

Clinical Biochemistry News



ACBI



ACB

November 2014

Newsletter of the Association of Clinical Biochemists in Ireland
and the Association of Clinical Biochemists (Republic of Ireland Region)



Photo: Dr. Alan Balfe

‘The Drummer’ by Barry Flanagan on the grounds of the Royal Hospital Kilmainham venue for this year’s ACBI annual conference

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Newsletter will be posted on the ACBI website where hyperlinks will be available

From the President

Paula O'Shea

On behalf of the Association of Clinical Biochemists in Ireland (ACBI), I wish to welcome delegates to the 37th Annual Conference on this the 50th Anniversary of the Association. The venue for the 2014 Conference is the historic Royal Hospital Kilmainham. Built by Sir William Robinson in 1684, it celebrates its 330th anniversary this year.

I extend my gratitude and congratulations to Dr Martin Healy (Chair of the conference committee) and the committee members of St James's Hospital and the Coombe Women and Infants University Hospital for their dedication, enthusiasm and endeavour in organising such a comprehensive, stimulating and challenging scientific programme. Topics include translating data and research into health outcomes, inflammatory disease, vitamin D as an anti-inflammatory therapy, the application of next Generation sequencing technology to detect mutant DNA, through to patient empowerment and direct patient access to laboratory results.

This year Council has focussed on preparing members for statutory registration, workforce planning, training, and developing career pathways. To this end, I am most grateful to Dr Jennifer Brady, Orla Maguire and Dermot Deverell for successfully designing and developing a functioning secure "online CPD scheme", accessible to all members via the ACBI website. This facility will no doubt prove invaluable, permitting recording and maintenance of all CPD activities. I wish also to thank my fellow Council and Committee members who are the 'unsung heroes' of the Association, working tirelessly and giving so generously of their time.

Finally, I wish one and all a very educational, fruitful and enjoyable conference on this special occasion of the Association's 50th Anniversary.

Paula O'Shea

President, Association of Clinical Biochemists in Ireland



Photo:
Alan Balfe

ACBI 50th Birthday

2014 is the 50th anniversary of the founding of the Association of Clinical Biochemists in Ireland otherwise known as the ACBI. For this edition of the Newsletter we asked some members to share their reminiscences of the ACBI in times past.

We start off with Tony McGill retired Principal Clinical Biochemist, St. James's Hospital, Dublin who remembers the genesis of the annual conference

In the early days of the ACBI the social event of the year was an Annual Dinner which was scheduled to take place during the final week of the Trinity College MSc in Clinical Biochemistry course. In 1978 the late Des Kenny, then Principal Biochemist in Our Lady's Hospital for Sick Children, Crumlin, became Chairman of the Association. It was at his suggestion that the ACBI Council appointed John McSweeney and Tony McGill, the newly-elected Hon. Treasurer, to look at the feasibility of an annual conference. John invited Peter Woods of B.M. Brown's to organise a trade show to run in parallel with the scientific and social programme. The event was to be held at the Marine Hotel Sutton in October 1978.

The first conference, at which three guest speakers and a clutch of local speakers gave interesting papers, proved to be a critical if not financial success. When John McSweeney retired from the organising committee, the Council invited the late John Stafford to join the Treasurer in organising the next conference. The new duo found an appropriate venue at the La Touche Hotel in Greystones. It was decided to widen the scope of the trade exhibition by retaining control of the allocation of 'stands'. As a result of this choice, the conference made a small profit.

The dynamic duo remained in harness for the 1980 edition. It was then that they found the Grand Hotel Malahide. The trade show was expanded. The scientific programme blossomed to a full two days with more international speakers and a new Friday Evening Special social event was initiated. As John Stafford described the venture in his speech at the Annual Dinner on the Saturday night, we had achieved "pure magic". The owner of the Grand Hotel seemed to concur with that assessment as he sent his manager to the USA for a year to study the construction and operation of conference centres. This research came to fruition within a few years and the facilities are there for all to see.

