ACB News
Number 485 • January 2004

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Printed by Piggott Printers Ltd, Cambridge
ISSN 1461 0337 © Association of Clinical Biochemists 2004

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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:
Selfridges and St Martin’s Church, Bullring. Birmingham is the venue for Focus 2004

Focus 2004
ICC • BIRMINGHAM • 18-20 MAY
The Association of Clinical Biochemists National Meeting
ICC, Birmingham
Tel: 01223 404830 Fax: 01223 404841
Email: info@focus-acb.org Web: www.focus-acb.org
Selby Retires

A scientific meeting was held to mark the retirement of Mr Selby Nesbitt, Consultant Biochemist, Royal Victoria Hospital in Belfast. Selby has been active in the Association of Clinical Biochemists over many the years and has held the office of chairman in Northern Ireland Region. Many of his colleagues and friends attended the meeting and a buffet meal to thank him for his contribution to Clinical Biochemistry in Northern Ireland and to wish him well in his retirement. Professor Brew Atkinson spoke at the meeting on the diagnosis of phaeochromocytoma and Dr Malcolm Hamilton on B12 and folate estimation.

Bye, Bye Judith

In December we said goodbye to Judith Burrows who has worked on ACB News as an Associate Editor for the last year or so. Judith is moving with her family to New Zealand where she hopes to extend her family (plans are already well advanced for this) and also continue her career in clinical chemistry.

Judith attended the launch of the Editor’s new book on Birmingham which was launched in his front room with 100 guests including the Lord Mayor and Lady Mayoress of Birmingham. Judith commented: “Nothing surprises me now after working on ACB News!”.

Final Paragraph of Article on Trainees . . .

The editor apologises that the article which discussed the position of Trainees in the December ACB News was not the final version. Changes were made after the first version had already been typeset when some amendments were made. The final paragraph should have read:

“The position of an experienced BMS who applies for and is successful in obtaining a clinical scientist post requires clarification. The individual must spend at least three years under supervision before being eligible to apply for state registration as a clinical scientist with HPC and cannot practise independently as a clinical scientist until state registered as such. HPC registration requires that a registrant does not operate outside his or her area of competence. Although state registration as a BMS covers some of the knowledge and skills required, this category of registration does not encompass the full range of competences required of a clinical scientist. Therefore, although there may be significant responsibilities which can be delegated and which would be within the competences of BMS registration, delegation of the full responsibilities of a clinical scientist or a medical practitioner in the discipline would not be appropriate. In particular, it would be inappropriate for an unregistered practitioner to deputise for the head of department in areas of clinical liaison and result authorisation or interpretation”. 
Launch into 2004 with Roche Diagnostics

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- Integrated Clinical Chemistry & Immunoassay Solutions.
- Innovative Point of Care IT solutions giving laboratories total confidence in performance and control of all remote systems.
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Hello Louise and Ian

Two new Associate Editors join the ACB News team this month. Louise Tilbrook has previously worked on the Publications Committee helping with Venture Publications. Louise is currently preparing for her Part II MRCPath. Ian is a seasoned traveller and is a Consultant Clinical Scientist at Hull.

Our new Associate Editors will be helping to extend our coverage of news and events in what is looking like an interesting year ahead. If readers have ideas for how we can improve ACB News then do please contact the editor.

Nominations for Association Awards for 2005

Nominations are invited for three of the Association’s awards to be presented at Focus 2005, which will be incorporated into Euromedlab 2005 in Glasgow.

The ACB Foundation Award
The ACB Foundation Award is to acknowledge an outstanding contribution to clinical biochemistry by an Association member, who is normally resident in the British Isles. The recipient will deliver the Foundation Award Lecture, which will be of a specific nature, reflecting the state of the art in one area of clinical biochemistry.

Nominations may be made by any three members of the Association (excluding elected members of the council) and should be submitted via a Regional Secretary.

The Konelab Lecture
The Konelab Award is given to honour a clinical scientist whose work has been of major importance to clinical biochemistry in practice, research or education, leading to improved international co-operation, particularly within Europe. The Konelab Award comprises finance for the Konelab Lecture to be delivered at the National Meeting, and is usually awarded to a practising clinical scientist from outside the UK.

Nominations should be made by three members of the Association (but excluding ACB Officers).

The Roche Diagnostics Award (formerly the Boehringer Mannheim Award)
The Roche Diagnostics Award is used to finance the visit of an international lecturer to give the Roche Diagnostics Award Lecture at the National Meeting.

Nominations may be made by any three members of the Association.

Full details of the nominations procedure for each of the three awards will be found in the current ACB Members Handbook.

Nominations should be sent before 13th February 2004 to: Mr C J Seneviratne, National Meetings Secretary, Biochemistry Department, Manchester Royal Infirmary, Oxford Road, Manchester M13 9WL.

Grade A Trainee Rep on FCS Sought...

There is a vacancy on the Trainees’ Committee for a Grade A representative to the FCS who would attend Trainees’ Committee meetings (twice per year, various locations) and the Federation of Clinical Scientists National Council meetings (three times per year at Tooley Street) to raise awareness of Grade A issues.

For more information, please contact Geoff Lester (FCS Secretary) or Cath Davies (Grade B Trainees/FCS Rep).
To volunteer, please e-mail catherine.davies@gwent.wales.nhs.uk before 13th February
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The Royal College of Pathologists
Aspects of Analytical Toxicology
Thursday 19th February 2004

One-day Symposium - Provisional Programme

Session 1: Overview
10.00 Clinical toxicology & therapeutics
   Mr M Hallworth, Royal Shrewsbury Hospital
10.30 Aspects of Forensic Toxicology
   Dr Robin Braithwaite, City Hospital, Birmingham
11.00 Assessing chemical exposure both in and out of the workplace
   Dr John Cocker, Health & Safety Laboratories, Sheffield
11.30 Coffee
12.00 Drugs/pesticides in foodstuffs
   Dr John Points, LGC Ltd, Teddington
12.30 Drug abuse in sport
   Professor D Cowan, King’s College Hospital, London
13.00 Lunch

