

ACB News

The Association of Clinical Biochemists • Issue 474 • 20th October 2002



ACS Website

**IT in a Modern
Pathology
World**

**Creatinine
and GFR**

**Bye, Bye
Old CPA
Inspections**



About ACB News

The monthly magazine for Clinical Science

The Editor is responsible for the final content. Views expressed are not necessarily those of the ACB.

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Front cover:

This year the DPC Poster prizes at Focus went to Louise Reeve and Carys Jones, seen here with Judi Jackson, head of DPC in the UK

fOCUS**2003**
MICC • MANCHESTER • 13-15 MAY
The Association of Clinical
Biochemists National Meeting

MICC, Manchester

Tel: 01223 404830 Fax: 01223 404841

Email: info@focus-acb.org Web: www.focus-acb.org

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ACB Wins Huge www Development Grant

The ACB has been awarded nearly £90 000 from the PPP Foundation to develop a UK version of the successful AACC Lab Tests Online web site. The site is designed to give patients accurate and up-to-date information about why tests are requested and the significance of the results. The ACB will adapt the existing US content, in co-operation with AACC, to meet the different circumstances found on this side of the Atlantic, and will develop new content for tests not yet available in the USA due to FDA restrictions. The project has the support of the National Electronic Library for Health, and it is hoped to link it to NHS Direct Online in the future. A wide publicity campaign will be mounted when the site is ready for launch, and it is hoped that local laboratories will play a part in publicising it in local clinics and GP surgeries.

The project will be managed by a Project Board consisting of Mike Hallworth (Chairman), Steve Smith (Finance Director), Stephen Halloran (Managing Editor), Jonathan Kay (Advisory Group Lead), Ian Godber (Technical Group Lead) and a part-time Project Manager (to be appointed). Links with other organisations within laboratory medicine will be established to ensure that the site develops a comprehensive coverage of laboratory medicine rather than being restricted to clinical biochemistry.

Mike Hallworth, Association Chairman, commented "We are delighted to have secured funding for this exciting project, which will meet the needs of patients needing laboratory tests and will confirm the Association's central role in education for laboratory medicine". ■

Manchester Focus Invitation

With this ACB News the Focus 2003 Invitation to Participate has been circulated. This promises to be a very exciting meeting. If you need more copies of the brochure to give to colleagues please contact the Focus 2003 office on Tel: 01223 404830 or email: info@focus-acb.org ■



A Practical Guide to Accreditation in Laboratory Medicine

This is the latest book in the Laboratory Medicine Series from ACB Venture Publications. This book has been written by David Burnett OBE PhD FRCPATH, the author of 'Understanding Accreditation in the Laboratory'.

This book will prove an invaluable practical guide to medical laboratories seeking external recognition for the quality of service they provide to their users. There have been major developments in the international standards relevant to the medical laboratory. The author integrates key aspects of these standards and draws upon information from all over the world and presents material of practical value to the reader. This book is essential reading for medical laboratory professionals of all disciplines and those concerned with the management of quality.

David Burnett was formerly Consultant Clinical Biochemist to the St Albans and Hemel Hempstead NHS Trust in the UK. Currently, David is chairman of the CPA (UK) Ltd Standards Revision Group and a member of the British Standards Institute, European Community Confederation of Clinical Chemists (EC4) Working Party on Quality Systems and Accreditation and representative of FESCC and EC4 on the European Co-operation for Accreditation.

Members of the association will receive a leaflet and order form for this book. Please pass this to any non-ACB members, particularly those in other Pathology disciplines, who may also benefit also from this book. ■

A Practical Guide to Accreditation in Laboratory Medicine

Author: David Burnett

ISBN 0 902429 39 6

£35.00

Published by the Association of Clinical Biochemists

Locum Available

Clinical Biochemist qualified to FRCPATH seeks challenging short-term locum consultant posts. Further details and CV on request from the ACB editorial office, quoting – **Locum 2002-02**

Focus 2003 in Manchester

With this edition of ACB News you will receive a copy of the Invitation to Participate to Focus 2003. This is the first of a new style of national scientific meeting. The science promises to be first rate and it really is essential that everyone with an interest in Clinical Biochemistry in the UK makes an effort to send staff to this event. ■



Gilbert Wieringa with some of the other members of the Focus 2003 Organising Committee at a recent meeting in Manchester

Eurogenetics becomes Tosoh Bioscience

From 1st October Eurogenetics has changed its name to Tosoh Bioscience. The Tosoh Corporation is headquartered in Tokyo and is a diversified global chemical and specialty materials company, worth \$3.5 billion. The company has developed the AIA Automated Immunoassay Analysers and the G5 and G7 Glycohaemoglobin HPLC Analysers.

Driven forward by the same team of staff that was involved until now in customer support, Tosoh Bioscience will continue to fulfil its engagements and agreements. ■

New Chair for President Price

It was announced in the 27th June edition of the Oxford University Gazette that the Medical Sciences Board of the University has conferred on Professor Chris Price the title of Visiting Professor in Clinical Biochemistry from 1st July 2002. ACB News sends our congratulations to Chris, ACB President, on this appointment. ■

Robert Gaddie Prize 2002

At the recent annual general meeting of the West Midland Region of the Association of Clinical Biochemists, Dr Judith Burrows won the Robert Gaddie Prize. This award is open to all clinical scientists and chemical pathologists working in hospitals in the region. Judith has worked in Clinical Biochemistry at Russells Hall Hospital as an HST for two years since finishing her PhD, and completing the Regional Training Scheme. She presented work with Dr Mourad Labib on the investigation of patients with inappropriate secretion of anti-diuretic hormone. The work showed that the syndrome is often over-diagnosed as the criteria for correct diagnosis are not being followed. Failure to follow the criteria led to some patients being inappropriately treated with democlocycline. Other work presented at the meeting included measurement of liver enzymes in obstetric cholestasis and cardiac markers in left ventricular dysfunction following myocardial infarction. All posters emphasised the role of clinical biochemists in helping clinicians reach the correct diagnosis by asking relevant questions and advising on appropriate investigations. ■



Dr Judith Burrows and Dr Mourad Labib with their award winning poster

ACB Appoints Citigate to Handle Focus 2003 PR

The ACB have appointed Citigate Communications, a London-based PR company, to help develop the 'Promotion of the role of diagnostics in healthcare' theme at Focus 2003.

