

Clinical Biochemistry News



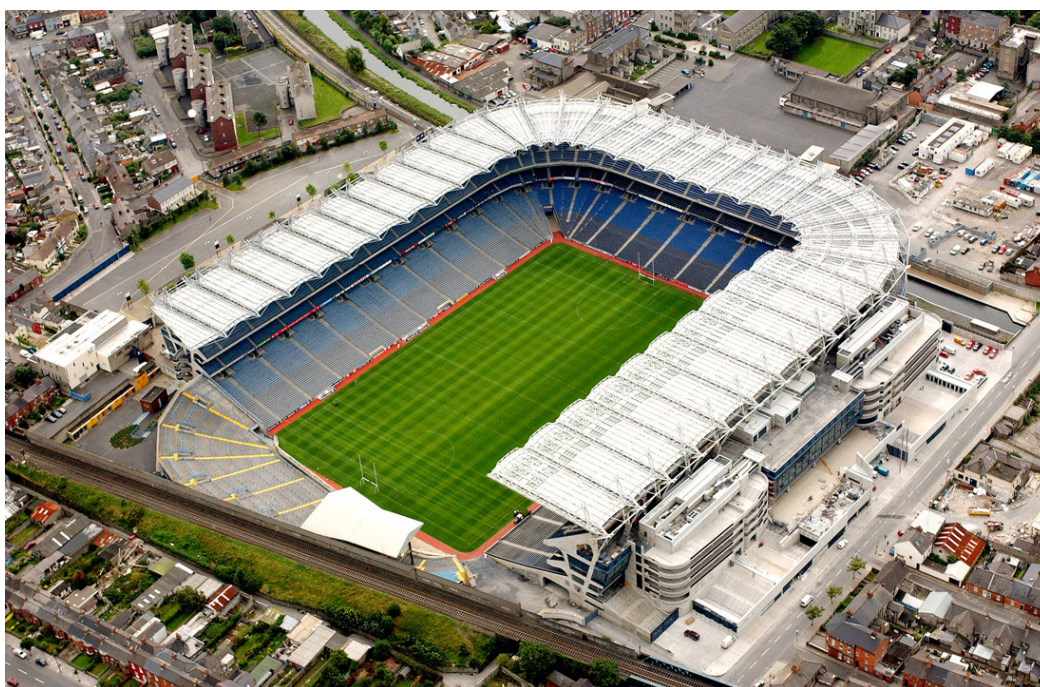
ACBI



ACB

June 2012

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



Croke Park Stadium, Dublin

This year's venue for the 35th Annual Conference of the ACBI
(5th and 6th of October)

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From the President

Ruth O'Kelly

I would like to welcome you to this edition of Clinical Biochemistry News, the newsletter of the Association of Clinical Biochemists in Ireland.

We are all facing difficult times with the extended working day and the early retirement of many staff. I would like to take this opportunity to thank those who are retiring for your hard work over the years of your career. Clinical Biochemistry in Ireland is at a very high standard and it is thanks to those who have worked in the profession for many years. We wish you well in your retirement and hope we will continue to meet you at the annual conference and other meetings.

We continue to maintain and increase our links with our European and International colleagues through the IFCC and EFLM (formerly EFCC). These links were originally forged by the late Des Kenny (Consultant Clinical Biochemist, Our Lady's Hospital for Children) and we are proud to follow in his footsteps. This year, 2 of our members have been accepted as corresponding members of the Conference and Molecular Diagnostics committees. In addition, members are assisting in a Working Group on laboratory errors set up by Mario Plebani, who spoke so well on this topic at our annual conference last October.

Labs are Vital is an important initiative supported by Abbott. In a joint venture with the Academy, ACBI members manned the Labs are Vital stand at the recent Young Scientist exhibition. This was a great opportunity to inform second level students about clinical biochemistry.

