

Also in this month's issue, we welcome in a change in the editorial team at the *Annals of Clinical Biochemistry*, and I would like to take this opportunity to personally thank Phillip Monaghan and Paul Hamilton for the work they have undertaken as co-editors in chief, and welcome David Gaze and Rav Sodi to the *Annals* team.



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RESEARCH AND INNOVATION GRANT: APPLICATIONS CLOSE 2 NOVEMBER

There's still time to apply for LabMed's Research and Innovation Grant – **applications close on 2 November 2026.**

Up to £8,000 is available per project, with £20,000 in total funding to be split across three to five projects this year. The grant is open for original research by fee paying members and covers equipment, reagents, calibrators, controls and consumables. It doesn't cover salaries, staffing, travel or subsistence.

To apply, you'll need to complete the application form and a Research Details Form, which is assessed anonymously. Applications are judged on project vision (25%), technical approach (50%), resources requested (15%) and ethical considerations (10%).

Got questions about the Research Details Form? Get in touch with David Gaze, director of scientific affairs, at director.scientificaffairs@labmed.org.uk. For anything else, email mike@labmed.org.uk.

Full details and the application form are on the Research and Innovation Grant page.

MAKING EVERY TEST COUNT: WHAT THE NEW PATHOLOGY WHITE PAPER ASKS OF GOVERNMENT

In vitro diagnostics (IVDs) inform around 70% of clinical decisions in the NHS but account for less than 1% of its budget. That gap is the starting point for *Making every test count*, a new white paper from the Royal College of Pathologists and Roche Diagnostics UK and Ireland.

The paper sets out what laboratory medicine needs if the NHS 10 Year Health Plan for England is going to deliver its three shifts: hospital to community, analogue to digital and sickness to prevention.

It draws on expert webinars held between September 2025 and February 2026, plus case studies from patients and services. The report was funded by Roche Diagnostics.

The paper is written for England, but the problems it describes (fragmented IT, stretched staffing, slow adoption) will be recognisable to members in Wales, Scotland and Northern Ireland too.

Find out more and read the full white paper at RCPath.

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"A PRIVILEGE AND A PLEASURE": *ANNALS* EDITORS SAY FAREWELL

Phillip Monaghan and Paul Hamilton have stepped down as co-editors-in-chief of *Annals of Clinical Biochemistry*, handing over to David Gaze and Rav Sodi.

Ian Godber, president of LabMed, thanked them. *"On behalf of everyone at the Association for Laboratory Medicine, thank you both for your leadership".*

There is a lot to thank them for. During their term, the journal moved to digital-only subscriptions for members and secured a new five-year publishing contract with Sage after a full tender process. Phil and Paul reviewed and diversified the associate editor team, bringing in new associate editors including some from overseas. They also recruited a new deputy editor and put an associate editor agreement in place, so the team is properly supported.

Sage's latest report shows the results. Time from submission to publication has come down, and the journal came through the recalculation of its impact factor and is now on a clear upward trajectory.

They also worked to bring the *Annals* closer to members. They supported sessions on how to get published at the LabMed training day, which have since become a Learning Academy module, and worked closely with Sage to shape the journal's strategy.

In their own farewell letter, Phil and Paul were quick to share the credit. They thanked LabMed, saying: *"We have greatly valued the confidence, encouragement and partnership extended to us throughout our time as editors".* They also thanked the publishing team at Sage, whose work behind the scenes often goes unrecognised.



Left to right: Phillip Monaghan and Paul Hamilton

They singled out the associate editors and deputy editor who run peer reviews. *"Their judgement, commitment and countless hours of work have ensured that submissions receive fair, constructive and timely assessment".* The editorial board, reviewers, authors and readers all got a mention too.

"Serving as co-editors-in-chief has been both a privilege and a pleasure. We are proud of what has been achieved during our tenure, but even more proud to have worked alongside so many dedicated colleagues whose efforts have made those achievements possible."

They are confident the journal is in good hands. Of David and Rav, they said: *"They bring considerable experience, insight and energy to the role, and we are confident that the journal will continue to develop and prosper under their stewardship."*

Ian agreed. *"We're delighted that David Gaze and Rav Sodi are taking on editorial leadership and that they are able to pick up on the excellent foundation you've both built."*

"THIS IS YOUR JOURNAL": MEET THE NEW *ANNALS* EDITORS-IN-CHIEF

David Gaze and Rav Sodi have taken over from Phillip Monaghan and Paul Hamilton as co-editors-in-chief of *Annals of Clinical Biochemistry*. Neither is new to the journal.

David has chaired the Clinical Science Reviews Committee (CSRC), part of the *Annals* editorial board, for several years, while Rav has worked his way up through the editorial team, first as an associate editor and then as deputy editor. "It felt like the next logical step", he said. *"This is the flagship journal of the profession and I am keen to develop it together with David."*

David's focus is on raising the journal's profile, increasing its visibility and the quality of its review articles and primary papers, with the aim of lifting the impact factor.

Rav wants the *Annals* to be something clinical biochemists turn to during the working day, alongside the research it publishes. *"We face many challenges and conundrums in our professional lives and I want the journal to provide a source of information for those on the job",* he said.

Both see open access and preprints as a chance to reach more readers. On AI, Rav said: *"The role of AI and large language model (LLM) is evolving and we encourage its appropriate use".*

The journal will publish its policy on AI soon.

If you have never published before, the new editors want to hear from you.





Left to right: David Gaze and Rav Sodi

"We encourage all members of the profession to submit an article". They are looking at ways to support trainees and first-time writers through the process. Both David and Rav have vast experience in publishing and editing and can support the right publication in getting into print.

There are plenty of ways to get involved beyond writing. *"We are always willing to consider members who are interested in publishing, reviewing or becoming associate editors",* David said. They are particularly keen to hear from anyone interested in joining the CSRC as well as any other roles, and you can email them at annals@labmed.org.uk.

Rav's advice is simple: complete your online membership profile, so the editors can find you when they need reviewers with your expertise.

"This is your journal and your voice, so make it heard!"

WELCOME TO THE LAB: LABMED AT NATIONAL PATHOLOGY WEEK 2026

National Pathology Week 2026 runs from 2-8 November, and this year's theme is Welcome to the Lab. As members of the Pathology Alliance, we're taking that invitation literally. We've put together three free evening webinars and two new episodes of our Life in the Lab podcast.

The webinars are aimed mainly at students and anyone thinking about a career in laboratory science, but they're open to all. If you supervise trainees, teach, or know a science undergraduate who hasn't yet worked out where they fit, please pass these on. Most people who end up in the lab didn't know the job existed until someone showed them.

