

# ACBNews

The Association for Clinical Biochemistry & Laboratory Medicine | Issue 669 | February 2021

ANNE GREEN

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Report

# Sheila

*Unlocking the treatment for PKU*





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# ACB News

The bi-monthly magazine for clinical science

Issue 669 • February 2021

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The Association for  
Clinical Biochemistry &  
Laboratory Medicine

*Better Science, Better Testing, Better Care*

*Front cover: Sheila - Unlocking the treatment for PKU,  
written by Anne Green, published by Brewin Books*

# President's Message – February 2021

It is incredible to see the continued dedication and professionalism of ACB Members as you deliver COVID-19 and routine diagnostic services in an ever-changing and unpredictable environment. The anticipated light at the end of the tunnel as the vaccination programme rolls out is welcome and we wait to see more data around its impact. However, not wishing to stand still we are keen to build on the strides we have made with our digital platform and are cautiously making plans for 2021 which will still be largely virtual in their nature.

We know that Trainees in particular have shouldered a significant burden last year with the cancellation of RCPATH exams, a general lack of training activity, and cuts in available study time and training budgets. So, plans are in hand for a virtual Training Day in preparation for the RCPATH exams during April. Also the Microbiology Professional Committee has arranged free online sessions to help fill the gap in the disrupted STP programme for Microbiology Trainees. You can read Rob Shorten's update on page 24.

Since we launched the new ACB website in October we have had an influx of membership applications with 56 new members confirmed and another 50 in the pipeline awaiting approval. CPD and professional development continues to be the main reason for joining so I want to thank all those members who give their time and share their expertise to support our events and training activities.

A welcome too this month to the new Lead Editor of *ACB News*, Dr Gina Frederick, along with new Associate Editors Miss Wendy Armstrong, Dr Becky Batchelor, Dr Jenny Hamilton and Dr Katy



Hedgethorpe who will provide some much-needed updates for the Trainees section. We are keen to hear your thoughts on what you want from *ACB News* for the future and we'll be asking for your comments in this year's Member Survey which will be going out shortly. Please do look out for it and take the opportunity to tell us what you'd like to see.

I know it's been a tough start to 2021 and many of you are still facing immense pressure as Trusts struggle to cope with the influx of patients and the resulting pressure on services including the labs. I sincerely hope the next time I write this message for *ACB News*, we will be starting to see the impact of the vaccination programme and we can start to envisage a phased return to business as usual. ■

## Message from the CEO

Welcome to the first *ACB News* of 2021. I continue to work in splendid isolation in the Tooley Street HQ with the rest of the staff team working remotely. It's very quiet and there is lots of space for online yoga at lunchtime!

We've used the opportunity over the past few months to clear the office, archive much of our paperwork and create new space for meetings and events on the third floor when the office reopens – hopefully later this year.

We are planning a refresh of the office and an improvement to facilities so that Members can pop in for meetings or just have a space to work quietly when in London and we'll be ensuring that we are fully equipped for virtual meetings as well. This means we've freed up the space on the fourth floor of Tooley Street and will be looking to sublet the space this year and reinvest the income in member services. We'll keep you updated as plans progress.

I'd also like to thank you all for understanding that we've been difficult to contact on the main phone number since March and you've had to use temporary numbers or email. We will rectify this shortly with the introduction of a digital phone system with personalised numbers so you'll be able to get straight to the person you need. Watch out for updates on the website.



Finally, I am sure all ACB Members will join me in wishing a fond farewell to Nic Law who moved to the Society for the Study of Inborn Errors of Metabolism as Executive Administrator in January this year. Nic gave the ACB many years of loyal service and we wish him well in the next stage of his career. Sadly, circumstances prevented us organising a proper send off for him but we hope he will want to mark his time with the ACB at a future celebration when we are able to socialise again.

I look forward to meeting more of you in person later in the year. In the meantime, thanks for your continuing hard work and resilience and stay well. ■

## Operational guidance: vaccination of frontline health and social care workers

On 7th January 2021, NHS England and NHS Improvement issued a letter to the service giving operational guidance for vaccination of frontline health and social care workers. This explicitly includes laboratory, pathology and mortuary staff and any temporary, locum or bank staff, volunteers, and trainee students. Read the article here:

<https://www.england.nhs.uk/coronavirus/publication/operational-guidance-vaccination-of-frontline-health-and-social-care-workers/> ■

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## Guidance on asymptomatic testing for NHS staff

The guidance on COVID-19 testing of asymptomatic NHS staff was updated on 18th November 2020. This is of importance to NHS laboratory professionals who are both NHS staff and have been busy providing Pillar 1 Covid testing. This statement and further links can be accessed on the [NHS Employers website](#). ■

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## COVID-19: What role for scientists in a nation full of armchair epidemiologists?

We are very fortunate at the ACB in that our members stick to what they know when talking to the media and only comment on the science they have expertise in. We welcome this approach and believe it has increased respect in our members and the organisation as a whole from both the media and the general public during the pandemic.

**This blog** from Fiona Fox, Director of the Science Media Centre, and 'Science in the Spotlight' on Radio 4 discuss this topic further and explore the new role both scientists and journalists have had to adopt in recent times. ■

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## Have hope – the UK has a track record of successful vaccine campaigns

Our success with mass flu vaccination bodes well for getting COVID-19 under control. Read the article by Fiona Culley and John Tregoning from *The Guardian* (published 30th November 2020) [here](#). ■

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## Is NHS Test and Trace exacerbating COVID-19 inequalities?

By Adam D M Briggs and Caroline Fraser, featured in *The Lancet* on 4th December 2020. [Read the article here](#). ■

## Pfizer and Biontech provide data from German phase 1/2 study further characterizing immune response following immunization with lead COVID-19 vaccine candidate Bnt162b2

Pfizer website | 14th December 2020

Pfizer and BioNTech announced additional data on neutralizing antibody and T cell responses from the Phase 1/2 trial with BNT162b2 conducted in Germany. The study results demonstrate that BNT162b2 elicits a combined adaptive humoral and cellular immune response against SARS-CoV-2 and provide insights into the composite nature of BNT162b2-induced T cell immunity. Read this article [here](#). ■

## *Annals of Clinical Biochemistry* COVID-19 papers

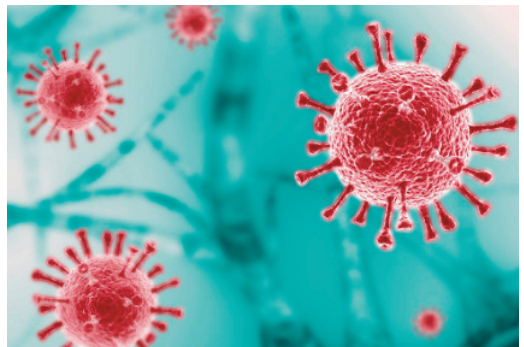
Moat, S. *et al* (24th November 2020). Development of a High Throughput SARS-CoV-2 Antibody Testing Pathway Using Dried Blood Spot Specimens. *Annals Express* <https://journals.sagepub.com/doi/pdf/10.1177/0004563220981106>

Yafang, Wan *et al* (12th November 2020) Performance verification of anti-SARS-CoV-2-specific antibody detection by using four chemiluminescence immunoassay systems. *Annals of Clinical Biochemistry* <https://doi.org/10.1177%2F0004563220963847>

Benton, S. C. & Fraser, C. G. (27th October 2020). Faecal immunochemical tests in the COVID-19 pandemic; safety-netting of patients with symptoms and low faecal haemoglobin concentration – can a repeat test be used. *Annals of Clinical Biochemistry* <https://doi.org/10.1177/0004563220967569> ■

## Science has led us to the brink of beating COVID-19. Let's not jeopardise it

By Patrick Vallance featured in *The Guardian* on 13th December 2020. [Read the article here](#). ■



## Support for Retired Members

Ruth Lapworth MBE, Organiser, Retired Members' Group

We recognise Retired Members might be experiencing particularly difficult periods of isolation. If you would like to connect by email or telephone with other Retired Members in the current circumstances, let us know by emailing [retired.connections@acb.org.uk](mailto:retired.connections@acb.org.uk) ■

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## Send us your good news stories

Have you heard about a lab doing incredible work on COVID-19 testing?  
Or perhaps you'd like to share how you're staying positive during self-isolation?  
Email [communications@acb.org.uk](mailto:communications@acb.org.uk) with your experiences during this difficult time to share with other Members. ■

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## Have you seen inaccurate reporting of science in the press?