The Annual conference is being organised by our colleagues in Beaumont Hospital and chaired by Ger Collier. Some of you will have attended the ACB (Republic of Ireland) meeting in St Vincent's University Hospital earlier in the year which was also organised by Ger; this was an excellent meeting so we are in good hands. The date and venue for the annual conference is the 5th/6th October at the Aviva stadium. This change in venue, from the usual hotel setting, will invigour the conference and ensure it is the usual resounding success. As usual I would encourage posters for our annual conference. Every day work can grind us down, yet a lot of what a Clinical Biochemist does on a daily basis from audits to method evaluation to interesting case histories should be shared with your colleagues through posters.

In these difficult times it is hard to find the opportunity to attend scientific meetings. Yet this is an essential activity not only to maintain your CPD and such meetings are an opportunity for informal exchange of knowledge and for building up contacts. Never underestimate the value of knowing who to ring if you have a small issue in your work. However, attendance at such meetings is dependent on both time and money. We can't do much about the first except to remind senior members of staff to somehow ensure that junior staff are

allowed time off. In addition Council are looking at the introduction of a conference bursary aimed, in the first instance, at Basic grade and Senior Clinical Biochemists to give financial assistance to attend scientific meetings.

There have been no moves recently in the Laboratory Modernisation process due to changes in HSE structure and staffing. Our Minister for Health, Dr James Reilly has recently (28th March) written to the HSE to ask them to prepare proposals for the creation of hospital groups and eventually hospital trusts. Changes in the HSE also include the abolition of the HSE board and formation of Directorates. This is part of the move to universal hospital care. Council members will continue to represent our profession at every opportunity during these changing times

We have added some new members to Council this year. There are now ten members including myself – Orla Maguire, Rita O'Hara, Paddy Quigley, Dr Sean Cunningham, Paula O'Shea, Dr Marguerite McMahan, Dr Martin Healy, Brendan Byrne, Dr Jennifer Brady. We meet at least every 6 weeks throughout the year. Council have recently agreed to a reduced membership rate for retired members. We hope this will encourage our recently retired members to keep in touch.

I would like to congratulate all those who are working their way towards fellowship of the Royal College of Pathologists and are passing the many exam components.

The ACBI website is well managed by Dermot and Deirdre Deverell and I would encourage you to use this resource. As well as having the facility to pay your subscription and register for meetings, there is access to CCLM, CRB Clinical Biochemist reviews and Clinical Chemistry journals.

An important process that is going on in the background is the registration process under the auspices of CORU which is the umbrella body which will be responsible for regulating health and social care professionals. The registration process includes the Health and Social Care Professions Council and the 12 Registration Boards. Its role is to promote high standards of professional conduct, education, training and competence in order to protect the public. Dr John O'Mullane has been inducted as an observer to CORU council and will become a full member when proposed legislation is passed by the Dail.

The ACBI CPD scheme has been set up in a pilot form and I would like to thank those who have volunteered to take part in the pilot. This CPD programme will be an essential process of our registration process and will assure our patients that we are contributing to their care at the highest possible standards.

I look forward to seeing you at scientific meetings throughout the year.

EFCC News

EFCC Statement:

The EFCC has changed its abbreviation to EFLM, European Federation of Clinical Chemistry and Laboratory Medicine and a new logo is also replacing the old one.

The Executive Board of the European Federation of Clinical Chemistry and Laboratory Medicine has become aware that the abbreviation EFCC is often misidentified as IFCC by other international organizations, National Societies and other stakeholders as well as by individuals from the profession.

In the past, this has caused confusion and sometimes has undermined the identity of the Federation.

After consultation with National Representatives and Presidents of our Member Societies, the Executive Board has agreed to adopt EFLM to replace EFCC as the acronym to describe the Federation. The full name of the Federation remains unchanged: European Federation of Clinical Chemistry and Laboratory Medicine.



