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Norovirus Update
Monitoring Analyser Performance Using Uncertainty Principles
Diagnostic Solutions for Improved Patient Care and Cost Savings in Gastroenterology

Faecal Calprotectin Testing

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ACB News
The monthly magazine for clinical science
Issue 622 • February 2015

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Front cover: Brendan O'Dwyer and the Menarini team host ACB President Eric Kilpatrick on their stand in Liverpool. Read what Brendan thinks about being a Focus exhibitor in this issue
Annals Reviews . . .
Your Input is Welcome

Would you like to contribute to the content of the Annals of Clinical Biochemistry? The Clinical Sciences Reviews Committee (CSRC) is seeking new membership. The Committee works with national and international expert authors defining the scope and style of the article, peer reviewing and formatting the final manuscript as either ‘Comments’, ‘Personal Views’ or ‘Reviews’. CSRC membership is for a term of three years. The Committee meets three times a year at the ACB Office in London and most of the work occurs via email.

Anyone interested should contact: Dr David Gaze, Tel: 020 8725 5878, or Email: david.gaze@stgeorges.nhs.uk

Collinson Awarded for Cardiac Marker Work

Congratulations to Professor Paul Collinson on winning the 2014 Hytest Cardiac Marker Award which was presented at an award ceremony followed by a lecture by Paul on 12th January 2015 in Turku, Finland.

Paul is Consultant Chemical Pathologist and Professor of Cardiovascular Biomarkers at St George’s, University of London and St George’s Healthcare NHS Trust. Paul studied at St Catharine’s College Cambridge and St Thomas’ Hospital London. He was awarded an MD from Cambridge for his thesis on the early diagnosis of AMI.

Paul has been instrumental in the introduction of cardiac troponin and natriuretic peptide testing in the UK, providing expert opinion to the NICE guideline groups for chest pain and acute and chronic heart failure. He has also worked with the Cardiac Marker working groups of the EFLM and IFCC.

Paul has published over 200 original papers and review articles, 240 abstracts and contributed 15 book chapters to Cardiovascular Biomarkers. Congratulations Paul!

Nominations for the Position of National Member 2015

In accordance with the provision of Articles 14 and Bye-law 6, nominations are called for the position of National Member of Council for a term of three years. National Members may be asked to take on additional roles during their term of office. Nominations for this position, duly countersigned, should be made on the nomination form in this issue of ACB News and sent to: ACB Administrative Office, 130-132 Tooley Street, London SE1 2TU before 1st March 2015. Please see the nomination form on page 23 of this edition of ACB News.

Sudoku

This month’s puzzle

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

Last month’s solution

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

ACB News | Issue 622 | February 2015
Cystatin C is extremely sensitive to very small changes in GFR and is therefore capable of detecting early stage kidney dysfunction. Up to 50% of renal function can be lost before significant creatinine elevation occurs. The Randox Cystatin C test provides an accurate method for the determination of Cystatin C in human serum and plasma.

- Extremely sensitive to very small changes in GFR and therefore capable of detecting early stage kidney dysfunction
- Extensive range of instrument specific applications available ensuring the convenient use of Randox Cystatin C on a variety of clinical chemistry analysers
- Liquid ready-to-use format for optimum ease of use
- Extensive measuring range of 0.4–10mg/L, capable of detecting extremely high Cystatin C concentrations
- Excellent stability minimizing reagent waste
- Limited interference for the generation of truly accurate results
What is Going On?

Each month now ACB Members will receive an email with links to the electronic version of ACB News when it is published. A click on the thumbnail on the email will take you directly to the PDF version of ACB News which you can read directly on your tablet, laptop or desktop computer. Since Summer 2014 we have also been experimenting with electronic links from articles in ACB News in the PDF versions. We started with the crossword page with some discrete links and also some adverts. Links have gone to both web pages and also to video clips. Last month we extended the experiment with links to editorial items throughout the electronic version of the magazine. An early experiment saw 42 people access a short video of walking in the Wilschonau Valley on the crossword page in September which could only be accessed from the ACB News PDF.

Saving Trees in the Longer Term
In this issue we have links to the Focus website on page 3, the Barnes Quality videos in General News and also some of our commercial adverts. If you are on the electronic version simply hover over a text area or photo and you will see if an electronic link is available. If your electronic copy comes to your work email and the links are blocked then simply forward on the email to your home account and open on your phone or computer!

We are encouraging readers to look at the electronic copy of ACB News which is available every month. Several readers have asked if we intend to “save some trees” and only distribute ACB News electronically. At present there are no plans to do this. We offer an important advertising platform to our commercial colleagues and it is unlikely this would be viable for an electronic only version. We also see clear internal marketing communication advantages to a printed copy of ACB News coming to our members and others each month at present. In the meantime do feed back to the Editor on the electronic copy links and whether you use them.