They will make a presentation to the Corporate Members' meeting in October. ■

"HE'S BEEN READING UP ABOUT
HORIZONTAL AUDITING"



Bye, Bye Old Style CPA Inspections

By Jonathan Berg

Over the next few weeks many departments join in the rush to have their last Clinical Pathology Accreditation inspection under the old standards before the January 2003 deadline. After then the new “improved” standards will be in place for everyone and that of course means “quality officers”, “vertical audit” and a whole lot more! Here are some tips from a pragmatic inspector on ways you can help yourself if you are being inspected over the next few weeks.

Clean Up Your Environment!

Yes, you really do need to clean up the laboratory for the inspectors. Take this as an opportunity to have a radical look around and throw out all that redundant equipment. Those old PCs under benches need to go out of your life. There is no excuse for untidy and cluttered areas of the laboratory. Inspectors may well take a very dim view if you have not done the basic housekeeping prior to the inspection visit.

Most “Stuff” Only Costs Time

It costs nothing to ensure that all staff, including consultants, have had their annual appraisal and the training officer has a record of continuing professional development targets for everyone. Tidying up electrical cables, getting equipment checked for electrical safety, ensuring fridges have temperature check records, pipette precision checks up-to-date, fume cupboards flow metered, all areas have proper safety equipment – these are just a few of the things that just need “people effort”. It is vital that you do your own pre-inspection timed some weeks before the actual event so that you can rectify things that need doing. Get hold of a blank inspection report and invite your worst enemy, perhaps the laboratory manager from Haematology, to come and inspect you. The real inspection will never be as tough!

A major problem with the current round of single department inspections is that getting your Chief Executive to turn up to meet inspection teams on multiple occasions was never going to be easy. Ensure that you have enlisted the help of another senior manager as a back-up. Then, when the phone rings to say the Chief Executive has urgent business elsewhere you have a reserve.

Three labs to inspect and two being inspected brings Jonathan Berg out of hiding!



Clearing out the laboratory comes to us all in the end!

Visit the Chemical, Solvent and Gas Stores

The inspectors should ask to see these even though you may not have visited them for years. The head of department should get down there and take a look! Do you use all the materials in there? Is the fire extinguisher and personal safety equipment up to specification? Are the materials properly labelled with hazard and safety data?

Back in the laboratory make sure your poisons cupboard has an inventory showing what it contains. There is absolutely no excuse for still stocking 2 kg of sodium cyanide and other such chemicals in a poisons cupboard; getting rid of all this is just an order number and a phone call away. As a rule of thumb chemicals and solvents not featured in a current SOP should not be in the department unless perhaps they are in a developmental section.

COSHH and H&S Inspection

Once you have got rid of all your historic chemicals then it is a lot easier to actually do the COSHH assessment that inspectors will expect to see. Do not try to hide behind a hospital COSHH initiative from years ago. With the correct approach and background information a COSHH assessment can be undertaken in a day or so for the average clinical laboratory. A useful approach is to do an assessment on each section of the laboratory and then bring it all together into the final report.

You should have had a Health and Safety inspection in your laboratory in the last 12 months and hopefully be able to show that you have taken action on the points that were raised. This is basic stuff that unfortunately many laboratories still do not perform well on.



The solvent store should probably receive a visit prior to inspection!

QA Noticeboards are Important

Make sure that noticeboards are full of relevant information. Every laboratory should have a quality assurance noticeboard. Having a flashy computer package is all very well but QA is for everyone in the laboratory and nothing is better than displaying some graphs on the wall. It is also a good idea to have the minutes of the last Quality Assurance Group meeting on the QA board to try and give the impression that you are encouraging wide participation in quality assurance. After all if you are serious about QA then you want everyone in the department to read the QA Group minutes.

Paperwork in Easy Read Form

It is far easier for an inspector to pass a standard if the evidence is presented rather than having to search it out. Ring binders with a section containing evidence for each standard are an absolute must if you want to impress.

When the inspectors arrive on preview day they are hoping to see well ordered paperwork, not boxes of SOPs thrown together the night before.

When the inspectors arrive, offer to spend a few minutes going through the materials to help make their job as easy as possible. However, be sensitive to what they want as some inspectors just want you out of the way so they can start digging! Remember many inspectors have been given three laboratories to inspect this Autumn and they really do want to feel that you have been trying to make their job as easy as possible.

Relax and Make it a Fun Day!

Remember these are the old standards and if you have prepared well over the last few months then you have nothing to fear. Your inspectors have probably been madly trying to get their own laboratories up to speed so they know the problems. Prepare your staff well for inspection day and create a team spirit – even if just for a day! Fifty quid behind the bar of the local pub is a must after the inspectors have been dropped back to the railway station! Perhaps you might like to have a quiz at one of your whole laboratory meetings the week before to check that all staff know basic stuff, like which noticeboard the emergency plan is on and where the laboratory safety manual is lurking!

The Alternative High Risk Approach . . .