Session 2: Techniques and Training
14.00 Training and accreditation in analytical services
   Dr Bob Flanagan, Guy’s and St Thomas’ Hospital, London
14.30 Quality assessment of analytical toxicology services
   Dr Ian Watson, Aintree Hospital, Liverpool
15.00 Tea
15.30 Applications of HPLC-mass spectrometry in analytical toxicology
   Mr Phil Teale, HFL, Newmarket
16.00 Elemental analysis by ICP-MS
   Dr Trevor Delves, Southampton
16.30 Close

Registration: Members: £120.00 Non-members: £160.00
Trainees/Nurses/BMS/Retired: £80.00
The meeting will be held at The Royal College of Pathologists, 2 Carlton House Terrace, London, SW1Y 5AF. Tel: 020-7451-6740.
Email: michelle.casey@rcpath.org. Book online at www.rcpath.org
ACB Southern Region Spring Meeting
Thursday 25th March 2004

Cockburn Lecture Theatre, 2nd Floor QEQM Wing, St Mary's Hospital, South Wharf Road, London W2 1PG

10.00-10.30 Coffee & Registration
10.30-12.30 Members Papers/Clinical Case presentations
12.30-14.00 Lunch

Guidelines and Cardiovascular Disease
14.00-14.30 Myocardial infarction redefined: the impact of the ESC, ACC/AHA guidelines
  Dr Jamil Mayet
14.30-15.00 New guidelines for diabetic screening
  Prof Desmond Johnston
  Tea
  Update on lipid-lowering strategies
  Dr Michael Feher
  New guidelines for risk assessment: laboratory issues
  Dr Bill Richmond

ACB SR Bursary Recipient Lecture
16.30-17.00 TBA
  Dr DJ Berry
17.00-18.00 ACB Southern Region AGM
  followed by refreshments

Member’s Clinical Cases: Oral presentations of 15 minutes. Please send abstract (max 200 words) preferably by email to Dr Pat Kyd at p.kyd@imperial.ac.uk or Department of Chemical Pathology, St Mary’s Hospital, London W2 1PG.

The meeting costs £15 (free to Grade A Clinical Scientists). For further information please contact: Dr Pat Kyd, Department of Chemical Pathology, St Mary’s Hospital, London W2 1PG. Tel: 0207-886-1618. Fax: 0207-886-1904. Email: p.kyd@imperial.ac.uk

Exciting Social Programme at Focus 2004 . . .

- Experience the delights of Le Petit Blanc when you attend the Trainees Dinner
- Come along to the ubiquitous Corporate Members Evening on the Monday evening at Bobby Browns The Club – corporate sponsored hospitality at its very best
- Tuesday sees a varied social programme from Rock Climbing, to a visit to a Vineyard, exploring Birmingham, Ten Pin Bowling to a night at the opera at Symphony Hall
- Book your Conference Banquet ticket early to ensure you don’t miss the delights of a sumptuous dinner in the delightful setting of the Botanical Gardens
THIS IS A NEW REPORT ON MODERNISING THE ORIGINAL MODERNISATION OF PATHOLOGY REPORT...
Deacon’s Challenge
No. 34  Answer

**Christmas Special**

What is the pH of a $1.0 \times 10^{-8}$ molar solution of hydrochloric acid?

$$pH = \log_{10} \frac{1}{[H^+]}$$

If it is assumed that the hydrochloric acid is completely dissociated

$$\text{HCl} \rightarrow \text{H}^+ + \text{Cl}^-$$

and that hydrogen ions only arise from hydrochloric acid (i.e. that $[H^+] = 1.0 \times 10^{-8}$ M), then:

$$pH = \log_{10} \frac{1}{1.0 \times 10^{-8}} = \log_{10} 1.0 \times 10^8 = 8$$

Clearly this is nonsense because a solution of acid can never be alkaline!

At very low concentrations it is also important to consider the dissociation of water which itself contributes to the hydrogen ion concentration:

$$\text{H}_2\text{O} \rightarrow \text{H}^+ + \text{OH}^-$$

So that

$$[H^+]_{\text{Total}} = [H^+]_{\text{From Cl}} + [H^+]_{\text{From water}}$$

Usually the hydrogen ion contribution from water is small in comparison to the hydrogen ions derived from added acid and is ignored (textbooks never seem to point this out). At neutral pH the hydrogen ion concentration of pure water is $1.0 \times 10^{-7}$ mol/L. One approach is to assume that this is the contribution from water for a very dilute acid which must have a pH near to neutrality:

$$[H^+]_{\text{Total}} = (1.0 \times 10^{-8}) + (1.0 \times 10^{-7}) = 1.1 \times 10^{-7} \text{ mol/L}$$

and

$$pH = \log_{10} \frac{1}{1.1 \times 10^{-7}} = \log_{10} 9.09 \times 10^6 = 6.96$$

Strictly speaking the hydrogen ions from HCl will cause minor suppression of the dissociation of water in order to keep the ionic product of water ($K_w$) constant:

$$K_w = [H^+] \times [\text{OH}^-] = 10^{-14}$$
Since one molecule of water always yields one hydrogen ion and one hydroxide ion, then the expression for the ionic product of water can also be written:

\[ K_w = \{ [H^+]_{\text{from HCl}} + [OH^-] \} \times [OH^-] \]

\[ 1.0 \times 10^{-14} = \{ (1.0 \times 10^{-8}) + [OH^-] \} \times [OH^-] \]

\[ 1.0 \times 10^{-14} = (1.0 \times 10^{-8})[OH^-] + [OH^-]^2 \]

Which is a quadratic equation which can be rearranged to:

\[ [OH^-]^2 + (1.0 \times 10^{-8})[OH^-] - 1.0 \times 10^{-14} = 0 \]

and solved in the usual way:

\[ [OH^-] = \frac{- (1 x 10^{-8}) \pm \sqrt{(1 x 10^{-8})^2 - 4 \times 1 \times (1 x 10^{-14})}}{2 \times 1} \]

\[ = 0.995 \times 10^{-7} \text{ mmol/L} \]

Using this value as the hydrogen ion component from water the pH can again be calculated:

\[ [H^+]_{\text{Total}} = (0.995 \times 10^{-7}) + (1.0 \times 10^{-8}) = 1.095 \times 10^{-7} \text{ mmol/L} \]

\[ pH = \log_{10} \frac{1}{1.095 \times 10^{-7}} = \log_{10} 9.132 \times 10^6 = 6.96 \text{ (3 sig figs)} \]

Which is the same result (to 3 significant figures) obtained if the suppression of ionization of water by the hydrogen ions derived from hydrochloric acid is ignored.