Nominations for Awards to be Presented at Focus 2016

Nominations are invited for Awards to be presented at Focus 2016.

The ACB Foundation Award: This Award is to acknowledge an outstanding contribution to Clinical Biochemistry by an Association Member, who is normally resident in the UK. The recipient will deliver the Foundation Award, reflecting ‘state of the art’ in an area of Clinical Biochemistry at the national meeting.

The ACB International Lecturer: This Award is used to finance the visit of an international speaker to the national meeting to recognise work that has been of major importance to clinical biochemistry – in practice, research or in education. Written nominations for each of the above Awards are sought from a proposer and two seconders, who are Members of the Association, excluding elected Members of Council. Nominations must be accompanied by a supporting statement outlining the nature of the contribution made by the nominee and the reasons for consideration for the Award. Nominations should be sent to: Dr Ian Godber, Biochemistry Department, Monklands Hospital, Monkscourt Avenue, Airdrie, Lanarkshire, ML6 0JS.

Email: ian.godber@lanarkshire.scot.nhs.uk
Closing date: 28th February 2015.
Oral Fluid Test Kit for Drugs of Abuse Including ‘Legal Highs’

- Ideal for use at remote locations
- Allows same sex sample taking
- Kit contains everything you need to collect the sample and send to our NHS laboratory

Service and Pricing:
- 1 working day turn round
- Results can be sent electronically
- Costs: Kit - £6; Analysis: £20

See the demonstration video on our ‘SWBH Pathology TV News’ YouTube channel

Our Oral Fluid Test Panel:

**Opiates:** Morphine, Codeine, DHC, 6-MAM
**Opioids:** Thebaine, Methadone, EDDP, Buprenorphine, Norbuprenorphine
**Cocaine:** Cocaine / Benzoylecgonine
**Benzodiazepines:** Diazepam, Nordiazepam, Oxazepam, Temazepam
**Amfetamines:** Amfetamine, Metamfetamine, MDMA, MDA, Mephedrone, 4-MEC

‘Legal Highs’: Adamantyl marker (AKB-48, 5F-AKB-48 & STS-135), Ethylphenidate, MPA

Other drugs: Ketamine, Tramadol

1: Originally a ‘legal high’ now Class B. 2: Predominant compounds in current smoking products. 3: Major drugs in current powders and pills.

Further information:
info@cityassays.org.uk • www.cityassays.org.uk • 0121 507 4138

Address for samples:
Clinical Biochemistry, City Hospital, Dudley Road, Birmingham B18 7QH
ACB Southern Region Scientific Meeting and AGM

Biochemistry . . . at the Cutting Edge of Medical Science

Friday 13th March 2015

Holiday Inn, Guildford GU2 7XY

A Meeting to Celebrate the Career of Professor Stephen Halloran

10.20-10.30 Welcome and Introduction

Morning Session: Inspiring Medical Science

Chair: Dr Steve Smith

10.30-10.55 Secrets from the Microbiome
Molecular Biology Meets Microbiology Meets Histopathology
Professor Phil Quirke

10.55-11.20 ‘Stephen Sutton’ – A Short But Inspiring Life
The Fascinating World of Inherited Gastrointestinal Tumours
Professor Ian Tomlinson

11.20-11.45 Personal Health Monitoring – Exploiting the Power of the Personal Phone
Gimmick or Medical Advance?
Dr Amir Hannan

11.45-12.10 Point of Care Testing – What the Future Holds
How Good it is and How Far Can We Go?
Dr Kerry Whiting

12.10-12.30 Insulin and the Law
Professor Vincent Marks

12.30-13.15 Lunch

Afternoon Session: Science-State of the Art

Chair: Sally C Benton

14.00-14.25 Wakeup and Learn about the Biochemistry of Sleep!
“Molecules of Sleep”
Dr Malcolm von Schantz

14.25-14.45 Detecting Cardiac Events – State of the Art!
Professor Paul Collinson

14.45-15.10 The New Emergence of Iodine Deficiency in the UK
Professor Margaret Rayman

15.10-15.35 Cystatin C – Why We Should be Measuring It
Dr Edmund Lamb

15.35-16.05 Afternoon Tea

16.05-16.25 ISO Standards in Pathology – A Step Too Far
Dr David Burnett

16.25-16.55 Improving Clinical Outcomes – Towards Patient-Centred Laboratory Medicine
Mr Mike Hallworth

Please register on ACB Website – Electronic Link
Professors’ Prize for Clinical Biochemistry Research and Development 2015

The Professors and Heads of Academic Clinical Biochemistry Departments have endowed a prize for original research in the medical sciences. Applications are invited for this prestigious award.

