

Medlines

A biannual publication from the College of Medical and Dental Sciences



Joint efforts

- Exploring links between periodontal disease and rheumatoid arthritis

Inside this issue: **Liver patients in stem-cells trial; Prescription for change on MBChB curriculum; Africa beckons for adventurous alumna**



Welcome

These are interesting times for those of us in the Higher Education sector. Cuts in public funding are beginning to impact on the availability of resources for teaching and for research, and you can't have missed all the controversial discussion around the future of tuition fees.

The medical charities, on whom we depend for a large proportion of our research income, are also not insulated from the effects of the economic downturn. For us there is the added NHS dimension where savings targets and significant restructuring are likely to affect training budgets and research funding.

The College of Medical and Dental Sciences recognises that in these challenging times it is even more important that we concentrate on research excellence and the quality of the student experience. This coming year will see a number of developments aimed at further promoting our key research themes, enhancing the provision of our teaching and improving our infrastructure to more efficiently and effectively deliver our mission.

In relation to research, we are building on our existing strengths in areas of national and international strategic priority with new initiatives in Global Infection, Stem Cells and Ageing, and Systems Science for Health (the use of technological advancements to expedite the discovery of novel biomarkers of disease and to identify new therapeutic targets). Alongside this, we continue to exploit the breadth of our expertise to link strengths across disciplines. This approach is nicely illustrated in this issue

of *Medlines* which highlights the largest ever clinical trial of stem cells in liver disease as well as studies exploring the relationship between gum disease and rheumatoid arthritis. Each of these is the result of cross-fertilisation that is born from our diverse research base supported by a state-of-the-art clinical and technological infrastructure. The same multi-disciplinary mentality pervades our delivery of education and in this issue we spotlight some of the innovative approaches that we are developing in the MBChB programme to help equip tomorrow's doctors with the necessary clinical skills.

We are also committed to improving the quality of our physical environment and are currently in the final planning phase of a very exciting refurbishment of the front hall of the Medical School building and Barnes library. This will provide a much more hospitable 'front of house' with more interactive student services, social learning space and a more comfortable place for parents to sit while their children are being interviewed!

I hope that as you read this edition of *Medlines* you will gain a sense of the confidence and ambition of the College and wider University. In recent months our reputation and profile has been further enhanced by our very

Competition winner

Thank you to everyone who took part in the *Medlines* survey in March. The email survey was designed to help us identify possible improvements to *Medlines*. Over 100 of you responded and the results have been vital in planning this edition. The classes of the Noughties were the biggest responders followed by the classes of the Fifties. The results show that overall you enjoy the publication and are happy with the general content and style and we've got it about right, which is great news. The most interest appears to be in College and School news followed by research. There were many useful suggestions and we have tried to implement some of them in this edition.

Thank you for everyone who took the time to respond.

The winner of the limited-edition University of Birmingham Monopoly Board went to Keith Hine (BSc, 1970; MBChB, 1973; MD, 1981) – congratulations Keith!



successful 'Heroes' campaign (you may have seen the posters on the London Underground) and our hosting of the BBC's prime ministerial leadership debate. So, while there's no doubt that the external environment will become increasingly challenging, we are confident in our ability to 'weather the storm' and to remain in our premier position as leaders in the training of tomorrow's healthcare professionals and as an internationally-recognised centre of excellence in research that translates into patient benefit.

Professor Lawrence Young
Pro Vice-Chancellor
Head of College of Medical
and Dental Sciences

Birmingham trial demonstrates benefits of self-management for high blood pressure



People with hypertension who self-test at home and adjust their medication accordingly are more likely to see their blood pressure drop than people receiving standard care, according to new research from the University of Birmingham.

Raised blood pressure is a key risk factor for heart disease, the largest cause of morbidity and mortality worldwide, yet only about half of patients receiving treatment find their blood pressure is controlled, despite lifestyle changes and medical intervention.

As trials leader Richard McManus, Professor of Primary Care Cardiovascular Disease at Birmingham, points out: 'There is a potentially important role for novel interventions to lower blood pressure, especially in primary care, where management of hypertension mainly takes place. One such approach is self-management.'

Researchers from the University's Primary Care Clinical Sciences section carried out a randomised controlled clinical trial involving 527 patients at 24 general practices throughout the UK from 2007–09.