A day in the lab

Wednesday 4 November 2026, 6pm-7pm

Our first session tackles the question every student asks: what does the job actually look like day to day?

- **Charlotte Begley** is a trainee clinical scientist in immunology at Southampton General Hospital, now in the final year of the Scientist Training Programme (STP).
- **Georgia Pretlove-Smith**, senior clinical scientist at Mid and South Essex NHS Trust, trained on the STP in Nottingham and now works at Broomfield Hospital.
- **Eleanor Finnie**, clinical scientist with the UK Health Security Agency at Birmingham Heartlands, completes the panel.

Between them they cover immunology, biochemistry and microbiology, and they'll talk honestly about the routes into the profession (the STP, postgraduate study, and the less direct paths built through hospital experience). Expect real examples from the bench, from handling clinical queries to phoning through critical results.

Register here

Pathology tests: the good, the bad and the ugly

Thursday 12 November 2026, 6pm-7pm

This webinar asks what makes a test result worth trusting, and what happens when testing moves outside the traditional laboratory.



- **Penny Cliff** leads national surveillance of antibiotic resistance in sexually transmitted infections at the UKHSA's STI reference laboratory. She will look at gonorrhoea testing and compare online and private services with attending a sexual health clinic in person.
- **Rav Sodi**, consultant clinical biochemist and head of department at Mid and South Essex NHS Trust, will take on prostate-specific antigen. He will explain why PSA rises in both benign and malignant disease, and why population screening isn't currently recommended despite growing public pressure.
- **Tim Woolley,** chief scientific officer and co-founder of Inuvi Diagnostics, will look to direct-to-consumer testing. Inuvi was the first UK laboratory to gain ISO 15189 accreditation for capillary blood testing, and Tim will look at whether finger-prick and upper-arm samples really match venous blood, using thyroid function studies on sample stability in transit.

They're joined by **Bernie Croal**, consultant chemical pathologist at Aberdeen Royal Infirmary, president of the Royal College of Pathologists and a former president of LabMed, and **Martin Myers**, co-clinical lead for the NHS England pathology Getting It Right First Time programme.

Register here

Welcome to careers in External Quality Assurance (EQA)

Wednesday 18 November 2026, 6pm-7pm

Behind every reliable result is a system checking that it's right. Few students have heard of EQA, and fewer still realise it's a career.

Sarah Davies is a principal/HSST clinical scientist and EQA scheme manager at Birmingham Quality, part of University Hospitals Birmingham NHS Foundation Trust. She studied chemistry before training in clinical biochemistry and she is now completing a DClinSci alongside national and international roles on traceability and guideline adjudication.

The session uses HbA1c testing in diabetes to show what quality failures mean for patients, looks at how quality assurance supports point-of-care testing, and walks through a real clinical case to show how a scientist pieces together the evidence of what's happened to a patient.

Register here

Two new episodes of Life in the Lab

We're also releasing two new episodes of Life in the Lab during National Pathology Week, both episodes sponsored by BD.

Karen Perkins, principal clinical biochemist at Lancashire & South Cumbria Pathology Network and **Kade Flowers**, principal clinical scientist at University Hospitals Sussex, will be talking about their own unique routes into laboratory medicine.

We'd like to thank BD for supporting the series and helping us get more laboratory stories in front of a wider audience.

Find all our podcasts at labmed.com/podcasts

ABSTRACT SUBMISSION AND REGISTRATION OPEN FOR EUROMEDLAB LONDON 2027

Register here

EuroMedLab is coming to London. The 27th European Congress of Clinical Chemistry and Laboratory Medicine takes place at ExCeL London from 16 to 20 May 2027, and abstract submission and registration are now open.

The congress is jointly organised by IFCC and EFLM in collaboration with LabMed, which means that for the first time in 20 years the biggest laboratory medicine meeting in Europe is on home ground.

Submit your abstract

The deadline is 15 December 2026 at 6pm CET. Abstracts are welcome across clinical chemistry, haematology, clinical molecular biology and laboratory medicine more broadly, with topics ranging from green laboratories and AI to reference intervals, mass spectrometry and point of care testing. Most accepted abstracts will be presented as posters, but a limited number will be picked for oral presentation in the symposia. If you'd like to be considered, tick the box on the submission form. Authors will hear back by 15 February 2027.
Find the full guidance and submit here.

Register early and save

Early rates run until 15 March 2027.
Full registration costs £615, and young registration (for anyone aged 40 or under, born from 1987 onwards) is £290. Emeritus registration for retired members aged 65 and over is also £290, as is a single day pass. Prices rise after 15 March, with full registration going up to £790. All fees include VAT.

Apply for an EFLM Award

EFLM will present three awards at the congress, each worth €5,000 plus a certificate, and we'd love to see LabMed members among the applicants. All three recognise original research papers published or accepted for publication between 1 July 2025 and 31 October 2026, in English and in a peer-reviewed journal. You must be the first author, a member of an EFLM full member society, and you can only apply for one EFLM or IFCC award at a time. Applications go by email to eflm@eflm.eu by 31 October 2026.

- **The EFLM Award for Excellence in Outcomes Research in Laboratory Medicine**, sponsored by Abbott Diagnostics, goes to a paper showing better clinical or economic outcomes from an *in vitro* diagnostic test, or better management of laboratory data.
  Read the award leaflet.
- **The EFLM Award for Excellence in Performance Specifications Research**, also sponsored by Abbott Diagnostics, recognises new contributions to the theory or practice of analytical performance specifications, or novel approaches to implementing measurement uncertainty.
  Read the award leaflet.
- **The EFLM Cardiac Marker Award**, sponsored by Hytest, is for early career researchers under 40 on 1 January 2027 whose work focuses on cardiac marker measurement and cardiovascular risk assessment. You'll need to include ID confirming your age.
  Read the award leaflet.

LABMED FOUNDATIONS OF PROFESSIONAL PRACTICE 2027

Our three-day residential course for early-career scientists and medical practitioners in clinical biochemistry is running in January 2027.

Build the knowledge and confidence you need for FRCPath and your first steps into autonomous clinical practice.

What you'll cover

- Inherited metabolic disease: amino acids, urea cycle disorders, lysosomal disorders and porphyria
- Specialist endocrinology, with clinical case sessions
- Analytical endocrinology and mass spectrometry
- Nutrition
- Critical appraisal
- Point-of-care testing governance, including POCT troponin.

How you'll learn

Lectures, case discussions and interactive workshops led by experienced clinicians and scientists. You'll focus on areas you may not see much of in routine training.

Who it's for

- Trainees preparing for FRCPath Part 1
- Those who have recently finished a formal training programme
- Anyone preparing for their first promoted role
- Trainees who want to build their skills and knowledge.