IFCC News

Two new IFCC Task Forces have been set up recently

Distance Learning (C-DL):

Chair Ms. Janet Smith

Terms of reference

To develop an IFCC strategy for distance learning, in partnership with the Communications and Publications Division Committee on Internet and eLearning (CPD C-IeL);

To provide educational material which can be used for on-line learning;

To solicit suggestions from National Societies, IFCC Committees, Task Forces and Working Groups to identify distance learning topic areas of value to IFCC;

To identify and evaluate existing distance learning programmes in relevant areas and, with permission and collaboration, modify these as necessary to fit IFCC requirements.

To develop new distance learning programmes where none already exist.

2. IFCC New Task Force on Point of Care Testing (TF-POCT):

Chair Rosy Tirimacco

Terms of reference

To promote quality in the use, performance, interpretation and reporting of POCT across the full spectrum of clinical chemistry and laboratory medicine



Members' Publications

Vitamin D deficiency in Crohn's disease: prevalence, risk factors and supplement use in an outpatient setting.

Suibhne TN, **Cox G**, **Healy M**, O'Morain C, O'Sullivan M.

J Crohns Colitis. 2012 Mar;6(2):182-8. Epub 2011 Sep 25

mTOR in breast cancer: Differential expression in triple-negative and non-triple-negative tumors.

Walsh S, Flanagan L, Quinn C, Evoy D, McDermott EW, Pierce A, **Duffy MJ**.

Breast. 2012 Apr;21(2):178-82. Epub 2011 Sep 29

Trastuzumab induces antibody-dependent cell-mediated cytotoxicity (ADCC) in HER-2-non-amplified breast cancer cell lines.

Collins DM, O'Donovan N, McGowan PM, O'Sullivan F, **Duffy MJ**, Crown J.

Ann Oncol. 2011 Nov 5. [Epub ahead of print]

Reference standard for serum bile acids in pregnancy.

Egan N, Bartels A, Khashan AS, Broadhurst DI, Joyce C, **O'Mullane J**, O'Donoghue K.

BJOG. 2012 Mar;119(4):493-8. doi: 10.1111/j.1471-0528.2011.03245.x. Epub 2012 Jan 18.

Upcoming meetings

4th World Congress on Controversies to Consensus in Diabetes, Obesity, and Hypertension (CODHy)

Dates: 08 Nov 2012 → 011 Nov 2012

Location: Barcelona, Spain

Web: www.codhy.com/2012/

Topics: Diabetes, Obesity, Hypertension

World Congress of Clinical Lipidology

Dates: 06 Dec 2012 → 08 Dec 2012

Location: Budapest, Hungary

Web: www.clinical-lipidology.com

Topics: Diagnosis, Drug Therapy, Diet, Adverse Events, Compliance

The American Institute for Cancer Research Annual Research Conference 2012 on Food, Nutrition, Physical Activity & Cancer

Dates: 01 Nov 2012 → 02 Nov 2012

Location: Washington DC, United States

Web: www.uicc.org/aicr-annual-research-conference-2012-food-nutrition-physical-activity-cancer

Topics: Cancer Research, Education, Nutrition, Physical Activity

Journal Watch



Recent Guidelines

Personal considerations on the 2011 American **Thyroid** Association and the 2007 Endocrine Society pregnancy and thyroid disease guidelines.

Glinoeer D.

Thyroid. 2011 Oct;21(10):1049-51. No abstract available

The new American Thyroid Association Guidelines for thyroid disease during pregnancy and postpartum: a blueprint for improving prenatal care.

Haddow JE.

Thyroid. 2011 Oct;21(10):1047-8. No abstract available

Guidelines of the American Thyroid Association for the diagnosis and management of thyroid disease during pregnancy and postpartum.

Stagnaro-Green A, Abalovich M, Alexander E, Azizi F, Mestman J, Negro R, Nixon A, Pearce EN, Soldin OP, Sullivan S, Wiersinga W; American **Thyroid** Association Taskforce on **Thyroid** Disease During Pregnancy and Postpartum.

Thyroid. 2011 Oct;21(10):1081-125. Epub 2011 Jul 25.