The ACB has a role in ensuring that the influencers of public opinion are hearing from experts to inform their reporting. If you see inaccurate science reporting of COVID-19 testing in the press, please let us know asap by emailing [communications@acb.org.uk](mailto:communications@acb.org.uk) and the ACB Communications team will consider how best to respond to make sure the inaccuracies are corrected, for example, by issuing an expert briefing to the press. ■

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**Keep up to date with COVID-19 news on the ACB website:**  
<http://www.acb.org.uk/whatwesay/covid19-updates>



# Annals Associate Editors wanted

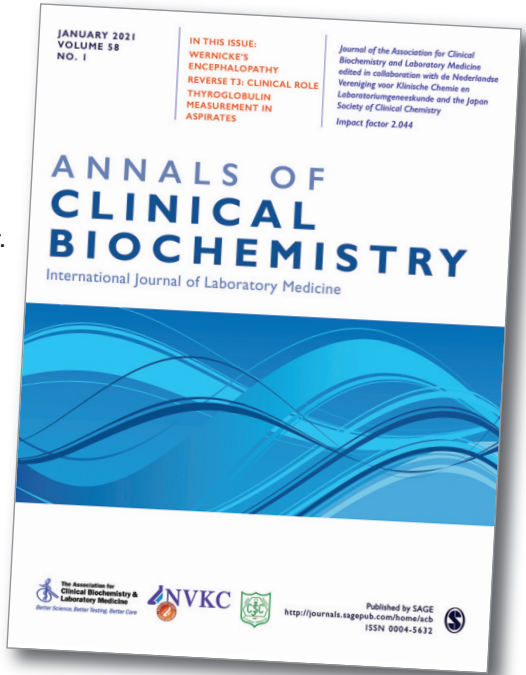
The *Annals* is seeking to expand the editorial team and would like to hear from academically active colleagues who wish to learn more about the role of Associate Editor. Applicants should be publishing regularly in peer-reviewed journals.

For preliminary enquiries please contact either of the Editors:

Dr Michael Murphy  
 +44 (0)1382-383541  
[m.j.murphy@dundee.ac.uk](mailto:m.j.murphy@dundee.ac.uk)

or

Dr Maurice O’Kane  
 +44 (0)28-71345171 ext 213805  
[maurice.okane@westerntrust.hscni.net](mailto:maurice.okane@westerntrust.hscni.net) ■



# Sudoku

## This month's puzzle

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

## Solution for December

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

# Diversity Data

## Dr Rachel Wilmot, Equality, Diversity & Inclusion Champion

I hope you are all enjoying the new ACB website. You will have noticed on your first touch you were directed to a questionnaire collecting many aspects of your data and inclusive of a section on the diversity of our membership. The aim is for us to have a more complete picture of our membership and to use the information we collect to inform our future direction in line with the EDI statement we adopted at our 2019 AGM.

We are becoming increasingly familiar with requests to capture these aspects of our lives and our Scientific members should have recently received an e-mail from our regulatory body – the HCPC – requesting that you complete their Diversity data survey 2020-21; the ACB encourages you to complete this. The HCPC currently holds this data on fewer than 6% of its registrants, severely hampering their ability to understand how different groups are affected by their processes, an unacceptable position to be in for the organisation that regulates our profession. Responses from Clinical Scientists to the request to complete have been very slow, at only 8% of their registrants by mid-January.

I appreciate some people find it uncomfortable or are hesitant to answer questions about potentially sensitive personal information. There is always an option if you would “prefer not to say”. I would, however, encourage you to complete these surveys as fully as you feel happy with as the data is used to enable organisations to improve their understanding of their membership and

develop in the best interests of all their members. The data is always held securely and away from public/general access (in accordance with the Data Protection Act).

As Laboratory Scientists and Medics in the NHS, COVID-19 has been our primary focus for the past year and is likely to remain so as we progress through 2021. As with so many things, COVID-19 has also shone a light on inequalities and injustices in society and within our workplaces.

Whilst the ACB has made significant progress in addressing a lack of diverse voices in our senior teams and committees (both with respect to protected characteristics and with respect to our increasingly broad membership across Laboratory Science); the data we hold shows disparity particularly with respect to race on the professions we represent.

COVID-19 has also taught us how quickly we can adapt to new ways of working. Many models of flexible working from home and in the laboratory have been implemented at no detriment to the leadership or quality of service we provide. This provides an ideal time to increase inclusion and opportunities to those who find the traditional model of long hours in the lab incompatible with the other demands on their time.

I am hoping to pull together a group of members to look at how we further progress our EDI Agenda particularly in terms of networking and support. If anyone is interested in joining us please e-mail the Membership Manager, Mike Lester ([mike@acb.org.uk](mailto:mike@acb.org.uk)). ■

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# ACB News news

## Dr Gina Frederick, Lead Editor, *ACB News*



As you are all aware, Ian Hanning retired from his role as Lead Editor at the end of December, after more than 17 years' service to ACB Publications. Our small *ACB News* team is missing him already, and we wish him all the best in his retirement. However, life moves on! I have taken on the role of Lead Editor from Ian, and from Jonathan Berg before that, after working on *ACB News* for the last 5 years. I have some big boots to fill! I came to work on *ACB News* when I volunteered to help proof-read after noticing that they had lost one of their team members. I have thoroughly enjoyed working as part of this great team, and it makes a nice change from the day job at Derbyshire Pathology, where I have worked for the

last 25 years!

Our small team is about to expand, as we have recently recruited some new Associate Editors to strengthen our editorial team. We would like to welcome Wendy, Becky, Jenny and Katy, who have been involved with the editing of this edition and will take on an increasing role working with myself, Sophie, Nicola, Chris, Elaine (who is our new Microbiology Associate Editor, replacing Derren Ready) and of course Nikki and Sue.

## Dr Wendy Armstrong

I am a Consultant Clinical Scientist in Biochemistry in the South West London Pathology laboratory at Croydon University Hospital.

I trained as a Grade A Clinical Biochemist at King's College Hospital in London, and from there I moved into a Senior Biochemist role at St George's Hospital in Tooting. Following a year out as a Darzi Fellow with NHSE (London), I moved to Croydon Hospital, where I have been a Consultant since 2019.

Alongside the day job, I'm also a Regional Tutor for London for the ACB, and Secretary of the ACB Southern Region Committee.

Outside the laboratory, I'm a keen rower. While the current situation means I am making do with the rowing machine, I'm looking forward to getting back on the water later in the year.

Before starting my Clinical Scientist training, I was Assistant Editor for *Trends in Biochemical Sciences*; it'll be good to redeploy some of the skills I learnt there for the *ACB News*!



## Dr Becky Batchelor

I accidentally came into the world of Clinical Biochemistry after a first degree in Chemistry, when I was reading the job adverts in the back pages of the *New Scientist* early in 2011 – but it turns out it's been a very lucky accident, because on most days it is the perfect job. I trained with an amazing team in East and North Herts NHS Foundation Trust who got me where I am today.

Currently, I am a Senior Clinical Scientist based at the Western General Hospital, NHS Lothian in beautiful Edinburgh, and before that I worked in lovely Poole (lab BBQs on the beach!). My main roles are in routine Biochemistry, antenatal screening and proteins authorising, with a side interest in Metabolic Biochemistry.

Outside of work I have been attempting to explore Scotland after relocating from Dorset – an activity that has been slightly harder to do lately – and I also enjoy baking, reading, knitting and long walks in the countryside. Luckily all things that are currently permitted!



### Dr Jenny Hamilton

I started my Clinical Scientist training in 2001 after finishing a PhD. I completed my training in Belfast Trust and have been the Principal Clinical Scientist in the NI Regional Toxicology Laboratory since 2013, overseeing significant modernisation of the service. I have recently been appointed to a Consultant post in the Southern Trust and will take up that appointment in April 2021. As a new Consultant, I decided the time was right to get more involved in the ACB, starting with a new exciting role as an Associate Editor of the *ACB News*. I knew that English 'A' level would come in handy someday!

On a personal level, I am married to a farmer, and we live on a farm along with several thousand chickens, a few hundred cattle and sheep, and our four children, so that all tends to keep me fairly occupied when not in work. My jobs on the farm include sorting out the IT and paperwork, "standing in the gap" as and when required, and ensuring everyone has wellies that fit!



### Dr Katy Hedgethorpe

I trained at St George's Hospital in London before deciding to swap big city life for Devon life and have worked at Derriford Hospital in Plymouth since Summer 2019.

Before starting the STP I completed a PhD studying proteins involved in the mating of social amoebae (fun fact: amoebae have three sexes!). I am currently Vice-Chair of the ACB Trainees' Committee and enjoy working with the other committee members to represent Trainees and make sure their issues and concerns are heard.

In non-pandemic times I am a keen cross country runner and am looking forward to the day when I can be racing up a muddy hill again! I'm also a Guide leader and have lots of fun trying to organise an excitable group of girls over Zoom once a week. ■



## Book Review

# *Sheila: Unlocking the treatment for PKU*

by Nicola Merrett, *ACB News Assistant Editor*

*Sheila: Unlocking the treatment for PKU* by Anne Green tells the story of Sheila Jones who became the first child in the UK to be diagnosed with phenylketonuria (PKU). The story begins in Ireland during World War 1 with the birth of Sheila's mother, Mary. In the early 1940s, Mary left Ireland for England in her quest for work. This led her to Birmingham where she married Edgar James Jones in 1945. Shortly after, she had her first son, Terry. Sadly, the Jones' marriage broke down and Mary became a single mother. Mary's second son, Trevor, was born in 1948 closely followed by her only daughter, Sheila, in 1949. Mary had two further sons, Philip who was born in 1954 and William (Liam) born in 1959. All was well until Sheila was about 18 months of age when it became clear that Sheila wasn't developing at the same pace as her older brothers. Mary made an appointment with her family GP who referred Sheila to the 'new' Birmingham Children's Hospital (BCH) in Ladywood Road. This new hospital was developed under the guidance of Dr Leonard Parsons who was appointed to BCH in 1910 as Physician to outpatients. He recognised the importance of laboratory investigations in the study of childhood diseases and he appointed his cousin, Dr Evelyn Hickmans, to establish chemical assays that would support his clinical work. Dr Hickmans was one of the very few women to study Chemistry at that time, and in 1923 she established the first ever Paediatric Biochemistry Laboratory at BCH. On 13th March 1951, Sheila was seen in a special outpatient clinic for children with mental retardation run by a newly appointed Consultant, Dr John Gerrard. He was assisted in his clinic by a



German PhD student, Dr Horst Bickel, who completed the team that would change the life of Sheila and all the future children diagnosed with PKU across the world.