The prize is awarded in open competition to any researcher in the field, but is particularly intended for early career investigators who have made a substantial and sustained contribution to research in Clinical Biochemistry in its broadest context.

The successful applicant will be expected to give a plenary lecture describing his/her work at the National Meeting of the Association for Clinical Biochemistry and Laboratory Medicine to be held in Cardiff in June 2015 where the official award will be made. This meeting is the premier meeting of the Association and hosts both UK and international delegates. Previous incumbents have secured high level academic posts both in the UK and abroad.

Applications should be submitted by 31st March 2015 to the Secretary of the National Association of the Heads of Clinical Biochemistry, Professor William D Fraser, Professor of Medicine, Norwich Medical School, Faculty of Medicine and Health Sciences, Norwich Research Park, University of East, Anglia, Norwich NR4 7TJ, or e-mail w.fraser@uea.ac.uk, with a full CV, a brief summary of the work and contribution made by the applicant (no more than 300 words), and letters of support from two academic colleagues. Applications should be submitted electronically with a hard copy sent by post to the above address.

Those who wish to discuss their application further are invited to contact Professor Fraser or Professor Gordon Ferns, Head, Division of Medical Education, Brighton and Sussex Medical School, Tel: +44 (0)1273 644001, e-mail: g.ferns@bsms.ac.uk

Annals Associate Editor

The Annals of Clinical Biochemistry is seeking a new Associate Editor to join the current dynamic team.

The ‘Annals’ continues to evolve as one of the world’s leading journals in the field of clinical biochemistry. Now in its 52nd volume, the journal is in good health receiving approximately 300 submissions a year with an acceptance rate around 40% and an impact factor of 2.1.

Since entering into a publishing arrangement with SAGE in 2012 the Annals has undergone an exciting period of change with initiatives such as OnlineFirst and Annals Express facilitating more timely publication of research articles. The Journal’s entire back catalogue to 1960 has been digitised and made available online and we have introduced table of contents alerts for members as new issues are released. We now require a new team member to help take the Annals forward. This exciting role provides an opportunity for an experienced member of the profession to become involved with, and gain experience of, scientific publishing and contribute to the success and value of the journal.

All applicants will be considered although typically you will have an active publication record, and therefore a broad understanding of the publishing process, and be working at a fairly senior level in the profession. To discuss this role, please contact the Editor-in-Chief, Dr Edmund Lamb; Tel: 01227 864112 or Email: elamb@nhs.net

Interested applicants should send their CV with a covering letter to Edmund before 6th March 2015.
ACB NI Region
Spring Meeting
Friday 24th April 2015
Wellington Park Hotel, Belfast

09.35 Opening Remarks
Mrs Margaret McDonnell, Chair, ACB NI Region

Morning Session Chair: Dr Peter Sharpe, Southern HSCT
09.45 Demonstrating Personal Proficiency
Professor Eric Kilpatrick, President, ACB
10:20 Direct Patient Access to Lab Results
Professor Maurice O’Kane, Consultant Chemical Pathologist, Western HSCT
10:55 SWBH NHS City Assays “Brand-Within a Brand” Concept and Role in Legal High Analysis
Dr Jonathan Berg, Consultant Clinical Scientist, Birmingham

11.30-12.00 Coffee/Tea Break
12.00 “With Regard to Healing the Sick . . . I Will Take Care That They Suffer No Hurt or Damage” The Hazards of Hyponatraemia in Children
Dr Kathryn Ryan, Consultant Chemical Pathologist, Belfast HSCT
12.35 Legal Aspects of the Hyponatraemia Inquiry
TBC

Afternoon Session Chair: Dr Mark Lynch, Western HSCT
14.20 So You Want a Kidney Transplant?
Dr Aisling Courtney, Consultant Renal Physician, Belfast HSCT
14.55 National Cancer Control Programme PSA Harmonisation Project
Dr Ophelia Blake, Consultant Clinical Scientist, Mid Western Regional Hospital, Limerick
15.30 Ebola Fever
Dr Conall McCaughey, Consultant Virologist, Belfast HSCT
16.05-16.25 Coffee Break
16.25 Vitamin D Measurement, It’s Clinical Usefulness and Abuse
Professor Ian Young, Consultant Chemical Pathologist, Belfast HSCT
17.00 Vitamin D – Demand Management in Northern Ireland
Dr Kirsty Spence, Principal Clinical Scientist, Belfast HSCT
17.25 Closing Remarks
Mrs Margaret McDonnell, Chair ACB NI Region

Registration forms are available on the ACB website and should be returned to:
ACB (NI) Meeting Secretary, jenny.hamilton@belfasttrust.hscni.net
Getting Pathology’s Front End Sorted

The second in the series of YouTube videos sees Dr Ian Barnes continuing his visit to “St Elsewhere’s” to explore key issues being taken forward after publication of the Pathology Quality Assurance Review. In this episode Ian emphasises the importance of pre-analytical factors. He meets Sukhvinder Atkar, Phlebotomy Manager, to see how continuous quality improvement is being applied in blood sample collection. Sukhvinder explains that patients take note of procedures during phlebotomy episodes and comment on them if they are not correct. One key area of quality improvement for St Elsewhere’s to work on is more appropriate environments for paediatric phlebotomy. Sukhvinder comments that “it is not ideal for children to wait in the same area as patients from Mental Health or the local prison”.