American Cancer Society Guidelines on nutrition and physical activity for cancer prevention: reducing the risk of cancer with healthy food choices and physical activity.

Kushi LH, Doyle C, McCullough M, Rock CL, Demark-Wahnefried W, Bandera EV, Gapstur S, Patel AV, Andrews K, Gansler T; American Cancer Society 2010 Nutrition and Physical Activity **Guidelines** Advisory Committee.

CA Cancer J Clin. 2012 Jan-Feb;62(1):30-67. doi: 10.3322/caac.20140

European Diabetes Working Party for Older People 2011 clinical guidelines for type 2 diabetes mellitus. Executive summary.

Sinclair AJ, Paolisso G, Castro M, Bourdel-Marchasson I, Gadsby R, Rodriguez Mañas L; European Diabetes Working Party for Older People.

Diabetes Metab. 2011 Nov;37 Suppl 3:S27-38. Review

Waiting for the National Cholesterol Education Program Adult Treatment Panel IV Guidelines, and in the Meantime, Some Challenges and Recommendations.

Martin SS, Metkus TS, Horne A, Blaha MJ, Hasan R, Campbell CY, Yousuf O, Joshi P, Kaul S, Miller M, Michos ED, Jones SR, Gluckman TJ, Cannon CP, Sperling LS, Blumenthal RS.

Am J Cardiol. 2012 Apr 10.

Comparison of the Prognostic Value of Peak Creatine Kinase-MB and Troponin Levels Among Patients With Acute Myocardial Infarction: A Report from the Acute Coronary Treatment and Intervention Outcomes Network Registry-Get With The Guidelines.

Chin CT, Wang TY, Li S, Wiviott SD, Delemos JA, Kontos MC, Peterson ED, Roe MT.

Clin Cardiol. 2012 Mar 20. doi: 10.1002/clc.21980. [Epub ahead of print]

Endocrine clinical practice guidelines in North America. A systematic assessment of quality.

Bancos I, Cheng T, Prokop LJ, Montori VM, Murad MH.

J Clin Epidemiol. 2012 May;65(5):520-5. Epub 2012 Jan 27

Management of hyperglycemia in hospitalized patients in non-critical care setting: an endocrine society clinical practice guideline.

Umpierrez GE, Hellman R, Korytkowski MT, Kosiborod M, Maynard GA, Montori VM, Seley JJ, Van den Berghe G; Endocrine Society.

J Clin Endocrinol Metab. 2012 Jan;97(1):16-38

A Peep into the Past Peadar McGing

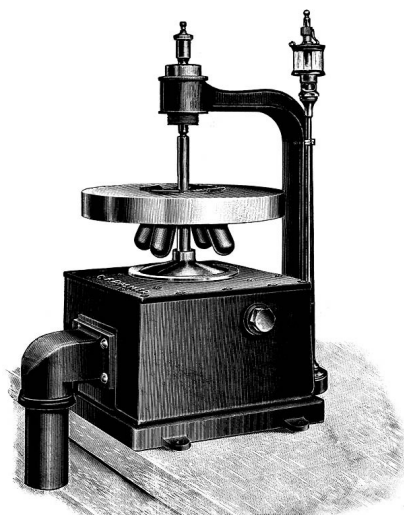
Peadar, a Principal Clinical Biochemist in the Mater Misericordiae University Hospital Dublin, takes a brief look at the history and origins of its Pathology Laboratory

Last year the Mater Hospital celebrated its 150th birthday. While researching the history of the Pathology Laboratory for a separate publication I found looking back, especially during a period when we were upgrading our Biochemistry equipment, really interesting. When Martin Healy sent me an email reminder of my promise to write something for the newsletter I thought a few brief snippets of history might appeal.

The 1904 Annual Report of the hospital carried the full text of the *Lecture of Sir Christopher Nixon at the opening of the Medical Session*. Dr. Nixon was Physician to the Mater Misericordiae Hospital and Professor of Medicine in the Catholic University School (now UCD) and he played a major role in establishing a Pathological Laboratory in the Mater.