Occasionally laboratories go for a minimalist approach, doing very little preparation for a CPA inspection, then throwing a mass of paperwork from every section into the pathology seminar room, along with a tray of sandwiches, just before inspectors arrive. Their game plan is that they will correct whatever the inspectors decide to find fault with once they receive the report. While this might work with some inspection teams it is certainly high-risk and experienced CPA inspectors can react badly to it. This can result in a very long list of problem standards which need corrective action. Far more rewarding all round is to get up to speed before the inspectors turn up smiling at the pathology reception hatch!

Anyway, whether it be “expected”, “inspecting” or both over the next few months . . . Best of luck! ■

Website of the Month: The Association of Clinical Scientists (ACS)

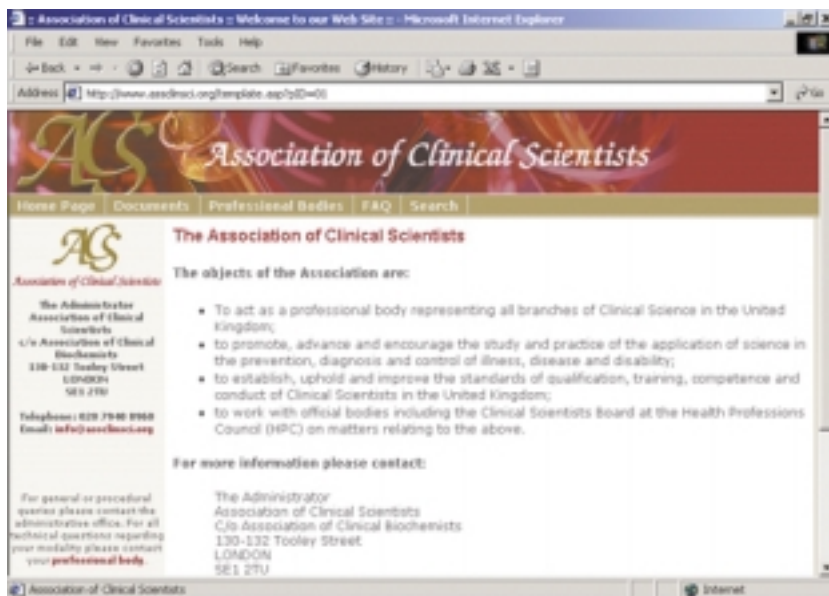
By Dr Ian Godber, Wishaw General Hospital

<http://www.assclnsci.org>

As detailed in the September 2002 issue of ACB News, the ACS will be the qualifying body for clinical scientists wishing to apply for registration with the Health Professions Council (HPC). The ACS is an umbrella body for all the professional associations in clinical science, including the ACB. Links and contact details for all these bodies associated with the ACS are detailed on the website.

For those wishing to apply for registration a visit to the ACS website is essential. This well laid out website contains clear links to documents of relevance to the registration process, all of which can be downloaded, either as Microsoft Word documents or pdf files. All the documents are fully searchable using the site's search engine. An easy to navigate 'frequently asked questions' page also provides the answers to the majority of questions relating to the registration process. Due to the importance of this site, a link has been placed to it from the ACB Homepage, so just click on the ACS logo.

- Don't forget links to all past and present 'Websites of the Month' are available from the ACB website (www.acb.org.uk). If you wish to suggest a site for the 'Website of the Month', please submit a short review (150-200 words) to Ian Godber at Wishaw General Hospital (webmaster@acb.org.uk). ■



Informatics and Pathology Modernisation

Reported by Andy Kerry, The Royal Free Hospital, London

Continuing the series of highly successful Medical Informatics training sessions organised by the ACB Informatics group, the second one day meeting was held at Roche Diagnostics, Lewes in June. The first session last year in Leeds concentrated on providing very much a practical hands on experience to IT. This second course focused upon the informatics requirements to support Pathology Modernisation and was split into two parts, identifying what was required to make it happen and secondly how we were going to achieve it.

*A report of
the ACB
Medical
Informatics
Training
Course No.2*

Increasing Sophistication

The morning session opened with John O'Connor giving an introductory talk about what IT infrastructure is needed to support Pathology Modernisation. To date, information management systems used in pathology have been relatively unsophisticated, and he reminded us that increased functionality and a much more patient-centred view is now needed to support clinical demands. Some of these pathology related targets are detailed in the NHS Electronic Record Programme (EPR level 3) as part of clinical governance. These aims include access to the appropriate evidence base to promote more targeted requesting, and intelligence results reporting when order requesting. We learned that NICE guidelines will increasingly incorporate more advice about the most appropriate use of laboratory tests and evidence based practice will ensure that pathologists will use, and be involved in the design and maintenance of these protocols. A full agenda for pathology modernisation is detailed in the Government's Information for Health strategy.

Rick Jones then spoke about Computer Simulation for Pathology and demonstrated how this could be used to create larger systems of organisation, so that many resources and expertise may be shared between regional pathology sites. Modelling may be used more in the future to help improve efficiency of pathology services as well as helping to reduce operating costs and capital spending on trust budgets.

In the next session, Miles Saunders from NHSIA gave an update on the Pathology Messaging Implementation Progress project (PMIP), which is dealing with the electronic data interchange of pathology results to GP surgeries. With an increasing emphasis on primary care, the Pathology Modernisation strategy will ensure that all GP practices will be enabled to receive pathology results electronically by December

this year. An update can be found on the PMIP site (<http://www.nhsia.nhs.uk/pathology/pages/default.asp>).

We then had a talk from Alice Breton from the Royal College of Surgeons who, for those interested in developing IT skills even further, have developed an e-learning post-graduate diploma in Medical Informatics. The MSc is designed for working healthcare professionals who want to use informatics effectively in their usual role, and applies a research approach to informatics issues. Designed to be flexible, the course is comprised of modules such as evidence based practice, e-commerce and website development, which will be offered as CPD and also includes two compulsory residential components. I have seen an on-line demonstration from a model student in Eastbourne and the set-up looks impressive, and features teaching staff and academics from a range of professional backgrounds. The course is highly recommended and further details are available on the site (<http://www.healthcare-informatics.info>).