We decided to remain at the Grand Hotel for the 1981 conference with similar success on the scientific, social and financial fronts. In 1982 John Stafford found that he could no longer contribute. Tony McGill soldiered on for another year. Paddy Quigley came on board during the process as understudy on the financial side. The venue was again in Malahide. The three early conferences at the hotel transformed the financial security of the Association. At this point Tony McGill decided to pass the baton on to another committee. It has evolved over the years into a major event in the scientific calendar in Clinical Biochemistry in Europe with many guest speakers from all over the world.

More reminiscences on next page

We continue with recollections from Paddy Quigley, retired Senior Clinical Biochemist, St. James's Hospital, Dublin remembering early adventures in organising the ACBI annual conference

My earliest recollection of an ACBI function is of the Annual Dinner in 1976. It was held in Fitzpatrick's Killiney Castle Hotel during the MSc course at Trinity. I had just enrolled on the course and had joined ACBI a few months previously. The guest of honour was a visiting lecturer. The late Marion Doolin was Chairman of the Association and presided over a most enjoyable evening. The General Secretary of the MLTA (now MLSA) Cyril Keogh, and his wife Roma, who was then Principal Biochemist at St. Luke's Hospital Rathgar, were guests and in his speech, Cyril invited the entire assembly back to the house for post-prandial drinks. Many of us availed of the invitation and the party went on late, some of the guests reputedly using the swimming pool as dawn came!

In 1978, the Association held its first Conference, at the Marine Hotel, Sutton. This was the brainchild of the late Des Kenny, who was devoted throughout his career, up to his untimely death, to Clinical Biochemistry, nationally and internationally. It was sponsored by B M Brownes under its director Peter Woods and organised by John McSweeney of Sir Patrick Dun's Hospital. My memory is of a brilliant presentation by Professor Vincent Marks, who was the keynote speaker. He had achieved notoriety for using the term "Healthcare Industry" at a time when those words in the same sentence would not be acceptable to many in the medical establishment.

The following year I moved from my position at the National Maternity Hospital to Sir Patrick Dun's Hospital. The late John Stafford who, together with Tony McGill, was organising the 1979 Conference, took me under his wing and recruited me as an assistant in charge of the slides. The Conference took place at the La Touche Hotel Greystones. John asked me the day before the conference if I owned a slide projector. I did and he asked me to bring it along as a substitute. As it happened, the Kodak

Carousel projector, which had been borrowed from Sir Patrick Dun's Hospital, broke down on the first day and my projector was pressed into service until the fault was repaired.

In 1980 we moved to the Grand Hotel Malahide. This time I was put in charge of all the audio-visual operations. I collected from Halls Camera Shop in Abbey Street a KODAK Carousel Projector, an eight foot screen, a projector stand, two large loudspeakers with stands, a multi-input amplifier, three microphones with stands, several long rolls of electrical cable, and the *piece de resistance*, a piece of cutting edge technology of its day, a round-the-neck microphone, which could be draped around a speaker's neck, and while attached to a long lead, meant that the speaker could move around and still be heard throughout the room! I duly set up the equipment in the empty meeting room and tested it. During the papers I operated the projector, having obtained the slides from the speakers. The odd one was upside down and had to be corrected. Also the odd one stuck in the projector and I struggled to free it as all eyes looked on me.

Even though we had booked the room from Thursday to Saturday, the Hotel in its commercial wisdom had arranged to have a disco party in it on the Friday night. This meant that at 5.30 the Audio Visual setup had to be completely dismantled and stored overnight. The only place I could store it was in the bedroom occupied by Tony McGill, on the second floor!

That night we were bussed to Castletown House for a dinner. By the time we got back to Malahide it was about 2.00 am. I, in my wisdom had elected to drive back to my flat and arrived there about 3.00 am. I set my radio alarm for 6.00 am, planning to be at the hotel for 7.30 to set up the AV equipment and to have everything ready for the first paper at 9.00 am. I woke up, very tired, looked at the radio and, shock horror,

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it was 9.35 am. I drove to Malahide as fast as I could and arrived at the hotel just as the conference had gone into the 10.30 coffee break. I was mortified. What had happened was as follows: Tony McGill woke up about 8.00 am, looking forward, no doubt, to a full Irish breakfast. He noticed that none of the equipment had been taken from his room. He got some people together, transferred the equipment to the meeting room and set it up as well as he could in the circumstances. It was not a pretty sight! I spent the break reassembling the set-up and tidying up where I could.