Book now

Included

This is a residential course with two nights' accommodation and all meals included.

Foundations of professional practice

Our residential course for trainees, designed to support FRCPath examinations preparation and the first steps into autonomous clinical practice



AI IN CLINICAL BIOCHEMISTRY: A NEW HOME FOR THE AI AND INFORMATICS SIG

Our AI and Informatics Special Interest Group now has its own section on the LabMed website.

AI has been all over the news this past month, and not always for good reasons. For those working in laboratories, the questions are more practical. Where can it help? Where does it fall short? And how do we use it safely with patient data?

Those are the questions the AI and Informatics Special Interest Group (SIG) has been working on.

From Excel to Python

Coding is now part of everyday lab work. Excel, Python and R are common tools and some universities teach coding as part of a bioinformatics module in their biomedical science degrees.

We've come a long way since the 2001 edition of Joseph Billo's *Excel for Chemists* (you can still buy it). Data visualisation has moved on too, though anyone who remembers Edward Tufte's *The Visual Display of Quantitative Information* will be glad to know it's still in print.

What the SIG does

The SIG brings together members with an interest in artificial intelligence, data science, bioinformatics and statistical analysis or programming. It's a place to share what you know, talk through new technologies and work out how to use digital tools safely and well in the lab.

The group feeds into LabMed's strategy and works with the Royal College of Pathologists and the wider NHS on best practice, learning, and how AI in healthcare should be implemented and governed.

So far it has concentrated on building awareness of AI across laboratory medicine and working through the regulatory and governance questions. In practice, that's meant reviewing AI standards and guidance, writing introductory resources, pointing members towards training and contributing to national discussions on AI regulation.

Two workshops, both popular

Members want this. LabMed's April workshop organised by Dan Turnnock, *The digital landscape in laboratory medicine: current systems, future possibilities*, was very popular. You can read a couple of meeting reports about the day on the new SIG section of the website.

The SIG also developed the AI and informatics in laboratory medicine course, which sold out quickly. Read more about the programme.

Find the SIG online

The SIG's new page is at labmed.org.uk/our-resources/ai-special-interest-group.html. We will keep adding resources, meeting reports and news as the group's work goes on.

LABMED NATIONAL AUDIT DAY

16 November 2026 – 9.30am to 5pm GMT
Royal College of Pathologists, London and online

National Audit Day brings together the latest national and regional clinical audits in laboratory medicine, presented by the clinical scientists and medical practitioners who led them.

This year's programme covers the national audits of the poisoned patient and of lipid testing and prescribing guidance. Talks look at what new poisoned patient guidelines mean for the lab, testing for lipoprotein(a) and the management of dyslipidaemia, with a clinical perspective from the National Poisons Information Service and a patient perspective too.

You will also hear regional audit presentations, browse posters from across the UK and have time to talk with peers and national leads, including national audit lead W. Wassif and deputy lead Louise Ward.

The day is for clinical scientists, laboratory medicine consultants, pathology audit leads, trainees, quality managers and anyone working in clinical audit, service improvement or diagnostics.

Why attend?

- Find out which national audits are running now and what's coming next, and how the results are changing practice
- Get up to date on poisoned patient guidelines, lipid guidance and dyslipidaemia from the people writing and applying them
- Trainees can see how audits are designed and presented, and more senior colleagues can take findings back to lead quality improvement locally
- Meet colleagues from other trusts and nations and share ideas over the posters
- Count the day towards your CPD.

Book here



TRAINEE MEETING: SHARING BEST PRACTICE, INCLUDING FREDDIE FLYNN LECTURE

17 November 2026 – 9.30am – 4.30pm GMT
Royal College of Pathologists, London

Book here

Join us on Tuesday 17 November 2026 at the Royal College of Pathologists in London for a free, in-person day organised by LabMed and the Royal College of Pathologists. Bringing together trainees and experienced colleagues from across laboratory medicine, the day focuses on supporting RCPath exam preparation and strengthening clinical knowledge and understanding.

The morning covers different aspects of training, from an FRCPath examiner's perspective on exam expectations and common challenges, to trainee cases and research and the interpretation of laboratory results in clinical practice. The sessions will help strengthen your knowledge, support your exam preparation and develop your understanding of how laboratory findings contribute to clinical decisions.

The afternoon is open to all colleagues from across laboratory medicine with the Freddie Flynn Award lecture, which has been part of the laboratory medicine calendar since 2000. Established in recognition of Professor Freddie Flynn's contribution to UK pathology, clinical computing and professional development, the lecture provides a chance to broaden your perspective on laboratory medicine and hear from an established speaker in the field.



ANNALS OF CLINICAL BIOCHEMISTRY LATEST RESEARCH ARTICLES



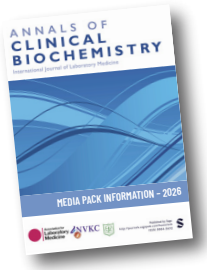
Check out these interesting new articles recommended for reading by the editors-in-chief of the *Annals of Clinical Biochemistry*:

Improved transcutaneous bilirubinometer for enhanced measurement accuracy in neonatal hyperbilirubinemia
Kosuke Koyano, Makoto Arioka, Yuta Noguchi, Yuta Shinabe, Tomoaki Kusaka, Hirosuke Morita, Katsufumi Nishioka, Yasuhiro Nakao, Kota Inoue, Aya Morimoto, Shinji Nakamura, Sonoko Kondo, Yukihiko Konishi, Saneyuki Yasuda, Hitoshi Okada, Konomu Hirao and Takashi Kusaka

Age-related reference intervals for thyroid function tests are beneficial in adults over 60 years
George F. G. Allen, Sarah Blampied, Kashyap A. Patel, Timothy J. McDonald, Andrew T. Hattersley and Bijay Vaidya

Interpretable laboratory-data model for risk stratification of elevated NT-proBNP and its deployment in diagnostic support middleware
Hidekazu Ishida, Noriko Ozawa, Masaya Tachikawa, Hiroki Nagasawa, Yohei Shirakami, Takatomo Watanabe. Hiroyuki Okura and Ryosuke Kikuchi

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



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PUBLICATION DATES



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 November for the December 2026 issue) to: editor@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 e-mail.