Participants in the intervention group were trained in how to use an automated blood pressure monitor and shown how to send readings to the trials team via a telephone modem. They carried out two self-

measurements at five-minute intervals in the morning and the readings were assessed according to targets and were colour-coded green, amber and red. Patients showing above-target readings on four or more days over two consecutive months made pre-agreed adjustments to their drug treatment.

At the end of the trial, patients who self-managed had significantly lower blood pressure than those who received usual care. Mean systolic pressure had decreased by 17.6mm Hg in the self-management group and by 12.2mm Hg in the control group. This reduction of 5.4mm Hg systolic blood pressure is equivalent to a cut in risk of stroke of more than a fifth and in coronary heart disease of more than 10%.

Professor McManus says: 'These findings seem to be the result of an increase in the number of antihypertensive drugs prescribed according to a simple titration (drug delivery) plan. Thus, self-management represents an important new addition to the control of hypertension in primary care.'

'Self-management is not suitable for all patients. But even if only 20% of individuals with hypertension self-managed their disorder, this proportion would still represent more than two million people in the UK.'

Health Research Bus launched



The first mobile medical research facility in the UK has been launched. The pioneering Health Research Bus (HRB), is set to transform the way that clinical research for major health issues like diabetes, obesity and ageing is carried out in the community.

The bus, which is funded by Birmingham Science City via Advantage West Midlands, was officially launched on Friday 11 June by Professor Dame Sally Davies, the UK's Chief Medical Officer, in Chancellor's Court.

The bus boasts state-of-the-art scanning equipment and consultation rooms, which will enable scientists from the University to carry out a wide variety of clinical studies, scanning programmes and health promotion activities anywhere in the region.

Professor Paul Stewart, Director of Research and Knowledge Transfer, said: 'The bus will be taken directly into the community, to GP surgeries, supermarkets and schools, making access to the HRB's hi-tech facilities readily available to the community.'

'This bus is a unique opportunity for researchers to overcome a number of barriers to clinical research. In particular it can reach large parts of the population which have previously been difficult to engage, notably young children and the elderly, as they find the experience of coming to take part in research intimidating or have difficulty travelling.'



Parkinson's breakthrough

A ten-year trial co-ordinated by the University, involving some of the UK's top neurosurgeons and consultant neurologists, has discovered new evidence that deep brain stimulation can significantly improve quality of life for some people with Parkinson's over medication alone.

The study, published in *The Lancet Neurology*, was funded by Parkinson's UK, the Medical Research Council and Department of Health, and is the largest trial of its kind in the world. It compared the effects of deep brain stimulation (DBS), a type of brain surgery used to treat Parkinson's, with the best drug therapy in 266 people with advanced disease who were considered suitable for surgery.

They were divided into two groups: those who received immediate surgery and medical therapy, and those who received just medication for a year.

After 12 months' follow-up the researchers found:

- The surgery improves quality of life and motor function in patients with advanced Parkinson's
- On average, the people who had DBS found that their symptoms improved, while those who received medication alone stayed the same



- The people who had DBS needed about a third (34%) less medication to control their symptoms than those who didn't have the surgery

In deep brain stimulation, signals from an electrical implant in the brain help to reduce Parkinson's symptoms such as tremor and stiffness. This type of brain surgery can be an effective treatment option for up to 5% of people with Parkinson's, in particular those whose symptoms are no longer adequately controlled by medication, and who have particular unwanted side effects. As with any major surgery, there is a risk of serious

adverse events, so it is not suitable for everyone. Professor Keith Wheatley explains: 'We will be looking at the long-term effects of DBS, neuropsychological effects of surgery and the economics of using DBS therapy in the NHS. We will further examine the findings to identify who is most likely to benefit from DBS in the future.'

Learn more

To find out more about Parkinson's disease come to Professor Carl Clarke's inaugural lecture on 10 November at 4.30pm in the Medical School Building.

Sperm motility solutions

Ever wondered how sperm know where they're going? By making a wave with their 'whip-like' tails these simple cells swim the equivalent distance of climbing Mount Everest through the female tract to reach the egg in less than five hours.