ACBI and ACB (Republic of Ireland Region)

This year marks the 50th Anniversary of the foundation of ACBI and we have the 37th Annual Conference. Over the years much has changed. The equipment exhibition has gone and information technology has made great progress. Yet the conference has come about each year, through the efforts of small teams of people, with the financial support of the Diagnostics Industry, to produce a two day meeting of quality, affording participants the opportunity to network and to socialise in an enjoyable atmosphere.

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Some photos from past ACBI conferences



Dr. Peadar McGing, Principal Clinical Biochemist in the Mater Hospital remembers people and events of past conferences

I began work as a Clinical Biochemist, in the Mater Hospital, on the 7th of December, 1981. My experience of mainstream Clinical Biochemistry was zilch, and my knowledge of the subject was based on a few lectures from Dr Barry Duggan during my undergraduate years plus some conversations pre-interview with Dr Seán Maguire. I had spent the previous nine months in a specialist lab in St James's Hospital Haematology Department, under the direction of Principal Biochemist Dr Seán O'Broin, performing microbiological B12 and folate assays and occasionally ferritin immuno-assay.

My initial learning was very much on-the-job and despite my lack of experience when I started I was working on-call within six weeks. No long structured programmes then, and if INAB had been calling in those days there would not have been a shred of paper documenting my witness audits etc. With the support of excellent colleagues I learned pretty fast though and despite the distraction of completing my PhD I was really enjoying being a Clinical Biochemist. Soon it was the autumn, and that meant conference time. I don't remember when I joined ACBI, though I'm sure it was early on, but I do remember going to my first conference. I was delighted when I was told that I would be going and I learned a lot from that 1982 visit to the Grand Hotel in Malahide.

To me the ACBI Annual Conference is one of ACBI's key contributions to laboratory medicine in this country. It is a top-class two-day conference combining excellent speakers and a chance to network with colleagues. One avenue of networking is through the social events and I've many memories of over three decades of enjoying the company of colleagues as we discussed biochemistry (a little) along with other important facets of life (and not just sport). Through ACBI conferences we've enjoyed many different activities and

venues, two that stand out for me being the splendid settings of Dublin Castle and Belfast City Hall. I've memories of colleagues singing, dancing, wearing odd-looking wigs, and playing music (but I'll keep all details and photos for the reveal-all book).

Once I mention music I must remember one giant of our profession, the tin-whistle-playing Des Kenny. I was clearing an old file recently and came across an abstract from our 1995 conference in which Des was explaining the world wide web and promoting its use – imagine him telling us that there was a lot of information to be got from the web and that, wait for it, some organisations and individuals were starting to put clinical chemistry information on the web which we could all access. My youngest daughter was born that year. She's now in College and just as she has grown from the six-month baby my wife and I left with her granny while we attended that ACBI Annual Dinner, so has the role of computing in clinical laboratories. ACBI played a key role in that too and in 1992 the Association hosted the 9th International Conference on Computing in Clinical Laboratories (CCL'92). The last line of Des's 1995 abstract stated – “A prototype WWW web page is in preparation.” For this year's conference speakers will send their abstracts and biographical details (hopefully) by electronic mail and the conference booklet will be prepared on a computer before final printing. At the time of writing most of us will have already registered and paid “on-line” via an ACBI website that has evolved hugely since that experimental homepage hosted on Des's personal domain. After the conference is over we will be able to re-read many of the posters on our own computers.

Though technology has changed our work and many facets of the conference there is no substitute for face to face meetings. ACBI has hosted many distinguished visitors from near

and far. Many authors of key work and textbooks have shared their knowledge with us. James Westgard, the leading guru of quality control, came from the United States (thanks to Nuala McCarroll) and generously shared his teachings, and most of the leading clinical biochemists and chemical pathologists from the UK came, some being regular contributors and attendees. I must mention one speaker who was a favourite of mine (and apologies to very many others whose lectures and company have given me great pleasure). Mike Hallworth has written books and many papers on Therapeutic Drug Monitoring and I have enjoyed his lectures on many occasions but it is his conference after-dinner few words 'on behalf of the guests' that I will treasure in my memory for a long time.