The video also goes out with a Pathology sample collection van to GP practices. This sequence gives a real insight and appreciation of the work involved in setting up a fit for purpose pathology transport network. Glen Campbell, Pathology transport driver, explains aspects of his job and points to the innovations that PDA devices are bringing.

Barnes Quality Review; Phlebotomy and Transport. Click here on electronic version to see the video – or put the title in your search engine

should approach pre-analytical issues when they are not directly in control of phlebotomy and transport. Ian summarises that in getting pre-analytical factors right, “So much waste can be overcome”.

The first video was published in January and has seen a large number of downloads from the UK and abroad. The series aims to increase the profile of the Pathology Quality Assurance Review and further short videos are being released on YouTube between now and June 2015. To view the second video click here.

Sukhvinder Atkar, Phlebotomy Manager, describing to Ian Barnes how they are working on continuous quality improvement

Glen Campbell, Pathology transport driver explains the use of his personal digital assistant (PDA) – to hear more from Glen click here
UK Newborn Screeing Laboratories Network Annual General Meeting

Thursday 19th March 2015
Nowgen Centre, Manchester M13 9WU

10.30-11.05  Congenital Hypothyroidism Education Progress Outcome Study
Professor Bridget Wilcken, Sydney

11.05-11.35  British Paediatric Surveillance Unit Study of Congenital Hypothyroidism
Dr Rachel Knowles

11.35-12.05  Should we Screen for Congenital Adrenal Hyperplasia and How Should We Do It?
Professor Paul Dimitri

12.05-12.35  Automated Dried Bloodspot Extraction for Application in Newborn Screening
TBC

12.35-13.35  Lunch

13.35-14.10  Next Generation Sequencing – Impact in Screening
Dr Ann Dalton

14.10-14.40  Expanded Newborn Screening Calibration Study
Dr Rachel Carling

14.40-14.55  Bloodspot Quality Audit
Dr Lesley Tetlow

14.55-15.55  Business Meeting

The meeting includes refreshments and lunch and will be accredited for 5 CPD points.
Cost of meeting: £25
Please contact Teresa Wu for further details:
Tel: 0161-701-2140/2137  Email: hoiyee.wu@cmft.nhs.uk
Norovirus in Healthcare Settings and Beyond:
A Research Workshop

Stephanie Worrall, Public Health Laboratory London

A Norovirus Workshop was held on the 17th October 2014, at Carlton House Terrace, Central London and was chaired by Sarah O’Brien and John Harris. The first speaker of the day Mike Head from UCL/IDRN described that norovirus was “not sexy enough” to attract research investment proportional to its level of disease burden. He highlighted the lack of research and development funding, as demonstrated by only 0.2% of the total funding relating to infectious disease research being allocated to norovirus projects between 1997 and 2010.

John Harris provided some epidemiological data demonstrating the major burden of norovirus disease. He stated that between 1992-2008, 40% of Gastrointestinal (GI) outbreaks were caused by viral pathogens, of which norovirus was responsible for over 90% of these incidents and outbreaks, with the majority being reported in the healthcare settings.

A surveillance based presentation from a laboratory perspective led by David Allen from Public Health England followed. Genogroup II, genotype 4 (GII-4) is still the leading cause of norovirus-associated human GI diseases both in the UK and worldwide. David and his team were able to demonstrate the rapidity of GII-4 strains evolving, highlighting the importance of strain surveillance for the understanding of patterns to evaluate infection control and prevention. The reference laboratory uses both Real-Time PCR for detection and conventional PCR for the sequencing and characterisation of these strains.

Derren Ready from Public Health England and Martina Cummins from Infection Prevention and Control, Barts Health NHS Trust, described the importance of the control of this infection and demonstrated just how quickly these outbreaks can occur in the hospital environment. Derren had some interesting new approaches to the removal of norovirus from the clinical environment, including light activated photodynamic surfaces, which has been shown to effectively remove a number of viral pathogenic organisms.

Use of Anti-Viral Agents

The concluding talks presented advances in the treatment and control of acute and chronic norovirus diseases. Ian Goodfellow from the University of Cambridge described the anti-viral activity of ribavirin and favipiravir as therapeutic treatment options. Ribavirin stops viral RNA synthesis and viral mRNA capping, and favipiravir is a novel antiviral able to inhibit the RNA polymerase of many different RNA viruses.