**Question No. 35**

A 60 mg dose of a drug is given to a male experimental subject who weighs 80 kg. Assuming that the drug is completely absorbed and distributed evenly throughout the total body water, estimate the potential peak plasma level. If the drug were distributed only within the extracellular compartment, what would the plasma level be?  

MRCPath, November 2003
Christmas Crossword

By Dr Michael Colley, Great Western Hospital, Swindon

Solomon's slave has a support that is partly magical (4)
Seaman hears a cutter at a distance horizontally (8)
Bony processes are colourless without drug habit,
but I'm in (7)
Dread confused summer (5)
Sloth! That sounds like me (2)
Amino acid for backward dad introduces raga (5)
One girl who's lost a name (2)
Fuse sly oaken source (8)
Like a tailless donkey (2)
Coded representation? Not one of spore bearers (4)
Tech's behind's not socially acceptable (3)
This year's buzz-word cheating one in ancient country,
but headless (13)
Sublimate head with power to eat away (13)
Waterfowl, not a thousand, by old gold (5)
The side of window-sill. Noel! (4)
Gosh, go back for the brain test (3)
Don't start garland in Indonesian region (2)
Separation process for diplococci (2)
Confused Angy takes drug after brief study of female
diseases (5)
Fish infectious diseases identity (2)
Iceland exists (2)

It is three-quarters of some parts (3)
Phone engineer becomes black (7)
Second pair embracing large size, about a divider (6)
Trotsky comes back at Christmas (4)
No car storage, no horse, going by boat (6)
Confused deity takes a brief look down in the mouth (3)
Short amino acid about birds (8)
Very large bone (2)
Trooper, go me endlessly for example (8)
Sound strip of bells (4)
Potty post-office (2)
Grantee becomes active component (7)
Bent caliper is similar (7)
Dug up precious metal eggs (3)
Element of sport (2)
Regret French street herb (3)
Fawly oracle (5)
Sounds like it's flying with royal magician (8)
Note the missing centre (2)
Too much French on state rises after attack (8)
Half a ballet dress for a short day (2)
I cure mixed waste (5)
Utilised second hand (4)
Council Matters

Report of the Council meeting held in October 2003

By Gwyn McCreanor, Assistant Secretary

The Topics of the Day were to review the Objectives of the ACB Standing Committees, to discuss the Science Council and the Chartered Scientist status, MHRA and IVD Directive and the Promotion of Laboratory Medicine.

Standing Committees

ACB Executive have decided that it is time to review the objectives of ACB Standing Committees such as Education and Publications etc, and the objectives of the Standing Committees were presented to Council and discussed in detail. It was concluded that Executive will review the objectives and will invite Chairs of Standing Committees to attend the Executive meeting in January.

Science Council

The Science Council has been working to get Chartered Scientist status for nearly 10 years. Part of the negotiations to get government approval for C.Sci is that individual member societies' charter status would be subsumed and the larger societies could become licensing bodies. Dennis Wright represents the ACB on Science Council Board and has been involved in these discussions. Further information on progress will be available in 2004.

MHRA and the IVD Directive

Robert Hill, secretary of the Scientific Committee, informed Council that the MHRA wrote to all Chief Executives in July 2003 indicating that by their interpretation the terms of the Directive would apply to any in-house test, which was used to analyse samples from another institution. This was interpreted, for instance, to include general practices. The MHRA did not appreciate the potential consequences of their interpretation of the directive. On 29th August, a further letter of clarification was issued indicating that any test in service currently would not have to comply with the terms of the directive until December 2005 if it was not put on the market. The additional two-year exemption applies only to tests that fulfilled the requirements in force on 7th December 1998. It remains unclear as to whether assays introduced since 1998 and put into service but not on the market can have the additional two-year period of grace.

EC4 are concerned with the UK interpretation and are challenging it. Their opinion is that a device that is made and used in the same institution should be exempt no matter where the result is sent.
Promotion of Laboratory Medicine

This initiative is to increase awareness of Laboratory Medicine both within and outside the profession. Our target audience includes PCTs, politicians, patients etc, and a group has been established to develop a strategy and materials to support this initiative. This collaboration has been developed between laboratories, the diagnostics industry and BIVDA.

There are plans that these issues will also be discussed at the meeting between ACB Executive and the College of Pathologists.

Medical Input into the Association

Alan Shenkin started this initiative, which is attempting to ascertain what medical members would like from the Association and how the Association can use this medical input. So far there has been lots of feedback from medical members of the Association with a diversity of views. A questionnaire is being compiled and will be distributed to medical members and non-members.

General Medical Services (GMS) Contract

The new GP contract means that there will be an increase in the amount of Pathology testing as a result of the contracting within the GMS contract. It was suggested that members need to enter into dialogue with the PCTs to establish protocols for monitoring workload. Most GPs currently have block contracts with Pathology Directorates so there may be no cost implications for them but plenty for Pathology. The GMS contract is available on the BMA Website.

College of Pathologists Bulletin

The College Bulletin has started to report Consultant Clinical Scientist appointments. Notice of Consultant retirements should be sent to the Association Secretary for collation and sending to the College.
The splendour of the Angel Hotel, in the shadow of both the Millennium Stadium and Cardiff Castle, was the venue for this joint scientific meeting held by the Wales and South West & Wessex regions of the ACB.

Over 100 delegates followed the busy programme with the conference being formally opened by Owen Crawley (Chief Scientific Advisor to the Welsh Assembly Government). Owen set the scene by referring to developments in healthcare in Wales and praising the role of pathology services in the delivery of healthcare in Wales and beyond.