At a time when official health policy for clinical laboratories in this country seems to be focussed on a factory type approach to diagnostic testing of patients it is interesting to read some of Dr. Nixon's comments on the added value of research.

“There are, indeed, some who would regard it as its exclusive function, that the object of a hospital should be to have its patients comfortably housed, fed, nursed, supplied with skilled medical and surgical advice, whilst scant, if any, encouragement should be given to... the carrying on of the work of scientific research. On the other hand the professional view with regard to hospital work is, that whilst its primary and fundamental object should be the well-being of the patient... the employment of all the scientific methods elaborated in our time for the purposes



An example of a water-driven centrifuge introduced in the 1930s

of investigation and research were so far from being antagonistic to the welfare of the patient that they should be regarded as important adjuncts in ministering to his wants.”

The report of The Pathological Department of the Mater Misericordiae Hospital, Dublin, for the year 1917 gives an interesting insight into laboratory work a century ago. There were no scientists - the first to be appointed was Isabelle Farrell, a Chemistry graduate employed in 1937 to “give a hand with chemical analyses” and given the job description ‘biochemist’.

In 1917 medical students attended classes in pathology and bacteriology twice a week and benefited from the latest technology. The Annual Report states that *the lectures were illustrated with lantern slides – an electric lantern having been recently installed in the*

Department and that the laboratory is adequately equipped with hot and cool incubators, steamers, sterilisers, embedding-ovens, microtomes, electrical and water driven centrifuges, dark-ground illumination apparatus, and all the requirements for modern clinical research.

A three-page list is given of the various numbers of tests on different sample types and what was found in each. An abbreviated extract is given below.

The following specimens are recorded as having been examined in the Department during the year:

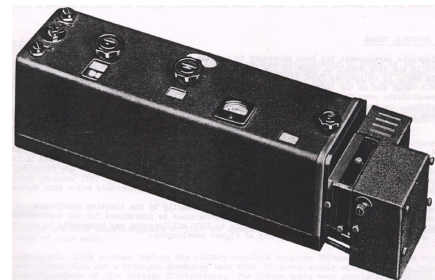
I. Urinalyses.....	2,652
Of these Albumin was found in	359
Sugar in.....	28
II. The number of specimens of sputum examined was...	203
III. Analysis of Gastric contents.....	10
The absence of hydrochloric acid was noted in.....	7
The presence of lactic acid in.....	4
Bile in.....	1
IV. The number of blood examinations made was-	
Complete Blood examinations	39
Simple or secondary anaemia was found in.....	13
V. Examinations of Blood for the diagnosis of Typhoid	
Fever by Widal's method	23
VI. The number of Blood-examinations by the	
Wassermann Test was.....	38
VII. Examinations of Pleural Effusions	26
VIII. Cerebro-spinal fluid examinations.....	4
The cultures were sterile in.....	4
Albumin was present in.....	4
Globulin in.....	3
IX. Examinations of throat-swabs.....	4
X. Preparations of autogenous vaccines.....	9
XI. Microscopic examination of tissues.....	500
XII. Autopsies.....	20 were carried out

For this article I'm grateful to Sr. Eugene Nolan who provided photocopies of the laboratory sections of the 1904 and 1917 Annual Reports. I hope that by looking at the past we can gain a small insight into what laboratories were like a century ago and the foundations laid by our predecessors on which our service today is built.

Trailblazers in Early Laboratory Instrumentation



First pH meter introduced by Arnold Beckman in 1934



The first commercially successful UV spectrophotometer, the Beckman DU, produced in 1941



The first commercial Technicon AutoAnalyser, produced in 1957. Precursor of the SMA 12/60 (1964) and the SMAC (1973)

ACBI SCIENTIFIC MEETINGS

Dates for the diary.....