Ian demonstrated in mouse models that favipiravir removed the chronic form of norovirus. Jim Sherwood from Takeda closed the day with his exciting developments on vaccine developments for norovirus prevention and control. The vaccine uses virus-like-particles and so far demonstrated protection against a number of strains of norovirus including the dominant GII-4 strain. Jim further demonstrated serum antibodies persisting for at least 12 months post vaccination. The vaccine also reduced the severity of the disease as demonstrated by a reduction in vomiting and shedding of the virus in patients, proving a promising infection control measure in hospitals.
Deacon’s Challenge

No 165 - Answer

An inherited metabolic disease is due to a gain in function of enzyme X. The erythrocyte activity of X was measured in 100 normal subjects and 100 patients with the disease. The 95% confidence limits of the two groups are:

- Unaffected: 89 – 901 IU/L red cells
- Diseased: 830 – 5260 IU/L red cells

The data from the unaffected group showed a normal Gaussian distribution. However, the data from the diseased group were markedly skewed but a simple logarithmic transformation produced a reasonable Gaussian distribution.

It is proposed to use the assay of X in erythrocytes as a screening test for the disease. Calculate the decision level which will result in a sensitivity of 95%. What specificity will this achieve?

Two tailed z-distribution:

<table>
<thead>
<tr>
<th>P(%)</th>
<th>10</th>
<th>5</th>
<th>2</th>
<th>1</th>
<th>0.2</th>
<th>0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>z</td>
<td>1.65</td>
<td>1.96</td>
<td>2.33</td>
<td>2.58</td>
<td>3.09</td>
<td>3.29</td>
</tr>
</tbody>
</table>

FRCPath, Spring 2014

The sensitivity is the percentage of results above the decision level (DL) in the diseased group.

First convert the 95% confidence limits of the diseased group to logarithmic units:

\[ \log_{10} 830 = 2.92 \quad \log_{10} 5260 = 3.72 \]

Next calculate the mean (m) and standard deviation (s) in logarithmic units:

\[ \text{Mean} = \frac{2.92 + 3.72}{2} = 3.32 \]

The 95% confidence limits include the mean ± 1.96s

\[ \text{therefore } s = \frac{3.72 - 2.92}{1.96 \times 2} = 0.20 \]

To obtain a sensitivity of 95% select a P value of 10% so that a half of values will be less than 5%. i.e. use \( z = 1.65 \):

\[ z = \frac{m - DL}{s} \]

\[ 1.65 = \frac{3.32 - DL}{0.20} \]

\[ DL = 3.32 - (1.65 \times 0.20) = 2.99 \]

This value is in logarithmic units so take the antilog to obtain DL in enzyme units:

\[ DL = \text{antilog}_{10} 2.99 = 977 \text{ IU/L red cells} \]
The specificity is the percentage of normal individuals with values below the DL.

First calculate \( m \) and \( s \) for the unaffected group:

\[
m = \frac{89 + 901}{2} = 495 \text{ IU/l red cells}
\]

\[
s = \frac{901 - 89}{2 \times 1.96} = 207 \text{ IU/L red cells}
\]

Calculate \( z \) to determine the percentage results outside \( m \pm DL \) range:

\[
z = \frac{DL - m}{s} = \frac{977 - 495}{207} = 2.33
\]

From z-table, 2% of values will fall outside the \( m \pm 2.33s \) range and half of these (1%) will be above the \( DL \).

Therefore specificity = 100 – 1 = 99%

**Question 166**

A patient is found to have a serum digoxin concentration of 3.8 \( \mu \text{g/L} \). Digoxin was stopped. Assuming a half life of digoxin in the serum of 40 hours, how long would it take for the serum digoxin concentration to fall to 2.0 \( \mu \text{g/L} \)?

*FRCPath, Spring 2014*
Reflections on an Exhibition
Brendan O’Dwyer, Menarini

EuroMedLabFocus 2014 has finished. The Exhibition Hall has been closed to delegates and we are in the process of dismantling our stand. It’s amazing how quickly the bright lights dim, the packing cases and the trolleys come out, and the hall becomes a working area for stand contractors.

A time to reflect on the meeting. Was it well attended? Did we get to see all the people we wanted to meet? How many leads did we generate? How successful were our planned activities?

Time also to think about Focus 2015. We’ve already made the commitment to attend as the deadline to book was in the summer but – was it a good decision? Will it still be value for money? Will it be worth our while spending staff time and resources building and manning the stand?

However, we’re in Liverpool on a Friday afternoon and the traffic going down South is going to be bad. Best to crack on with dismantling the stand and get on the road home. We’ll leave worrying about next year until we are all back in the office.