The first speaker Graham Shortland, a Consultant Paediatrician from University Hospital, Wales emphasised the partnership between paediatricians and the laboratory, particularly in the investigation of inherited metabolic diseases (IMD). He spoke of the imminent revolution in newborn screening with the advent of tandem-MS, which he felt would become a routine tool in the investigation of metabolic disease. His observation that many children born with IMDs were now surviving and being transferred to adult care led smoothly into a talk by Anne Green on the management of women with IMD in pregnancy. For example, good management of maternal phenylketonuria can improve outcome. It is also emerging that expectant mothers with a mild undiagnosed IMD may deliver a baby with microcephaly, congenital heart disease or hypertension. Investigating the mother further in these circumstances may be appropriate. Ruth Ayling from Plymouth rounded off the morning session with advice on when and how to investigate puberty. Her review spanned adrenarche, thelarche, gonadarche and a few other - arches for good measure. There followed a more detailed review of the differentiation between gonadotrophin-dependent and gonadotrophin-independent precocious puberty including clinical signs and biochemical investigations.

After a lunch, Roy Sherwood preached caution in the interpretation of abnormal liver function tests. His “take-home” message described a patient who had presented the day before with all of his LFTs abnormal, but not one of them due to liver disease! Ian McDowell brought the meeting up-to-date with the current thinking on the role of homocysteine (hcy) in vascular disease, illustrating this with work done in the Cardiff Heart Institute. In healthy subjects given high dose folic acid, hcy fell but brachial
artery flow mediated dilatation (FMD) was unchanged. However, in CHD patients FMD improved on high dose folic acid independent of hcy, suggesting a possible direct effect of folic acid. He also outlined ongoing trials on lowering hcy with folic acid, B12 and B6 the results of which should be eagerly awaited. Andrew McCaddon reviewed the possible role of homocysteine in neurological disease, particularly Alzheimer’s Disease.

Five trainees competed for the Bayer Award with excellent presentations making the work of the judges very difficult. The eventual winner was Camilla Reed from Southmead Hospital for her presentation “The distribution of peroxisomal proteins in X-linked adrenoleukodystrophy”. The announcement being made at the conference dinner along with a speech by Keith Griffiths made despite his reassurances of keeping quiet.

On Friday morning, Graham Mould from Guildford outlined the problems of polypharmacy and its impact on clinical biochemistry. He observed that nearly 40% of the over 75s take four or more prescribed drugs with nursing home residents taking even more, and this does not include herbal or OTC drugs. Phil Routledge of the University of Wales College of Medicine took us through the management of a chemical incident. There are a staggering 7,000 new chemical formulations introduced annually and currently there are around 11 million known compounds. Most incidents occur during transport and in the USA 25% involved ammonia or strong acids. David Holt of St George’s gave a comprehensive review of the monitoring of the new (and some not so new) immunosuppressive drugs including modes of action, side effects and analytical methods.

Ian Watson from Liverpool completed the session, with a review of the provision of toxicology services. While the rapid availability of many of the analytes would be desirable, it is acknowledged that this may present difficulties for the average DGH.

Under the banner of the All Wales Clinical Biochemistry Audit Group there were post-prandial presentations of audit projects from both regions including the appropriateness of HbA1c requesting, fluid analysis, troponin testing and the investigation of phaeochromocytoma and PCOS.

Our grateful thanks go to the diagnostics industry who supported this meeting and to all the speakers for making it a most successful meeting.
Update from the SAS Hormone Group

Julian H Barth, Chair, SAS Hormone & Tumour Marker Group

The SAS has always prided itself on being a vibrant organisation providing high quality assays that are at the forefront of clinical practice backed up by interpretative help. Over the years there have been a number of changes at the SAS laboratories. These changes have included the directors, contact details and, especially, the assays that we provide.

This issue of ACB News contains an update of the contact details and a guide to which hormones are provided by which SAS laboratory and which matrix is required. There is also information of the novel introduction on a clinical service for serum 17OH progesterone by GC-MS.

These changes are visible on the SAS website (www.sas-centre.org).

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Intensive Course on Screening for Down’s Syndrome

10th-13th May 2004
Wolfson Institute of Preventive Medicine
Barts & The London, Queen Mary’s School of Medicine & Dentistry

- Comprehensive coverage of theoretical and practical aspects of screening for Down’s syndrome
- New information on advances in first and second trimester biochemical and ultrasound screening
- Suitable for the RCOG CME and the IBMS CPD programmes

Further details are available from the Wolfson Institute website: www.smd.qmul.ac.uk/wolfson/epm

