Clinical Biochemistry News

ACBI

ACB

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Newsletter of the Association of Clinical Biochemists in Ireland

and the Association for Clinical Biochemistry and Laboratory Medicine (Republic of Ireland Region)

Professor Maria Fitzgibbon, recipient of the ACB International Award

at UKMedLab23, with Dr. Bernie Croal ACB President

Contents

Editors: Dr. Martin Healy; Dr. Peadar McGing

Message from the President of the Association of Clinical Biochemists in Ireland

Dr. Jennifer Brady

As we head into the summer we have just finished a busy conference season. Two major events Worldmedlab-Euromedlab and UKMedlab23 took place in recent months. I attended the former and represented the ACBI at the EFLM annual general meeting. This is a meeting of member society presidents or representatives where we heard about the achievements and future plans of the EFLM. The meeting was a great opportunity to meet other national society presidents and hear updates from each of the EFLM committees which are very active. Some highlights included the number of publications that have been published by the EFLM Science committee relating to practical Uncertainty of Measurement, report formats, and sample stability studies. The EFLM Professions committee continues its work to progress the EU common training framework for specialists in Laboratory Medicine. It is clear that the EFLM and indeed the IFCC are making huge efforts to engage with member societies and promote laboratory medicine to the wider healthcare system and the public which is very encouraging.

On behalf of the ACBI I would like to congratulate Professor Maria Fitzgibbon on being awarded the International Award at UKMedLab23. Maria has been a leader in our profession and mentor to many of us for a long time now and it is a really well deserved award. Congratulations to our colleagues in the ACB Republic of Ireland region committee who organised a session to celebrate the 70th anniversary of the ACB. Speakers included Dr Peadar McGing, Dr Graham Lee and Professor Joe Duffy, and the session was chaired by Dr Brendan Byrne. It was great to see strong Irish representation at the event.

Closer to home, on Tuesday June 27th we held an evening CPD webinar event and heard about how to make our laboratories more sustainable with presentations from Dr Seán Costelloe from Cork and Caroline Donaghey in the National Drug Treatment Centre laboratory. It was great to hear some real-life examples of how we can each do something in our workplace to help our planet. Visit the Greenlabs section in the members' area of our website for some useful resources.

Preparations continue for our own annual conference led by Dr Paula O'Shea. Now is the time to start thinking about your abstract, the submission deadline is September 15th. As usual there will be prizes for the best poster, clinical case and non-clinical case presentations. Why not submit some sustainability initiatives to share ideas?

This year we are hosting an EFLM postgraduate course for our training day. The topic will be 'Improving your skills on Writing and Publishing a scientific article'. It is open to all ACBI members but is limited to 35 places on a first come first served basis in order to facilitate small group work during the event. Registration is via our website.

Don't forget if you attended a conference or event recently, to use the CPD portal on our website to record your activity. We'd be delighted to hear any feedback on this.

I recently joined the EFLM task force on Direct to Consumer Testing (DTCT) as the ACBI representative. This is a really topical issue and the group met for the first time last week. It was a great way to meet new people with differing levels of expertise in the area and hear about how DTCT is being regulated in different countries. As always, I encourage everyone to put your names forward when the opportunities to sit on these groups arise. Depending on the group, you may not need extensive expertise in an area nor significant committee experience and it would be a great way to 'dip your toe in the water'.

On that note, I hope everyone has a great summer!

Dr Jennifer Brady, ACBI President

UKMedLab23
Celebrating 70 years of the ACB

Reports from Wendy Groenendijk and Ciara Cunning, edited by Peadar McGing.

After the disruption of Covid the ACB's annual conference resumed in full, at its usual time of year, with UKMedLab23 held in the Royal Armouries in Leeds on the 13th and 14th of June, 2023. The main conference was preceded by a Training Day (June 12th) which was attended by three members of ACBI and is reported elsewhere in this newsletter.

UKMedLab23 was a special conference celebrating 70 years since the founding of the Association of Clinical Biochemists (ACB). The ACB abbreviation has remained (until this year's AGM) though the association's actual name has evolved. For this year's event each of the regions within the ACB were asked to nominate speakers with one 90 minute session allotted to each region, run as parallel sessions over the two days. This made for a very interesting variety of topics and all sessions were very well attended.

International Award Lecture

The audience listens intently to Maria Fitzgibbon's lecture. Photo: Alistair Fyfe

The first morning of the conference began with a plenary session, where Professor Maria Fitzgibbon, Consultant Clinical Biochemist at the Mater Private Hospitals Network and Clinical Professor at University College Dublin, was awarded the prestigious ACB International Award. This award has traditionally been presented to "clinical biochemists from outside of the UK who have made a major contribution to clinical biochemistry". Professor Fitzgibbon gave an excellent award lecture titled *Lessons in Chemistry* and began by describing the different types of inflammation and theircauses. Inflammatory mechanisms and hyperlipidaemia contribute to atherosclerotic disease and Professor Fitzgibbon discussed the evidence for the clinical utility of high-sensitivity (hs)-CRP and LDL-C as a predictor for subsequent risk of future major cardiovascular events and death. The talk referred to the 2021 ESC Guidelines on Cardiovascular Disease Prevention in Clinical Practice, which recommends targeting LDL-C reduction as the primary approach but also recognizes that "anti-inflammatory therapy is a promising strategy in CVD prevention". Professor Fitzgibbon went on to briefly discuss the association of CRP with stroke and the association of elevated

Prof. Maria Fitzgibbon is presented with her International Award by ACB President Dr Bernie Croal. Photo: Alistair Fyfe

levels of hs-CRP with first stroke. The talk then touched upon the potential prognostic value of hs-CRP and IL-6 post stroke and Professor Fitzgibbon commented that research was currently being carried out by the Mater Hospital Stroke Research Team to investigate this. The presentation concluded with an interesting case of hemophagocytic lymphohistiocytosis (HLH), potentially fatal hyperinflammatory sequelae secondary to malignancy or infection. A key biochemical feature of this condition, which is primarily seen in infants or children, is hyperferritinaemia. Professor Fitzgibbon was truly deserving of this award.

Northern Ireland Region Session – Neuroendocrine Tumours

After a short coffee break the first of the parallel sessions took place with sessions from the Trent, Northern & Yorkshire region in the Bury Theatre and the Northern Ireland Region showcasing their experience of neuroendocrine tumours in the Wellington Suite. This latter session of the conference was opened by Professor Joy Ardill, who has over 50 years' experience in the field of Neuroendocrine Tumours (NETs). Professor Ardill's talk was titled *A Lifetime Experience in Peptides and Neuroendocrine Tumours*. The talk outlined the fascinating history of NETs, from the discovery of the first peptide secretin to the development of the first radioimmunoassay in the late 1950s by Berson and Yalow, to the first detailed description of NETs by Lubarsch. NETs originate from cells of the neuroendocrine system and are capable of secreting various hormones and peptides. Professor Ardill outlined some of the biomarkers that have been used in the investigation of NETs and highlighted the importance of assay sensitivity and specificity for the measurement of these markers. Professor Ardill closed her talk by highlighting the immense progress made in the area of NETs. The combined knowledge of the various types of NETs together with the available treatment options has greatly improved the prognosis of patients as well as their quality of life.