This book takes us on a journey of the past as Sheila receives her first tentative diagnosis of 'phenylpyruvic oligophrenia' following her outpatient appointment with Dr Gerrard. We follow the hospital admission that was required to confirm the initial biochemical findings and we reminisce over the personal anecdotes describing the use of amino acid paper chromatography that was used to visualise the excess phenylalanine present in Sheila's blood and urine, a technique pioneered by Dr Hickmans in her BCH laboratory. Sheila's story symbolises what can be achieved with a strong partnership between clinician and scientist but the real heroine of this story has to be Sheila's mother, Mary. Her determination to seek treatment for her child is awe-inspiring, especially considering her difficult personal circumstances at the time. When the medical team became distracted with the

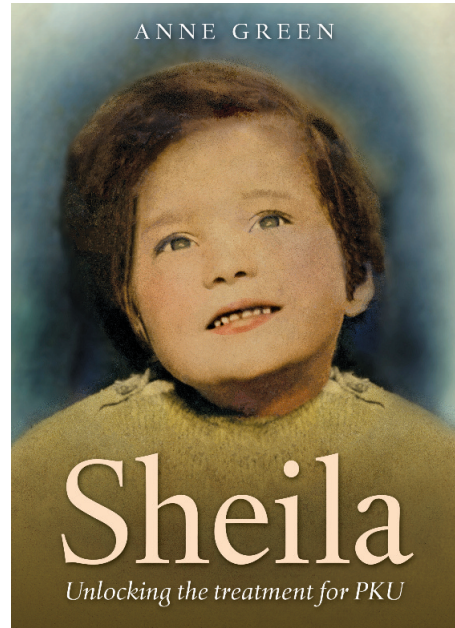
science behind the diagnosis, she was a constant reminder at the laboratory door that her daughter still needed their help – “when are you going to treat my child?” she would say. When Dr Bickel explained that there was no treatment, her reply was simple – “can’t you find one?”.

This led Dr Bickel and his coworkers to develop a revolutionary new diet treatment for Sheila in the hospital laboratory at BCH. Again, Mary’s sheer determination and courage shines through as she consents to another long hospital admission for Sheila to trial this revolutionary new treatment with no guarantee of success. We appreciate how difficult life must have been for Mary as she spent the next few years travelling across Birmingham by bus to take Sheila to her weekly outpatient appointments and to collect the 2.5 L bottle of special formula. We also appreciate the sacrifice made by Sheila as she was encouraged to take this unpleasant diet over so many years for the ultimate benefit of others.

We all know how the story ends. The low phenylalanine diet is well established in the treatment of patients with PKU but this book reveals the thought-provoking backstory of how the tenacity of a determined mother, the bravery of a little girl and the courage of a medical team

led to the development of a treatment that has changed the lives of all future children born with PKU.

Interspersed with personal family anecdotes, *Sheila* is a thought-provoking read that will inspire scientists and non-scientists alike. ■



*Sheila – Unlocking the treatment for PKU*, written by Anne Green and published by Brewin Books, is available at [www.brewinbooks.com/sheila](http://www.brewinbooks.com/sheila)

## Nominations for position of National Member of Council

In accordance with the provision of Articles 11, 12 and 14 as outlined in the Association Bye-Laws subsections 6.2 and 6.3, nominations are called for the position of National Member of Council.

Nominations for the position, duly countersigned, should be made on the nomination form on page 39 in this issue of *ACB News* (also available as a PDF form on request) and sent electronically to the Membership Manager, Mike Lester ([mike@acb.org.uk](mailto:mike@acb.org.uk)) or by post to: Association for Clinical Biochemistry & Laboratory Medicine, 130-132 Tooley Street, London SE1 2TU before **12th March 2021**. ■

## Peer Reviewers needed for Analyte Monographs

We urgently require volunteers to peer review new Analyte Monographs (AMALCs). We are looking for members of our profession who have expertise or special interests in particular areas. This could be in any area, from ACE through to Zinc, as our aim is to produce a monograph for as many laboratory analytes as possible. Once a monograph is written, it requires peer reviewing before publication. We currently have plenty of volunteers to write monographs, but not many peer reviewers.

AMALCs are published on the ACB website, and also linked to Lab Tests Online UK. So, if you would like to earn some CPD points and contribute to the education of our Members, and the wider scientific community, please get in touch with the Editor-in-Chief via [amalcs@acb.org.uk](mailto:amalcs@acb.org.uk) or [gina.frederick1@nhs.net](mailto:gina.frederick1@nhs.net) ■

## Statement from the Chief Executives of the health care regulatory bodies

**Emma Lewis**  
**Chair of the FCS Committee**

As people are being asked to work differently, and this may include being in places they may not normally work, there may be concerns about how this could affect their professional registration. Please see the link below for a statement from the Chief Executives of the statutory regulators of health and care professions regarding registration: <https://www.hcpc-uk.org/news-and-events/news/2021/joint-statement-from-chief-executives-of-statutory-regulators/> ■

## Virtual Poster Competition Winners hosted by ACB South West & Wessex

### First Prize:

**Anu Abraham** – Optimisation and validation of a cannabinoid quantification method in PM blood by UPLC-MS/MS

Comment from our Judge: *“Good solid method development and validation, cannot really fault this”.*

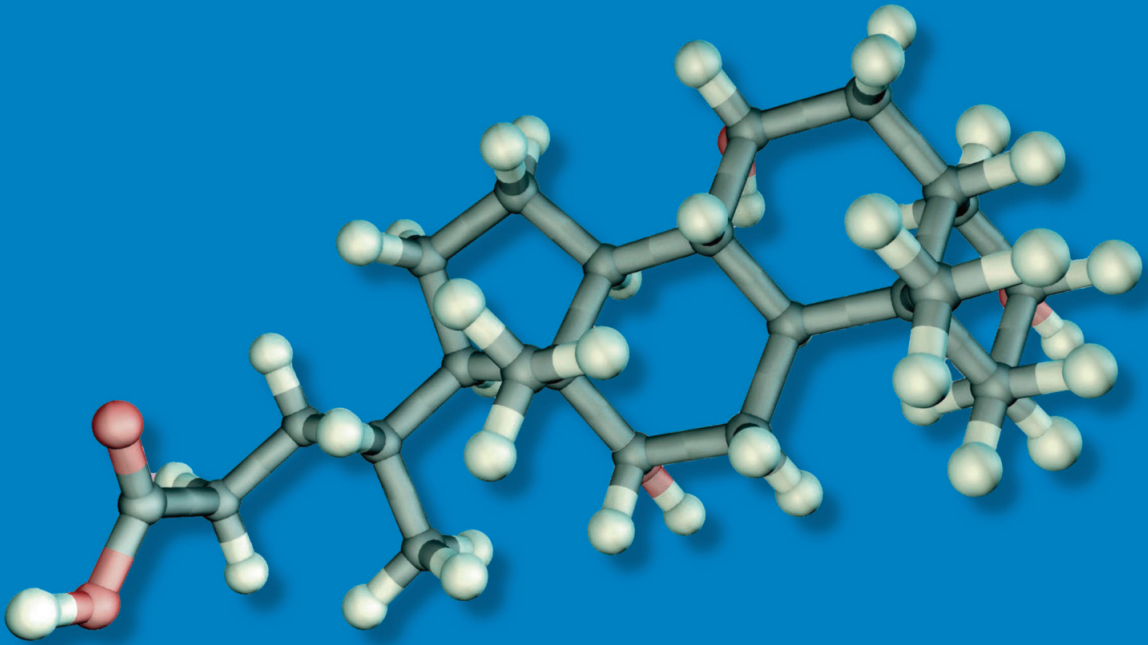
### Runners-up:

**Angie Cooper** – Clinical audit of NICE guidelines for coeliac disease testing pathway: room for quality improvement?

**Jinny Jeffrey** – Measurement of serum c-peptide in patients following simultaneous pancreas and kidney (SPK) transplants

Congratulations to you all, we had a strong field with a fascinating and diverse group of posters. Thank you to everyone who took part. The posters are still available to view on the [Region's webpage](#) so please do visit and have a read. ■





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## Upcoming Events

The ACB runs a wide range of CPD accredited meetings and courses for the benefit of our members. These range from large national conferences run by the ACB National Meetings Committee to small one day single topic meetings run by the local regional committees, all of which are geared towards spreading and improving scientific knowledge within the profession. The Education Committee also runs a number of training courses aimed at both pre-registration Trainees and those members looking to progress towards managerial positions.

### March 2021

#### **ACB Scotland Spring Scientific Meeting & AGM (virtual event)**

The meeting will be held on 5th March 2021 with Members' papers presented before lunch and Trainee presentations for the John King award in the afternoon. Further details will follow on the [ACB website](#).

#### **ACB Trent, Northern & Yorkshire AGM (virtual event)**

The AGM will be held at 12:00 on 31st March 2021. All TNY ACB Members are encouraged to attend.