6th September 2012 – A meeting celebrating Ned Barrett's contribution to Clinical Biochemistry (details below)

5th and 6th October 2012 – 35th Annual Conference of the ACBI (See flyer on page 11)

A meeting in honour of Prof. Ned Barrett, who retired this year, will be held in Dublin on September 6th next. Ned held the position of Consultant Clinical Biochemist and Head of the Biochemistry Department in Limerick Regional Hospital. His interests covered a wide range of topics and in recent years he played a prominent role in the implementation of standardised HbA1c reporting in Ireland. In this capacity he chaired a sub committee of the HSE's Diabetes Expert Advisory Group tasked with overseeing the roll out. For a couple of Ned's excellent presentations on the HbA1c story see www.hse.ie/eng/services/healthpromotion/Diabetes/NedBarrettHbA1cLecture.pdf and www.ieqas.ie/Pages/documents/7NedBarrettHbA1c.pdf.

Other committees Ned has served on include the Health Care Standards Consultative Committee which advises the NSAI (National Standards Authority of Ireland) and the National Renal Strategy Review Group. He has been a member of the IEQAS (Irish EQA Scheme) Steering Committee since its inception in 1981 and is currently Chairman.

The meeting will have a diabetes theme, both diagnostic and clinical, reflecting Ned's longstanding interest in this area. The programme is in the process of being drawn up. More information soon.

Professor Barry Duggan

We were all very sorry to hear of the death of Prof. Barry Duggan on April 27th last, aged 79. A graduate of UCC he gained a PhD from UCD in 1958 with a thesis entitled "A Study of the Cation Carrier in the Yeast Cell Wall" under the supervision of his nominating professor, EJ Conway FRS. He was subsequently awarded a DSc by the National University of Ireland for published work. After a period engaged in research in the United States and in UCD he took up the position of Consultant Clinical Biochemist, initially in St. Finbarr's Hospital Cork, and subsequently in Cork University Hospital. He remained in this post from 1971 until his retirement in 1997 having overseen the development of one of the largest Clinical Biochemistry laboratories in the country. During these years he held the position of Chairman of the Association of Clinical Biochemists in Ireland on four occasions (1975, 1986, 1987 and 1988) and, in 1981, was a member of the original committee which set up IEQAS (the Irish External Quality Assurance Scheme).

Many will remember his good humour and his hospitality to delegates who attended the biennial scientific meetings he organised in Cork. Attendees always looked forward to the reception he and his wife Ursula laid on in their home after the meeting.

Our sympathies go to his wife Ursula and to his family.



A Report by Rachel Cullen Senior Clinical Biochemist Mater Hospital, Dublin

The Association of Clinical Biochemistry (ACB) held their annual national meeting in Liverpool from 1st-3rd May 2012. The theme of the conference was 'Focus on the patient'. There were interesting and varied topics which ranged from renal medicine to lipid management, the relevance of age, adult inborn errors, transplantation and TDM. As usual there were the various award lectures and keynote lectures with internationally recognised speakers. Over the course of the three days, 120 posters of high standard were presented; the main topics included audits, clinical cases, genetics, POCT, bone disease, renal disease, endocrinology, diabetes, toxicology and methods. I attended day two and three of the conference and below is a summary of some of the key sessions and lectures on those days.

Wednesday May 2nd Day Two Clinical Practice section-Update on renal medicine

The speakers in this session discussed some of the key changes proposed by the the KDIGO guideline development group, which is scheduled to be

published by the summer of 2012. This first speaker gave an overview to the current guidelines and the key changes proposed in the new guideline. Some of these will be uncontroversial for the UK having already been implemented by SIGN and NICE. However, others are more contentious such as, for the first time, inclusion of a specific role for cystatin C. The most important changes are (1) putting the cause of the kidney disease at the front of the staging system, and (2) placing emphasis on the presence and quantity of albuminuria. Instead of staging CKD as 1-5, the markers G-for GFR (1-5 incl 3A and 3B) and A- for albuminuria will be categorised so that prognosis is seen not as a linear 1-5 but multi-dimensional. Dr Ed Lamb expanded on these new guidelines and discussed the superiority of the CKD-EPI equation over the MDRD equation in the assessment of CKD.