Prof. Joy Ardill. Photo: Alistair Fyfe

Dr. Una Graham. Photo: Alistair Fyfe

The second talk of the session was presented by Dr Una Graham, Consultant Endocrinologist and Deputy Chair of Northern Ireland Neuroendocrine Tumour Multidisciplinary Team. Dr Graham focused on Carcinoid Syndrome (CS), a collection of symptoms caused by the release of various biologically active substances (amines, polypeptides, prostaglandins) from NETs. The typical symptoms of CS include facial flushing, diarrhoea, and bronchospasm and often these symptoms only become clinically evident when the tumour has metastasized to the liver. CS is a rare condition and is only experienced by some patients with NETs (20-35%). Dr Graham went on to discuss the difficulty of diagnosing CS due to the non-specificity of the symptoms and often late presentation. The biochemical investigation of CS includes the measurement of 5-hydroxyindole-acetic acid (5-HIAA), a urinary metabolite of serotonin (5-HT), in a 24-hour urine collection. Although non-specific, measurement of chromogranin A aids in the diagnosis as it is a marker of neuroendocrine disease. Dr Graham presented three clinical cases, each of which outlined different treatment methods (medical and surgical) for the management of CS. Dr Graham emphasized that medical treatment must be tailored to each patient and discussed the various options available for those who don't respond to initial treatment.

The session was concluded by Dr Claire McHenry, Consultant Endocrinologist and member of the NET MDM. Dr McHenry's talk on multiple endocrine neoplasia type 1 (MEN1) covered MEN1 presentation, diagnosis, monitoring and management. MEN1 is a rare hereditary condition and is characterized by a predisposition to tumours of the pituitary, parathyroid, and entero-pancreatic cells. Dr McHenry spoke of the complex nature of MEN1 disease and presented a very interesting case of suspected insulinoma, outlining some of the challenges involved in disease management. Patients with insulinomas often present with hypoglycaemic symptoms after exercise or a period of fasting, with these symptoms resolving after consumption of glucose. Dr McHenry highlighted that the 72-hour fast is the most reliable test for investigation of hypoglycaemia and described another test; the arterial calcium stimulation test, a test not as well known to many, with the purpose of localizing the tumour. In the case presented, the patient had multiple other pancreatic endocrine tumours resulting in an array of clinical manifestations. This fascinating case really outlined the difficulty and complexity of managing patients with MEN1, and how a multidisciplinary approach to management and treatment is essential for reducing morbidity and improving disease outcomes. Closing remarks from Dr McHenry highlighted the need for early diagnosis of MEN1 and emphasized the importance of screening and surveillance of families affected by MEN1 and SDH mutations.

Dr. Claire McHenry. Photo: Alistair Fyfe

Impact Award Lecture

After lunch and a round of excellent poster viewing, *the Impact Award* was introduced and was made to Professor Timothy McDonald (and colleagues). This award is presented to those who have "used their initiative to make a positive demonstrable change to a service". Professor McDonald delivered a truly excellent award lecture titled *Development of a national home finger-prick blood laboratory testing service for clinicians of Paediatric Highly Specialist Services for complex conditions.* Professor McDonald opened the presentation by highlighting the impact the COVID-19 pandemic had on healthcare services; the ability to obtain venous blood samples was greatly impacted and consequently patients with chronic and/or complex disease were not being routinely monitored. The presentation summarized the process the team followed to design and develop a remote finger-prick capillary blood collection and laboratory testing service for patients. The development of such a service requires many considerations as highlighted by Professor McDonald; the stability of the parameter in whole blood prior to receipt and centrifugation in the laboratory, the existence of a highly secure online portal to view results and importantly, what a patient does with their result once available. An innovative service such as this has various benefits to many across the UK, Professor McDonald and his team were worthy winners of this Impact Award.

The audience show their appreciation of Prof. McDonald's presentation. Photo: Alistair Fyfe

The remainder of the afternoon saw a variety of topics presented by speakers from the West Midlands, the Scottish, and the South West and Wessex regions as well as presentations from the ACB Medal Award finalists. There was also some time to look at some more of the many excellent posters.

Republic of Ireland Region Session – Fluids, ctDNA, and Macroprolactin

Following a fantastic night of food and drink, the second day of UKMedLab23 kicked off with an engaging session featuring topics from the Republic of Ireland, chaired by Dr. Brendan Byrne. Dr Peadar McGing, an expert in fluid analysis, took to the floor to share his presentation on *Biochemical testing of atypical fluids – a personal perspective.* Dr McGing emphasised the importance of careful oversight when it comes to fluid biochemistry. In most cases, fluid removal serves as a therapeutic measure, and its analysis plays a crucial role in aiding or confirming diagnoses. For instance, fluid protein levels are used to differentiation between transudate and exudate in pleural fluids (transudate <25 g/L vs exudate >35 g/L; use Light's criteria if 25-35 g/L) and SAAG (Serum-Ascites Albumin Gradient) is used in the differential diagnosis of peritoneal fluids (accurately predicting portal hypertension with 97% accuracy when SAAG levels exceed 11 g/L). Diagnostic testing of fluids is often a one-time opportunity, particularly with cerebrospinal fluid (CSF) due to the invasive nature of lumbar punctures. Therefore, it is the responsibility of clinicians and scientists to ensure that all the necessary tests are ordered and analysed correctly, considering factors such as the source of the fluid, relevant timing, and the potential need for paired blood tests. It is worth noting that validation of synovial fluid is challenging due to the high viscosity of this sample and the absence of an External Quality Assessment (EQA) scheme, however, efforts are now being made to address EQA for atypical fluids. Dr. McGing's presentation provided a comprehensive overview of atypical fluid biochemistry, featuring several intriguing case studies whilst also sharing his personal insights on how to address verification.

Dr. Peadar McGing. Photo: Alistair Fyfe

The second talk of the session was by Dr Michael Joe Duffy who delivered an insightful talk titled *Circulating tumor DNA (ctDNA): The next major blood-based cancer biomarker?* Dr Duffy highlighted the limitations of current protein-based cancer biomarkers, which lack specificity and sensitivity in detecting new cancers and often show elevated levels only in advanced malignancy. Emerging data suggests that ctDNA has immense potential as a blood-based cancer biomarker and holds significant advantages over serum biomarkers, including a greater specificity for malignancy. The desirable properties of an effective cancer screening test and how ctDNA meets these requirements were discussed. In terms of post-operative surveillance, ctDNA appears to outperform radiology and standard biomarkers in detecting early recurrent/metastatic disease. Another significant clinical application of ctDNA is its use in selecting the most appropriate therapy for specific cancer types. ctDNA analysis is relatively non-invasive, faster, more cost-effective and provides a comprehensive overview of mutations present in a tumour, unlike a single tissue biopsy. It should be noted however, that ctDNA biomarkers are more expensive to measure, less widely available, and have longer turn-around times for reporting. Despite these limitations, the increasing availability of ctDNA measurements is expected to complement existing biomarkers and imaging in detecting and managing cancer patients, ultimately leading to better outcomes.