### April 2021

#### **ACB Trent, Northern & Yorkshire Regional Scientific Meeting (virtual event)**

Organised by Ann Bowron, Consultant Clinical Scientist at Newcastle upon Tyne Hospitals NHS Foundation Trust, the Meeting will be held on Wednesday 21st April 2021. The theme will be *Advances in Lipids*. Further details will follow on the [ACB website](#).

### March 2022

#### **Quality in the Spotlight**

The "Quality in the Spotlight" Antwerp meeting has been rearranged and will now be held on Monday 21st and Tuesday 22nd March 2022. For further information please visit: <https://qualityinthespotlight.com/>



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# LAB TESTS ONLINE<sup>UK</sup>

*Your Trusted Guide*

Peer Reviewed • Non-Commercial • Patient Centred

Produced by  The Association for  
Clinical Biochemistry &  
Laboratory Medicine

In partnership with 

With support from

 The Royal College of Pathologists  
Pathology: the science behind the cure



Lab Tests Online-UK is a non-commercial website written by practising laboratory doctors and scientists with lay editorial review of content to ensure its suitability. The aim of the website is to help patients and the public, including healthcare professionals, understand the many clinical laboratory tests that are used in diagnosis, monitoring and treatment of disease.

## What's New on Lab Tests Online-UK?

*NEWS* NHS to evaluate a new blood test that detects more than 50 cancers.

## LTO-UK fact of the month

Did you know that all the LTO-UK content is written by laboratory scientists and medical professionals based in the UK? They all work on a voluntary basis to keep the information on the website up to date.

## Meet the Lab Tests Online-UK Board

### Patient Liaison: Prof Jonathan Kay



Jonathan Kay is the only remaining Board member since the founding of Lab Tests Online-UK in 2004.

He spent most of his career as a Chemical Pathologist in Oxford trying to convince everyone that what look like laboratories are actually information factories. This included inventing and implementing the way that we all now send reports to general practitioners with John McVittie, the first online Clinical Chemistry Bulletin Board, the ACB mail lists with Rick Jones, *AssayFinder* with James Falconer Smith, reports with contextually hyperlinked information with David Nurse, and a massive network of

connected POCT devices with Ian Smith.

Many of these projects were supported by the ACB, where he also initiated the Scientific Development Scholarships.

He left clinical practice to become Clinical Informatics Director at NHS England but continues to teach at the University of Oxford and elsewhere. He was a Founding Fellow of the Faculty of Clinical Informatics and is now Chair of Council.

Outside work he is a keen actor, most recently performing in a socially distanced version of *As You Like It*. He'd like to spend more time walking and cycling, although not as far as the Treasurer!

## How to get involved

### Join the editorial team

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

### Become a Lab Tests Online-UK champion

Join our champions and promote LTO-UK locally and nationally. Champion packs provide a great starting point with ideas and marketing materials, for more information or to join our champions contact us.

Email: [labtestsonlineuk@acb.org.uk](mailto:labtestsonlineuk@acb.org.uk) Website: [labtestsonline.org.uk](http://labtestsonline.org.uk) Follow us



## Molecular Innovation. Now.

Improving your testing capabilities, consolidating molecular workflows, extracting, amplifying and detecting SARS-CoV-2 to fight COVID-19.

The next generation of core instrumentation is here. Placed in a laboratory near you. Introducing the Randox Discovery, the fully automated, compact benchtop platform consolidating multiple laboratories into one. Advancing multiplex testing detecting hundreds of targets from one single patient sample.





## **IFCC Global Conference on COVID-19 Diagnostics and Clinical Management**

**A virtual scientific event focusing on the critical role  
of Clinical Laboratories in the COVID-19 pandemic**

**15th-17th February 2021 – virtual platform**

This year has been incredibly challenging for the scientific community, yet we have all made invaluable strides towards the end of the COVID-19 pandemic. To highlight such advancements, the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) is hosting the IFCC Global Conference on COVID-19, which will take place virtually on 15th-17th February 2021. We are delighted to share this important event with your organisation and ask that you share this invaluable learning opportunity with all your colleagues.

Now, the IFCC feels it is more crucial than ever to virtually bring us all together on a global platform to present the most up to date evidence in the field of COVID-19, with a specific focus on innovations in diagnostics and therapeutics. This conference will also provide the opportunity for us to work towards a more collaborative clinical care model in diagnosing and treating COVID-19. Specifically, attendees will have access to:

- ◆ Plenary sessions delivered by leading scientists, physicians and public health authorities.
- ◆ Ten scientific symposia, covering technological advances in clinical diagnostics and management, therapeutics, vaccines development.
- ◆ Special presentations on the global response to COVID-19 in Africa, Asia-Pacific, Europe, Latin America, Arab Federation and North America.
- ◆ An industry panel with presentations from industry leaders on the latest IVD innovations.
- ◆ Twelve educational industry workshops.
- ◆ A young investigator forum with presentations from young scientists worldwide.
- ◆ Scientific e-posters and virtual industry exhibits.

**For further details and to view the preliminary scientific programme, [click here](#).**

**To register for the conference, [click here](#).**

Registration is €50 for all young scientists/trainees who are under 40 years old and €150 for others.

Don't miss this unique international scientific event! We look forward to seeing many of you (virtually!) at this important and timely scientific event in February. ■

## AQMLM Zoom meeting

### Jonathan Middle, Chair AQMLM

Our next Zoom meeting – Zoom 09 – to be held on Friday 5th February 2021, will have the theme 'Evaluating Assay Performance Characteristics'.

At this event, we intend to bring together concepts from our recent Zooms (Validation & Verification, Quality Specification based on Biological Variation, Measurement Uncertainty), and discuss the practicalities of evaluating assay performance characteristics that are required for assay fitness for purpose.

Registration is now open and there are plenty of places available. [Please click here](#) for details of our Zoom programme.

All AQMLM Zoom meetings are free of charge for full members with £25.00 annual subscriptions. Others may participate for a one-off fee of £10.00. ■

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## Publication Deadlines

To guarantee publication, please submit your article by the 1st of the preceding month (i.e. 1st March for April 2021 issue) to:

[editor.acbnews@acb.org.uk](mailto:editor.acbnews@acb.org.uk)

We try to be as flexible as possible and will accept articles up to the 20th 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. ■

## The Diggle Microbiology Challenge

These multiple-choice questions, set by Dr Mathew Diggle, are designed with Trainees in mind and will help with preparation for the Microbiology Part 1 FRCPATH exam.

### Question 22 from October's ACB News

*A man returns from Sierra Leone. 4/52 later he presents with fevers and rigors. The most appropriate initial management is?*

- A. Send him to a CL4 facility
- B. Take blood for malaria film
- C. Start him on chloroquine
- D. Start him on ribavirin
- E. Manage him expectantly pending report of blood cultures

**Answer – B**

### Question 23

*Can you link the most likely antiviral agents with the indication?*

- |                          |                |               |
|--------------------------|----------------|---------------|
| A. Ganciclovir           | B. Aciclovir   | C. Simeprevir |
| D. Amantidine            | E. Oseltamivir | F. Foscarnet  |
| G. Peginterferon alfa-2a |                |               |

1. Generally healthy adult with chronic HBV infection
2. Person with chronic HCV infection
3. Person with ganciclovir-resistant CMV infection
4. Elderly lady with localised zoster presenting within 72 hours of onset of rash
5. Lady with confirmed INFB presenting within 48 hours of onset of symptoms

**The answer to Question 23 will appear in the next issue of ACB News – enjoy! ■**

## Training Update

The training of STPs in Microbiology has arguably been disrupted more than any other Healthcare Science discipline. Some have missed over nine months of a three year programme whilst they contributed to SARS CoV-2 testing and most lab secondments and training courses have been cancelled.

The ACB Microbiology Professional Committee has worked hard to arrange online sessions with experts in their fields in a pragmatic attempt to plug these knowledge and experience gaps. We are incredibly grateful to all of the speakers who are giving up their time, including Professor Tim McHugh of University College London's Centre for Clinical Microbiology who will lecture on the topic of tuberculosis; Katherine Burn of Public Health England who will give insights into food and water microbiology; and Victoria Miari of the London School of Hygiene and Tropical Medicine who will cover sexually transmitted infections.

These sessions will be recorded when possible and are to be made available to all Trainees, regardless of their membership status. The Microbiology Committee see this as a vital service that falls within its remit and is an opportunity to advertise the benefits of joining the ACB to all Microbiology Trainees. ■



# Deacon's Challenge Revisited

## No 12 - Answer

A 0.5 mL sample of urine is extracted into dichloromethane. An aliquot of the extract is analysed by HPLC and found to give an apparent original concentration of 320 nmol/L of analyte Y. 100  $\mu$ L of Y standard with a concentration of 880 nmol/L is added to a further 0.5 mL sample of the same urine and the sample mixed. 0.5 mL of the mixed sample is then processed as before, giving a measured concentration of 405 nmol/L. Calculate the recovery of analyte Y.