AACC Transatlantic Award lecture

Dr Miller from Virginia USA gave a lecture titled 'From chaos to order: harmonisation of clinical laboratory test results'. He gave a comprehensive presentation on the importance of standardisation and /or harmonisation. He highlighted that results should be equivalent, to enable optimal use of clinical guidelines for disease diagnosis and management. He discussed examples where a lack of equivalence between results may not be recognised, which can often lead to erroneous clinical, financial, regulatory or technical decisions. To address these problems, a systematic approach for identification and prioritisation of measurands to be harmonised based on clinical importance and technical feasibility has been initiated.

ACB International Lecture

Dr Morris from Adelaide in Australia gave an

excellent presentation on the topical subject of Vitamin D and metabolic bone disease. He gave an overview on the well characterised endocrine pathway of vitamin D metabolism and how it effects regulation of calcium. He also showed that, in human bone cell cultures and animal models, 25 hydroxyvitamin D can be metabolised to 1,25-dihydroxyvitamin D. Resulting VDR activation and modulation of gene expression has profound effects on osteoblast and osteoclast biology.

ACB Medal Awards Session

The six contestants who were shortlisted for the ACB medal award gave presentations on Wednesday afternoon. The winner was Sally Hanton from Aintree University Hospital, Liverpool. She, under the supervision of Dr Ian Watson, developed an enzymatic assay for the detection of glycolic acid in serum, which is a marker of ethylene glycol poisoning. This quick inexpensive assay could be used to assess the likelihood of ethylene glycol toxicity in emergency situations. The runner up was Emma Ashley from the Royal Berkshire NHS Foundation, Reading. She evaluated the diagnostic value of neutrophil gelatinase-associated lipocalin for acute kidney injury in an ICU population.

Day Three: Thursday 3rd May Flynn Lecture

On day three, the highlight was the Flynn Lecture, which was presented by Dr Denis O'Reilly. He gave a compressive overview of how the systemic inflammatory response impacts the interpretation of a broad range of clinical biochemistry analysis and micronutrient assessment. He outlined how

the magnitude of the inflammatory response can be estimated by markers such as WCC, ESR, serum albumin and CRP. He demonstrated that even when CRP is only slightly raised at 20 mg/L, changes in concentrations of analytes occur which could be interpreted incorrectly.

Transplantation and the Laboratory

Prof Holt outlined the evidence for therapeutic monitoring in immunosuppression. He discussed how TDM for immunosuppressive drugs such as tacrolimus and ciclosporin, which are the mainstays immunosuppressive drugs, have developed without randomised control trials (RCT). He stated, however, that it would be ethically and logistically impossible to design a study to test the impact of TDM using RCT only. Also during the clinical development of sirolimus and everolimus some well-defined concentration/effect data were developed but again no RCT was performed on the effect of TDM. Prof Holt also raised methodical issues regarding analysis of immunosuppressants.

The following speaker gave a presentation describing how the role of histocompatibility testing contributes to the success of both organ and haemopoietic stem cell transplantation. The final speaker gave a microbiologist view on the type of infections which are encountered in the immunocompromised patient and how such infections are managed.



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The Association of Clinical Biochemists in Ireland



Advance Notice
35th ANNUAL CONFERENCE
October 5th & 6th 2012
Croke Park, Dublin



TOPICS INCLUDE:

- NEUROENDOCRINOLOGY
- RENAL TRANSPLANTATION
- MEDICINE & THE LAW
- INNOVATIVE DIAGNOSTICS
- DEMAND MANAGEMENT
- TOXICOLOGY

Further information and registration will be available from the ACBI website: **www.acbi.ie**
email: acbiconference@gmail.com