or from Cecily Cromby or Laura Fisher, Wolfson Institute of Preventive Medicine, Charterhouse Square, London, EC1M 6BQ
Tel: +44 (0) 20 7882 6258 Fax: +44 (0) 20 7882 6290
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<td>Dr G Wark&lt;br&gt;Tel: 01483-406715&lt;br&gt;Fax: 01483-464168&lt;br&gt;<a href="mailto:gwark@royalsurrey.nhs.uk">gwark@royalsurrey.nhs.uk</a></td>
</tr>
<tr>
<td>Leeds</td>
<td>SAS Centre for Steroid Hormones&lt;br&gt;Dept of Clinical Biochemistry and Immunology&lt;br&gt;Leeds General Infirmary&lt;br&gt;Great George Street&lt;br&gt;Leeds LS1 3EX</td>
<td>Dr J Barth&lt;br&gt;Tel: 0113-392-3416&lt;br&gt;Fax: 0113-392-5174&lt;br&gt;<a href="mailto:julian.barth@leedsth.nhs.uk">julian.barth@leedsth.nhs.uk</a></td>
<td>Mrs M Cavwood&lt;br&gt;Tel 0113-392-3614&lt;br&gt;Fax: 0113-343-5672&lt;br&gt;<a href="mailto:marion.cavwood@leedsth.nhs.uk">marion.cavwood@leedsth.nhs.uk</a></td>
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<tr>
<td>London</td>
<td>Dept of Medical Oncology&lt;br&gt;Charing Cross Hospital&lt;br&gt;Fulham Palace Road&lt;br&gt;London W6 8RF</td>
<td>Prof E S Newlands</td>
<td>Mr H Mitchell&lt;br&gt;Tel: 020-8846-1415&lt;br&gt;Fax: 020-8846-1443&lt;br&gt;<a href="mailto:h.mitchell@ic.ac.uk">h.mitchell@ic.ac.uk</a></td>
</tr>
<tr>
<td>London</td>
<td>SAS Reception&lt;br&gt;Pathology Centre, Area G&lt;br&gt;Hammersmith Hospital&lt;br&gt;London&lt;br&gt;W12 0HS</td>
<td>Prof S R Bloom&lt;br&gt;<a href="mailto:s.bloom@imperial.ac.uk">s.bloom@imperial.ac.uk</a></td>
<td>Dr R S Chapman&lt;br&gt;Tel: 020-8383-8191&lt;br&gt;Fax: 020-8740-0682&lt;br&gt;<a href="mailto:richard.chapman@ic.ac.uk">richard.chapman@ic.ac.uk</a></td>
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<td>Dr S Girgis&lt;br&gt;Tel: 020-8383-3232&lt;br&gt;Fax: 020-8383-3232&lt;br&gt;<a href="mailto:s.girgis@imperial.ac.uk">s.girgis@imperial.ac.uk</a></td>
<td>Dr M Donaldson&lt;br&gt;Tel: 020-8383-4681&lt;br&gt;Fax: 020-8740-0682&lt;br&gt;<a href="mailto:m.donaldson@imperial.ac.uk">m.donaldson@imperial.ac.uk</a></td>
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<tr>
<td>Centre</td>
<td>Address</td>
<td>Director</td>
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<tr>
<td>London Kings</td>
<td>Dept of Clinical Biochemistry</td>
<td>Prof T J Peters</td>
<td>Dr N Taylor</td>
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<tr>
<td></td>
<td>King's College Hospital</td>
<td><a href="mailto:timothy.peters@kcl.ac.uk">timothy.peters@kcl.ac.uk</a></td>
<td>Tel: 020-7346-3731</td>
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<tr>
<td></td>
<td>Denmark Hill</td>
<td></td>
<td>Fax: 020-7737-7434</td>
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<td>London</td>
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<td><a href="mailto:norman.taylor@kcl.ac.uk">norman.taylor@kcl.ac.uk</a></td>
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<td></td>
<td>Dr J Marsden</td>
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<td><a href="mailto:joanne.marsden@kingsch.nhs.uk">joanne.marsden@kingsch.nhs.uk</a></td>
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<tr>
<td>London</td>
<td>Immunoassay Laboratory</td>
<td>Prof J Burrin</td>
<td>To be appointed</td>
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<tr>
<td>St Bartholomew</td>
<td>Dept of Clinical Biochemistry</td>
<td>Tel: 020-7601-7645/7426</td>
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<tr>
<td></td>
<td>St Bartholomew’s Hospital</td>
<td>Fax: 020-7601-8468</td>
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<td></td>
<td>London EC1A 7BE</td>
<td><a href="mailto:j.m.burrin@qmul.ac.uk">j.m.burrin@qmul.ac.uk</a></td>
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<tr>
<td>London</td>
<td>Dept of Clinical Pathology</td>
<td>Dr P A Kyd</td>
<td>Mr M Scanlon</td>
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<tr>
<td>St Marys’</td>
<td>SAS Lab. for Aldosterone and Renin</td>
<td>Tel: 0207-886-1618/1259</td>
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<tr>
<td></td>
<td>Basement, Wright-Fleming Institute</td>
<td>Fax: 0207-7886-1904</td>
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<tr>
<td></td>
<td>St Mary’s Hospital</td>
<td>Dr M Wheeler</td>
<td><a href="mailto:mike.scanlon@st-marys.nhs.uk">mike.scanlon@st-marys.nhs.uk</a></td>
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<tr>
<td></td>
<td>London W2 1PG</td>
<td>Tel: 020-7928-9292</td>
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<td></td>
<td></td>
<td>Extn: 2396/2387</td>
<td><a href="mailto:sophie.barnes@gstt.sthames.nhs.uk">sophie.barnes@gstt.sthames.nhs.uk</a></td>
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<tr>
<td>London</td>
<td>Dept of Chemical Pathology</td>
<td>Dr M Wheeler</td>
<td>Miss S Barnes (acting deputy)</td>
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<tr>
<td>St Thomas’</td>
<td>Guy’s &amp; St Thomas’ Trust</td>
<td>Tel: 020-7928-9292</td>
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<td><a href="mailto:mike.wheeler@kcl.ac.uk">mike.wheeler@kcl.ac.uk</a></td>
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<tr>
<td>London</td>
<td>Clinical Biochemistry</td>
<td>Dr J Honour</td>
<td>Dr G Rumsby</td>
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<tr>
<td>UCLH</td>
<td>UCLH, Windeyer Building</td>
<td>Tel: 0207-679-9592</td>
<td>Tel: 0207-679-9229</td>
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<tr>
<td></td>
<td>Cleveland Street</td>
<td>Fax: 0207-679-9592</td>
<td>Fax: 020 7679 9496</td>
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<tr>
<td></td>
<td>London W1T 4JF</td>
<td><a href="mailto:john.honour@uclh.nhs.uk">john.honour@uclh.nhs.uk</a></td>
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<tr>
<td>Manchester</td>
<td>Vitamin D Research Group</td>
<td>Dr M Davies</td>
<td>Dr J Berry</td>
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<tr>
<td></td>
<td>Medicine</td>
<td>Tel: 0161-276-4066</td>
<td>Tel: 0161-276-8630</td>
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<tr>
<td></td>
<td>Manchester Royal Infirmary</td>
<td>Fax: 0161-274-4833</td>
<td>Fax: 0161-274-833</td>
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<tr>
<td></td>
<td>Oxford Road</td>
<td><a href="mailto:michael.davies@cmmc.nhs.uk">michael.davies@cmmc.nhs.uk</a></td>
<td><a href="mailto:jacqueline.berry@man.ac.uk">jacqueline.berry@man.ac.uk</a></td>
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<tr>
<td>Newcastle</td>
<td>SAS Laboratory</td>
<td>Prof C H Self</td>
<td>Dr A Fleetwood</td>
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<tr>
<td></td>
<td>Dept of Clinical Biochemistry</td>
<td>Tel: 0191-222-6931</td>
<td>Tel: 0191-282-4007</td>
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<td><a href="mailto:c.h.self@ncl.ac.uk">c.h.self@ncl.ac.uk</a></td>
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<td>Pancreatic polypeptide</td>
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<td>Pituitary polypeptide (common subunit)</td>
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<td>Proinsulin</td>
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<td>Thyrotrophin binding inhibiting immunoglobulin</td>
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<tr>
<td>Vasoactive Intestinal Peptide</td>
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C = CSF; P = heparin plasma; Pe = EDTA plasma; Pt = heparin plasma containing trasytol; S = serum; Sa = saliva; U = urine; We = EDTA whole blood. **Blue bold** indicates that specimens have special handling requirements - please see SAS handbook.
SupraRegional Assay Service (SAS) Update

The Executive of the SAS has designated University College London Hospitals (UCLH) as a centre for quantitative analysis of 17-hydroxyprogesterone (17-OHP) by gas chromatography-mass spectrometry (GC-MS). The assay was developed to provide accurate and specific results for this important diagnostic hormone at concentrations up to 2000 nmol/L. The laboratory has extensive GC-MS experience and is active in research on investigations of patients with disorders of the adrenal cortex and gonads.