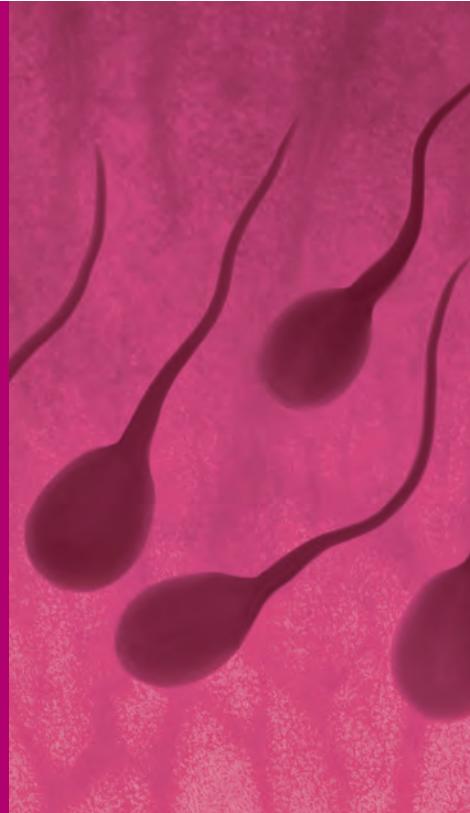
The Birmingham based Centre for Human Reproductive Science is unravelling this puzzle by developing an understanding of sperm motility and how it can be manipulated to affect reproduction.

The team consisting of mathematicians, chemists and engineers as well as biologists have identified a number of receptors on the sperm surface, identical to those in the nose that give us a sense of smell. They have gone on to identify a single odourant out of hundreds of perfume smells tested as a stimulant that has been shown to strongly attract sperm to the egg.

Dr Kirkman-Brown who is leading the group, said: 'The inability of an individual sperm to swim and find the egg is probably the largest but least well-defined cause of fertility problems, which, with around 20% of couples needing help to conceive, is significant.'

'Using a virtual sperm computer model we have discovered how changes in the surrounding fluids can cause sperm to switch from swimming straight to going round in circles, and detailed high-speed characterisation of the tail beat using crash-test cameras.'

The team is unique worldwide for its interdisciplinary approach putting Birmingham in a great position for developing simple human and animal conservation-based fertility treatments and diagnoses in the future.





Stroke survivors could benefit from listening to a regular beat

A joint project between the University of Birmingham and the University of Worcester is looking into how listening to a regular beat could help stroke survivors to improve their walking and reduce the risk of a fall.

The new study has been launched to find out how the use of a metronome, a device used by musicians to keep to a beat, could aid stroke patients.

According to the Department of Health every year approximately 110,000 people in England have a stroke, which is the single largest cause of adult disability.

About 80% of people who have had a stroke suffer a degree of muscle weakness associated with one side, which could lead to an uneven walking pattern.

Dr Rachel Wright, Postdoctoral Research Fellow at the University of Birmingham's School of Psychology, said: 'An uneven walk can lead to a greater risk of a fall, and once someone has suffered a fall they can be fearful of falling again. This can prevent

people from participating in activities that they once enjoyed because they are so worried about falling over.

'Through this research we hope to look at how the use of a metronome can help to regulate a stroke patient's walk and help them to achieve symmetry.'

Dr Wright is carrying out the research using the University of Worcester's state-of-the-art Motion Performance Centre. Participants are analysed using the latest motion capture equipment to see how they walk before and after the introduction of a regular beat.

'This is a three-year project funded by The Stroke Association,' said Dr Wright. 'We hope that the results will be used to design a home-based exercise programme which stroke survivors can use as part of their rehabilitation.'

Dr Wright is currently looking for stroke survivors to assist in the research and would like to hear from anyone in the Worcester area who is willing to take part.

Counting the cost of cancer care

The University has harnessed its academic expertise to provide non-partisan, intelligent commentary on policy issues throughout election year. The Birmingham brief is written by internationally recognised academics in response to headline issues of the day. Below is an excerpt from a brief written by Nick James, Professor of Clinical Oncology at Birmingham.

'The UK is one of the leading centres for cancer research and clinical trials. Many of the most significant drug developments of the last decade have come through UK research. Yet UK patients are increasingly missing out on the benefits of these discoveries as the UK's cancer budget fails to keep pace with European countries. The UK spends around 40% less per patient on cancer drugs than countries such as France or Germany.'