My first presentation to the conference was an oral presentation in 1983. Then posters became the mode of presentation for 'ordinary' scientists like yours truly. My first poster in

1985 was prepared in very big print on separate A4 pages which were individually stuck up on a board. This year will see my twenty-third poster presentation at ACBI and it will be a single very big rolled up single 'page' produced on my computer and then emailed to a printer. Before finishing these brief reminiscences I must state my strong support for all ACBI members presenting posters at our conference. It is so important to share our work and is a focus for inter-laboratory discussions that helps us and helps our colleagues.

This is a brief personal jump through three decades of my attendance at ACBI Annual Conferences. In that time I've been an attendee, poster presenter, session chair, poster judge, and photographer. But more than all those activities I've just enjoyed the company of colleagues and the knowledge and lift I get from my attendance. Happy Birthday ACBI – here's to many more years of ACBI conferences.

More photos from past ACBI conferences



IFCC WorldLab Istanbul 22 - 26 June 2014

Report by Dr. Graham Lee, Principal Clinical Biochemist, Mater Misericordiae University Hospital, Dublin 7

Istanbul was the venue for the 2014 IFCC (and Laboratory Medicine) Worldlab congress. Although the timing of this event coincided with the World Cup soccer finals, there was no indication of apathy amongst the laboratory medicine community during this four day meeting as delegates from 111 countries converged at the Istanbul Conference centre for presentation, discussion and debate on topics across a diverse 'laboratory medicine' programme. This meeting held appeal not only for those with primary interests in clinical chemistry but for all sub-specialities within laboratory medicine, as evidenced by sessions on infectious diseases, autoimmunity, haemostasiology, molecular diagnostics. Poster presentations were equally diverse in content. Sessions on Evidence Based Laboratory Medicine, EQA, ISO15189 accreditation and Continuous Quality Improvement also engendered wide-ranging interest!

The first day of the scientific programme included a morning session entitled 'Laboratory Medicine Practice Guidelines: A Multidisciplinary approach'. Dr Rita Horvarth (Australia) chaired and opened the session with a presentation asking 'Are guidelines guiding us on how to utilise laboratory tests? In this presentation we were given insight into the problems that guidelines can cause, not only by the number of guidelines published, but disagreement and conflicting evidence when there is more than one guideline. This may often provoke the question 'Which guidelines can we trust'? Dr Horvarth described the AGREE instrument tool that can be used to 'assess the methodological rigour and transparency in which a guideline is developed'. She further discussed that even if guidelines have been meticulously developed and disseminated, this does not ensure their implementation and adoption. An analogy was made to a quote by Joseph Schumpeter, 1939 i.e. 'It was not enough to produce satisfactory soap, it was also necessary to

induce people to wash' to explain that guidelines need to be employed (applied), in effort to improve health or achieve the desired outcome. To this end, the Guideline Implementability Assessment (GLIA) tool was also mentioned. Continuing the theme of appraising the evidence, Dr Andrew Don-Wauchope also discussed the GRADE project i.e. Grading of Recommendations Assessment, Development and Evaluation working Group which since 2000 has developed an approach to grading the quality of evidence and strength of recommendations. In his presentation he described the criteria used to grade the strength of evidence (Risk of Bias, Consistency, Directness, and Precision) and how it can be difficult to assess the (direct) impact of a diagnostic test on outcome, given the numerous variables between test reporting and patient outcome.