Prof. M.J. Duffy. Photo: Ciara Cunning

We concluded the session with an enlightening talk titled *It's a big big problem... happening again and again* by Dr Graham Lee. The accurate differential diagnosis and management of hyperprolactinemia is important to prevent unnecessary further testing and treatment. Unfortunately, the measurement of prolactin (bioactive/monomeric) is hindered by cross-reactivity with macroprolactin, a concern that persists to this day and poses a recurring challenge for laboratories. The existing guidelines and recommendations lack a clear definition of hyperprolactinemia, thus leading to some labs testing for macroprolactin in all samples with elevated prolactin levels. The question arises: should we retest for macroprolactin? The evidence on this matter is conflicting, with different methodologies employed across various studies. Leveraging data from The Mater Misericordia University Hospital (MMUH), Dr Lee passionately advocates for a change in current protocols regarding macroprolactin testing and has developed a decision tree/protocol for repeat testing with huge potential to reduce repeat testing and alleviate staff workload. Dr Lee's presentation sheds light on the persistent issue of prolactin measurement and by challenging current protocols has proposed a practical solution to address this recurring problem.

Dr. Graham Lee. Photo: Ciara Cunning

[L-R] Peadar McGing, Joe Duffy, Maria Fitzgibbon, Graham Lee, Brendan Byrne. Photo: Alistair Fyfe

Wales Region Session – Porphyrins, Blood Science Standardisation, and Drugs

After a refreshing coffee break, the next session commenced under the intriguing title of *Myths, legends, and WLIMS* organised by the Wales ACB region. The first speaker to take to the floor was Dr Danja Schulenburg-Brand, presenting a captivating talk titled *A whistle-stop tour of the porphyrias and Cardiff*

Porphyria Centre. Dr Schulenburg-Brand started by reminding us of the intricate haem pathway and delved into the clinical features of Acute Hepatic Porphyrias, which encompass symptoms such as abdominal pain, nausea/vomiting, and urinary retention, among others. She provided valuable insights into the management and supportive treatments for these conditions, emphasizing the importance of avoiding sunlight and using reflective sunscreen. Monitoring complications such as bone health, specifically vitamin D deficiency resulting from sunlight avoidance, was also discussed. The discussion turned to porphyrin testing, a manual and labour-intensive process that necessitates specific equipment. Dr Schulenburg-Brand elaborated on the role and operation of The Cardiff Porphyria Centre which offers a fully integrated service encompassing both cutaneous and acute porphyria clinical care, alongside a specialised porphyrin laboratory and discussed the current strategies employed for the diagnosis and management of porphyrias.

Dr. Danja Schulenburg-Brand. Photo: Alistair Fyfe

The second talk of the session, titled *Blood science standardisation - why bother?,* featured Dr Catherine Bailey and Dr Rachel Still as speakers. They provided valuable insights into the progress of All-Wales Blood Sciences standardisation, which was initiated in 2010 alongside the implementation of the All-Wales Pathology Laboratory Information System (WLIMS). During the presentation, the developments in standardisation in Wales were discussed, including notable successes and the challenges encountered. The aim of the standardisation efforts was to eliminate variation, reduce duplication, and deliver a uniform approach throughout Wales. However, the process faced challenges in terms of engaging all health boards and a lack of documentation. Additionally, any configuration changes made during the roll-out had to be implemented individually by each health board. The presentation emphasized the importance of increasing harmonisation of practices, although it was acknowledged that a "one size fits all" approach might not be suitable for every situation, considering the distinction between specialist and non-specialist services. Ongoing challenges were also highlighted, such as the graphing of results across Wales and the integration with secondary systems. Furthermore, the preparations for the implementation of a replacement WLIMS were discussed, with the benefit of hindsight guiding the decision-making process. By sharing their experiences, Dr Bailey and Dr Still provided valuable insights that can contribute to the continual improvement of standardisation efforts.

Rachel Still. Photo: Alistair Fyfe

Dr. Catherine Bailey. Photo: Alistair Fyfe

The final talk of the session was a captivating presentation titled *WEDINOS (Welsh Emerging Drugs and Identification of Novel Substances),* by Dr Joanne Rogers. Dr Rodgers presented an overview of a Welsh Public Health Harm Reduction project. This initiative aims to establish a robust mechanism for the collection and testing of

unidentified or new psychoactive substances. WEDINOS provides a comprehensive framework for the collection and testing of these substances. Individuals can anonymously submit samples via the project's website, where each sample is assigned a unique reference number to ensure confidentiality and traceability. The journey of a sample through the laboratory begins with careful documentation, including the witness opening, receipt, and weighing of the sample. Subsequently, extraction and analysis are performed to identify the substances present. Substances are verified against the Waters library and new compounds can be added to the existing library. Safety precautions are paramount throughout the entire process to ensure the well-being of laboratory staff. The presentation shed light on the work carried out by WEDINOS, which serves as a crucial resource for monitoring and addressing emerging drugs.

Foundation Award Lecture

The foundation award lecture titled *Metamorphosis - from retrospective confirmation to management tool, the evolution of cardiovascular biomarkers* was delivered by Prof Paul O. Collinson. The lecture explored the transformation of cardiovascular biomarkers from being primarily used for retrospective confirmation to becoming essential tools for diagnosis and management. Traditionally, cardiac enzymes such as creatine kinase (CK), aspartate transaminase (AST), and lactate dehydrogenase (LDH) were serially measured over three days for the confirmation of myocardial infarction (MI). At that time, the electrocardiogram (ECG) served as the primary diagnostic technology.

Prof Paul O. Collinson. Photo: Alistair Fyfe

The development of immunoassays for the cardiac-specific proteins cardiac troponin T (cTnT) and cardiac troponin I (cTnI) demonstrated superior diagnostic capabilities followed by assays for B-type natriuretic peptides, high-sensitivity assays and point-of-care testing. While the lecture acknowledged that the ECG remains a fundamental diagnostic and management tool it highlighted how the emergence of troponin as a cardiac-specific and sensitive biomarker revolutionized the field and significantly improved patient outcomes.

Close of Conference

The last lectures of the day were delivered in parallel sessions from the North West Region and the Interactive Clinical Case Presentations. The latter was chaired, as always, by Professor Danielle Freedman, and included a great variety of intriguing cases.

After a short break to allow everyone to assemble from the other lecture theatre, the new ACB President, Dr. Kath Hayden, announced the winners of the various awards and presented the winners with their prizes. She gave a brief overview of her vision going forward for the association, the name of which will be changing to the Association for Laboratory Medicine. She then thanked everyone involved in this excellent conference and the meeting was closed.

The authors of this report, Wendy Groenendijk (Clinical Biochemist, St. Vincent's University Hospital Dublin) and Ciara Cunning (Clinical Biochemist, Mater Misericordiae University Hospital Dublin), received travel bursaries from the Association of Clinical Biochemists in Ireland to attend this meeting.

A Selection of Members' Recent Publications

Vitamin D status & associations with inflammation in older adults.
Laird E, O'Halloran AM, Molloy AM, **Healy M**, Bourke N, Kenny RA. PLoS One. 2023 Jun 28;18(6):e0287169. doi: 10.1371/journal.pone.0287169. eCollection 2023.