The 17-OHP assay is based on stable isotope dilution and is not subject to interference from placental and fetal steroids present in blood samples from new-born infants which often lead to difficulties in interpretation of results. 17-OHP is an intermediate in the biosynthesis of cortisol. Deficiency of 21-hydroxylase leads to congenital adrenal hyperplasia (CAH) with increased 17-OHP in the peripheral circulation. In a patient with suspected 21-hydroxylase deficiency blood for this assay can be taken from 12 h after birth at which time genital ambiguity of a female infant will be the only clinical sign. Electrolyte imbalance is a later problem in many cases of CAH requiring emergency administration of corticosteroids. Blood samples for 17-OHP should be taken prior to use of steroids. In CAH 17-OHP is elevated to a range of 80-250 nmol/L within 24 h of birth when normal results in this assay are below 5 nmol/L. A synacthen test (250 micrograms) with bloods at zero and 30 minutes is needed for detection of the non-classic form of CAH and heterozygotes.

Performance of the assay is checked internally at 4 levels in each batch. Within- and between-assay variation is less than 5%. External performance is monitored monthly through the UKNEQAS (A score less than 50) and fortnightly with a BioRad scheme.

The assay is run daily (Monday to Friday) if necessary and preliminary results on an urgent sample can be available on the same day of sample receipt with confirmation by 1100 h the next working day. Early indications for CAH are valuable to clinicians and the families involved.

Minimum sample of serum or plasma is 100 microlitres although the preferred sample size is at least 500 microlitres. Samples should be sent to the laboratory by courier or first class post (next day delivery before 1100 h).

Samples should be sent to: Clinical Biochemistry, UCLH, Windeyer Building, Cleveland Street, London W1T 4JF. For guidance notes, reference ranges and enquiries write to the above address or telephone 0207-679-9592 or e-mail john.honour@uclh.nhs.uk or gill.rumsby@uclh.nhs.uk.

<table>
<thead>
<tr>
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<th>Basal 17-OHP (nmol/L)</th>
<th>17-OHP (nmol/L) at 30 mins post synacthen</th>
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<tr>
<td>Normal neonate (beyond second day)</td>
<td>&lt;8</td>
<td>17-OHP (nmol/L) at 30 mins post synacthen</td>
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<td>Normal child 1-6 years</td>
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<td>&lt;8</td>
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<td>Normal child 6-10 years</td>
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<td>&lt;10</td>
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<tr>
<td>Patient with classical CAH due to CYP</td>
<td>21 defect</td>
<td>17-OHP (nmol/L) at 30 mins post synacthen</td>
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<tr>
<td>Patient with non-classical CAH</td>
<td>5-200 nmol/L</td>
<td>&gt;100 nmol/L</td>
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<tr>
<td>Heterozygote for classical CAH</td>
<td>&lt;10</td>
<td>&gt;&gt;200 nmol/L</td>
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<tr>
<td>Normal adult males 0800-1000h</td>
<td>1.2-5</td>
<td>60-800</td>
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<tr>
<td>Normal adult females (follicular phase)</td>
<td>0.6-4.0</td>
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<td>Normal adult females (luteal phase)</td>
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<tr>
<td>Normal adult females (luteal phase)</td>
<td>1.0-6</td>
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</tbody>
</table>
Topics will include:

- **Gl Tract**
  Liver, pancreas, gut function

- **Nutrition**
  Vitamins, trace elements, antioxidants

- **Immunology**
  Autoimmune disease, Ig subclasses, allergy

- **Histology/Cytology**
  Liquid-based cytology

- **Techniques**
  AA, ICP-MS, spectrophotometry

- **Management**
  Finance, budget management, what not to do!!

- **Case Reports**
  Poster Presentations Skills

The social programme will include a quiz, a night at the dogs, and a Chinese banquet

For further details please contact:
Stephen Halloran, Clinical Laboratory, Royal Surrey County Hospital, Surrey GU2 7XX
Tel: 01483 464121   Fax: 01483 464072
Email: s.halloran@btinternet.com
ACB website: http://www.acb.org.uk/

For an application form please contact the ACB Office: office@acb.org.uk
Focus 2004 is to be held in Birmingham at the ICC. Getting there could not be easier. This article, the first in a series, gives advice and information on planning your trip to the second city.

**By Air**

Birmingham International Airport is located, within easy reach of Birmingham’s city centre. It has direct links to many European destinations and regular internal flights to and from parts of the UK and Ireland. The airport has two terminals. British Airways and British European Airways fly from the eurohub with all other services using the main terminal. More information can be found on their website www.bhx.com.

Both British Airways and British European provide an internal flight service from most major airports in the UK and Ireland. If you plan your journey early and book in advance air fares start from as little as £20.00. For up to date information see www.flybe.com and www.britishairways.com

There is a free shuttle bus service between both terminals and Birmingham International railway station. Delegates can then take a short rail journey to Birmingham New Street station. There is also a 24-hour taxi service available.

**By Rail**

Birmingham New Street station is the major hub of the rail network. It is serviced by all major train companies and is readily accessible from all parts of the country.

The station is approximately a 10-minute walk from the ICC and the route is fully signposted from New Street Station. Alternatively take a taxi from the front of New Street Station.

For more information call the National Rail Enquiries hotline on 0845-748-4950 or visit www.rail.co.uk. For local transport enquiries visit www.centro.org.uk

Again savings on rail fares can be made by booking well in advance and taking advantage of special offers.