Molecular Genetics permeated throughout the four day meeting and featured examples of how the latest technologies, including Next Generation Sequencing and biochip array methods, have emerged into laboratory medicine diagnosis. Dr Colin Graham (Northern Ireland Regional Genetics) presented on the use of one such technology, employing multiplex PCR and biochip array hybridization (Randox iplex), for the screening of Familial Hypercholesterolaemia. This methodology was verified as an alternative to Mass Spectrometry (Maldi-TOF) based approaches for identifying SNPs, that allows simultaneous detection of up to 40 mutations (70-80% of common mutations) in the LDL-receptor, Apolipoprotein B and Proprotein convertase Subtilisin/Kexin type 9 (PSK9) genes, in which FH causative mutations have been identified extensively. Other insights into the expanding era of molecularisation focused on pre-analytical, analytical and post-analytical challenges facing molecular diagnostics. The latter was discussed in the context of the 'bioinformatics challenges' arising from the generation of large amounts of data when massively parallel sequencing (aka NGS) approaches are used. Dr T Rattei (Austria) discussed the limitations of software available for data processing (and storage), the need for

establishing standardised approaches (pipelines) to processing data (given the variation in such approaches) and the presentation of filtered data as biologically and clinically useful (relevant) 'information' on which appropriate interpretation and advice can be offered. Generation of information from data is clearly a pan-pathology goal!

A workshop on ethics and scientific writing, hosted by Dr Nader Rafai (Clinical Chemistry Editor in Chief) began with alarming examples and statistics regarding plagiarism and data fabrication, including the deliberate use of incorrect statistical tests to generate significant results. Dr Rafai also described how such misconduct has caused not only retraction of scientific publications but on occasion can be a legal infringement, leading to prosecution and imprisonment. Such misconduct may also have the potential for negatively changing public perception to science (research and funding!). Algorithms and tools are however available for assessing such scientific misconduct e.g. COPE, Turnitin, déjà vu and thereby preventing publication! In the second half of the workshop Dr Rafai also gave a very clear and comprehensive guidance to effective scientific writing and gave useful tips to consider when preparing manuscripts for journal publication! Delegates were referred to two useful publications: Publication Ethics (Clinical Chemistry Editorial Standards, Clin Chem 2009; 55(1): 1-4 and Preparation of Manuscripts for Publications: Improving Your Chances for Success Clin Chem 2009; 55(7); 1259-64.

Day 3 of the meeting featured a session entitled 'Established and Emerging Markers of Renal Function-Chronic Kidney Disease- Best Laboratory Practice'. Dr Graham Jones (Australia) chaired and opened the session with an overview of eGFR equations (theory and practice). Delegates were reminded of the superior 'accuracy' of CKD-EPI compared to the MDRD equation, as defined by the attainment of a higher % of individuals with eGFR within 30% of the reference GFR method. Although CKD-EPI is more accurate for eGFR >60 it has been derived from a study cohort including limited numbers of elderly and racial sub-groups. Dr Jones therefore summarised that the equation's performance is not optimal for all populations! Furthermore, the question was raised Which race adjustment factor should be used for persons of mixed race? Considering the available evidence

regarding eGFR equations, Dr Jones concluded that three options exist for laboratories: (1) to use CKD-EPI in all ages (2) to not report eGFR if >75 years of age OR (3) to use a different formula in this age group. In a subsequent talk by Dr Edmund Lamb (UK) differences between the MDRD and CKD-EPI equation were given further scrutiny, in terms of the significant reclassification of patients (without albuminuria) from stage 3A to stage 2, as may be expected given the negative bias of the MDRD equation. Dr Lamb also mentioned that since 2009, studies have attempted to validate CKD-EPI in older persons (Kilbride et al., 2012). Delegates were also given prior insight to the most recent NICE guidelines on CKD (July 2014) which gave the same recommendation as KDIGO 2012 regarding the measurement of Cystatin C i.e. for adults with eGFR_{cre} 45-59 ml/min/1.73m² and no other markers of kidney damage and for whom 'confirmation' of CKD is required. If GFR_{cys} is also <60, CKD diagnosis is confirmed (and *vice versa* if >60). Financial implications of this recommendation are perhaps not so nice for the laboratory? Dr Jones closed the session with a discussion of Enzymatic vs Jaffe (blank corrected, IDMS traceable) creatinine assays and reported no difference on patient monitoring with either assay. The study did however show that discrepancies between results (J>E) were greatest for lower creatinine concentrations (<50 µmol/L). Enzymatic assays were also reported to decrease the frequency of diagnosis <60 (from 27% to 24%) in the population study.