Back in the Office for a Reality Check
What, then, about ACB Focus 2015? What does Focus mean nowadays for the diagnostics companies? From the delegate’s point of view the answer should be straightforward. There is usually a high quality scientific programme with many educational opportunities for junior members. The programme offers updates on current hot topics and developments in clinical biochemistry. The busy poster sessions offer the chance to present and catch up on the latest research. There are networking opportunities, meetings with colleagues and old friends and socialising to make new friends. Finally, of course there is the commercial exhibition.

The Dade Behring stand at Focus 2006 makes the point. A large busy stand with lots of equipment, but the company was acquired by the German conglomerate, Siemens AG, in 2007.
I have been in the industry just long enough to remember the first new style Focus meeting at Buxton in 1984, when as a junior product manager I was responsible for planning and organising the company stand. My recollection is of a crowded exhibition hall full of delegates. During the tea, coffee and lunch breaks every stand was busy with decision-making scientists interested in finding out more about the products on display. The evening activities were well attended and the partying went on well into the early hours each night.

Rose-tinted spectacles perhaps? Well it is a fact that the delegate numbers for Focus meetings these last few years have been well down on those memorable meetings through the eighties and nineties. The quality of the scientific programme has if anything improved over the years but we do not seem to get the same level of attendance as we used to in the exhibition. The message that comes back from the field when we are trying to plan workshops or social events around Focus each year is that fewer scientists are planning to come. They can’t get the study leave or the laboratory is too busy to allow many staff to attend.

This topic came up at a recent ACB Corporate Members’ meeting. There was some surprise expressed by senior members present concerning the refusal of study leave. Focus is seen as an important educational opportunity, key to career development, which should be accessed by as many scientists as possible. There was even mention of taking annual leave to attend if study leave was not possible!

If it can be addressed, a higher number of delegates visiting the trade stands would certainly bring a welcome vitality back to the exhibition area.

Scaled Back Exhibition

Let us consider the commercial exhibition in more detail. Focus used to boast the best commercial exhibition for clinical laboratory equipment. All companies, large and small would attend and many would furnish elaborate stands with the latest analysers and products on display. It was an exciting environment to be part of. The unavoidable fact is that today there are fewer companies
supplying products and services to the Clinical Biochemistry laboratory. Mergers and acquisitions have removed many individual names and brands which have now become part of single larger companies. Many smaller companies have withdrawn from the market or closed down as laboratories look to source as much as possible from single solution providers. Automation has driven much of this as the demand for individual products based on manual methodologies has declined.

As the ranges being offered by single companies have expanded it has become difficult to bring everything to display at the exhibition. Again, with automation the equipment is just far too large and the cost of implementation too high to be able to display at the exhibition. Companies who do attend have generally gone down the route of a “hospitality” stand with different ways of demonstrating the product range, such as videos or interactive computer displays. As a consequence of all of this the exhibition area has shrunk over the years with fewer, smaller stands and wider aisles.

Double-Edged Sword of Sponsorship

Sponsorship opportunities whereby commercial organisations are offered alternative options to support Focus can be seen as a bit of a double-edged sword. Companies can provide the financial input that is required to run the meeting while saving costs on designing, building and manning a stand. This is undoubtedly beneficial to both parties. However, it does result in a smaller, less busy commercial exhibition each year. One possible result is that if more and more companies go down this route the commercial exhibition may become less viable.

So, are we in a spiral of declining attendance making exhibiting at Focus less attractive, which in turn makes the exhibition less of a draw leading to declining attendance?
Are alternative sponsorship opportunities allowing companies not to physically attend even adding to this decline?

Another reality is that the purchasing process for Pathology services has changed and continues to change. Managed Services Contracts dominate the scene and these are broadening out into pan-pathology disciplines. That is not to say that the Clinical Biochemists do not have a strong influence in the technical decision. But we need to recognise that there are other stakeholders in the decision making process.

**On to the Future**

Every company has an obligation to carefully consider how and where to spend the limited marketing budgets that we have at our disposal these days. I am sure that we all carefully appraise the opportunity to attend Focus or not each year and we make decisions based on what we think is best for our business. If there is a decline in companies attending, or attending in the traditional manner, then it is based on a business assessment. I can only speak for my own company but so far each year we have decided to continue to attend, but we do have to constantly review this decision.

The final question, and it is probably beyond my remit to attempt an answer in this article, is what is to be done? However, I think we, both the ACB and the industry, do need to find a way of addressing the decline in exhibition numbers. The role of the Clinical Biochemist in the decision making process needs to be recognised but is there a way of including other stakeholders in the meeting? Could we reduce the number of days that the exhibition is open but have stronger incentives for delegates to attend and visit all stands? Should we review the way that sponsorship opportunities work?