In the last talk before lunch, Graham Handley described the benefits of remote order communication on wards, giving a live demonstration with WAP enabled Palm Pilots. As well as reducing the time taken to request tests, this new portable technology will provide a range of diagnostic and clinical advice at the bedside to the clinician and enhanced positive patient identification, in addition to decreasing the number of repeat requests. The infrastructure is now developed and implemented and so we can expect to see more of this technology in the future (it has already been featured on Tomorrow's World).

Inter-laboratory Communication

The afternoon began with Craig Webster telling us about the lab-to-lab communications project, a system developed to support data transfer for referred specimens. It has been long standing practice for laboratories to refer specialist testing to reference laboratories, with much of this process currently still paper driven. The benefits should include faster referrals and return of data as well as leading to savings in efficiency of staff time and an improved quality of reporting.

Bill Bartlett showed us how to request lab tests over the web so now you can dial in from home and order your U&Es from the hospital at the same time you choose your fruit and veg from Tesco. The web-based system is designed to close the link between GPs and hospital systems by providing improved data quality and intelligent requesting, similar to technology used with other electronic requesting.

Now with greater access to the web, one of the common findings is that more and more patients want to access and find out further information about their health. The NeLH (<http://www.nelh.nhs.uk>) is directed towards the NHS user and although the NHS Direct site aims to provide information to relieve GP's workload, there is still a distinct lack of information on what lab tests are available and what they mean. Ian Godber talked us through the American peer reviewed information resource Lab Tests Online (<http://www.labtestsonline.org>), which has already been a big topic

on the ACB discussions list and provides a wealth of knowledge on laboratory tests. Unfortunately this is a US based site with FDA approved tests only, but has stimulated a lot of pressure to create a similar site in the UK. This was a much-discussed topic during the meeting, and would probably need to operate on a two-tier system, with interpretative information being available for both doctors and patients. The ACB should play an important role in the development and running of this site, with a proposed web-based editorial system, and a grant application has now been made (now successful - see General News - Ed.).

IT for Pre-Analysis

Finally, David Ball from Roche Diagnostics finished the meeting by explaining IT support for pre-analytics, and giving a presentation of the management packages available for pre-analytical systems. After just joining a department where this system is in action the talk seemed very appropriate, and over time, it seems as if more and more laboratories will be moving in this direction. This support will be increasingly important as pre-analytical systems are becoming more popular.

This was the first time I had attended the informatics training course and after hearing so much about plans for informatics as part of pathology modernisation beforehand, I was grateful for the opportunity to learn more about how we are progressing. Looking back at the day it was quite amazing to see how much information I had accumulated in such a short space of time. The meeting certainly stimulated plenty of discussion and it will be interesting to see what effects these new developments in informatics will have in our laboratories in the future. Certainly there should be no excuse for ringing up to request extra tests in a hurry any more! Many thanks should again go to John O'Connor and the ACB Informatics committee for organising the course and we look forward with anticipation to next years meeting. ■

Deacon's Challenge

No. 19 Answer

The literature (particularly American literature) often contains analytical data presented in units other than SI units. Convert the following results to SI units: (atomic mass C=12, O=16, N=14, H=1, Ca=40)

- Express 99 mg/dL plasma glucose as mmol/L glucose
- Express 14 mg/dL BUN (Blood urea nitrogen) as mmol/L urea
- Express 2.50 mEq/L plasma ionized calcium as mmol/L

MRCPath, May 2002

$$a) \quad \text{Concentration (mmol/L)} = \frac{\text{Concentration (mg/L)}}{\text{MW}}$$

Given concentration of glucose = 99 mg/dL = 990 mg/L (since 1 dL = 100 mL)

MW glucose (C₆H₁₂O₆) = (6 x 12) + (12 x 1) + (6 x 16) = 180

Therefore, concentration of glucose = $\frac{990}{180} = 5.5 \text{ mmol/L}$

- BUN = blood urea nitrogen

$$\text{Concentration of BUN (mmol/L)} = \frac{\text{Concentration of BUN (mg/L)}}{\text{MW of nitrogen}}$$

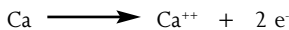
Given concentration of BUN = 14 mg/dL = 140 mg/L (since 1 dL = 100 mL)

MW nitrogen (N₂) = 2 x 14 = 28

Therefore, concentration of BUN (mmol/L) = $\frac{140}{28} = 5.0 \text{ mmol/L}$

Since one molecule of urea [formula CO(NH₂)₂] contains one molecule (or 2 atoms) of nitrogen then the urea concentration also equals **5.0 mmol/L**

- Calcium is a divalent cation formed by the loss of two electrons from calcium:



Therefore each molecule of calcium contains 2 equivalents

i.e. 1 mmol/L = 2 mEq/L

and 1 mEq/L = $\frac{1}{2}$ mmol/L

So that 2.50 mEq/L = $\frac{2.50}{2} = 1.25 \text{ mmol/L}$

Question No. 20

A new diagnostic test has been introduced into your laboratory. Only one request for this test was received in July 1998. In January 1999, 27 requests were received. For forward planning you need to be able to anticipate future demand. Assuming that the increase in number of tests is exponential, what is the predicted workload for July 1999?

MRCPath, May 1999

Shadowing the Boss US Style

Dr Ewan Bell, Post-doctoral Fellow

When I asked my boss if I could shadow him for a day, little did I realise that this would mean my working day would start considerably earlier than normal, and that I'd have to struggle out my bed at 5.30 am to get to his office for 7.30 am. Maybe I should just have asked him what he did all day instead of actually shadowing him, I thought, as I darted through the rain to the train station, gulping down a bagel and coffee.