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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:

Full members

Noor Afzal, trainee clinical scientist, Liverpool Clinical Laboratories

Sarah Blampied, clinical scientist, Royal Devon University Trust

Andrew Duncan, honorary fellow, University of Edinburgh

Katja Eckl, senior lecturer in biomedical science, Edge Hill University

Tessia Evenor, trainee clinical scientist, Norfolk and Norwich University Hospital

Jessica Harris-Jones, specialist biomedical scientist, Royal Devon and Exeter NHS Foundation Trust

Victoria James, specialist biomedical scientist, Buckinghamshire Healthcare NHS Trust

Mollie Joyce, healthcare scientist, UKHSA Manchester

Amrita Raj Jugurnauth, senior scientist, Royal Free Hospital NHS Trust

Musab Karar, chemical pathology trainee, Royal Liverpool & Broadgreen University Hospitals NHS Trust

Hannah Marlow, senior clinical scientist, Leeds Teaching Hospitals

Alexandra McManus, trainee clinical scientist, Norfolk and Norwich University Hospitals NHS Foundation Trust

Harvey Stringer, principal clinical scientist, Manchester University NHS Foundation Trust

Sylvanus Udoette, specialty doctor in microbiology, University Hospitals of North Midlands NHS trust

Kirsten Winterburn, HSST trainee, Public Health Wales

Student members

Khadija Ali, University of Chenab, Gujrat, India

Taylor Bronzovich, London Global University

Emeka Emmanuel Chukwu Chukwu, University of Birmingham

Muhammad Kashif, National Skills University, Islamabad, Pakistan

Dur E. Sameen, University of Gujrat, India

Rachel Parayiwa, Anglia Ruskin University

Lorna Salvini, The University of Liverpool

Syeda Shabana Nasir, Lincoln University College

Raafea Shakeel, University of Gujrat, India

Dilashini Sundaran Sagaran, University of Manchester

Megan Thomas, University of East Anglia

LABMED BENEVOLENT FUND

Your generosity will provide support to colleagues and families who are going through tough times.

PLEASE DONATE NOW

Association for Laboratory Medicine

BECOMING A TRADE UNION REP: NEW LEARNING ACADEMY GUIDANCE GIVES REPS ANOTHER LAYER OF SUPPORT

Reps in the LabMed Trade Union already have plenty of people behind them. From December, new guidance in the LabMed Learning Academy adds more support and every hour you spend on it counts towards your CPD.

That was the message from Your Trade Union and You, the latest session in the LabMed training series. Kirsty Spencer from the Chartered Society of Physiotherapy (CSP) led the session, which covered how to get to know your membership, organise around workplace issues and represent colleagues individually and collectively.

Mike Lester, LabMed's membership manager, and Aivaras Surskas, digital learning officer, then gave members a first look at the new rep resources.

Watch the recording here.

You won't be doing it alone

Kirsty admitted her session handed reps a long to-do list: mapping members, spotting trends in cases, organising around issues and supporting colleagues through grievances. She was just as clear that it doesn't all land at once, and nobody does it on their own.

The CSP team works with LabMed on the training programme, and Kirsty invited any rep with a collective issue at an early stage, or who wants help with workplace mapping, to get in touch. The team will help put the basics in place and support you through it. Anything that isn't right for an open webinar can go to them directly.

The Union's National Committee, which meets quarterly, sits behind that. It's the committee that has been rewriting the rep's guidance and handbook now heading to the Learning Academy.

Support also comes from inside your own department. Kirsty's mapping example showed how key contacts take pressure off a single rep. These are colleagues who aren't reps but are respected, well connected and happy to put up a poster or round people up for a meeting.

Then there are the other recognised unions on site. In the NHS, smaller unions can negotiate in bigger numbers by joining forces on shared issues, and long-standing reps from other unions have often dealt with the same problems before. Kirsty's advice was simply to ask them how they handle a particular meeting or what a policy group is for. The TUC also publishes guides on organising and mapping, and where an individual case has a legal element, it can be referred on once internal processes are exhausted.

What's coming to the Learning Academy in December

The new rep section goes live in December. It'll appear on the My Learning page of every accredited rep, and you log in with your membership details.

At its heart are three interactive modules:

- an induction to the role,
- getting active in your workplace, and
- handling individual cases.

The casework module is built for dipping in and out. If you're preparing for a case that involves the Employment Rights Act, for example, you can go straight to the section you need.

Two shorter micro lessons, on facility time and mapping your workplace work well as a refresher. More are planned for next year. Recordings of the training series will sit alongside them, together with the updated guidance, the handbook and anonymised example cases.

The team wanted the modules to feel interactive and easy to remember.
Each topic ends with key takeaways and each module has a short assessment to embed the core knowledge.

Training that counts as CPD

Everything in the new section is certificated. There will be six to eight hours of content at launch, and each certificate is evidence you can use for CPD or self-accreditation.

The skills it builds go well beyond union work. Kirsty pointed to what reps get to do that most day jobs don't offer: negotiating, leading, presenting, and putting a case to senior managers, chief executives and external stakeholders. She said watching new reps' confidence grow is one of the best parts of her job, and that the experience is valuable for anyone thinking about a move into management.
The certificates mean you'll have a record of that learning to show at appraisal.

Thinking about becoming a rep?

Kirsty's mapping example showed what happens when there are no reps.
One department of 100 staff had just ten members and nobody to organise them, so any issue that came up would be hard to tackle. Elsewhere, people were keen to get more involved but didn't feel supported to take the step.

That's the gap the new guidance is designed to close. You don't have to take on everything straight away either: plenty of members start as a key contact who helps their rep now and then.

If you would like to talk about becoming a rep, get in touch, contact your regional representative or our membership manager, Mike Lester (mike@labmed.org.uk).



GREEN CHAMPIONS

PIP (PEE IN A POT) PROJECT



NICK BURNS-COX

Semi-retired urologist,
NHS Innovation & Greener NHS

Urinary tract infections (UTI) are a very significant and common healthcare challenge.

Accounting for 10 million GP consultations per annum and 50% of all GP antibiotic prescriptions, UTIs are also the commonest cause of admission to secondary care with sepsis, requiring 2.2 million hospital bed days per annum.

Key to the timely and targeted management of a suspected UTI is the collection of a mid-stream urine sample (MSU).

MSU testing is unfortunately highly unstandardised even though national guidance exists. MSU collection is often associated with a poor patient experience and is time consuming for healthcare professionals.

Commonly MSU collection processes use multiple single use plastic devices and the associated inefficiencies lead to unnecessary CO2e and incineration of multiple plastic items.

The PiP is a class 1 medical device which has been specifically designed and developed in the NHS to collect a MSU sample and transfer it easily and hygienically into the correct primary analysis tube for microscopy, culture and sensitivities (MC and S).

The PiP is made of Thermofiber, a biodegradable material manufactured from sugar cane and bamboo. In a ward environment the PiP can be macerated and flushed away and is stackable, requiring little room for storage.

Patient and workforce feedback has been very good, confirming good patient experience and ease of use.