International newborn screening practices for the early detection of congenital adrenal hyperplasia.
Conlon TA, Hawkes CP, **Brady J**, Loeber JG, Murphy N. Horm Res Paediatr. 2023 May 15. doi: 10.1159/000530754. Online ahead of print.

The European Register of Specialists in Clinical Chemistry and Laboratory Medicine: code of conduct, version 3 - 2023.
Queraltó J, **Brady J**, Carobene A, Homšak E, Wieringa G. Clin Chem Lab Med. 2023 Feb 1;61(6):981-988. doi: 10.1515/cclm-2023-0031. Print 2023 May 25

Calculated Globulin as a potential screening tool for paraproteinemia to aid in the early diagnosis of Multiple Myeloma.
O'Brien A, **Bransfield A**, O'Halloran F, Mykytiv V. Clin Biochem. 2023 Jun;116:113-119. doi: 10.1016/j.clinbiochem.2023.04.008. Epub 2023 Apr 27.

Challenging gestational trophoblastic disease cases and mimics: An exemplar for the management of rare tumours.
Hamid M, **Joyce CM**, Carroll HK, Kenneally C, Mulcahy S, O'Neill MK, Coulter J, O'Reilly S . Eur J Obstet Gynecol Reprod Biol. 2023 Jul;286:76-84. doi: 10.1016/j.ejogrb.2023.05.016. Epub 2023 May 13.

The utility of plasma glycated CD59 in predicting postpartum glucose intolerance: A prospective study of women diagnosed with GDM during a period of universal GDM screening.
Bogdanet D, Castillo MT, Doheny H, Dervan L, Luque-Fernandez MA, Halperin J, **O'Shea PM**, Dunne FP. Diabet Med. 2023 Apr 20:e15121. doi: 10.1111/dme.15121. Online ahead of print.

Dietary counselling to reduce moderate sodium intake: effects on cardiovascular and renal biomarkers: primary findings of the COSIP and STICK phase II feasibility randomised controlled trials.
Smyth A, Judge C, Kerins C, McDermott S, Niland A, Corcoran C, Dineen R, Alvarez-Iglesias A, Nolan A, Mente A, Griffin MD, **O'Shea P**, Canavan M, Yusuf S, O'Donnell M. EClinicalMedicine. 2023 Feb 15;57:101856. doi: 10.1016/j.eclinm.2023.101856. eCollection 2023 Mar.

Prescription drugs with potential for misuse: protocol for a multi-indicator analysis of supply, detection and the associated health burden in Ireland between 2010 and 2020.
Cousins G, Durand L, O'Kane A, Tierney J, Maguire R, **Stokes S**, O'Reilly D, Arensman E, Bennett KE, Vázquez MO, Corcoran P, Lyons S, Kavanagh Y, Keenan E. BMJ Open. 2023 Mar 2;13(3):e069665. doi: 10.1136/bmjopen-2022-069665.

The causal role of vitamin D deficiency in worse Covid-19 outcomes: implications for policy and practice development
McCartney DM, **O'Shea PM**, **Healy M**, Walsh JB, Griffin TP, Walsh C, Byrne DG, Kenny RA, Faul JL. Ir Med J; February 2023; Vol 116; No. 2; P733

Adrenal insufficiency is common amongst kidney transplant recipients receiving maintenance prednisolone and can be predicted using morning cortisol.
Tomkins M, Martin-Grace J, Kennedy C, McEnroe O, **Heverin K**, Srinivasan S, Little D, Conlon P, De Freitas D, Denton M, Magee C, O'Seaghdha C, O'Reilly MW, Thompson CJ, Sherlock M.Nephrol Dial Transplant. 2023 Jan 23;38(1):236-245. doi: 10.1093/ndt/gfac044

Low vitamin B_{12} but not folate is associated with incident depressive symptoms in community-dwelling older adults: a 4-year longitudinal study.
Laird EJ, O'Halloran AM, Molloy AM, **Healy M**, Hernandez B, O'Connor DMA, Kenny RA, Briggs R.Br J Nutr. 2023 Jul 28;130(2):268-275. doi: 10.1017/S0007114521004748. Epub 2021 Dec 13.

Recent Reviews of Interest

For those wishing to become LC-MS afficionados the two reviews below give a wealth of information on development and setup of assays and ensuring the validity and quality of results

Review of the Use of Liquid Chromatography-Tandem Mass Spectrometry in Clinical Laboratories: Part I-Development.
Rappold BA. Ann Lab Med 2022; 42(2): 121-140. https://doi.org/10.3343/alm.2022.42.2.121

Review of the Use of Liquid Chromatography-Tandem Mass Spectrometry in Clinical Laboratories: Part II-Operations.
Rappold BA. Ann Lab Med. 2022 Sep 1;42(5):531-557. doi: 10.3343/alm.2022.42.5.531.

Immunoassays are the maintstay of clinical labs. They have their problems, though, as this review outlines

Hormone Immunoassay Interference: A 2021 Update.
Ghazal K, Brabant S, Prie D, Piketty ML. Ann Lab Med. 2022 Jan 1;42(1):3-23. doi: 10.3343/alm.2022.42.1.3.

Work on new treatments for Alzheimer's Disease is growing apace. This article outlines the huge number of drugs in various trial phases

Alzheimer's disease drug development pipeline: 2023.
Cummings J, Zhou Y, Lee G, Zhong K, Fonseca J, Cheng F . Alzheimers Dement (N Y). 2023 May 25;9(2):e12385. doi: 10.1002/trc2.12385. eCollection 2023 Apr-Jun.

Hypercalcaemia of malignancy is a commonplace and serious complication of cancers. This is an evidenced-based review of its management

Treatment of Hypercalcemia of Malignancy in Adults: An Endocrine Society Clinical Practice Guideline.
El-Hajj Fuleihan G, Clines GA, Hu MI, Marcocci C, Murad MH, Piggott T, Van Poznak C, Wu JY, Drake MT. J Clin Endocrinol Metab. 2023 Feb 15;108(3):507-528. doi: 10.1210/clinem/dgac621.

Consensus statement on a new algorithm for Type 2 diabetes management covering 11 different aspects.

American Association of Clinical Endocrinology Consensus Statement: Comprehensive Type 2 Diabetes Management Algorithm - 2023 Update.
Samson SL, Vellanki P, Blonde L, Christofides EA, Galindo RJ, Hirsch IB, Isaacs SD, Izuora KE, Low Wang CC, Twining CL, Umpierrez GE, Valencia WM. Endocr Pract. 2023 May;29(5):305-340. doi: 10.1016/j.eprac.2023.02.001.

Is it possible to interchange different eGFR equations among older adults?

Concordance and Discrepancies Among 5 Creatinine-Based Equations for Assessing Estimated Glomerular Filtration Rate in Older Adults.
Beridze G, Vetrano DL, Marengoni A, Dai L, Carrero JJ, Calderón-Larrañaga A. JAMA Netw Open. 2023 Mar 1;6 (3):e234211. doi: 10.1001/jamanetworkopen.2023.4211.