Professor Bryan Wolf holds tenure in the Department of Pathology and Laboratory Medicine at the University of Pennsylvania. His Diabetes Research lab was based in the University's Medical School until he got the post of Chair of Pathology and Laboratory Medicine at the nearby Children's Hospital of Philadelphia (CHOP) in December 2000. At this stage he moved his lab (including me) to the Abramson Research Center (a brand new 12-storey building donated by Mr Abramson – founder of US Healthcare, now owned by Aetna, a large American healthcare insurance company) at CHOP. In his spare time, Bryan runs the lab, co-edits *Diabetes*, attends lab meetings and journal clubs and is involved in numerous American Diabetes Association and Juvenile Diabetes Foundation International committees. Scientifically, he is known for his work on insulin signalling in the beta cell. He's a busy man.

Nothing Changes . . .

So there I was, sitting in his office at 7.30 am, still yawning. His first task of the day was to meet the phlebotomy supervisor, who complained that the endocrinology nurse practitioners (ENP) were using the physician's name when requesting blood tests and hence the results were not going back to the requesting ENP. Ah, I thought, I've heard this before somewhere!

Thereafter, Bryan met with the Director of the Metabolic Lab. My bleary eyes widened when they proceeded to discuss the new tandem mass spectrometer they had ordered that would cost around \$400,000. There were logistical problems regarding where it was to be located and who was to staff it. When it arrived, the plan was for it to allow a 24/7, turn-around time of 1 hour, for patients with maple syrup urine disease, a tertiary service they were hoping to establish.

Next it was off to the hospital's grand rounds. The Cohen Memorial lecture was being given by Dr George Buchanan (Chief of Paediatric Haematology/Oncology at the University of Texas Medical School, Dallas), a haematologist with a specialist interest in idiopathic thrombocytopenic purpura (ITP). His non-interventional line was that "masterly inactivity" is often the most appropriate form of treatment in certain paediatric patients with ITP. He was not a great advocate of the widespread use of immunoglobulins. Indeed, he joked that "the art of medicine consists of amusing the patient until nature cures the disease". Interestingly, he lauded European guidelines for the management of ITP and criticised the US guidelines, which

he characterised as too interventional. My ears pricked up when he referenced several papers by Professor John Lillyman.

Bryan's chief method of communication is by email. Daily, he has around 30-50 emails to respond to, so this takes up a substantial proportion of his time between meetings.

Later that morning, we met with auditors from Price Waterhouse, who were assessing old practices and developing new strategies to increase departmental revenue. Maintaining a revenue stream and optimising income is an essential component of the day-to-day work of all US labs and hence features prominently in the mind of the Chair. Each lab in the US gets paid by one of the health insurance companies or Medicare for each lab test, so the department was trying to optimise its income generation by properly identifying each test performed. Also, billing has to be accurate and comply with Federal and State regulations. Inaccurate billing can lead to prosecution of the Chair of the Department, so Bryan was trying to ensure that this eventuality remained remote. It became obvious to me that the US system of billing everything is intensively bureaucratic and not a model the UK should try to replicate. On the other hand, the bureaucracy associated with the burgeoning healthcare industry keeps vast numbers of people in employment.

Turn Round Committee

The "turnaround times committee" was an interesting experience. They could have been talking about the Royal Infirmary in Glasgow. The ER physicians used to have their own emergency lab in ER, staffed by the Department of Pathology and Laboratory Medicine. However, during a period of contraction, this lab was closed, and all emergency samples were sent to the core lab, with a guarantee regarding turnaround times. Subsequently, the ER physicians started to complain about the service they received from the core lab and wanted their own ER 'emergency lab' back. This provoked considerable discussion regarding the set-up of the emergency core lab, as to who should staff it and where. Needless to say, a sub-committee was organised to look at the matter in closer detail.

Another interesting meeting I attended was the joint meeting between staff of CHOP and a firm of architects, who had drawn up plans for a hospital extension. Part of the extension was to be used to house an expansion of laboratory space for the Department of Pathology and Laboratory Medicine. The discussions revolved around detailed projections of each part of the lab's requirement for new space. This resulted in intricate and complicated drawing and redrawing of floor space on the architect's plans. Those cerebral tasks were helped by generous supplies of coffee and chocolate-chip cookies.

Bryan meets with each of his lab staff weekly and discusses data or the direction of the project. Today it was my turn, so we spent a productive hour discussing the next set of experiments I was planning for my rapamycin and beta cell toxicity project.

At the end of the day I realised that being Chair of Pathology requires many varied and different skills, but the skill that seemed to me to be the most important is the ability to converse and people-manage effectively. Oh yes, and to work 12 hours a day, I thought, as I left Bryan working in his office for another few hours, and I rushed out to get the 10 past 5 train. ■



Letters

Readers speak out

Creatinine and GFR

Sudha Bulusu pointed out in the August ACB News that John Morton's survey had found creatinine clearance is still widely measured in spite of its inaccuracy. He commended a recent equation for predicting GFR based on serum creatinine that does not need a timed urine collection and is more accurate than both measured creatinine clearance and the Cockcroft and Gault formula.¹ Its drawbacks are that you need to know the patient's age, sex and whether he or she is black, and measurements of serum urea and BCG albumin are also needed. The authors' graphs show that, at a GFR of 50 mL/min measured with [125I] iothalamate as the gold standard, both measured creatinine clearance and the Cockcroft and Gault equation gave values that ranged from about 35 to 105 mL/min while their new equation gave a range of about 25 to 75 mL/min with a mean of 50 mL/min. Thus, the new equation is more accurate but it may still have an error as great as $\pm 50\%$.