Dr. Sean Cunningham, Consultant Clinical Biochemist (retired), St. Vincent's University Hospital, Dublin 4

Report on POCT Symposium at EuroLab Focus

A very good symposium entitled "POCT: Its impact on patients and laboratories" took place on the final day of the meeting. The main topics covered in this session were tight glycaemic control (TGC) in critical care, the precision / accuracy requirements for glucose meters and quality control.

Since Van den Berghe's study in 2001 showed that using frequent point of care glucose testing and i.v. insulin to maintain tight glycaemic control resulted in improved mortality, morbidity and length of stay outcomes in critical care patients, regardless of whether they had diabetes, TGC has become common worldwide. However, more recent studies,

including meta-analyses and some prospective studies suggested that TGC was harmful in terms of some outcomes, for instance, hypoglycaemia. The original Van den Berghe study used blood gas analysers and arterial specimens to measure glucose, whereas most recent studies have used glucose meters and a mixture of specimen types. Glucose meters have not been FDA approved for use in TGC in critical care patients.

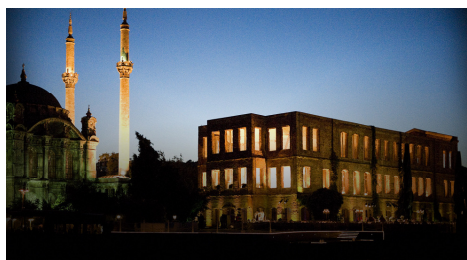
Both speakers discussed the issues of how precise and accurate glucose meters should be for this and other purposes. David Bruns reported studies showing that the more frequent and precise the glucose measurements, the better the outcome for patients and he advocated continuous glucose monitoring as a means to achieve this. David Sachs reviewed guidelines on the accuracy of glucose meters. Although recent guidelines have all tightened the requirements, they differ in the detail of the accuracy required. Both ISO 15193, which deals with the requirements for meters for home monitoring, and CLSI POCT12-A3, which deals with requirements for glucose meters in hospital use, were revised in 2013. In early 2014, the FDA published two draft guidelines, one for home meters and one for hospital meters, which tightened accuracy requirements still further. This has given rise to considerable debate and is undergoing a consultation process; some submissions take the view that some of the targets are unachievable. (A Working Group of the IFCC POCT Committee, of which SC is a member nominated by ACBI, is working on the overall requirements for glucose meters in critical care). For the present, CLSI POCT12-A3 is the most relevant guideline for hospital glucose meters (this states that, when compared to a laboratory method (traceable to a reference method), 95% of glucose meter results should be within $\pm 12.5\%$ when glucose is ≥ 5.55 mmol/L and within ± 0.67 mmol/L when glucose is < 5.55 mmol/L. Also, 98% of glucose meter results should be within $\pm 20\%$ when glucose is ≥ 4.2 mmol/L and within ± 0.83 mmol/L when glucose is < 4.2 mmol/L).

Dr Sverre Sandberg of Bergen, Norway, discussed quality control of POC instruments. He stated that most guidelines recommend daily QC for strip based POCT and less frequently for cartridge based POCT (although electronic QC checks should be daily). Guidelines all state that POC testing should be included in an EQA scheme, but they do not

recommend how this should be done. In traditional EQA, the specimens which are circulated to participants may not resemble blood specimens. Dr Sandberg discussed an alternative approach of sending split blood samples to GPs and using the results to estimate POCT method bias and individual participant bias.

The final day of the meeting also included a session entitled 'New Insights in Quality Management of the Total Testing Process, chaired and introduced by Dr Mario Plegani. An 'hour glass' model currently depicts the frequency of errors occurring in the total testing process (TTP: Pre-pre-Analytical to Post-Post Analytical), with most errors attributable to the physician ordering the correct test and obtaining the correct interpretation. The need was highlighted in the areas of result interpretation and advice on the choice of examinations, repeat frequency and what to do next? The session continued with discussions on Quality Indicators (QIs), how they can be defined (rationale for measurement, performance goals, how to measure etc) and current harmonisation efforts to ensure that QIs are patient-centred, consistent with ISO15189 requirements and that they address all stages of the TTP. Delegates were referred to Harmonisation of Clinical Indicators in Laboratory Medicine (Clin Chem Lab med, 2014) and www.ifcc.mqi.com. The session ended with a message that harmonisation efforts should not just be concentrated on methodology but on all aspects of TPP including reference ranges and investigative protocols etc!