Meetings / Educational

The Prevention and Management of Cardiovascular Disease: A Contemporary Update.
Royal Society of Medicine/Cleveland Clinic partner event. London, Wimpole Street, Oct 12-13 2023
State of the art lectures on CVD causes, diagnosis and prevention

43rd British Society of Mass Spectrometry (BMSS) Annual Meeting, 12-14 Sep 2023, Manchester
Wide range of presentations on mass spectrometry applications including proteomics, health/disease, environmental and food applications, lipidomics and palaeomics. The Royal Northern College of Music is the venue.

Adipositas and metabolic bone disorder in a 16th century Upper Austrian infant crypt mummy—An interdisciplinary palaeopathological insight into historical aristocratic life.
Front. Med., 26 October 2022 Sec. Pathology Volume 9 - 2022 | https://doi.org/10.3389/fmed.2022.979670
Fascinating paper on the cause of death of a 16th century one year old infant who on examination had bone pathologies consistent with vitamin D deficiency and rickets. The article traces the infant's aristocratic lineage and the authors speculate that it was lack of sunlight rather than nutritional deficiencies that led to the child's death.

WorldLab/EuroMedLab Roma 2023

Karen Heverin (Principal Clinical Biochemist, University Hospital Galway)

As a corresponding member of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) Task Force for Young Scientists (TF-YS), representing the ACBI, I was very fortunate to have had the opportunity to attend WorldLab/EuroMedLab in bella Roma on 21st – 25th May.

Firstly, I'd like to explain how I got involved with this wonderful group of young scientists (YS). As vacancies arise on working groups, the ACBI secretary distributes the details of each vacancy including any desirable criteria/experience if applicable, to become either full/ corresponding member. I would encourage all members to consider applying for vacancies that might arise in the future that pique your interest. I was fortunate to have been successful in my application for corresponding member of TF-YS in 2022.

The aim of the TF-YS is to ensure that young scientists make a significant and growing contribution to the activities of IFCC and to the promotion of laboratory medicine worldwide. Some of the objectives of the group are to create networks to facilitate communication between YS globally, to link with national society YS initiatives, to share experience of laboratory medicine and other healthcare practice around the world, to enable YS to participate in meetings and to encourage participation in the IFCC activities. Our current chair is Dr. Santiago Fares Taie, based in Buenos Aires, Argentina. There are five other core TF-YS members, and to date up to fifty corresponding members across the world.

On Sunday 21st May 2023, the TF-YS Forum began at 8.30am. A full day of talks from different YS speakers took place. There were very engaging talks on a wide range of subjects from the use of machine learning to 'correct' for the interferences of Jaffe creatinine and prediction of enzymatic creatinine results (Arnel Christian King Dy, Philippines) to the use of social media to target high risk individuals in Malawi for HIV testing in the community (Ronald Khunga, Malawi). There was a presentation about training YS in EQA scheme operation and management (Serafeim Karathanos, Greece) and a wonderful talk and debate about the past, present and future of reference intervals in laboratory medicine (Josep Miquel Bauça, Spain). Marco Alfonso Perrone, a corresponding member from the Italian Society for Clinical Biochemistry (SIBioC) presented his research on the use of cardiac biomarkers in the professional endurance athlete and the debate as to the clinical significance of these findings post endurance training/marathon event.

Prof. Khosrow Adeli opening the TF-YS Forum, Sunday 21st May. Photo: Karen Heverin

During the conference in Rome, a TF-YS meeting was held on Monday 22nd May at Hotel dei Congressi, adjacent to La Nuvola, the iconic Italian conference venue. In attendance were five of the core members and seven corresponding members. The meeting began with each member introducing themselves and the country they represent. The core members of the task force updated the group on ongoing TF-YS activities and initiatives. Some of the discussion points included topics and speakers suggested for the scientific content for the YS forum of WorldLab Dubai in 2024 and also Brussels in 2025! There was great discussion around training in laboratory medicine around the globe – similarities and differences and how we could use this information to improve training in our own countries. We then debated about different topics for webinars and virtual case discussion in 2023, the first of which will take place during the coming months on the topic of digital technologies. We discussed the use of social media to disseminate the activities of the TF-YS across the globe

and to promote engagement of YS globally. There was a reminder about the 'Labsurfing' programme by the TF-YS (www.lab-surfing.com) which was created to facilitate an exchange programme for YS members. Various ideas were noted about strategy for future YS activities and how we can develop as a task force to ensure greater awareness of the TF-YS and how we can improve engagement with national societies to strive for global representation in each country. The IFCC TF-YS are also open to engage with any national society meetings where YS forums or training days are taking place to promote the work of the task force and highlight the opportunities available for YS across the globe.

TF-YS meeting Monday 22nd May at Hotel dei Congressi with core & corresponding members

Our wonderful national society hosts, the SIBioC organised a social evening for young scientists on 23rd May at The Building Hotel in the city of Rome. It was a well-attended event with over 100 young scientist conference attendees present and a great opportunity to network over some delicious traditional Calabrian pasta and refreshingly cool Aperol Spritz. When in Rome!

It has been a wonderful opportunity to participate in a task force working together with like-minded YS on our shared challenges and experiences in laboratory medicine across the globe. I hadn't had the opportunity to work on an international committee with such a diverse mix of members from different countries with markedly different GDP before. This experience offered great perspective both personally, in that my experience of laboratory medicine practice had been confined to the UK&ROI, and professionally to consider the challenges that lower economic status countries face when trying to deliver a quality laboratory medicine service with less available resources.

The TF-YS are a very welcoming and collaborative group, certainly by the end of the conference in Rome I felt we were a group of old friends. Since the meeting in Rome we have been very actively engaging to deliver upon the initiatives set out by the TF-YS.

Should you wish to find out more information about the TF-YS please click on the below link.

https://ifcc.org/task-force-young-scientists-tf-ys/

Finally, I am very grateful to the ACBI and the ACB for the bursaries that I received which contributed to my attendance at such a prestigious conference. I am also grateful to the HSE and my colleagues in Galway for the study leave that I was granted to attend.

SIBioC social evening for young scientists on 23rd May at The Building Hotel. Pictured: (L-R) Josep Miquel Bauça (Spain), Tara Rolic (Croatia), Agustina Fares Taie (Argentina), Karen Heverin (Ireland), Claudia Imperiali (Spain)

SIBioC social evening for young scientists on 23rd May at The Building Hotel

45TH ANNUAL ACBI CONFERENCE

Venue: Pillar Centre
Eccles Street
Dublin D07 R2WY

20th - 21st October 2023

ASSOCIATION OF CLINICAL BIOCHEMISTS IN IRELAND

The 45th Annual ACBI Conference takes place this year in the Pillar Centre for Transformative Health, Eccles Street Dublin on the Friday the 20th and Saturday the 21st of October. Details on public transport to the venue and addresses for a selection of 3– and 4-star hotels can be found here.

The main themes are:

- Toxicology
- Nutrition
- Diabetes/Endocrinology
- Management

More complete programme details can be found here.