I strongly support the views of Stewart Cameron and Rainer Greger² that, for ordinary clinical purposes, when serum creatinine is over 200 $\mu\text{mol/L}$ it alone is adequate for assessing glomerular function, but below that value an isotopic method has to be used. Cystatin C may prove to be of value for detecting patients with marginally reduced glomerular function so that they can have an isotopic measurement, for example before cancer chemotherapy, but at present it is still not certain whether increased cell turnover or cell death can raise cystatin C concentrations.³

If the relationship between a patient's isotopic GFR and serum creatinine concentration has been established, serum creatinine alone can be used subsequently to monitor changes in GFR. Creatinine is far better than cystatin C for this purpose because it can be measured more precisely (CVA 3.1% vs 8.9%) and has a much tighter index of individuality (CVI 4.9% vs 13.3%).⁴ If I am allowed to offer yet another equation, I suggest:

$$\text{Predicted GFR (now)} = \text{Isotopic GFR (then)} \times \frac{\text{Scr (then)}}{\text{Scr (now)}}$$

The isotopic measurement of GFR would need to be repeated very infrequently in adults unless muscle wasting or liver failure were to develop. Patients are likely to prefer this method of monitoring GFR to the repeated collection of 24 h urine specimens for creatinine clearance. It is more accurate and reproducible, and it may well prove cheaper over time.

Brian Payne

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LS8 1EY

- 1 Levey A S, Bosch J P, Lewis J B, Rogers N, Roth D. A more accurate method to estimate glomerular filtration rate from serum creatinine: a new prediction equation. *Ann Intern Med* 1999; **130**: 461-470
- 2 Cameron J S, Greger R. Renal function and testing of function. In: Davison A M, Cameron J S, Grünfeld J-P, Kerr D N S, Ritz E, Winearls C G, eds. *Oxford Textbook of Clinical Nephrology*. Oxford: Oxford University Press 1998; **1.3**: 39-69
- 3 Laterza O F, Price C P, Scott M G. Cystatin C: an improved marker of glomerular filtration rate? *Clin Chem* 2002; **48**: 699-707
- 4 Keevil B G, Kilpatrick E S, Nichols S P, Maylor P W. Biological variation of cystatin C: implications for the assessment of glomerular filtration rate. *Clin Chem* 1998; **44**: 1535-1539

HST Versus Permanent . . . Getting the Balance Right

Regarding the recent discussion of HST posts, first expressed in ACB News in 2002 I would like to voice my support of the efforts of senior colleagues in establishing fixed-term contract HST posts.

As a trainee looking for Grade B posts in the mid 1990s, I vividly remember the near desperation of many trainees chasing the tiny number of advertised

posts. Many were forced to leave the profession, despite a high regard for the job. This loss of trainees has now rebounded on the profession as the number of suitably experienced and qualified applicants for senior positions has dwindled.

The ACB trainees committee was fully behind the Education committee in establishing fixed-term contract HST posts, because at the time there was little alternative. The fixed term contracts were deemed necessary in order to persuade otherwise reluctant training consortia to fund the posts. Without these posts, I believe the loss of trainees would have been worse. The 50% loss rate quoted, (which was for the 1996 intake), was chiefly a consequence of low morale amongst trainees because of the dearth of grade B posts advertised. In later years, as HST posts became established, the loss rate of Grade A trainees fell to about a third or less.

However, HST posts are not without problems. They were originally envisaged as supernumery posts being a 'fast-track' to senior positions with more emphasis on training than substantive posts and, importantly, to be additional to rather than replacing substantive posts. The aim was to attract those wishing to gain more rapid career advancement. However, we must recognise that for some individuals substantive posts and a permanent contract will be more attractive. It is unfortunate that in the rush to create new HST posts the substantive posts appear to have declined. Many Grade B biochemists in substantive posts make a significant service contribution, in addition to training for MRCPATH. This service commitment is vital, particularly with such shortages in consultant numbers, as highlighted in the recent Manpower Report. Only through longer-term placements is sufficient experience and confidence gained to provide this support. Substantive posts are also vital in specialist laboratories such as toxicology and paediatrics to allow expertise to develop.

Fixed-term HST posts successfully fulfilled an urgent

need at the time but a more permanent solution is now needed. There may still be a role for 'fast-track' fixed-term posts but they must not be allowed to overshadow the permanent substantive posts that served the profession well in the past. It is essential for the profession that the right balance is struck between fixed-term and substantive posts for the long-term survival of the 'profession under siege'.

David Kennedy

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Editors Note: If anyone else would like to write on this topic please do so!

Retiring with Grace . . . Get a Grip

Poor old 'Ageing C Grade', aged 54! (ACB News 20th August 2002).

One can only feel sympathy for Grace (his partner?), at the prospect of retirement with him. It must be of great concern, however, that he might be unable to 'carry on acting' for his local private hospital. Is this a reference to a starring role in the Nuffield Christmas pantomime?

After re-reading his letter I can only assume that a degree of leg pulling is going on here. If not, for heaven's sake get a grip, man.