Personally, I have always enjoyed my time at Focus wherever it has been held and would want to continue to have this opportunity to meet up with customers, old colleagues and friends, which of course are not mutually exclusive groups. I hope that it will continue well into the future – but possibly not finishing late in the afternoon in Liverpool every year.

*Carla Deakin and Mervyn Nicholas catching up in the exhibition but exhibition visitors from laboratories can be thin on the ground*
Monitoring Performance of Networked Analysers Using Uncertainty Measurement

Nudar Jassam, Harrogate

On the 10th December, the ACB Office in London hosted the launch of software for monitoring the performance of networked analysers. The launch event was attended by a representative from UKAS, manufacturers, UK NEQAS and the Working Group who developed this software. The Working Group comprised of Dr Robert Hill, Zahra Khatami, Anders Kallner, Pete Ayling and myself. The event was followed by a well-attended workshop to explain how the software should be used. The attendees were diverse in background including Biochemists, Haematologists and Microbiologists, who came along with their laboratory’s IQC data and a laptop. Workshop attendees were handed a USB memory stick with the software and example data pre-loaded. Participants then put the software into action and produced performance reports from their data.

Dr Robert Hill, Chair of the Working Group, presented an introduction to the software, describing its characteristics and the two components of the software:

- An Excel spreadsheet that calculates the uncertainty of measurements from IQC data.
- A data loader that can import data from the main analytical platforms commonly used in the UK.

The spreadsheet processes the imported data and performs statistical calculations and can present IQC data in several formats, both numerical and graphical. The graphical presentation includes graphs showing deviation from target values, Levy Jennings plots, and a Youden Plot. Each sheet provides IQC information that aids trouble shooting if the assay under scrutiny is performing poorly.

Robert reiterated that this software helps medical laboratories to fulfill the requirement of ISO 15189: “For tests using multiple instruments, methodologies or analysis at different sites, the laboratory must periodically verify comparability of results, throughout the clinically relevant interval”. The software can compare up to 12 analysers on single site or multiple and geographically distant locations.

The keynote talk of the afternoon was given by Professor Anders Kallner, author of the spreadsheet. Anders introduced the audience to the science that underlies the software. He explained the statistical tool ANOVA and the concept of the uncertainty of measurement. This talk was followed by Pete Ayling, who was responsible for developing the data loader. Pete’s session demonstrated the data loader and its utility. The whole team was then available to facilitate during the workshop period.

More Coming

The software concept was the culmination of a proposal by Zahra Khatami to the ACB Scientific Committee. The concept was to produce a tool for managing the quality of analytical measurements across a network of analysers. It took three years of hard work, aided by regular conference calls, to translate this concept into a product.

During this period we needed to focus on practical considerations so that the product would be useful in the many configurations of laboratories, networks, LIMS and data managers that exist in global healthcare systems. The data-loader has the potential to include more analytical platforms than the current “big four” of Siemens, Roche, Abbott and Beckman.
The software, data-loader and a manual for their use will be made available free of charge on the ACB website.

Further ACB training sessions are planned for those who may be interested. Comments received after the training session from participants indicated that they would prefer a full day with more explanation of the statistical procedures behind the spreadsheet and more Q&A discussion about the spreadsheet input fields. Issues with different versions of MS Excel led to some frustration which will be addressed at the next training session.

If you wish to register for the next training sessions please contact the ACB Office.

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**Official Laboratory Opening During National Pathology Week**

**Katherine Wright & Shirley Spoors, Doncaster and Bassetlaw Hospitals NHS Foundation Trust**

The Department of Clinical Laboratory Sciences at Doncaster and Bassetlaw Hospitals NHS Foundation Trust held its official Open Day during National Pathology Week 2014 to showcase its new Automated Laboratory based on the Doncaster Royal Infirmary (DRI) site.

The Open Day was a celebration of the end result of a major service redesign which began in 2007 when the Departments of Clinical Biochemistry and Haematology merged under a single management structure to form the Department of Clinical Laboratory Sciences (CLS).

The main ‘blood sciences’ laboratory is based at DRI with a small laboratory at Bassetlaw Hospital offering essential services only.

Shift-style working was introduced late October 2013 to deliver a robust 24/7 multidisciplinary service across the two hospital sites with the final building works at DRI completed in September 2014.

The automated laboratory at DRI has been designed to encompass the routine Clinical Biochemistry and Haematology services as well as the automated Virology workload. A multifunction laboratory has also been established which sees CLS and Microbiology staff working side by side.

**Ten Hours of Pathology Tours**

Invitations to the open day were extended to local dignitaries, the Trust Executive team, Pathology service users, including representatives from the Primary Care setting and Trust clinicians, as well as previous employees of the Department. Guided tours of the laboratory were offered from 10 am until 8.30 pm with visitors being shown the path a sample takes from specimen reception to report. The clinical and non-clinical teams welcomed the opportunity to ‘put faces to names’ and to see what goes on ‘behind the scenes’. A number of retired staff also commented on the technical progress that had been made . . . in one case since 1956!