MRCPath May 2001

$$\text{Recovery (\%)} = \frac{\text{Standard recovered}}{\text{Standard added}} \times 100$$

Standard recovered = [Y] in mixed sample - [Y] in urine component of mixed sample

The initial measured [Y] in the urine was 320 nmol/L, 0.5 mL of which was diluted to 0.6 mL by the addition of 0.1 mL of standard, i.e. diluted by a factor of 6/5.

$$[\text{Y}] \text{ in mixed sample which was derived from urine} = \frac{320 \times 5}{6} = 267 \text{ nmol/L}$$

Since the measured [Y] in the mixed sample is 405 nmol/L then the standard recovered

$$\begin{aligned} &= \text{Measured [Y] in mixed sample} - [\text{Y}] \text{ from urine component} \\ &= 405 - 267 = 138 \text{ nmol/L} \end{aligned}$$

0.1 mL of 880 nmol/L standard was mixed with 0.5 mL of urine i.e. diluted by 6

$$\text{Therefore [standard] added} = \frac{880}{6} = 147 \text{ nmol/L}$$

$$\text{Therefore recovery} = \frac{138}{147} \times 100 = 94\%$$

## Question 13

1. A patient was mistakenly given 500 mL 20% mannitol ( $\text{C}_6\text{H}_{14}\text{O}_6$ ) intended for the patient in the next bed. Instead of the same volume of normal (0.9%) saline. Calculate the extra osmolal load given over that which would have resulted from isotonic saline.
2. A patient known to have diabetes insipidus is admitted in a coma. His plasma osmolality is 324 mosm/Kg. If his weight is 85 Kg, estimate his body water deficit.

MRCPath May 2001

# Trainees' News

**Dr Katy Hedgethorpe, Vice-Chair, Trainees' Committee**

Welcome to the Trainees' section! We'll be using this space to report any news and updates that are relevant to Trainees, and hope that you all find it useful.

As I am very involved in the work of the Trainees' Committee, which I have been a member of since early on in my training and now sit on as Vice Chair, I'll begin with an introduction to who we are and what we can do for you as Trainees. With any luck I might even persuade some of you to get involved too.

The Trainees' Committee includes a representative from each of the ACB regions along with representatives from immunology, microbiology, and the FCS. Each representative is in their post for up to three years. The current Committee Chair is Rebecca Stead, who is based at Great Ormond Street, and between her and myself we attend ACB Council and ACB Education, Training and Workforce Committee meetings, as well as meetings of the RCPATH Trainee and Specialist Advisory Committees. At our Trainees' Committee meetings we report any relevant news back for all representatives to communicate out to their Trainees. This way we try to ensure that all Trainees are kept up to date with what's going on within the ACB and RCPATH.

We meet twice yearly to discuss topics that are relevant to Trainees. Each regional and specialism representative prepares a report that includes training news and issues that they have been made aware of. I really enjoy our meetings as it's a chance to get to know Trainees from all over the country and have a good chat about training and what's happening in different regions. We've got representation from STPs early on in their training through to

those approaching the end of FRCPATH so it's interesting to hear about how the STP is changing and also about what lies ahead!

Recent issues that have been brought to the committee have included the problems encountered by Trainees sitting FRCPATH examinations since the switch to an online format, and the difficulties that STP Trainees have experienced as a result of COVID-19. These discussions were then brought to the attention of the ACB Director for Education who can escalate and try to resolve the problems. Our Communications Officer, Rebecca Tibbs, has recently been involved in the development of the new website, which we hope will make it easier for useful education resources to be made available for all Trainees.

We feedback directly to the Education Committee with ideas for topics to be included in Training Days and educational resources, and are always looking for ideas, so get in touch with your representative if you have anything you would like to be covered in a future meeting.

Going forward we hope to be involved in the new ACB Strategy by promoting good science communication and developing resources for Trainees to use when planning outreach activities for events including National Pathology Week. But first and foremost we are here to help! If you have any training-related issues, or ideas about how the ACB could support Trainees, don't hesitate to get in touch with your regional or specialism representative (the names of the current reps are available on the [Trainees' Committee section of the ACB website](#)) who will do what they can to help. ■

# Audit Meeting and regional research in COVID-19 immunity

Dr Jessica Johnson, Chemical Pathology ST1, Sheffield Teaching Hospitals NHS Foundation Trust

**On 20th November 2020, ACB Members gathered individually in their offices and homes via Microsoft Teams for the ACB Trent, Northern & Yorkshire and Yorkshire Laboratory Medicine Discussion Group event: 'Audit meeting and regional research in COVID-19 Immunity'.**

The morning comprised of audit presentations that had taken place by members of the region within the last year (with one even encompassing effects of the COVID-19 pandemic), while the afternoon session was focussed on COVID-19.

## **Audit of management of high risk cardiovascular disease patients**

**Dr Deepa Narayanan, Hull University Teaching Hospitals NHS Foundation Trust**

Dr Narayanan presented an audit looking at the management of high-risk cardiovascular disease (CVD) patients in Hull and whether they were meeting the targets set by the treatment guidelines of the time, EAS 2016 guidelines and NICE CG181. 12,585 patients were included, 41% of which had coronary artery disease,

39% had undergone revascularisation procedures, and the rest had peripheral vascular disease, abdominal aortic aneurysm or thromboembolic cerebrovascular accident (CVA).

Dr Narayanan found that more than 50% of these patients known to have high risk CVD had never had lipid profiles tested; with >50% of patients who had undergone PCI/CABG never being tested and >66% of patients presenting with ischaemic CVA. Of the cohort that had their lipid profiles measured, only 38% of these were within the set targets, and findings were similar to the recent DAVINCI study.

## **Audit of 1000 FIT tests versus colonoscopy**

**Dr Nudar Jassam, Harrogate NHS Foundation Trust**

Dr Jassam followed with an audit looking at FIT (Faecal Immunochemical Test) testing versus colonoscopy after FIT screening was rolled out to Primary Care services. When this was first being introduced in their area, the GPs had concerns that FIT would miss tumours when compared with colonoscopy. This audit took place from March 2019 to January 2020 (so results would coincide with a GP annual meeting). 986 tests were carried out, with a total of 107 positive FIT tests.

54 patients with negative FIT were further referred for colonoscopy,

10 of whom were found to have polyps, including 2 adenomas; however none of these patients were found to have malignancy. Of the FIT positive patients, all were referred for colonoscopy, and only two were found to have colorectal carcinoma.

### Audit of telephone calls received by the Duty Biochemist for clinical advice

**Dr Daniel Turnock, York Teaching Hospitals NHS Foundation Trust**

In 2017, York added a hidden test code on their LIMS for lines of free text when a phone call was received about a sample, allowing for handover of advice given between different Duty Biochemist (DB) sessions and audit of what advice was being sought.

In the initial audit of clinical advice in 2017-2018, a total of 194 phone calls were logged via this system, with 81% of these calls coming from Primary Care. The phone calls received from GPs were then categorised by test type and topic. Advice pages were created for the investigation and management of the most common topics on the hospital laboratory website.

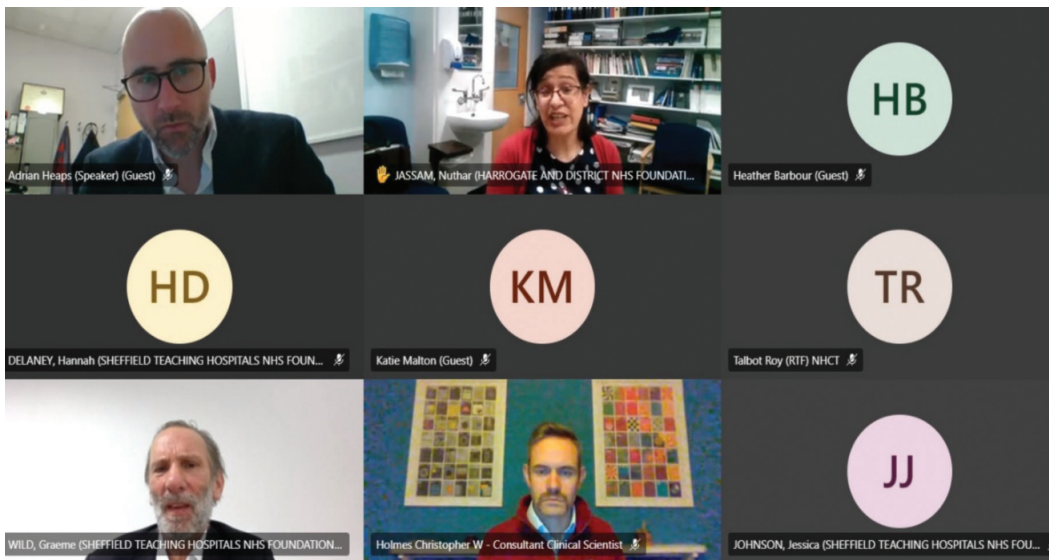
These webpages seemed to be quite popular, often being in the top 10 results on Google when looking up management of the condition!

Dr Turnock then repeated the survey for 2019-2020. 104 phone calls were logged, with 89% from GPs. It was hypothesized that a lower frequency of calls may have been due to increased use of advice from the website. The areas that had a higher volume of calls (e.g. calcium) were areas that were not targeted when first setting up pages on the website. For some repeated issues identified, interpretative comments were either added or updated to add clarity.

### Audit of tumour marker requests from Primary Care during the COVID-19 pandemic

**Ms Gemma Minett, Hull University Teaching Hospitals NHS Foundation Trust**

The next audit looked at how the COVID-19 pandemic affected GP requesting of tumour markers. This was measured by looking at rates of PSA and CA125 requesting by Primary Care for the period spanning 1/9/18 to 31/8/19 (pre-COVID-19) and 1/9/19 to 31/8/20 (post-COVID-19).