Stuart Robertson

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HU3 2JZ

Sex and the City

Wolfson Conference Centre
Hammersmith Hospital
Ducane Road
London W12 OHS
Thursday 5th December 2002
ACB Southern Region Winter Scientific Meeting

- 09.45 Registration and Coffee
 10.15 The andrology laboratory
 Dr Kevin Lindsay
 10.45 To be announced
 11.15 Coffee
 11.45 Measurement of testosterone
 Mr John Kane
 13.00 Lunch
 14.00 Polycystic Ovary Syndrome
 Professor Stephen Franks
 14.45 Biochemistry of advanced reproductive technologies
 Mr Stuart Lavery
 15.15 Ovarian Hyperstimulation Syndrome
 To be announced
 15.45 Tea and Close

Meeting cost: £15 (free to grade A trainees).
 Please contact: Mandy Donaldson, Clinical Chemistry,
 Hammersmith Hospital Pathology Centre,
 Hammersmith Hospital, Ducane Road, London
 W12 OHS. Email: m.donaldson@ic.ac.uk

Neonatal and Paediatric Medicine & Junior Members Papers (Bayer Award)

Redwood House
Gloucester Royal Hospital
Thursday 7th November 2002
Scientific Meeting of the ACB South West and Wessex Region

- 10.00-10.30 Registration and Coffee
- Junior Members Papers (Bayer Award)**
- 10.30-10.50 Effects of exposure to leptin on
 pancreatic islet function
 Dr W Woltersdorf, Bristol Royal Infirmary
- 10.50-11.10 Seminoma – will PLAP fill the gap?
 Miss C Noyce, Southampton General Hospital

- 11.10-11.30 Insulin-like growth factors pre- and post
 prostate surgery
 Miss D Chantler, Southampton General Hospital

Neonatal and Paediatric Medicine

- 11.30-12.00 Peroxisomal Disorders
 Mrs A Brown, Southmead Hospital, Bristol
- 12.00-13.15 Lunch
- 13.15-14.00 Neonatal screening for cystic fibrosis
 Dr D Bradley, University Hospital of Wales
- 14.00-14.45 Diagnosis and treatment of fatty acid
 oxidation defects
 Dr S Olpin, Sheffield Children's Hospital
- 14.45-15.15 Tea
- 15.15-16.00 The jaundiced neonate
 Dr P Cairns, St Michael's Hospital, Bristol
- 16.00-16.45 The metabolic consequences of the
 growth in childhood obesity
 Dr M Sabin, Institute of Child Health, University
 of Bristol

This meeting is CME & CPD accredited.

Grateful thanks to our sponsors - Bayer Diagnostics
 and Randox Laboratories.

All laboratory staff are welcome to attend –
 registration fee £15, closing date 23rd October.

Contact Dr Paul Thomas, Bristol Royal Infirmary,
 Bristol BS2 8HW. Tel 0117-9282828.

Email: paul.thomas@ubht.swest.nhs.uk

The Royal College of Pathologists

Wednesday 20th November 2002
**Protecting the Public from Infectious, Chemical
 and Radiological Hazards**

- 09.30 Registration and Coffee
- 10.00 Terrorists threats and emergency planning
 Dr Pat Troop, Department of Health, London
- 10.30 CAMR - what can we do?
 Dr Charles Penn, Centre for Applied Microbiology &
 Research, Wiltshire
- 11.00 Coffee
 College Foundation Lecture
- 11.20 Bio-Terrorism – threats and opportunities
 Professor Sir Leszek Borysiewicz, Imperial College of Science,
 Technology and Medicine, London

Forthcoming Meetings *Forthcoming Meetings* *Forthcoming Meetings*

- 12.20 Radiological protection
Miss Frances Fry, National Radiological Protection Board
- 12.50 Chemical incidents
Dr Stephen Palmer, University of Wales College of Medicine,
Cardiff
- 13.20 Lunch
- 14.00 Vaccine preventable diseases
Dr Liz Miller, PHLS Communicable Disease Centre,
Colindale
- 14.30 Exotic and emerging viruses
Dr David Brown, PHLS Central Public Health Laboratory,
Colindale
- 15.00 Tea

- 15.20 Epidemiology and public health threats
Dr Angus Nicoll, PHLS Communicable Disease Centre,
Colindale
- 15.50 Regional planning for public health protection
Dr Gina Radford, Regional Director of Public Health - East
of England
- 16.20 Close

Registration fees: RCPATH members £80.00, Trainees/
Nurses/Retired/BMS £50.00. Non-members £110.00.

Further information: Miss Michelle Casey, Academic
Activities Co-ordinator. Tel: 020 7451 6740.

Fax: 020 7451 6701: Email: michelle.casey@rcpath.org

The following is a list of people admitted to Ordinary Membership of the ACB by recent meetings of ACB Council:

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The following is a list of people admitted to Affiliate Membership of the ACB by recent meetings of ACB Council:

Mr P B Dissanayake
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James Paget Hospital
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Tel: 01493-452-846

The following is a list of people admitted to Federation Membership of the ACB by recent meetings of ACB Council:

Mrs A J Brown
Scottish Newborn Screening
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Biomedical Genetics
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Dr H Palmer
Genitourinary Infections Reference
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Bristol Royal Infirmary
Level 8, Bristol PHL
Bristol
BS2 8HW
Tel: 0117-928-2557
Email: helen.palmer@ubht.swest.nhs.uk

The following is a list of people admitted to Student Membership of the ACB by recent meetings of ACB Council:

Miss C E Michlewski
Lancaster University
Lancaster
Email: c.michlewski@lancaster.ac.uk

**University Hospital Birmingham NHS Trust
Department of Clinical Biochemistry**

Clinical Scientist Grade B

**8-16 (depending on qualifications and experience)
Job Ref: 1803**

Applications are invited for this post, in a department which provides clinical biochemistry services to the major teaching Trust within the West Midlands Region (Queen Elizabeth and Selly Oak Hospitals), to other hospitals in Birmingham and over 100 GP practices. In addition to a wide range of general analytical services, the department provides specialist support for tertiary referral regional centres including transplantation, oncology, cardiac surgery, burns, trauma and renal medicine.

The department provides Regional and Supra-regional endocrine services and there are strong links with academic and clinical specialties within the Medical School and the Trust, providing excellent opportunities for the pursuit of specialist interests and research and development. Senior staff are involved in undergraduate and postgraduate teaching and the department is ideally suited to those wishing to complete training for the MRCPath.