In a prospective study published in the *BMJ* open in April 2026 (Clean Pulp versus sterile single use plastic) with over 1350 paired MSU samples, the PiP was found to be non-inferior to single use sterile plastic bowls with regard to microscopy and culture.

The PiP therefore does not need to be sterile but clean, obviating the need for single use packaging and the energy involved in those processes.

In the same published study, a full lifecycle analysis showed that the PiP pathway reduced CO2e by 70% and 175 g per MSU collected compared to the gold standard process.

Adoption of the PiP pathway reduced direct consumable costs in Somerset by £1478 and indirect costs by £3,200 (lab and ward efficiency) and £276 (reduced waste for incineration) in a 12-month period.

The PiP pathway is now the standard process for MSU collection in Somerset including community hospitals and hospital at home. Trials continue in GP surgeries.

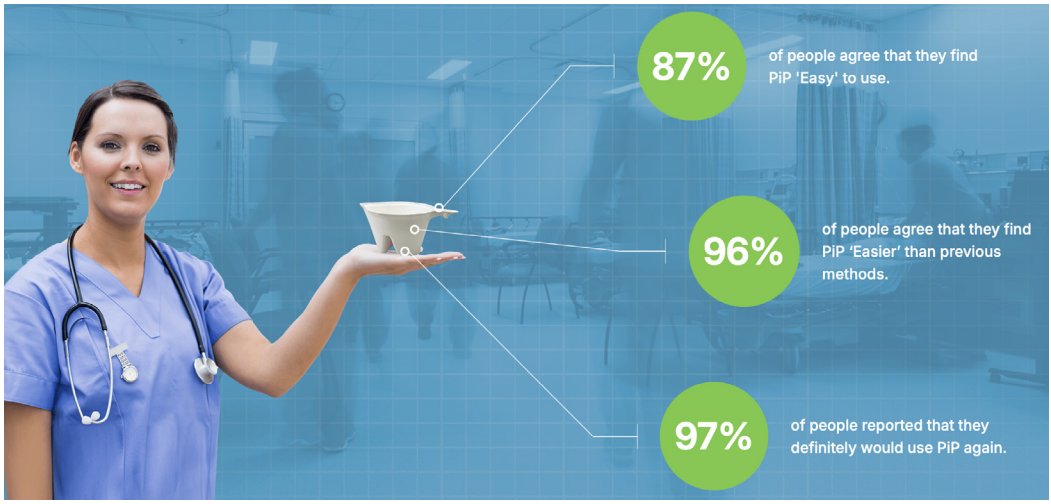
70 other healthcare organisations have bought the PiP and it is adopted in Gloucestershire, Dorset and Devon.

The PiP project was the winner of the South West NHS Clinical Excellence Awards and has been short listed for the HSJ awards this November in the 'Towards Net Zero' category.

The PiP is now a stock item on NHS supply chain and supported by their case study.

I can see the incredible work the Association for Laboratory Medicine has done in sustainability led by the Green Champions Group. Of course, as you know, the most sustainable action we can take with regard to pre analytic tests is to only do them when they are clinically appropriate and add value. The adoption of the PiP pathway supports standardisation and an opportunity to build in robust and clear guidance on MSU testing which is available to all from NICE and the UKHSA.

More information and resources on the PiP are on the website peeinpot.com and please do not hesitate to contact the PiP team or me personally if you would like to discuss any aspect of the project and possible collaboration.



MEET THE EDI WORKING GROUP:
RAISING THE PROFILE OF LABMED'S EDI WORK

At LabMedUK26 in Birmingham, EDI champions Alan Courtney, Divine Azange and Sofia Koussis met members at the LabMed stand across two coffee-break sessions to find out more about how equity, diversity and inclusion impacted their work. A token drop poll asked visitors whether their background or identity had affected their career opportunities in laboratory medicine and a mosaic wall of sticky notes captured what an inclusive lab culture looks like to them. Both were great conversation openers and gave lots of interesting insight. One of the biggest take aways was the members weren't aware of the work our LabMed group does.

One example of what the group has been working on is a survey that Sofia Koussis, EDI liaison for the North West, recently completed with regional members, the first of its kind for LabMed. Of 36 respondents, around a third reported experiencing discrimination, including sexism, ethnicity-related issues and unconscious bias, though most said they feel safe expressing their identity at work. Again, a recurring theme was that members don't know what LabMed already does on EDI and want clearer signposting.

LabMed's EDI champion role dates back to 2017 and since then the working group has grown to include committees and regions who now have their own EDI liaisons, including Alison Whitelegg, Christopher Pitt, Umar Anjum and Fiona Davidson, feeding EDI into their committees' work and reporting back to the wider group.

Future projects

Next up the group are working on a bank of short, anonymised case studies about EDI in the lab, for the website and for regional trade union reps to use plus a national rollout of a survey learning from Sofia's regional survey.

Want to get involved, or share your own experience? Contact the EDI working group at ediworkgroup@labmed.org.uk



Alan Courtney and Sofia Koussis staffing the LabMed stand across one of the coffee-break sessions

MEETING REPORT

GOLDEN DAYS OF CHEMICAL PATHOLOGY: THE 11TH ANNUAL ACADEMIC SESSIONS OF CCPSL

The 11th Annual Academic Sessions of the College of Chemical Pathologists of Sri Lanka (AAS CCPSL 2026) took place on 10 and 11 July 2026 at the Shangri-La Hotel, Colombo. Held under the auspices of the IFCC and the Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine (APFCB), this year's conference was themed 'Quality, Innovation and Interdisciplinary Collaboration in the Era of Personalised Medicine' – a highly timely topic for laboratory medicine both regionally and globally.

Led by the president of the CCPSL, Ganga Withana Pathirana, alongside the secretaries, co-editors, council members and enthusiastic chemical pathology trainees, the two-day event delivered an outstanding academic programme. A key feature of this year's meeting was its



PAVITHRA SAMARAKOON
Training fellow (MTI), Oxford University Hospitals NHS Trust

Left to right: joint secretary Thathsarani Vithana Pathirana; Orator: Samuel Vasikaran; chief guest: Nalinda Jayatissa; president of College of Chemical Pathologists of Sri Lanka 2026: Ganga Vithana Pathirana; guest of honour: Jayantha Balawardane; immediate past president: Thushara Hewageegana; joint secretary: Majitha Ibrahim





Participants of Annual Academic Sessions 2026

dual-stream approach, offering tailored sessions for chemical pathologists, clinical doctors and postgraduate trainees, while hosting a dedicated medical laboratory science (MLS) programme to address technical excellence and laboratory operation.