The pandemic caused a sharp drop in testing. These have now stabilised at about 80% of the pre-pandemic levels – interestingly the CA125 requests recovered faster than PSA or U&E requesting, possibly correlating with the fact that women are more likely to present to their GP with worrying symptoms. The percentage of abnormal results compared to the total number requested also increased during the COVID-19 pandemic, however, not enough to account for all cases one would have expected during this period, indicating that some patients have had diagnoses delayed.

In summary, this study showed that potentially only 50% of new diagnoses of prostate cancers and 30% of new ovarian cancers were made, compared to what would have been expected.

### **Audit of alpha-1-antitrypsin phenotyping requests**

**Ms Katie Malton, Hull University Teaching Hospitals NHS Foundation Trust**

Clinical practice guidelines do not give absolute cut-offs for when to send for alpha-1-antitrypsin (AAT) phenotyping, and practice varies between labs. This audit evaluated the appropriateness of the criteria used in Hull: adults with emphysema/asthma, COPD, unexplained liver disease, asymptomatic individuals with persistent obstruction on PFTs and risk factors (e.g. smoking, occupational exposure), adults with necrotising panniculitis, and known family members. All low AAT results should be followed up with phenotyping.

Three months of data was collected from 1st November 2019 to 31st January 2020. 23% of requests did not have any relevant clinical details. 9 patients were found to have low AAT results, 8 of these were sent for phenotyping (one did not have a second sample as requested), and all 8 were patients who were either carriers or homozygotes for pathogenic alleles.

From these results, the next steps in the process were to give GPs recommendations for requesting to improve adequacy of clinical details and decrease inappropriate requesting.

### **SARS-CoV-2 immune responses: our current understanding**

**Dr Adrian Heaps, Cumberland Infirmary**

The first afternoon talk had the monumental task of summarising nearly a year's worth of fast-moving research and ensuring it was as up to date as possible.

COVID-19 uses ACE receptors to enter cells. After a 5-day incubation phase, mild clinical symptoms may appear, with peak viral load at about 1 week post infection, and no live virus after about day 9 in a normal course of infection. Patients may then go on to develop severe symptoms around days 8-10, with critical illness around days 12-14.

Further work for the future includes: 1) determining whether neutralising antibodies or T cell specific response is sufficient to prevent clinical disease and transmission; 2) ongoing longitudinal studies to establish the protective adaptive immune response in patients; 3) identifying biomarkers for patients who are at risk of severe disease progression; and 4) assessing vaccine efficacy against severe disease and whether it also minimises transmission.

Dr Heaps ended with the sobering observation that to gain 'herd immunity', if one assumes a mortality rate of 0.6, with 50-80% of the population needing infection, then 600,000 deaths in the UK would occur.

### **COVID-immunity research: longitudinal follow up and re-infection**

**Dr Nudar Jassam, Harrogate NHS Foundation Trust**

The next talk was once again by Dr Jassam, who presented her prospective follow up

of COVID-19 positive patients looking at antibody responses monthly post-infection. Antibody responses were measured on both Roche Elecsys and Combo card assays with good concordance between the two methods in the acute phase of infection. In the monthly follow up of these patients, most lost IgM prior to IgG, however, 25% of participants had persistent IgM up to 8 months post-infection – it is unclear whether this represented re-infection, a phenomenon specific to COVID-19 or an artefact in the assay.

In the ongoing study, 79 subjects were followed up, with only 3 subjects showing loss of antibody response after 6 months, while others did show a slow decline in titres, suggesting antibodies may last longer than 12 months.

### **Development of SARS-COV-2 antibody assay**

**Dr Graeme Wild, Sheffield Teaching Hospitals NHS Foundation Trust**

The final talk was a fascinating description of the process by which the Sheffield

Immunology team created a SARS-COV-2 antibody test. Numerous different variables had to be optimised to create the assay, including assay microtitre, which coating protein to use, coating parameters, assay time, sample effects and how to report results.

The final assay uses a PBS buffer of pH 7.4, Nunc plates, 1/750 dilution of conjugate, sample dilution of 1/20, substrate incubation of 45 minutes and a total assay time of 5 hours. This gives a specificity of 98.8% and sensitivity of 92.6% in samples taken >15 days post-symptom onset. Sample results are reproducible on the Triturus analyser. This is now reported as an index of 1.4: <1.4 patient is negative for anti-SARS-COV-2 antibodies and ≥1.4 patient is positive for anti-SARS-COV-2 antibodies.

All in all, a very jam-packed 5.5 weeks, but very illustrative of all the processes required to create a valid test! ■

# XIII Congreso Uruguayo de Bioquímica Clínica – virtual attendance from the UK

Sophie Hepburn, Consultant Clinical Scientist, East Suffolk and North Essex NHS Foundation Trust

The XIII Uruguayan Congress of Clinical Biochemistry was held virtually in October 2020. The theme of the conference was 'Talent, technology and time: the key to transformation' and it was hosted by the Asociación Bioquímica Uruguaya (ABU). More than 700 global participants registered to attend from 35 countries. Overall, there were 51 speakers including 36 foreign speakers, with 24 posters in the virtual exhibition hall, where posters were displayed with an attached summary and video.


I was fortunate enough to receive an IFCC scholarship to attend the conference. It would have been nice to visit Uruguay in person, but this gave me the perfect opportunity to experience virtual attendance at an international conference. My Trust IT firewall blocked access to the platform used for presentations so I managed to work from home on the days of the conference. In addition, Uruguay

Standard Time (UST) was GMT -4, so most presentations started around midday, giving me the chance to get on with routine work in the mornings. However, this also meant that on the Friday night, the seminars did not end until 1:30 am. It sounds easy attending a virtual conference from the comfort of your own home, but when also working full-time and being Duty Biochemist, it was hard to avoid phone calls and queries during live presentations. Fortunately, lectures were recorded so I was able to return to those that I'd missed, and each time I logged on I was warmly welcomed by a pop-up greeting of 'Hola Shopie' – I think they meant Sophie!

I'm not sure if the image below depicts the 'real' conference centre intended for this congress, or whether it is a mythical building, but either way it looked like a wonderful venue for a conference and I'm sure the blue sky was real!

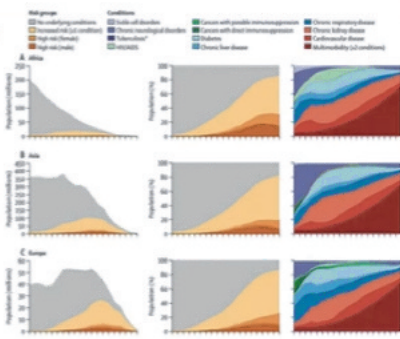


**LIVE**



### Risk factors

- 1.7 billion people, comprising 22% of the global population, have at least one underlying condition that puts them at increased risk of severe COVID-19 if infected.
- 349 million people (4% of the global population) are at high risk of severe COVID-19 and would require hospital admission if infected.
- 6% of males to be at high risk compared with 3% of females.



Clark et al. 2020

The conference was divided into two rooms (Sala 1 and Sala 2). Fortunately for me, with my rusty Spanish, all presentations held in Sala 1 were simultaneously translated into English or Spanish.

The opening ceremony included an informative plenary conference, delivered by Professor Damien Gruson, from Belgium, entitled 'The impact of digital transformation and artificial intelligence on laboratory services'. Professor Gruson was one of three IFCC visiting lecturers, which also included Professor Alan Wu from the USA and Dr Wytze Oosterhuis from The Netherlands.

Professor Gruson discussed some of the differences between countries in their handling of the COVID-19 pandemic, including those that invested more in prevention than in primary or secondary care, as well as the political influences on healthcare budgets. He also highlighted two positives of the pandemic: firstly that laboratory medicine is finally visible to the world, and secondly that it has accelerated technology at an astounding rate. He also explained how technology is being used in

the real-time monitoring of certain diseases and the newfound benefits of video consultations.

Other highlights included the Plenary Conference: 'Promoting the value of the clinical laboratory to the general public. The time to act is now'. This was presented by Professor Alan Wu of the University of California, San Francisco. You may recognise his name as an author of *Tietz Clinical Guide to Laboratory Tests* (4th Ed.), and from editorial boards past and present including *Clinical Chemistry* and *Clinica Chimica Acta*. He is very concerned that laboratory professionals are under-appreciated and undervalued and his answer to informing the general public about the role and importance of our profession is to create a TV show. He is well aware that documentaries and science-based shows do not reach a broad audience, and so has planned to make an exciting drama series, which is currently under discussion with TV series production 'bigwigs'. Think of a combination between *CSI*, *ER* and *Murder She Wrote*, which he hopes will appear on Netflix or Amazon Prime in the near future. Sadly, he would



not provide the answers to many of his case presentations as he is eager for us to be gripped by his TV show! He ended the presentation by showing his homemade trailer, featuring his son and daughter as laboratory professionals. As we all know, every TV show needs a villain – and they tend to have a British accent – so if anyone fancies a change in career ....? In all seriousness, he hopes that increasing publicity of our profession will lead to increased enrolments onto university courses and improve the pathology budget (known as the 'CSI phenomenon').

If you want to know more about him, try picking up one of his many books such as *The hidden assassin: when clinical lab tests go awry*, which are based on true stories that he has come across throughout his career.

Another plenary conference of great interest was held by Dr Wytze Oosterhuis on the subject of 'Adding clinical utility to laboratory reports'.