**By Road**

Birmingham is directly accessible from the M6, M5, M1, M42 and M40. The ICC is clearly signposted from all major routes into the city. Take advantage of the newly opened M6 Toll road that provides a 27 mile congestion free road with access to and from junctions 4-11b of the M6 network. See www.m6toll.co.uk for more information

Parking is located at the National Indoor Arena - a short walk from the ICC. The car parks operate a reasonably priced pay and display system with over 2000 spaces available.

National Express Coaches also terminate at Digbeth coach station - a short taxi ride from the ICC.

Contact the National Express hotline on 08705 808080 or visit www.nationalexpress.com

**For the Trainees**

“The good does not interest us, the sublime does”

Don’t forget to book your travel for early arrival on Sunday 16th May. There is a special Trainees dinner starting at 7.00pm at Le Petit Blanc Brasserie, part of the chain of restaurants owned by top chef Raymond Blanc www.blanc.co.uk/lpb_birmingham.htm - don’t miss out!
Guidelines for optimal patient care invariably incorporate clinical investigations and laboratory diagnostic tests. The implementation of such guidelines can have a significant impact upon the demand for specific laboratory tests. Therefore it is vital that relevant specialist healthcare scientists are involved in the consultation process and in writing the final document, if it is to represent a practical best-practice approach.


The extensive list of co-authors includes three ACB members, alongside gastroenterologists, a General Practitioner and a radiologist. This should ensure an integrated approach between physicians and the hospital laboratory.

Chronic diarrhoea may result from any one of a plethora of causes (or a combination), as illustrated by an extensive table and a practical algorithm of appropriate investigations and/or diagnostic tests given in the guidelines, to be pursued dependent on the clinical history and symptoms.

Faecal Fat Discouraged

The guidelines contain clear, evidence-based recommendations at the end of each section. The update incorporates advances in laboratory diagnostic tests that have occurred since the original version was published in 1996. These include, for example, widespread access to the faecal elastase test (pancreatic elastase 1 stool test) for determining pancreatic exocrine function and the increased use of serological tests for diagnosing coeliac disease, such as tests for the detection of anti-tissue transglutaminase antibodies or anti-endomysium. Many clinical biochemists may be relieved to read that “Quantification of three day faecal fat is poorly reproducible, unpleasant, and non-diagnostic, and its use should be discouraged”, reflecting the view published by Dr Peter Hill in the Annals of Clinical Biochemistry in 2001 (unbeknown to Peter the guidelines’ ‘authors’ affiliations’ relocated him from Derby to Manchester!). The faecal elastase test, on the other hand, receives a very positive recommendation because it “... offers the advantages of acceptable reliability and convenience (a single stool sample is required) without the need for prolonged urine collections, and is therefore recommended as the test of first choice in patients who present with diarrhoea of putative pancreatic origin”.

The BSG guidelines are a good illustration of the contribution that Laboratory Medicine can make to support optimal clinical management of patients.

‘Guidelines for the investigation of chronic diarrhoea’ are available as pdf files at http://www.bsg.org.uk/clinical_prac/guidelines.htm
Clincial Biochemists, Grade B - Salary: £28,224 - £34,342 pa

Applications are invited from state registered Clinical Scientists for two newly created posts within the Norfolk and Norwich University Hospital. You will have a broad, general background with good inter-personal and communication skills. Demonstration of research experience will be an advantage but not essential. Teaching opportunities exist in this new teaching hospital (associated with the University of East Anglia) and an honorary academic appointment may be offered where appropriate.

Depending on experience and interest you will be associated with a specific area of the laboratory where you will be expected to take the scientific lead. Experience in toxicology, endocrinology or pediatrics would be advantageous.

As these are new posts, appointments will be made to appropriate points within the Principal Biochemist scale and you would be expected to hold either DipRCPath or MRCPath. Consideration will be given to applicants who can demonstrate the ability to progress to this level.

This recently opened hospital has 999 beds and covers a resident population of around 600,000. All major specialties within medicine (with the exception of Cardiac surgery and Neurosurgery) are provided within the hospital and it is anticipated that research activity will develop in association with the UEA. The department of Clinical Biochemistry is well equipped and is in the process of tendering for new analytical equipment and is presently investigating expansion.

The Trust is actively investigating networking with neighbouring hospitals for the provision of Pathology services across Norfolk.

For further information or to arrange a visit please contact Dr Trevor Tickner, Head of Department on (01603) 286927 or email trevor.tickner@nnuh.nhs.uk or Dr Garry John, Clinical Director of Pathology on (01603) 286933 or email g.john@nnuh.nhs.uk

Application form and job description available from Caroline Read, Pathology Office, Norfolk and Norwich University Hospital, Colney Lane, Norwich, NR4 7UY on (01603) 287760 or e-mail caroline.read@nnuh.nhs.uk

Closing date: 16 February 2004.

Relocation expenses may be payable and single accommodation may be available for a limited period of time for staff moving into the area.
**Blackpool Victoria Hospital**

Pathology Directorate  
Clinical Biochemistry Department

**Clinical Biochemist Grade B**  
£23,199 - £29,355 (dependent upon qualifications & experience)

Victoria Hospital is a large District General Hospital with specialist cardiothoracic and cancer units. It is situated on the outskirts of Blackpool in a pleasant location adjacent to Stanley Park and Blackpool Zoo. There are excellent links to the motorway, rail and public transport networks. The costs of accommodation and general living are relatively low on the Fylde coast.

The Clinical Biochemistry Department provides a comprehensive service to this busy District General Hospital, Community Hospitals and Primary Care Trusts. This is a new post and we are seeking an enthusiastic innovative scientist who will make a positive impact in the development of the biochemistry service.

We require suitably qualified Clinical Scientists for this Senior Biochemist post. The appointee will be expected to make a contribution to all aspects of the department’s activities. Candidates will be expected to possess a minimum of a 2nd class degree in an appropriate science and have completed Grade A training. Starting salary will be dependent upon qualifications and experience.

For an informal discussion visit please contact Dr. Steve Butler, Consultant Clinical Scientist, on 01253 300000 ext. 3743. Ref: PAT1/04.