To view this article in full, please visit: www.newscentre.bham.ac.uk/birminghambrief/archive/counting-the-cost-190410.shtml





Professor Ian Booth

Birmingham is spearheading changes to the delivery of its MBChB curriculum to better prepare its fledgling doctors for the modern world of health care.

The 2014 Curriculum Review recognises not only the changing nature of the NHS but the significant rise in student numbers in recent years, as well as the enormous expectations now being placed on young medics.

As Dean of Medicine, Professor Ian Booth points out: 'They need to be able to hit the ground running as soon as they start as Foundation Doctors. We are putting more effort into making sure our students have the necessary clinical skills when they start their first job.'

The main reason for the curriculum review (which is dated to mark the year the first students of the new system will graduate) is not concern about its content – which is widely recognised as excellent – but the desire to improve teaching in a fast-evolving clinical environment.

'The way the curriculum has been structured until now means we have a lot of students going to many different hospitals but not spending very long in each one,' says Professor Booth. 'They found the experience rather impersonal. The re-design of delivery splits students into smaller groups so they go to fewer hospitals and end up in the one they started in.' This will start with the 2011 academic year.

'Birmingham has strengthened and formalised its arrangements with NHS partner Trusts through an innovative undergraduate teaching academy scheme, each Trust Academy having an appointed head who co-ordinates a team of NHS colleagues to deliver teaching. This means it will be less *ad hoc* than in the past. The system has been adopted with considerable enthusiasm in the NHS, which is gratifying, and

Prescription for change

The Medical School has long been a champion of innovation in teaching. Here, *Medlines* examines the alterations currently being made to the MBChB curriculum at Birmingham and assesses how they will benefit the emerging doctors of tomorrow.

an example of good partnership working between the University and the NHS.'

Alumni frequently praise the focus on practical clinical experience that training at Birmingham brings. 'One of the innovations here which has been running for a couple of years now and is being taken up regionally and probably nationally is the Clinical Skills Passport,' says Professor Booth. 'This means that by the time students graduate they have a document that says, "this person can competently perform all the necessary interventions", which is very important for a Foundation Doctor in the NHS today.'

'Students learn on medical mannequins how to take blood or put up a drip, whereas when I was training you just practised on the patient and it could be hell for them.'

The 2014 review is particularly timely, coinciding with the publication of a new edition of the General Medical Council's *Tomorrow's Doctors*, which underpins the MBChB curriculum. 'This sets out what medical schools should be teaching students so they are fit for purpose,' says Professor Booth. 'It has been very useful to set alongside the changes we are making.'

He also commends the Role of the Doctor consensus statement produced by the Medical Schools Council in 2007. 'At a time of some blurring over where doctors stood compared to other health professionals, it has helped to define what a doctor is supposed to do, which is important for medical students to understand when they graduate.'

Access to a large patient population has long given Birmingham students the edge. But shorter hospital stays and renewed emphasis on primary care means it is becoming more difficult to achieve consistent hands-on experience.

Prosectorium





Wolfson Centre for Medical Education



Leonard Deacon lecture theatre

'This morning I was teaching at the Children's Hospital and students there had seen patients in the last few days who, by the time they returned, had already been discharged. Also, students don't learn clinical skills "on the job" nowadays so we use simulation procedures, particularly for emergency situations. Students learn on medical mannequins how to take blood or put up a drip, whereas when I was training you just practised on the patient and it could be hell for them.'

'Another change is greater emphasis on communication skills. It is not just the doctor who matters, although often the role of the doctor within the team is to provide leadership and that is one of the roles that has been eroded. But we do emphasise teamwork and focus on community-based medicine; we teach in primary care much more than we did 30 or 40 years ago.'

Birmingham students do particularly well in qualifying exams, he says. 'One recent study showed that out of 25 medical schools our students are in the top five when it comes to performance in the Membership of the Royal Colleges of Physicians (MRCP) postgraduate qualifying exam, the examination taken if you want to become a physician. We also know they are significantly more likely to pass the Royal College of Anaesthetists (RCA) qualifying exams first time.'

'Over just a few years, our student cohort has doubled, going from under 200 to over 400. This coincided with increasing the size and quality of teaching facilities, so many students were here when the place was a building site. We are now seeing the benefits of that with, for example, the new Leonard Deacon lecture theatre, the Wolfson Centre and our new prosectorium, all of which are extremely popular.'