The conference is preceded by an EFLM postgraduate training course on Thursday the 19th of October. The topic is *'How to write a good scientific and professional article'*. The maximum number of participants is 35.

The conference dinner will be held on Friday the 20th of October at 59 Eccles Street, a Georgian house built c1790.

Registration details for ACBI 45 and for the conference dinner can be found here. Early bird registration closes on the **8th of September.**

Poster abstracts on topics relevant to Clinical Biochemistry are invited. A selection of abstracts will be selected for oral presentation. Full requirements for abstract submission can be found here. Deadline for abstract submission is the **15th of September**.

EFLM / IFCC Links

A new issue of Clinical Chemistry and Laboratory Medicine (CCLM) is out, volume 69(1). CRP figures prominently with an editorial from Mario Plebani (Why C-reactive protein is one of the most requested tests in clinical laboratories?) and a number of other articles. An interesting paper on the metaverse and clinical laboratories is here as well (A new door to a different world: opportunities from the metaverse and the raise of meta-medical laboratories).

A number of live EFLM webinars worth watching will become available from September onwards for EFLM Academy members. If you are a member of the ACBI you can join for free. Register for webinars here and see a complete list of those available. A couple of examples are given below:

Digital Transformation: What to do and How to do
Date: 12th September 2023 at 18:00 CET time
Speaker: Merve Sibel Gungoren (Turkey)

Current concepts for early diagnosis of malignant disease
Date: 10th October 2023 at 18:00 CET time
Speaker: Michael Neumaier (Mannheim, Germany)

Again, if you are an Academy member, you have access to the EFLM's excellent e-learning content. The EFLM Syllabus Course is an extensive list of educational presentations on a wide range of topics. Nine of the presentations are from Irish contributors.

Another source of educational videos is the IFCC's E-Academy. Not as wide-ranging as the EFLM's site (or as up to date). It nevertheless provides some interesting lectures.

UKMEDLAB Trainee Day 2023. A Report by Kelly Foley

On the 12th June I attended the UKMEDLAB trainee day held in The Armouries Museum in Leeds.

This was my first overseas event since before the COVID pandemic and I was looking forward to getting back to networking and learning with my fellow trainees. Registration opened at 9am and it was great to be met with a coffee and pastries along with some

Kelly Foley and fellow delegates enjoying the Training Day presentations. Photo: Alistair Fyfe

familiar faces. This was also the first time the trainee day was multidisciplinary with microbiology trainees in attendance.

The day opened with an Abbott sponsored presentation from Jacob Stokes on 'Procurement options - manage service contracts, reagent rental, and capital purchase. The pros and cons'. This was of particular interest to me as we are currently going through this in our own laboratory. Jacob discussed the different options available to laboratories and the 'ideal' way this should be adopted. One method discussed was new and something I feel all laboratories need to work towards, that is, a value based approach that is clinical pathway driven. This would ensure we are meeting patient's expectation and testing is appropriate to clinical outcomes. The payment model in this type of procurement would be linked to percentage of patient outcomes. Artificial intelligence will play an important role in this and something we as laboratories should be pushing our suppliers for.

The second speaker of the day was Hazel Borthwick who presented 'Collaborative procurement – one big happy family?'.

Hazel Borthwick.
Photo: Alistair Fyfe.

Hazel spoke of her own experience of three separate Trusts, not formally networking but going for one manage service contract. She gave tips on how to navigate everyone's wish list to ensure the best service for the patient pathway but also the tax payers' money. We then took a well needed coffee break to refuel for the next session. After coffee there was an interactive session on Management scenarios. We worked in tables to brainstorm our given scenarios. All tables had at least one microbiology trainee which was a great approach and gave us biochemistry trainees a different perspective. Some of the scenarios included how you would go about looking at the feasibility of introducing a new test into the laboratory and what steps would you take to investigate a test result that didn't correlate with the clinical picture? e.g. HCG of 4000 IU/L on a 10 week old viable pregnancy. We had some great discussions around these and it was really interesting to hear how other laboratories work and share experiences. It was then time for lunch and it was so nice to be provided with a hot meal.

After lunch the trainees were split and Biochemistry trainees went on to have a session on 'Real world statistics' given by Craig Webster. In this session Craig highlighted the appropriate use of basic statistical calculations that are required for the implementation

Craig Webster delivering his lecture. Photo: Alistair Fyfe

of assays into routine use. This included looking at 'normal' distribution and the use of mean, median and mode. Craig gave us some good tips on how to test for normality by looking at mean and median. Craig highlighted how analysing data is a fundamental skill that all scientists need and how it underpins future technologies such as artificial intelligence and machine learning. Although statistics can be a difficult subject to present I thought this session was very practical with so much good advice and tips.

We broke for a coffee break after statistics and had some lovely conversations with trainees from other hospitals throughout the UK.

Katherine Bates
Photo: Alistair Fyfe

Katherine Bates opened the final session with an Overview of liver metabolism with clinical cases. This was an interesting session and there was discussion on intelligent liver function tests (iLFT). This is a novel, automated system designed to improve early diagnosis of liver disease where initial abnormal LFT results trigger a cascade of reflexive testing to help identify early diagnosis of liver disease. This is something that has been fully operational across NHS Tayside in Scotland since 2018.

The final speaker of the day was Stuart McPherson, a consultant Hepatologist who spoke on Advances in the laboratory diagnosis of liver disease. This focused on the diagnosis of NAFLD and on the FIB-4 and ELF tests. Dr. McPherson suggested that the FIB-4 be used as the first line test in the investigation and that ELF testing would be a second line test depending on the FIB-4 result.

Dr. Stuart McPherson
Photo: Alistair Fyfe

Overall, the trainee day was a well-attended event with a great multidisciplinary approach and the presentations were thought-provoking with ideas for us all to take home to our own laboratories. I look forward to attending the next event.

Training Day UKMedLab 23 Photo: Alistair Fyfe

Kelly Foley is a Principal Clinical Biochemist in Cork University Hospital. She received a travel bursary from the Association of Clinical Biochemists in Ireland to attend this meeting.

UKMedLab23
The Veteran's View

By Dr. Peadar McGing

Leeds was the venue for the 70th birthday party that was UKMedLab23. The ACB was born just three years before I was. Just as this meeting was, almost definitely, my last UK national clinical biochemistry conference, it also marked the last such conference of the 'ACB'. Future meetings will operate under 'ALM', the ACB having elected at the AGM to change its name to The Association for Laboratory Medicine.

At UKMedLab23 I had the honour of being an invited speaker. In a way, that completed my 'set' of Focus / UKMedLab participations. Since my first conference in 1986 (Glasgow) I have presented countless posters, given oral presentations as a finalist in the Ames Award (now Medal Award) and through being selected from submitted abstracts, being invited speaker at the Training Day, and of course I have attended a number of times as 'just' a delegate.

View of Royal Armouries Museum (conference venue) from the River Aire. Photo: Peadar McGing

The format for this year's celebratory event was that each of the ACB's regions organised a 90 minute session celebrating some aspects of clinical biochemistry expertise in their region, with a little bit of history included along the way. My thanks to the organising committee for inviting me to speak on the topic of atypical fluids. Though now retired from the Mater I am currently moving forward with updating the ACBI's guideline booklet so this was a great push on that road following on from my on-line lectures for the EFLM Academy. The ACB covered my expenses for the day of my lecture and ACBI kindly provided me with a bursary to attend the other day. It was well worth the effort as I found the meeting really good (and let's be honest, I couldn't miss Maria Fitzgibbon getting her award).