The conference brought together a distinguished lineup of international and local experts. Renowned speakers from the UK, Australia, India, Malaysia, Singapore, New Zealand and Sri Lanka shared invaluable insights. Topics spanned a wide spectrum of modern diagnostics, including lipid management, cardiac biomarker interpretation, metabolic bone disease, point-of-care testing (POCT), paediatric endocrinology and the integration of Six Sigma and metrological traceability into quality systems.

Beyond the lectures, the event celebrated clinical and academic excellence. Key highlights included the formal Presidential Induction, alongside awards for the best oral presentations across case reports and research. Academic achievements were recognised through awards for the highest performers in the MD Chemical Pathology Part 1 and Part 2 examinations, including the prestigious MD Part 2 Gold Medal. Research publication awards further underscored the College's commitment to fostering scientific inquiry among young pathologists.

The 11th AAS CCPSL successfully provided a vibrant platform to exchange clinical expertise, strengthen interdisciplinary partnerships and renew professional friendships across borders. It showcased a flourishing chemical pathology community in Sri Lanka, firmly aligned with global developments in personalised patient care.

OBITUARY

ABDULLA A-B. BADAWY

1941-2026



Professor Abdulla Abu-Bakr Badawy passed away on 23 June 2026, at the age of 85 after a series of medical problems earlier in the year.

Abdulla was born in Cairo and educated at the Ibrahim Secondary School (1955-57) and Cairo University (*B. Pharm*, 1957-61). He later moved to a Postdoctoral Fellowship at King's College London (1970-71), subsequently taking an appointment as consultant clinical biochemist in the Cardiff and Vale NHS Trust in 1972, remaining there until his retirement in 2006. Abdulla was active in research and published over 200 papers. His early interests centred around the causes and treatment of alcoholism, and the biochemistry of tryptophan. In 1967 he was involved in the formation of the Medical Council on Alcoholism (MCA), a group affiliated with the Royal College of Physicians, becoming the Editor-in-Chief of their journal, *Alcohol and Alcoholism* from 1994-2004. Abdulla's research led to the development of an alcohol-deterrent treatment based on the ability of tryptophan metabolites to inhibit alcohol dehydrogenase. He had shown that benserazide inhibited the tryptophan-metabolising enzyme kynureninase, and then established that kynurenine metabolites caused nausea and vomiting when consumed with ethanol and benserazide. These combinations were a substantial improvement on previous alcohol deterrents since they increased brain serotonin (5-HT) levels, generating positive feelings of well-being and success, rather than depression. This work was supported by the Wellcome Trust. In 1990, Abdulla was one of 13 European academics who formed the Plinius Major Society, a group dedicated to performing and promoting research into alcoholism (named after Pliny the Elder's interest in alcohol). In his later years, Abdulla produced a series of detailed, highly cited reviews and analyses of tryptophan metabolism along the kynurenine pathway and in 2012, for his contributions to tryptophan biology, he was awarded the prestigious Musajo Medal by the International Society for the Study of Tryptophan (ISTRY) and the University of Padua. Abdulla was appointed in 2000 to be the first Treasurer of ISTRY, a post he retained until 2016. On his retirement, Abdulla was made honorary professor of clinical biochemistry at the Cardiff Metropolitan University of Wales. He retained formal links with colleagues at the University of Karachi, the University of Texas at Saint Antonio and Wake Forest University in North Carolina.

Abdulla will be remembered for his contributions to science, and also as a gentle man, always ready to help and advise those who needed it. He leaves his wife, Janet.

Trevor Stone, Oxford

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 55 from the August issue

A 34-year-old woman presented to the Emergency Department in Manchester in July 2026 with a 10-day history of profuse watery diarrhoea, bloating, anorexia and low-grade fever. Symptoms began about a week after a family gathering where a pre-packaged mixed salad bag (lettuce and mixed leaves) was served. She reported no recent travel outside the UK. Stool microscopy following formalin-ethyl acetate concentration showed spherical, refractile oocysts measuring 8-10 µm in diameter, staining unevenly with modified acid-fast (Kinyoun) technique.

Which of the following statements regarding the diagnosis and biology of the causative organism is most accurate?

A) The oocysts show bright autofluorescence (blue under UV excitation ~330-380 nm, or apple-green under ~450-490 nm) on epifluorescence microscopy, a useful adjunct to modified acid-fast staining.

B) Oocysts are immediately infectious upon passage in stool, permitting direct faecal-oral person-to-person spread.

C) Modified acid-fast (Kinyoun) staining reliably differentiates this organism from Cryptosporidium spp. by consistent, uniform staining of all oocysts.

D) First-line treatment is a course of oral metronidazole.

E) The organism is an intracellular helminth larva that migrates through the intestinal mucosa.

Answer

A) The oocysts show bright autofluorescence (blue under UV excitation ~330–380 nm, or apple-green under ~450-490 nm) on epifluorescence microscopy, a useful adjunct to modified acid-fast staining.
A cyclospora cayetanensis oocysts autofluoresce strongly and under UV epifluorescence, appearing blue with a 330-380 nm excitation filter or green with a 450-490 nm filter. This is a well-recognised, reliable adjunct diagnostic feature, particularly useful when acid-fast staining is equivocal and helps distinguish Cyclospora from Cryptosporidium and yeasts on stool microscopy.

Explanation

B), C), D) and E) are incorrect.

B) Freshly passed oocysts are unsporulated and non-infectious; sporulation (division into two sporocysts, each containing two sporozoites) takes days to weeks in the environment under suitable temperature and humidity conditions.

This is why Cyclospora is not typically transmitted directly person-to-person and instead spreads via faecally contaminated food or water – historically implicating imported fresh produce such as berries, herbs (basil, coriander) and leafy salad crops, with cases classically clustering in warmer months.

C) Unlike Cryptosporidium, which stains fairly uniformly with modified acid-fast techniques, Cyclospora oocysts characteristically stain variably – ranging from unstained 'ghost' oocysts to intensely stained ones, sometimes described as a mottled or variegated appearance. Size is also a useful discriminator: Cyclospora oocysts (8-10 µm) are roughly twice the diameter of Cryptosporidium oocysts (4-6 µm).

D) First-line treatment for cyclosporiasis is oral trimethoprim-sulfamethoxazole (co-trimoxazole); metronidazole has no reliable activity against Cyclospora and should not be relied upon, particularly in immunocompromised patients who can develop prolonged or relapsing illness.

E) Cyclospora cayetanensis is a coccidian, apicomplexan protozoan parasite, not a helminth. It infects enterocytes of the small intestine rather than migrating through tissue as helminth larvae do.