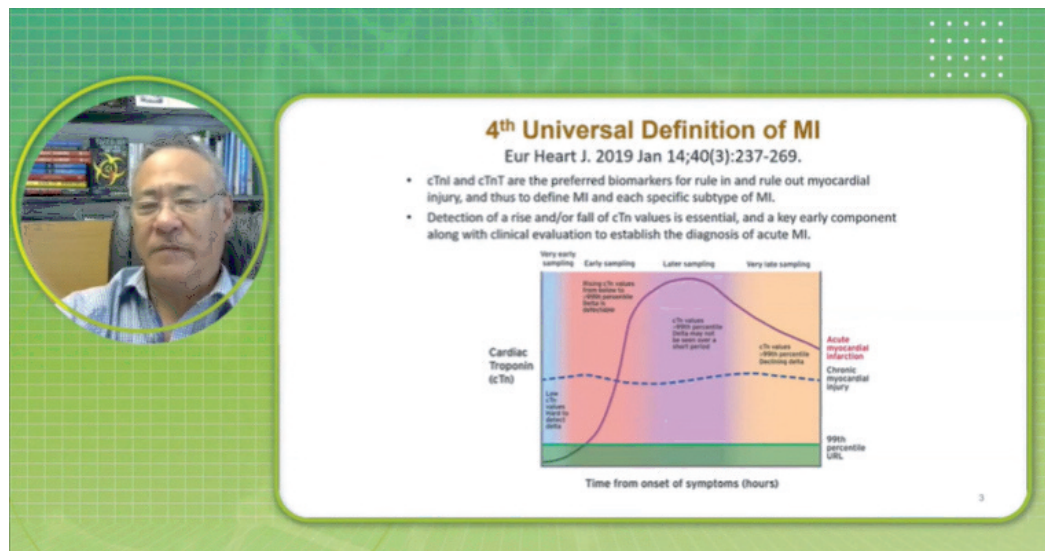
His presentation discussed the value that Clinical Scientists and Chemical Pathologists can add to the post-analytical phase. Dr Oosterhuis presented evidence that if an abnormal test result is in keeping with the original line of thought

of a GP they will act on results, but if results are unexpected they may disregard them unless guided by comments. He also discussed results from several publications about reflective testing, including *Reflective testing: how useful is the practice of adding on tests by laboratory clinicians?* (Paterson J R and Paterson R, *J Clin Pathol* 2004; 57: 273-275).

Of particular note from this study, the addition of iron studies to 150 specimens with a raised ferritin and/or transaminases resulted in the diagnosis of eight patients with haemochromatosis.

His group have recently surveyed GPs for whom they perform diagnostic tests and provide interpretative comments. The results of the survey showed that 53% of GPs thought the role of Clinical Scientists had a positive effect on patient management, with only 1% reporting a negative effect. His latest publication on this topic can be found in the *Annals of Clinical Biochemistry* (October 2020): 'Reflective testing – A randomized controlled trial in primary care patients'. Further information can also be found at [www.reflectivetesting.com](http://www.reflectivetesting.com)

Another very enthusiastic presentation came from Dr Rosa Guillén on



'Nephrolithiasis: What can we contribute from the laboratory?'. Rosa provided some very interesting photographs of brushite crystals growing on a patient's catheter, and other images worthy of being in an art gallery (or at least the presenter thought so).

Dr Guillen's team have developed a chart of the positive and negative contributory factors for stone formation, thus allowing quick assessment of a patient's risk. She also presented a case where the laboratory was vital in the diagnosis of cystinuria in a 34-year old patient who had sadly already lost one kidney.

Professor Alan Wu returned for another plenary conference: 'Implementation of high sensitivity cardiac troponin for acute coronary syndromes'. He spoke about the major advantages of hs-cTn in the early rule out of acute coronary syndromes (ACS) for patients who present to the ED with symptoms. More than 50% of patients presenting with acute symptoms can be ruled out based on testing at presentation and again at 1 or 2 hours. In the current COVID-19 pandemic, early discharge reduces the exposure risk for infection. He also discussed non-ACS diseases that can cause elevated hs-cTn

concentrations including renal disease, heart failure, venous thrombotic disease, sepsis, vigorous exercise, and of course COVID-19 infection. He suggested laboratories should incorporate IQC material below the 99th percentile cut-off and use gender-specific reference intervals. In addition, one day it may be possible to use an individual's baseline [hs-cTn] to detect when a clinically significant change has occurred.

During the closing ceremony, Professor Khosrow Adeli (President of the IFCC), presented on 'Lipid guidelines and the new evidence-based recommendations on laboratory assessment and clinical stratification of patients with lipid disorders', providing useful considerations with regard to fasting and non-fasting cut-offs for risk stratification. This included guidance from the 2016 European Atherosclerosis Society and EFLM. He concluded that non-fasting lipid profiles can predict CVD events as well as fasting profiles; however, non-fasting samples are not recommended for prediction in patients with hypertriglyceridaemia.

I would like to thank the IFCC for awarding me a free scholarship to attend this event. ■

**Recommended Adult (>18 years) Lipid Report**

Analyte	Decision Limit	Result Comment
Total Cholesterol	<5.2 mmol/L	<p><b>Result Comment:</b></p> <p>Treatment thresholds and targets based on the 2016 CCS Guidelines. For patients ≥40 years, estimate risk using the modified Framingham Risk Score (FRS):</p> <p><b>Low Risk (FRS &lt; 10%)</b> Treatment advised if LDL-C ≥ 5.0 mmol/L. Treatment target: ≥ 50% reduction LDL-C</p> <p><b>Intermediate Risk (FRS 10 - 19%)</b> Treatment advised if LDL-C ≥ 3.5 mmol/L OR Non-HDL-C ≥ 4.3 mmol/L OR ApoB ≥ 1.2 g/L OR Men:50 and women:60 yrs with ≥1 additional CV risk factor Treatment targets: LDL-C ≤ 2.0 mmol/L OR decrease by ≥50% OR Non-HDL-C ≤ 2.6 mmol/L OR ApoB ≤ 0.8 g/L</p> <p><b>High Risk (FRS ≥ 20% or presence of high risk features)</b> Treatment advised in all patients Treatment targets: LDL-C ≤ 2.0 mmol/L OR decrease by ≥50% OR Non-HDL-C ≤ 2.6 mmol/L OR ApoB ≤ 0.8 g/L</p> <p>Note: If non-fasting, triglycerides &lt; 2.0 mmol/L acceptable. Triglycerides ≥ 1.5 mmol/L, recommended to use non-HDL-C or ApoB as treatment target of choice. If Triglycerides ≥ 4.5 mmol/L, recommended to measure lipids and lipoproteins fasted</p>
HDL-C	≥ 1.0 mmol/L	
LDL-C	< 3.5 mmol/L	
Triglycerides	< 1.7 mmol/L	
Non-HDL-C	< 4.3 mmol/L	
Existing (hours)	Record (h)	
ApoB	< 1.2 g/L	<p>Treatment thresholds and targets based on the 2016 CCS Guidelines. If ≥ 1.2 g/L, Treatment advised if Framingham Risk Score is Intermediate or High. Treatment target for ApoB ≤ 0.8 g/L.</p> <p>If &lt; 1.2 g/L, Treatment target for ApoB ≤ 0.8 g/L.</p>

# Industry Insights: February 2021

**Doris-Ann Williams, Chief Executive, BIVDA**



In this issue I am delighted to be sharing some great news with you – BIVDA is working with the ACB to bring you a virtual tradeshow to run alongside your national meeting this year.

At BIVDA, we were really disappointed when it became clear that November was not the right time to be hosting the Expo last year. It's great that we are being able to take the bespoke Expo platform which was created, to allow you to access the industry's products between scientific sessions or whenever you would normally visit the exhibition area. The vision for the Expo will remain the same with virtual halls and an exhibition plan which can be searched by product type, company name or key words.

Industry, like everyone in the NHS, has some big challenges with COVID-19 still to face while at the same time companies have been working really hard to make sure that the products you need are available when you need them despite the UK finally leaving the EU. As I am writing this, it all appears to be going relatively smoothly, but this has followed months of planning and some areas are still unclear on both the UK and EU sides for moving products in and out of the UK.

This also means changes to regulation of IVDs. The MHRA will be formally consulting from March on how the UK regulatory system for IVDs should work, so this is an opportunity for professionals to put forward views and to raise any concerns. The key principle will have to remain that patient safety is central. The UK will recognise products CE marked under the current EU directive until the

end of June 2023 when a UKCA mark comes into force showing compliance to the UK regulations. With the EU changing to the IVD Regulation (IVDR) from 26th May 2022, it is likely that some products will be discontinued – it is unlikely they would be produced just for a UK market due to the costs of doing so. A lot is still unclear, but we hope there will be mutual recognition between the EU and the UK which would allow IVDR CE marked products to be sold here, as well as UK products to be sold in the EU.

There is also a lot of activity going on around the re-creation of a strong diagnostic industry base in the UK as a consequence of the pandemic. This would involve utilisation of the large laboratories set up to run the COVID-19 tests in some way, rather than winding them down as testing numbers reduce. I think this is a huge opportunity for everyone working in diagnostic testing, industry and professions alike and that this, along with the raised awareness of the role of diagnostic testing as central to the provision of any healthcare needs, will be positive legacies from this past devastating year.