The President of the IBMS, Mr Nick Kirk, officially opened the Laboratory and praised the forward thinking staff in recognising the future of multidisciplinary working. Chris Scholey, Trust Chair, congratulated the Department on its enormous achievements in delivering what the Board had signed off!

The event proved to be a positive way of engaging with users and an opportunity to acknowledge the hard work and achievements of its staff. Well done to Katherine Wright, Principal Biochemist, for project managing this highly successful Pathology Open Day.
ACB News Crossword

Set by Rugosa

Quality Tips for UKAS Inspection Success . . . the Feedback Postcard Concept Revisited

We have been putting our thinking caps on at St Elsewheres, as one does coming up to a UKAS inspection. Yet again the thorny issue of how we get feedback from our users properly into the system has surfaced.

Do we rush away from the Clinical Governance meeting and design a questionnaire, send it out to our GPs and hope for some to come back? Do we update things and set up a SurveyMonkey and email out the link or do some other electronic approach. Well in the end we decided to design a feedback postcard and incorporate it into a system to ensure that we get continuous feedback into the quality system. However, before we started we sat down and planned a system around the postcard which would ensure it met our key aims. So, first of all we spent a few minutes working out what the key aims were . . . and next month, when we have firmed them up, we will tell you.

2 Sentimental entertainer, not stupid, fabricated reproductions (7)
3 Eye measure (5)
4 Was the dressing bandage? (6)
5 Redhead princess in rayon concoction – pedestrian (8)
6 Canon moves men out of tenement (5)
7 Content of protocol oncologists used before a list (5)
10 Unusual tick-borne disease gets Oxford graduate a haematological problem (7)
12 See 9 Across
14 Fell shelter (4)
15 See 18 Across
17 Overwhelm untrained doctor (not raw beginner) (8)
20 Mourns loss from osmium nitrate counterfeit (7)
21 Asian palace guards could quench us without question (7)
22 Put off revision of postulate about bone (6)
23 Superficial lesion observed in painful cervix (5)
24 Reads about dangerous challenges (5)
25 Textually below or perhaps far in (5)

Across
1 Changes spikes (7)
5 Ran away from potentially astronomic sort of pressure (7)
8/11 Consents that she try new procedure for 18/15 diagnosis (5,9,4)
9/12 Symptom of 18/15 in a Pima blond a fabrication (9,4)
11 See 8
13 Traces bits and pieces (6)
16 Used to prepare specimen cold cuts (8)
18/15 Did assess idea on origin of clinical condition (8,7)
19 Set out essential treatment used in acute 18/15 (6)
24 One who uses the 8/11, for example, so indicating a disorder (13)
26 Performance curve returned regarding deceased associate (9)
27 It is said obsolete currency was not reserved (5)
28 Regret about disorganised side remains (7)
29 Trainee engineer reads new editor’s articles (7)

Down
1 Discordant videocassettes evoke abstract refrains (7)

Last month’s solution

ACB News | Issue 622 | February 2015
Association for Clinical Biochemistry & Laboratory Medicine
Council Nomination Form 2015

Election of National Member of Council

We, the undersigned, being Members* of the Association nominate

Name ...........................................................................................................................................

Address ........................................................................................................................................

...........................................................................................................................................

...........................................................................................................................................

for election as National Member of Council

Name 1. ........................................................ ..........................................................

Capitalssignature

Name 2. ........................................................ ..........................................................

Capitalssignature

Name 3. ........................................................ ..........................................................

Capitalssignature

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

.................................................. ..........................................................

Signature Date

If there are more nominees than positions, a ballot will be held with all voting members. (see Bye-Laws of the ACB items 2 & 3 and 8). Federation Members can vote for the election of the Director of Regulatory Affairs.

This form, duly countersigned, to be returned to:
The Administrative Office
Association for Clinical Biochemistry & Laboratory Medicine
130-132 Tooley Street
London SE1 2TU
before 13th March 2015
**PhiCal® Calprotectin**

**TNFα blocker monitoring**

**PhiCal® Calprotectin ELISA**
- Fecal calprotectin: marker of intestinal inflammation
- Therapy monitoring of IBD patients

**TNFα blocker ELISA panel**
- **TNFα blocker monitoring:** infliximab, adalimumab or golimumab drug levels (e.g., Remicade®, Humira®, Simponi®) in serum/plasma
- **TNFα blocker ADA:** anti-drug antibodies against infliximab, adalimumab and etanercept (e.g., Remicade®, Humira®, Enbrel®) in serum/plasma

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