Question 56

A 28-year-old man presents to the Emergency Department in Leeds in September 2026 with four days of bloody diarrhoea, cramps and fever, starting three days after an egg mayonnaise sandwich at a family barbecue. He has not travelled abroad. Stool culture on xylose lysine deoxycholate (XLD) agar grows red colonies with black centres, confirmed as *Salmonella enterica serovar Enteritidis*. Whole genome sequencing (WGS) at UKHSA's Gastrointestinal Bacteria Reference Unit places the isolate in a national outbreak cluster, subsequently linked to a wider, ongoing multi-country European outbreak associated with imported eggs.

Which of the following statements regarding the diagnosis, epidemiology and management of this infection is most accurate?

A) Whole genome sequencing can resolve genetically distinct sub-clusters within a single Salmonella serovar at close to single-nucleotide resolution, enabling cross-border linkage of cases that would appear identical using classical serotyping alone.

B) Because this is uncomplicated Salmonella gastroenteritis in an immunocompetent adult, a course of oral ciprofloxacin should be started routinely to shorten symptoms and prevent invasive disease.

C) The red colonies with black centres on XLD agar reflect lactose fermentation, a feature Salmonella shares with Shigella, so this reaction cannot reliably distinguish the two genera.

D) Because *Salmonella Enteritidis* is classically associated with poultry meat, egg contamination can be excluded as a plausible source without further investigation.

E) Diagnosis of this presentation requires a positive blood culture, since routine stool culture on selective media lacks sufficient sensitivity to confirm non-typhoidal Salmonella infection.

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

DEACON'S CHALLENGE REVISITED

NO 45. ANSWER

As duty biochemist, you encounter a sample with an apparent plasma sodium concentration of 152 mmol/L. You discover that the blood was taken in error into an 'anticoagulation' Vacutainer tube containing 0.5 mL trisodium citrate solution (citrate concentration 0.105 mol/L). The total volume of anticoagulated blood in the tube is 4.5 mL.

Assuming that the result is analytically correct, what is the true plasma sodium concentration?

When any solution is diluted the total amount of a substance in the solution (derived from the solution) is the same both before and after dilution.

Since the total amount of a substance in a solution is the product of concentration and volume, we can write:

Final concentration x Final volume = Initial concentration x Initial volume

which can be rearranged to calculate any component. It is essential, however, that the same concentration and volume units are used throughout.

In this problem, the sodium present in blood is diluted with anticoagulant and the sodium present in anticoagulant is diluted with blood. Therefore, a proportion of the sodium in the anticoagulated blood is derived from each component of the mixture.

By rearranging the above equation, it is possible to calculate the Na concentration in anticoagulated blood which was derived from the anticoagulant alone:

Na from anticoagulant =

$$\frac{\text{Na concentration in anticoagulant} \times \text{Anticoagulant volume}}{\text{Volume of anticoagulated blood}}$$

The anticoagulant contained 0.105 mol/L of trisodium citrate. This concentration must be multiplied by 3 (to allow for each molecule containing 3 sodium ions) and by 1,000 (to convert from mol/L to mmol/L), giving 0.105 x 3 x 1,000 = 315 mmol/L.

Therefore, 0.5 mL of anticoagulant (containing 315 mmol/L of Na) is diluted to 4.5 mL with blood, so that the Na concentration in the anticoagulated blood which is derived from anticoagulant is:

$$\frac{315 \times 0.5}{4.5} = 35 \text{ mmol/L}$$

The total Na concentration in anticoagulated blood is the sum of the Na concentrations derived from both blood and anticoagulant:

Total Na = Na from blood + Na from anticoagulant

So, the concentration of Na derived from blood is simply the difference between the Na in anticoagulated blood (152 mmol/L) and the component derived from anticoagulant (35 mmol/L):

Na in anticoagulated blood derived from blood = 152 - 35 = 117 mmol/L

Since this is the concentration obtained when 4.0 mL of blood is diluted to 4.5 mL with anticoagulant, then the Na concentration in undiluted blood is:

$$\frac{117 \times 4.5}{4.0} = \textbf{132 mmol/L} \quad \text{(3 sig figs)}$$

Question 46

An endomysial antibody assay has been reported to have a diagnostic sensitivity of 88% and a diagnostic specificity of 97% for coeliac disease. What is the probability that a positive result truly indicates coeliac disease in a group of subjects whose pre-test probability of coeliac disease is 1 in 1,500?

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

SUSSEX CHALLENGES



Hypertriglyceridaemia unresponsive to therapy brings cardiovascular risk and, at high levels, risks acute pancreatitis. This case demonstrates the complexity in managing hypertriglyceridaemia and the need for a personalised approach to interpreting results with particular regard to laboratory input.

Challenge 8

Analyte	Result	Result	Unit	Ref Interval
Serum sodium	135		mmol/L	136-145
Serum potassium	4.7		mmol/L	3.2-5.1
Serum urea	6.2		mmol/L	1.7-8.3
Serum creatinine	73		umol/L	62-106
e-GFR (MDRD)	>60		mL/min/1.73 m^2	
Plasma glucose	5.0		mmol/L	
Serum total protein	76		g/L	66-87
Serum albumin	49		g/L	35-52
Serum globulin	27		g/L	18-36
Serum total bilirubin	6		umol/L	0-21
Serum alkaline phosphatase	71		U/L	40-129
Serum ALT	11		U/L	0-41
Serum appearance	Clear			
Serum cholesterol	3.9		mmol/L	<5.0
Serum HDL cholesterol	1.5		mmol/L	>1.0
Serum LDL cholesterol*	2.0		mmol/L	<3.0
Serum triglyceride (fasting)	6.0		mmol/L	<1.7
Serum non-HDL cholesterol	2.4		mmol/L	<2.6
TC:HDL ratio	2.6			<4.0
Serum TSH	2.16		mU/L	0.3-4.2
Serum free T4	12.3		pmol/L	11-23
Hb A1c	36		mmol/mol	<42
Serum adjusted calcium	2.30		mmol/L	2.15-2.50
Serum phosphate	1.14		mmol/L	0.81-1.45
Hb	143		g/L	135-180
WBC	4.6		10*9/L	4.0-11.0
PLT	176		10*9/L	150-450
Urine albumin:creatinine ratio		<2	mg/mmol	<3
Random urine glycerol		309	mmol/L	
Random urine creatinine		15.7	mmol/L	

**Direct assay rather than calculated*

1. **What do you think are the key findings?**
2. **What secondary causes of hypertriglyceridaemia do you recognise?**
3. **What formula would you use to estimate the serum LDL cholesterol and why?**
4. **What causes of a raised plasma glycerol do you recognise?**
5. **What explanation do you have for these results?**

Commentary

1. What do you think are the key findings?

Elevated fasting serum triglyceride concentration.

Elevated random urine glycerol.