Istanbul has no shortage of spectacular sights and attractions, including the Marmara Esma Sultan Mansion, which was the venue for the conference banquet. Delegates enjoyed Turkish cuisine in an open air event which was perfect for enjoying the views across the river Bosphorus and the Bosphorus suspension bridge linking Europe and Asia. This event gave new meaning to Turkish delight! The meeting ended with thoughts of the next Worldlab IFCC meeting, Durban, South Africa 2017.



**The Marmara
Esma Sultan
Istanbul**

Royal Hospital Kilmainham – Venue for ACBI 2014

The Royal Hospital Kilmainham (RHK) was designed by Sir William Robinson (1645-1712), official State Surveyor General of Ireland. Marsh's Library in Dublin and Charles Fort in Kinsale are some other surviving examples of his architecture. The building was commissioned by the Duke of Ormonde, James Butler, Lord Lieutenant of Ireland (1610-1688). It was built as a home for disabled soldiers and was inspired by Les Invalides built in Paris a few years earlier. It consists of four unbroken ranges enclosing a courtyard where the soldiers could exercise. The enclosed arcades around the perimeter correspond to passages on the floors above. The building was completed and opened in 1684. Built at a cost of £23,550 the money was raised from "a levy of sixpence in the pound out of the pay of every soldier and officer on the military establishment of Ireland."

The land on which the RHK is built and the surrounding Kilmainham area is rich in history. The name Kilmainham is derived from *Cill Mhaighneann*, meaning "St Maighneann's church". The church or monastery was established in the 7th century and was an important place of pilgrimage. In 1014 the High King of Ireland, Brian Boru, bivouacked on Bully's Acre in the grounds of the RHK prior to the Battle of Clontarf, exactly 1,000 years ago. In 1174 Strongbow (Richard de Clare, Earl of Pembroke), who had arrived in Ireland as part of the Norman invasion, established the Knights Hospitallers Priory in Kilmainham. It survived for about 365 years until the dissolution of the monasteries by Henry VIII in the 1530's.

The site of Bully's Acre holds Dublin's oldest public cemetery. Located just beyond the Richmond Tower on the Hospital grounds there has been a graveyard on this site for at least 1,000 years. It is thought that some of those killed at the Battle of Clontarf are buried here including the son and grandson of Brian Boru. Over time it evolved into a pauper's cemetery and it is estimated that there are over 100,000 bodies buried here. It has a colourful history with body-snatching rife in the 18th and 19th century. Robert Emmet, executed nearby in Thomas Street, was briefly interred in Bully's Acre before his body was removed. The whereabouts of his subsequent burial remains a mystery to this day. The cemetery was eventually closed to public use after the cholera epidemic of 1832.

The Irish Museum of Modern Art (IMMA) was opened in 1991 by Taoiseach Charles Haughey. Housed in the Royal Hospital Kilmainham the museum is the national institution for contemporary art and its permanent collection contains almost 1700 works.

Upcoming Meetings

Life Sciences Conference
15-16 December 2014
Education Academy, The
Royal London Dental Hospi-
tal, Whitechapel, London
<http://goo.gl/XH52WZ>

European Atherosclerosis
Society: EAS 83. March 22
-25 2015, Glasgow UK
<http://goo.gl/hmShKv>

Vitamin D: Moving Toward
Evidence-Based Decision
Making in Primary Care
December 2-3, 2014, NIH
Bethesda, Maryland
<http://goo.gl/VnDu1S>

British Mass Spectrometry
Society: 36th Annual
Meeting. Introduction to
Mass Spectrometry 14th -
15th September 2015. Sci-
entific Meeting 15th-17th
September 2015. Univer-
sity of Birmingham, UK.
<http://goo.gl/4oAn4q>

FILM 2015: Frontiers in
Laboratory Medicine. Aus-
tin Court, Birmingham,
27th-28th January 2015
<http://goo.gl/5f9Ame>

Diabetes UK Professional
Conference. 11-13 March
2015. ExCel, London, UK
<http://goo.gl/5Ucv6j>

Members' Publications

Hameed A, **Brady JJ**, Dowling P, Clynes M, **O'Gorman P**. Bone disease in multiple myeloma: pathophysiology and management. *Cancer Growth Metastasis*. 2014 Aug 10;7:33-42.