Prof. Joy Ardill. Photo: Alistair Fyfe.

Many of the talks have been covered in the main article by Ciara and Wendy. Maria Fitzgibbon gave a very impressive presentation covering a number of different aspects of inflammation. It's amazing how this has come into so much prominence over the past decade or so and how we are realising its very extensive impact on health. Definitely something to watch. Maria really did us all proud.

Naturally my choice of parallel session following Maria's lecture had to be the session from the Northern Ireland region. Joy Ardill started in the Royal in Belfast in 1970 on a two-year contract to develop a gastrin assay. For most of the audience at her lecture this talk was a history lesson with useful learning points about neuroendocrine hormones and diseases. For me it was also a spur to reminiscences of the many past lectures I heard on these developments, most of which occurred during my career in the Mater. Our Endocrine lab did get a mention for the Substance P research carried out by David Powell, Petr Skrabanek, and their team which also included past ACBI President Alan Balfe. One of the main points for me in Joy's

lecture was the way gastrin produced by cancer is different from the usual circulating gastrin form and therefore more specific assays are more likely to miss tumours. Towards the end of her talk she summarised the huge strides made in our knowledge of peptides and neuroendocrine tumours, in terms of knowledge and ability to measure peptides, plus huge patient benefit in improved treatments. Quite uplifting.

Una Graham's very interesting talk on Carcinoid Syndrome is reported elsewhere and unfortunately due to a clash of interests I had to miss Claire McHenry's talk on MEN1. The reason was I was very keen to hear Robert Barski's talk *The metabolic effects of nitrous oxide – "no laughing matter"* in the parallel session organised by the Trent, Northern and Yorkshire Region. My interest in nitrous oxide went all the way back to my PhD. My work, testing my supervisor John Scott's idea, was the first to show that nitrous oxide could be used to generate a functional vitamin B12 deficiency in experimental animals [McGing et al, Biochem Biophysical Res Com, 1978; 82: 540-546]. Fast forward many years and in the past decade there are suddenly clinical cases presenting with B12-related complications from abuse of this gas. We had cases in the Mater and so I had a special interest in Robert's talk, and had a good chat with him afterwards.

Robert Barski. Photo: Alistair Fyfe.

Nitrous Oxide (N_2O) was discovered by Joseph Priestly in 1772 and has many modern uses. In medicine it has been used mainly as an analgesic anaesthetic while in industry its uses vary from rocket fuel to culinary. For the latter it has a use in baking and for that purpose one can buy small 'whippits' to expel the gas and foam cream. These can easily be bought on-line and that has led to an explosion in recreational drug use of N_2O. Unfortunately prolonged abuse of nitrous oxide can lead to Subacute Combined Degeneration (SACD) of the spinal cord. That's because of the inactivation of B12 by N_20. The gas converts the Co+ active form in B12 to inactive Co3+ form. Over time B12 falls to deficiency levels.

Robert Barski told us their unit saw 27 cases of nitrous oxide toxicity from July 2021 to June 2023. Although young (age range 16-34) most have severe neurological symptoms, with many unable to walk. He told us that in these cases total B12 assays are of very limited use but that B12 functional assays MMA and homocysteine are useful for diagnosis and monitoring response to treatment. He finished up telling us that an excellent clinical guideline is available for diagnosis and treatment of nitrous oxide-induced SACD, an open access 2023 paper by Parry et al. [https://pn.bmj.com/content/practneurol/23/3/222.full.pdf].

The Irish at ACB70 dinner. L-R: Ciara Cunning, Eleanor Hanna, Kirsty Spence, Graham Lee, Maria Fitzgibbon, Brendan Byrne, Gareth McKeeman, Peadar McGing, Wendy Groenendijk. Photo: Alistair Fyfe.

The afternoon began with an excellent Impact Award Lecture by Prof. Tim McDonald, covered by my younger colleagues. I also took in an interesting look at *Past, present and future of specialist endocrine testing*, delivered by Karen Smith as part of the Scotland Region Session and then *Use of clinical decision support in patient test pathways* delivered by Kat Mordue in the South West and Wessex Region session. So a good mixture of old and new and also time to view the many posters on display and talk to some of the industry reps. After

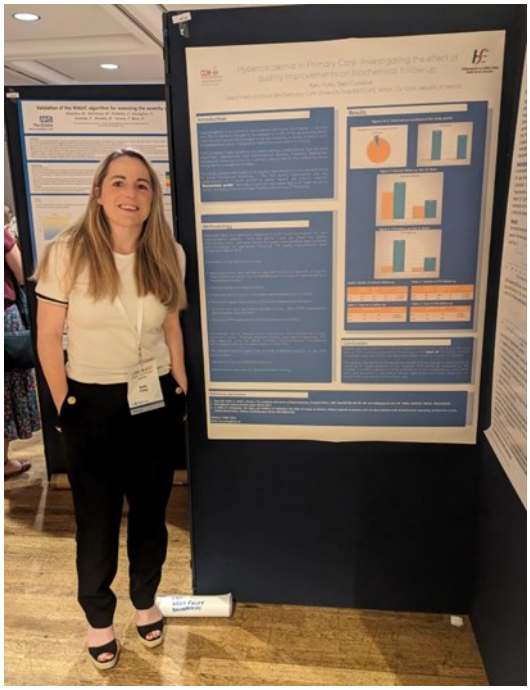
all that it was back to the hotel, time for a stroll around the area, and then on to the birthday party (officially designated in the programme as *Conference Reception)*. At the meal we had a great time at our Irish table with a mix of delegates from both of ACB's Irish regions.

After a good night's sleep, and a hearty ('condemned man') breakfast I headed back across the square to the Royal Armouries Museum. The lecture theatre was empty as I checked my slides and made one last update, but when we started (on time, thanks to Bren) it had filled up very considerably. Although clearly biased I thought the Republic of Ireland session was very good, and the feedback afterwards reflected that. Reports on that session are carried elsewhere, but I do want to mention Joe Duffy's excellent talk which gave a clear picture of what can be achieved with these new ctDNA cancer markers but also routed us firmly in reality.

Peadar McGing visiting commercial stands. Green labs supporters may note the re-used ACBI'98 conference bag. Photo: Alistair Fyfe

I attended one other lecture in the morning, *Blood science standardisation, why bother?* delivered by Catherine Bailey and Rachel Still as part of the *Myths, legends, and WLIMS* session run by the Wales region. This is reported elsewhere but it's one that I'd love if a lot of people back in Ireland could have heard. I've watched for more than half my career the continued failure to produce a national lab IT system. Wales has managed that big step and this talk was about standardising test reference ranges, comments, etc. Lots of problems, tweaks, compromises where absolutely necessary, and hard push when no good excuse not to. Local arguments / arrangements were one of the biggest obstacles. With PSA, for example, 'reference' ranges had been agreed but report comments and follow up protocols were only standardised with the intervention of two UK national urology groups.