You will be expected to have a thorough grounding in clinical biochemistry, work well as part of a team and be prepared for a challenging, but rewarding role.

For further information, or to arrange an informal visit, please contact Janet Smith, Head of Department on 0121 637 8449 or Peter Gooling, Consultant Clinical Scientist on 0777 1647586.

Application forms and job descriptions are available from the Personnel Department, Queen Elizabeth Hospital, Edgbaston, Birmingham B15 2TH, tel: 0121 637 2310, quoting job reference number 1803.

Closing date for applications: 15th November 2002.

The Trust is an Equal Opportunities Employer and positively encourages applications from all sections of the community. All posts are open to Job Sharing unless stated. The Trust operates a No Smoking Policy.

University Hospital Birmingham 
NHS Trust



One Trust, Endless Opportunities

**West Midlands Inherited Metabolic Disorders
and Neonatal Screening Laboratories**

Birmingham Children's Hospital
NHS Trust



**Department of Clinical
Chemistry**

Grade B Clinical Scientists are required for exciting new developments in newborn screening and inherited metabolic disorders (IMD).

■ **HIGHER SPECIALIST TRAINEE IN PAEDIATRIC BIOCHEMISTRY**

(B8-13) £20,781 - £25,282 Ref: TM743

■ **SENIOR/PRINCIPAL CLINICAL SCIENTIST**

(B10-22) - two posts, £22,474 - £35,982 Ref: TM744

The department provides a comprehensive service for paediatric biochemistry including biochemical genetic services for newborn screening and diagnostic IMD services for the West Midlands. There are strong links with the Cytogenetics and Molecular Genetic Laboratories at the Birmingham Women's Hospital.

Due to the planned expansion of newborn screening (sickle cell disease, cystic fibrosis and medium chain acyl CoA dehydrogenase) and our diagnostic IMD services, we are seeking enthusiastic Clinical Scientists at Grade B level. Successful applicants will join a dynamic team of 13 clinical scientists and 24 biomedical scientists.

There will be opportunities to work in the following areas:-

- tissue enzyme analysis for diagnosis of a variety of disorders (including prenatal diagnosis)
- introduction of region-wide newborn screening for sickle cell disease
- tandem mass spectrometry for newborn screening for IMD and other paediatric applications
- molecular analyses for diagnosis of IMD

All posts will involve service provision, development of new technologies, clinical liaison and audit. Scale points will depend on previous experience. Training and support for CPD will be provided and the Clinical Chemistry Department has full CPA Accreditation.

The Higher Specialist Training post would suit a clinical scientist who has undertaken training at Grade A level and now wishes to train in general and specialised paediatric biochemistry. Full training for completion of MRCPATH will be provided, including opportunities to undertake a project.

The senior/principal posts would suit individuals with MRCPATH Part 1 (or close to completion) in clinical biochemistry or molecular biology, or those with relevant post doctorate experience in enzymology and/or molecular biology. For candidates with a molecular biology background and appropriate experience, there will be opportunities to rotate to the Molecular Genetics Laboratory at Birmingham Women's Hospital.

Informal enquiries and visits are welcome, telephone **0121 333 9916** and speak to Anne Green, Consultant Clinical Biochemist and Head of Department, Paul Griffiths, Consultant Biochemist and Deputy Head of Department, or Mary Anne Preece, Consultant Biochemist.

Application packs are available from the Personnel Department, Birmingham Children's Hospital NHS Trust, Ladywood House, Whittall Street, Birmingham B4 6NL, tel **0121 333 8352** (24hrs) or email:

trudi.morgan@bhamchildrens.wmids.nhs.uk Please quote appropriate reference; closing date for completed applications **22nd November 2002**.

For ALL current vacancies at Birmingham Children's Hospital NHS Trust visit us at www.bch.org.uk We are committed to Equal Opportunities and actively discourage smoking at work.



Grampian University Hospitals

NHS Trust www.show.scot.nhs.uk/guh



Laboratory Medicine Clinical Group,
Based at Aberdeen Royal Infirmary

Service Manager

Executive Level 8 - £32,212 - £42,949 per annum
(pending pay award - Scientific grading can be individually discussed)

This full-time post is a centrally important component of the Trust diagnostic laboratory management team, providing effective management through planning, supporting and facilitating development and delivery of diagnostic NHS laboratory services in the North-East of Scotland. The postholder will work in conjunction with the Clinical Group Co-ordinator and specialty Heads of Service of Clinical Biochemistry, Genetics, Haematology, Immunology, Medical Microbiology and Pathology.

The post would offer an ideal development opportunity for either a) a Biomedical or Clinical Scientist who has a minimum of five years experience of laboratory departmental management at a senior level or b) an individual who has had a minimum of five years experience of general or other specialty management within the NHS at a senior or supervisory level.

The post is available from 1 April 2003 and the successful applicant will shadow the outgoing Service Manager for a three month period to 30 June 2003 to gain experience of local operations.

Aberdeen is the centre of the UK oil industry. The surrounding area affords ample opportunities for outdoor leisure pursuits. Good road, rail and air links exist with the rest of the UK. For further information on the City and surrounding area visit www.visitscotland.com

For informal enquiries please contact Dr R Herriot, Clinical Group Co-ordinator on (01224)553308, e-mail r.herriot@arh.grampian.scot.nhs.uk

Application packs can be obtained from the Grampian HR Service Centre, Ashgrove House, Aberdeen Royal Infirmary, Foresterhill, Aberdeen, AB25 2ZA or by telephoning (01224) 556692 (24 hour jobline) quoting Ref No SDU25389. Applications should include four copies of CV with details of two referees. Closing date 1 November 2002.

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