Cotter AG, Sabin CA, Simelane S, Macken A, Kavanagh E, **Brady JJ**, McCarthy G, Compston J, Mallon PW; HIV UPBEAT Study Group. Relative contribution of HIV infection, demographics and body mass index to bone mineral density. *AIDS*. 2014 Sep 10;28(14):2051-60.

Laird E, McNulty H, Ward M, Hoey L, McSorley E, Wallace JM, Carson E, Molloy AM, **Healy M**, Casey MC, Cunningham C, Strain JJ. Vitamin D deficiency is associated with inflammation in older Irish adults. *J Clin Endocrinol Metab*. 2014 May;99(5):1807-15.

Kilbane MT, **O'Keane M**, Morrin M, Flynn M, McKenna MJ. The double-edged sword of vitamin D in Ireland: the need for public health awareness about too much as well as too little. *Ir J Med Sci*. 2014 Sep;183(3):485-7.

Ahern T, Khattak A, O'Malley E, Dunlevy C, **Kilbane M**, Woods C, McKenna MJ, O'Shea D. Association between vitamin D status and physical function in the severely obese. *J Clin Endocrinol Metab*. 2014 Jul;99(7):E1327-31.

Noctor E, Crowe C, Carmody LA, Kirwan B, O'Dea A, Glynn LG, McGuire BE, **O'Shea PM**, Dunne FP. ATLANTIC-DIP: prevalence of metabolic syndrome and insulin resistance in women with previous gestational diabetes mellitus by International Association of Diabetes in Pregnancy Study Groups criteria. *Acta Diabetol*. 2014 Jul 8. [Epub ahead of print].

Lee GR, Jhanji S, Tarrant H, James S, Pearse RM, **Fitzgibbon M**. Peri-operative troponin monitoring using a prototype high-sensitivity cardiac troponin I (hs-cTnI) assay: comparisons with hs-cTnT and contemporary cTnI assays. *Ann Clin Biochem*. 2014 Mar;51(Pt 2):258-68.

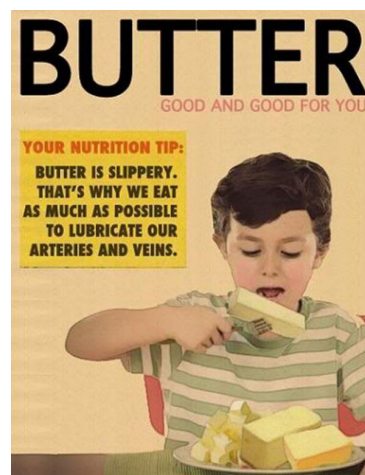
Around the Web

If you want a central source of Ebola information go to www.medscape.com/resource/ebola. Lots of informative articles such as 'Ebola: Your Lingering Questions', 'Evaluating Patients for Ebola: CDC Recommendations for Clinicians' and 'How Is Ebola Transmitted? WHO Offers Guidance'. News articles also here e.g. on the decision of the Australian Government to ban West African visas. There is also a step-by-step [video](#) of how to put on and take off personal protective equipment.

While the panic around Ebola continues to rise it is easy to forget that there are other infectious diseases, such as malaria, that kill far more people. This article from [Salon](#) describes the worrying development of multidrug-resistant bacteria particularly in the context of tuberculosis. With an estimated 9 million infected in 2013 and an average 3.5% rate of drug resistance in new cases it's a battle to stay ahead.

On the lighter side

A new take on butter from www.dailyhaha.com/



Recruitment ad (also from dailhaha)