Overall on the Wednesday morning I was mostly unwinding after my own lecture so I visited the commercial stands and enjoyed a good chat with a few people, and also read a good number of posters. To me the posters are nearly always the highlight of this meeting. After sitting down for a while with my buffet lunch I took my tea and desert back around the posters. As an aside I must mention that the food was very good, and I was never hungry, but they must have engaged some caterers from the Continent to do the teas as they had no inkling that tea should be hot.



Kelly Foley with her poster. Photo: Ciara Cunning

During my visit to the posters I talked to Kelly Foley at her poster, which happened to be on one of my pet topics, namely serum/plasma calcium. We also availed of the opportunity to do some ACBI business as part of the handover of the ACBI Secretary job.

Then I headed to the *Interactive Clinical Cases Presentations*, coordinated under the chairmanship of the larger than life Danielle Freedman. I first met Danielle in the social setting of a bar at an ACB training course when I was the Republic of Ireland Region's 'Junior Liaison Representative', now termed Trainee Rep, and she made quite an impression. She has contributed hugely to our profession and I have been a particular fan of her

work in communicating the lab to the public, in particular the Sense about Science series (Making Sense of Testing and Making Sense of Screening — both well worth a Google). I had not enjoyed the

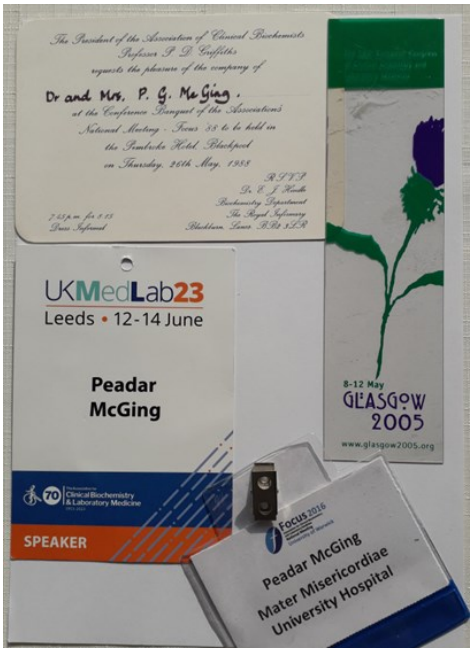
Prof. Danielle Freedman.
Photo: Alistair Fyfe.

experience of attending her interactive cases session, though I had heard great reports, so I decided this would be a good way to spend the rest of the afternoon. And it was, with a wide variety of cases and audience participation via phone app (unimaginable back when I was studying for MRCPath). I was happy to see that I hadn't forgotten too much clinical biochemistry, and that I could use the technology while enjoying the cases.

The meeting concluded with awards and closing remarks and then I collected my suitcase, changed from 'proper' shoes into my comfortable runners, and headed off to the bus station. Less than 40 minutes later, and for a fare of just £2, I was at the airport. Of course the flight was delayed a bit, though far less than the Belfast flight, but eventually I was back home ready to enjoy a good night's sleep (and no need to head off to work the next day).

Given the cost of attending UKMedLab it is extremely unlikely that as a retired member I will be in a position to attend any more conferences. Even this year was different as I wasn't going to be going back with ideas from posters, etc. So, I'm probably allowed to have a quick glance back at some past events. I didn't make it to Focus every year but I did make a lot of the meetings. Glasgow 1986 was my first. I enjoyed the luxury of flying, but that was because my sister was working in Aer Lingus and as she was still single it meant her brother could avail of standby travel (when she got married I was back on boat and train). I went early on the Sunday rather than take a chance on the evening flight, and having arrived early in the day decided to throw my hand in with the local organising crew filling conference bags.

Blackpool 1988 was a highlight as I was a finalist in the Ames Award and my wife Teresa travelled with me. We travelled by car and after a week of the conference we spent a weekend in Wales on the way home. Now when the BBC's Strictly Come Dancing features Blackpool each year in the grand hall I can say "I gave a lecture there". Unfortunately I didn't win the award, that honour went to Ruth Lapworth for her presentation



18-Hydroxycortisone as a marker for primary hyperaldosteronism. Ruth has herself enjoyed a very illustrious career and is now heavily involved in ACB Retired Members matters. A fond memory from that conference was deciding to forgo Wednesday afternoon lectures and take in the optional extra trip to the Lake District. At the dinner on that excursion Teresa and I sat with fellow-Dub Mike Ryan, then king of Magnesium and for whom I had set up the Mater's first Mg assay before he moved to the UK. We had a great time chatting and exchanging stories and as our noise level was a bit above the rest of the ACB dinner participants we did get some funny glances. I won't bore you with a full history of my Focus meetings which also included European and World conferences held in

conjunction. Over the years the Focus meeting went from four days to three and now to two, all plus a Training Day. Poster formats changed but the content remained relevant and for me was the main source of ideas that I brought back. Travel changed for the better, in large part we can thank Ryanair for that. The year of the volcano ash was one to remember — I was lucky enough to get to Glasgow and home on schedule but some colleagues got stuck and some speakers didn't make it to the venue. I managed to have an article about that published in the Irish Medical News. When Covid came it robbed Belfast of the chance to host, and I was very disappointed about that. The on-line version which replaced it was inexpensive to attend and ACBI gave bursaries to 14 individuals and the newsletter got a follow-on supply of reports for the next year. But there is no substitute for face to face and I would encourage all ACB Region members and all ACBI members to try and attend this meeting and try and present a poster. It's worth the effort.

River Aire beside UK MedLab23 conference venue. Photo: Peadar McGing

Dr. Bernie Croal and incoming ACB President Dr. Kath Hayden at UKMedLab23. Photo: Alistair Fyfe

Hurray for Normal!

Dr. Peadar McGing

Plasma Sodium = 141 mmol/l

Yippee.

I didn't expect to ever get excited over a sodium of 141. But it has happened. Relief too.

I have never underestimated the importance of a blood test result in the 'normal' range as being of significance in patient treatment. I've included it in lectures; I've even written an article published in the Irish Medical News many years ago. But this was different. This time, I was the patient.

I often tell trainees and students that all results are in context. Sometimes a 'normal' result is very important. For me it meant I could start having whatever volume of liquid I wanted, full mugs of tea at a meal instead of a measly half cup. To give some context, I had developed SIADH and was on a liquid intake of initially less than one litre and then a few days of less than 750 mL a day. My SIADH was not unexpected, as it was a side effect of the trans-sphenoidal surgery I'd undergone two weeks previously. Leaving the hospital my sodium was 141, but on monitoring testing as an out-patient a few days later it fell to 134, and then to 132, and even on initial fluid restriction down to 130. Now it was thankfully back up to its usual level and so I could enjoy my tea again.

It's nice to understand health-care from the patient point of view. However, this level of understanding I had happily avoided until now. But whenever you find yourself churning through those hundreds of renal and other routine profiles, don't ever feel that all those normal ones don't matter. They may matter a lot to someone.

A plasma sodium of 141 meant a lot to me.