So a lot going on, which includes hopefully sooner rather than later, getting back to more normality and companies supporting all of you to address the backlog of testing which will follow. ■

# Dr John Surtees, 1929-2021:

## An appreciation

A former Chemical Pathologist and well respected historian – who penned scores of books on Eastbourne and the surrounding area – died earlier this month at the age of 92.

I first met John when I joined the Chemical Pathology Dept at Eastbourne in 1982. John always made every effort to nurture the ambitions and enthusiasm of every member of his department. In my case to undertake a PhD programme of study and following on from that leading to the MRCPPath. John had a marvellous intellect, and was a great personal tutor. He made time to discuss and instruct on every aspect of Chemical Pathology.

In 1991 I was appointed as the first Consultant Clinical Scientist in the department and enjoyed an excellent working relationship with John based on mutual admiration and respect. The combination of John's clinical background and my scientific one worked well. I was very pleased that this continued when John retired in the early 90s and Dr Stephen Bangert



took over as Consultant Chemical Pathologist.

I fondly remember our regular appearance at the weekly medical case conference reviews that attracted a very large audience of both local GPs and Hospital Consultants where we were regularly put to the test on all aspects of the cases that had a Clinical Biochemistry component. A regular attendee at those meetings was Dr Bodkin Adams, the Eastbourne GP, convicted fraudster and suspected serial killer. It's fair to say that his attendance was never really appreciated. But an intriguing character nevertheless, and following retirement, John wrote an excellent

account of his activities in *The Strange Case of Dr Bodkin Adams: The Life and Murder Trial of Eastbourne's Infamous Doctor and the Views of Those Who Knew Him*. A good read and still available.

He had been living in the village of Friston in East Sussex for a number of years and was a stalwart member of Eastbourne Local History Society and the East Dean and Friston Local History Group.

He was also the Honorary Vice-President of the Friends of Eastbourne Hospital.

John Surtees' career began in Liverpool in 1962 and he did his National Service in the Far East where he was a Pathologist. He returned to Liverpool and London and was then appointed Consultant Pathologist at Eastbourne District General Hospital where he set up the Chemical Pathology Department. Dr Surtees was also the Pathologist to the Coroner.

John had a prolific career originating the Eastbourne GP vocational training scheme and was President of the

town's British Medical Association branch. He was also a lecturer at Brighton Polytechnic.

In 1980, John and Alan Birch produced *The House Physicians Handbook*. This was a survival guide for junior doctors engaging in their first stint in a District General Hospital environment and was one of his first forays into publishing.

As well as a highly decorated medical career, Dr Surtees' other passion was history and, together with his wife Sheila, he wrote a number of history books.

Among those he penned were a history of St Mary's Hospital, a history of Princess Alice Hospital, as well as books on Beachy Head and Eastbourne.

Dr Surtees and his wife Sheila, who died in 2008, were prominent members of Eastbourne Local History Society and as well as serving as Vice-President of the group for several years, he was a valued member of the committee responsible for the publication of the Society's books.

He contributed a great deal to researching and

recording local history, giving several talks to our group and many others – including his favourite about Bodkin Adams.

He was always a cheerful and approachable person with a wealth of knowledge and stories. He will be greatly missed.

It is understood that Dr Surtees requested that no service be held in the event of his death and asked to be cremated, with his ashes interred in his wife's grave at Friston Church. ■

J O'C

# ACB News Crossword

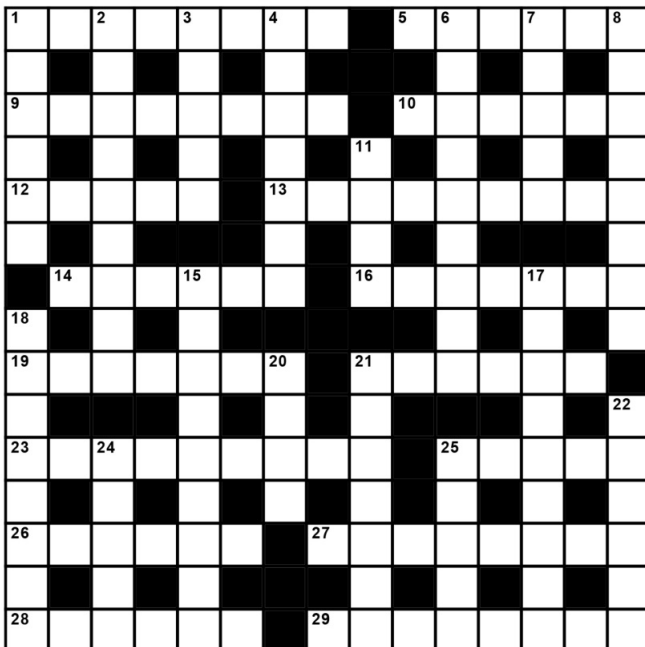
Set by Rugosa

## Across

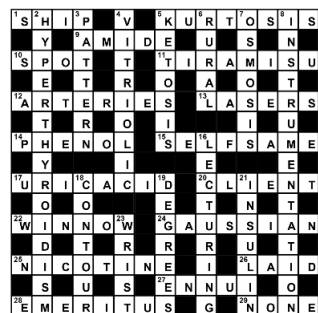
- 1 Delivers an impassioned account of French demands (8)
- 5 Element symbolically represented by four from groups 1, 2, 15 and 16 (6)
- 9 Food with very pleasing taste and aroma sib cooked (8)
- 10 Pack up and go? Take off in a dreadful pandemic? (6)
- 12 Spanish accent of tiled building (5)
- 13 Re notions about this multifunctional molecule – is it a hormone? (9)
- 14 Endlessly dispenses mixture for infection (6)
- 16 Feed injured and untame house martin (7)
- 19 Inaccurate pointer to component of all organisms (7)
- 21 Base gangster meets Hindu goddess (6)
- 23 Infection that can produce symptoms of a mild achy sort (9)
- 25 Sneak away from part of a novel operation (5)
- 26 Puts in fresh planter or cast (6)
- 27 If so, dry death unlikely (8)
- 28 Informal doctors (6)
- 29 Mid-evening hot meal involved alcohol (8)

## Down

- 1 Inadequacy of damaged chain of linked posts (6)
- 2 Spanish gentleman modifying US computer cloud system holds lab up (9)
- 3 A rejection of French for conducting contact (5)
- 4 Some information is wrong about the reduction division process (7)
- 6 Amazed, odd way to wreak cuts (9)
- 7 Strike head scholar (5)
- 8 Reject extremes of remedy, a threepenny mixture helps one forget one's troubles (8)
- 11 Kind of club that forms part of the social environment (4)
- 15 Must first practise spinning such cords (9)
- 17 Long title about one kind of profit (3-6)
- 18 Range of complex computers with nothing lacking (8)
- 20 Although negative at first, they signify approval (4)
- 21 Estimate from student given an easy problem (7)
- 22 Heal the Spanish geneticist (6)
- 24 Mouth identity of organic compound (5)
- 25 Connection lacking potential (5)



## Solution for December Crossword



# Association for Clinical Biochemistry & Laboratory Medicine Council Nomination Form

## Election of Officers / Council Member 2021

We, the undersigned, being Members of the Association nominate

Name .....

Address .....

.....

.....

For election as National Member of Council\*

Name	1. ....	.....
	Capitals	Signature

Name	2. ....	.....
	Capitals	Signature

Name	3. ....	.....
	Capitals	Signature

I am willing to undertake the duties and responsibilities of this office if elected.

.....	.....
Signature	Date

\*Please note only Ordinary and Honorary Members of the ACB may be nominated for the position of National Member of Council.

If there is more than one nominee for any of these positions, a ballot will be held with all voting members (see Bye-Laws of the ACB items 2 & 3 and 9).

This form, duly countersigned, to be returned to:  
 Membership Manager, Mike Lester (mike@acb.org.uk)  
 or by post to: Association for Clinical Biochemistry & Laboratory Medicine  
 130-132 Tooley Street, London SE1 2TU  
 no later than **12th March 2021**.



## “Amazon: The Test”

### “Could we do more?”

After implementing greater health and safety procedures across all of its operations globally in response to the Covid-19 pandemic, Amazon’s business leaders asked themselves “Could we do more?” In March 2020, Amazon assembled a team of experts from across the company to set up and run multiple high throughput molecular diagnostics facilities including our flagship European site in Manchester, UK. We aim to contribute to testing capacity and are actively hiring as we continue to scale our operations to offer regular testing to ever greater numbers of employees.



We are looking for healthcare professionals and scientists to support us. If you are interested to learn more about our open roles, scan one of the QR codes below for more information.



**Title:** Associate Laboratory Director (evening shift)  
**Location:** Manchester  
**Summary:** Responsible for running our high-throughput operation during our evening shift. You will also provide key input to strategic initiatives including our expansion to EU sites.



**Title:** Clinical Laboratory Scientist (evening shift)  
**Location:** Manchester  
**Summary:** Leading on the front lines of our diagnostic operation, you will own the diagnoses and interpretation of testing results end-to-end whilst providing more junior members of the team with supervision and support.



**Title:** Biomedical Scientist (evening shift)  
**Location:** Manchester  
**Summary:** At the heart of our diagnostic operation, you will provide support to our clinical scientists by performing end-to-end PCR testing on Covid-19 samples whilst developing your career with Amazon.



# ACB News

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The Association for  
Clinical Biochemistry &  
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*Better Science, Better Testing, Better Care*