2. What secondary causes of hypertriglyceridaemia do you recognise?

Secondary causes – often associated with a low HDL cholesterol:

- Obesity
- Metabolic syndrome
- MASLD
- A diet with a positive energy-intake balance and a high fat or high glycaemic index
- Insufficient physical activity
- Alcohol, in excess
- Diabetes mellitus, particularly T2DM*
- Renal disease: CKD, nephrotic syndrome*
- Hypothyroidism*
- Pregnancy: physiological triglyceride concentrations double during the third trimester
- Paraproteinaemia* or SLE
- Any of several types of medications, including:
  - Corticosteroids
  - Oestrogens, especially those taken orally
  - Tamoxifen
  - Antihypertensives: e.g., non-cardioselective β-blockers, thiazides
  - Retinoids
  - Bile-acid–binding resins
  - Cyclophosphamide
  - Protease inhibitors
  - Psychotropic medications: phenothiazines, second generation antipsychotics

**Cholesterol may also be elevated*

3. What formula would you use to estimate the serum LDL cholesterol and why?

The most commonly used formula is that described by Friedewald. However this formula has been shown to be inaccurate when serum triglyceride concentrations are either low or above 4.5 mmol/L.

Alternative formulae have been described to overcome these limitations including the Sampson-National Institutes of Health (NIH) equation 2 and the Martin-Hopkins equation which can be used for serum triglyceride concentrations up to 9 mmol/L.

4. What causes of a raised plasma glycerol do you recognise?

- Artefactual
  - Glycerol contaminated blood collection tubes
  - Glycerol contaminated laboratory water supply*
  - Glycerol containing skin preparations with capillary blood sampling

- High oral intake of glycerol containing food– often associated with CKD causing low glycerol excretion
- Alcoholic drinks especially beer
- Common additive to processed foods

- Metabolic
  - Critical illness with weight loss
  - Heparin infusion
  - IV lipid infusion

- Genetic – X-linked glycerol kinase deficiency has three forms
  - Complex –associated with other features such as adrenal hypoplasia
  - Juvenile - associated with episodic vomiting, acidaemia and hypotonia
  - Benign adult form - an incidental finding with pseudo-hypertriglyceridaemia

*This has happened due to cleaning of water tanks with glycerol containing cleaning agents.

5. What explanation do you have for these results?

The clue: the mismatch between the elevated triglyceride concentration and the clear appearance of the serum (also no lipaemia flag on the autoanalyser) which would be milky as this machine assayed triglyceride concentration.

Automated assays for serum triglyceride concentration do not have a blank to measure endogenous serum glycerol concentration. Kit inserts suggest that 0.11 mmol/L may be subtracted from the post hydrolysis total glycerol concentration to allow for the presence of endogenous free glycerol. So, samples with high concentrations of free glycerol will be reported as having elevated triglyceride concentrations - this is termed 'pseudo-hypertriglyceridaemia'.

The lack of response to triglyceride lowering therapies and the high random urine glycerol concentration in the absence of high oral intake of glycerol and good renal function indicated this man had the benign adult form of glycerol kinase deficiency – a rare X-linked disorder.

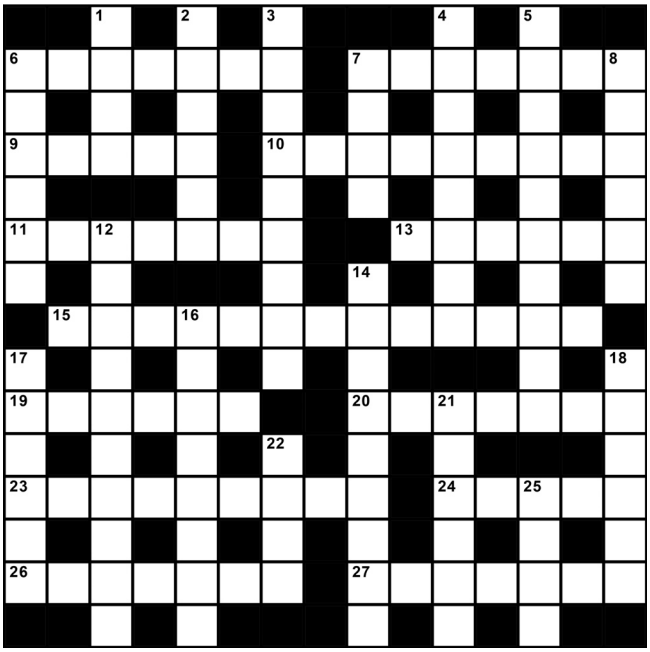
THE CROSSWORD BY RUGOSA

Across

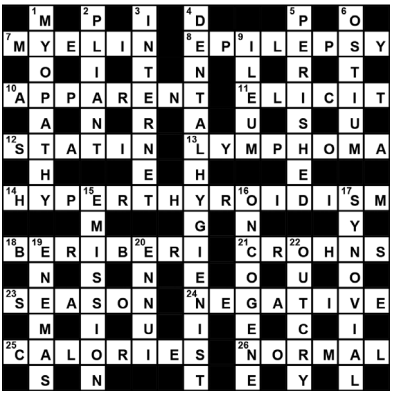
6 Against trip outline (7)
7 Graduate cut open lab instrument (7)
9 Attempt measurement (5)
10 Carbohydrate catalogue's editing not top drawer (9)
11 Crazy Goon era spice (7)
13 Samsons condition in Gaza (6)
15 Essential nutrient in acidic tonic mixture (9,4)
19 Extirpate from sailor after hours (6)
20 Sedition of Middle Eastern cause (7)
23 Alcoholic drink following allotment exposition (9)
24 Instructor in statutory law (5)
26 Some unit is developing the process of reduction division (7)
27 One element jolly about another (7)

Down

1 We bear the responsibility? (4)
2 Last two over first after surprise expression of infection (6)
3 Poor signs, poor medical outlook (9)
4 Post bearing thanks for shared composite organ (8)
5 Pride NHS on synthesis of analgesics (10)
6 Operator of late ferry cast anchor (6)
7 Humour or anger (4)
8 GI procedures same in French translation (6)
12 Good ties pilot developed: thin elastic structure prevents choking (10)
14 Treatment using an electric instrument: doctor taking time out made thirty (9)
16 Privy to US external structure (8)
17 A disorderly struggle broke a bone (6)
18 Generally dissipated, lacking all vigour (6)
21 Aden left East Enders some fragrant liquids (6)
22 Permit transfer (4)
25 Heard what 24 did when tight? (4)



SOLUTION FOR AUGUST'S CROSSWORD



SUDOKU ... THIS MONTH'S PUZZLE

C			H			R		
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SOLUTION FOR AUGUST

E	R	M	Y	C	T	I	H	S
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