We have a Trust Nursery based at Blackpool Victoria Hospital and a Child Care Co-ordinator who can be contacted on 01253 306426.

Application packs are available by telephoning our recruitment line on 01253 303507 (24 hour answer service) or by writing to the Human Resources Department, Blackpool, Fylde and Wyre Hospitals NHS Trust, Trust Headquarters, Victoria Hospital, Whinney Heys Road, Blackpool FY3 8NR or by e-mail: Jobs@exch.bvh-tr.nwest.nhs.uk Visits: www.bfhwospitals.nhs.uk and www.jobsinhealth.co.uk to see all our vacancy advertisements. Please quote the appropriate reference.


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**Readers and Lecturers**

The Faculty of Applied Sciences is further developing its profile in key areas and we are offering the following full-time opportunities:

**Reader in Biomedical Science (Clinical Biochemistry)**  
Ref: L/0139/ACB

Reader will have a profile that includes measures of international esteem. Lecturers will be keen to contribute to teaching/learning and to further developing research. Experience of securing research income and working with those in professional practice will be valuable. For the Lectureship we will be pleased to receive applications from practising Clinical Biochemists who wish to maintain up to a half-time post in practice alongside an academic position to 1.0 FTE.

Reader scale £32,100 - £40,300.  
Lecturer Senior Lecturer scale £22,100 - £34,100.

Visit our Website to see full details and to complete an on-line application form, or telephone our 24 hour answerphone service on 0117 328 2890 to request documents by post. Closing date for applications is 9 February 2004. Selection events for the Readership will be held from 1 - 12 March 2004, and the Lectureship thereafter.

Please quote the relevant reference number.

Working towards equal opportunities.

University of the West of England, Bristol
WATFORD GENERAL HOSPITAL

Consultant Clinical Biochemist

Chemical Pathology
Grade C £38,628 - £52,867 p.a. plus £251 London Fringe Allowance plus benefits

Following the merger of the Mount Vernon/Watford and St Albans/Hemel Hempstead Trusts in 2001, West Herts Hospitals NHS Trust is managed by a single team of managers and clinicians with a commitment to providing services from the two principal general hospital sites. The Strategic Health Authority for Beds and Herts has been consulting on proposals to rationalise the provision of health care to the local community. A new programme, ‘Investing in Your Health’ has recently been announced and the plans are to build a new hospital in Hatfield in parallel with the development of the Watford site. This will include provision of a new, purpose built centralised laboratory facility.

You will work in a team with the Consultant Chemical Pathologist and two B Grade Biochemists with responsibility for the provision of a comprehensive analytical service. You will initiate and direct audit, research and development and provide relevant post-graduate teaching and training.

You’ll also work with the Consultant Chemical Pathologist at Hemel Hempstead General Hospital and have membership of the Pathology Management Board with eligibility for the post of Director of Pathology.

You must be a registered Clinical Scientist, having completed vocational and research training and have a recognised professional qualification (MCB or MRCPath).

For further information or to arrange an informal visit, please contact Dr D R Collins, Consultant Chemical Pathologist on 01442 287838 or Indu Chandarana, Principal Biochemist at Watford General Hospital on 01923 217570.

For an information pack, please contact the 24 hour recruitment line on 01923 217532 or email Recruitment@whht.nhs.uk quoting ref: DB/177.


For NHS Professionals call 01442 450381.
We offer a range of development opportunities, including clinical supervision and preceptorship.
Situations Vacant

Sheffield Teaching Hospitals NHS

NORTHERN GENERAL HOSPITAL
Clinical Scientists – 2 posts

Directorate of Laboratory Medicine
Department of Immunology
Trust Grade 10/13: (depending on experience)
Hours: 37.5 per week

The above Department has two Clinical Scientist vacancies to enhance the development of the UK NEQAS Immunology and Immunochrometry and Protein Reference Unit services as Centres of Excellence.

We are looking for dynamic applicants with initiative and enthusiasm, who will take a lead role in further developing the department. The appointee will have the opportunity to contribute to research and development, and to other areas of activity within the department, where appropriate.

We provide a supra-regional diagnostic service for immunochrometry, autoimmunity, tumour markers and prenatal screening. The test repertoire is one of the largest in the UK and assay development is continually ongoing. The UK NEQAS Centre provides external quality assessment services to clinical laboratories throughout the world in the fields of immunology, allergy and specialist immunochrometry, is CPA accredited, and recognised internationally.

The Northern General Hospital is one of the largest NHS teaching hospitals in Britain and offers attractive employment packages. The Trust is noted for its excellence in human resource and financial management, and is seeking Foundation status.

Committed to improving the working lives of its staff, the Trust has a flexible approach to working hours and currently offers a 9-5 Monday to Friday service.

Sheffield is a well-positioned city, the fourth largest in England, has a National Park within its boundaries and can offer excellent recreational facilities, theatres, nightclubs and restaurants.

Applicants should have a good honours degree in a relevant subject and ideally a PhD. Applications are welcomed from those who have undergone Grade A training, as well as from enthusiastic scientists who have a strong background and an interest in a career in Clinical Science or EQA and who are eligible for state registration. Candidates with specific expertise in Immunochrometry, tumour markers or prenatal screening will be welcome. Appropriate training will be given to successful candidates who have no experience in routine service provision.

For further information or to arrange an informal visit, please contact Mr K Green, Laboratory Manager on (0114) 271 5707 or (0114) 271 5552, Dr W Egger, Head of Department on (0114) 271 5700 or Mr P A E White, UK NEQAS for Immunology on (0114) 271 5349.

Please quote reference number: 2625C
Closing date: 3rd February 2004

To advertise your vacancy contact:
ACB Administrative Office, 130-132 Tooley Street, London SE1 2TU
Tel: 0207-403-8001  Fax: 0207-403-8006  Email: ACBNewsAdverts@ACB.org.uk

Deadline: 26th of the month prior to the month of publication

Training Posts: When applying for such posts you should ensure that appropriate supervision and training support will be available to enable you to proceed towards state registration and the MRCPath examinations. For advice, contact your Regional Tutor. The editor reserves the right to amend or reject advertisements deemed unacceptable to the Association. Advertising rates are available on request.
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