Also in the pipeline is a £2 million project to refurbish the Medical School building foyer and

the ground floor of the Barnes Medical Library to bring both up to date, including providing 24-hour access to learning. Academic Services and the College of Medical and Dental Sciences have contributed £500,000 to the project along with a donation of £416,000 from former Aston Villa chairman Doug Ellis OBE. 'We hope the shortfall of £1.1 million will be supported through our alumni, friends and supporters when the campaign starts in September.'

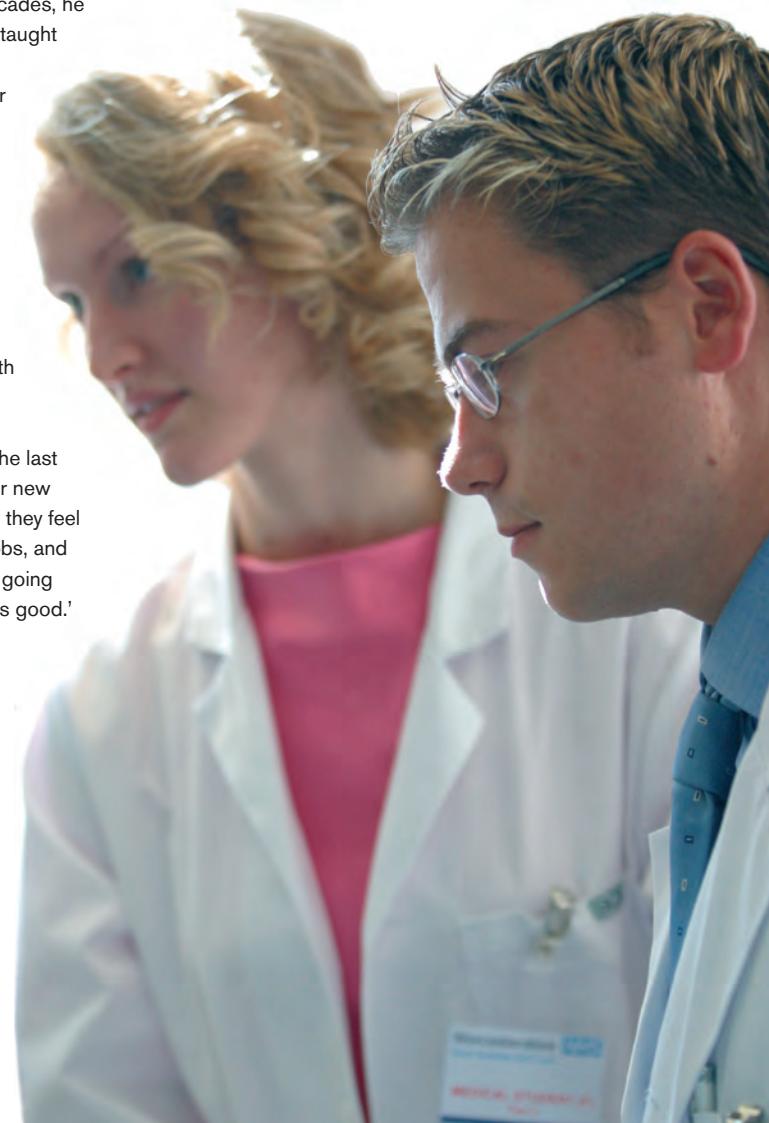
Asked to reflect on the changes in medical teaching over recent decades, he muses: 'Historically, we taught people enough to be a surgeon. I was taught far more anatomy than I needed. Also, using prosection (in which students are taught using an expertly dissected specimen) rather than dissection as a teaching lesson is a step change, along with blended e-learning.'

'Successive surveys in the last ten years have asked our new graduates how prepared they feel for undertaking house jobs, and preparedness has been going up progressively which is good.'

This is particularly heartening given current concern over how prepared today's school leavers are for the gruelling nature of medical training. 'They seem to be less ready for an inquiry-led university education than they used to be.'

'This is something we are addressing as part of the 2014 Review, looking at the content of the early module Learning Medicine to make it more appropriate for arriving students.'

Professor Booth, Leonard Parsons Professor of Paediatrics and Child Health, is due to retire next year and will be stepping down from the Deanship at the end of the summer.



GumJo

tackles double health scourge



Could gum disease be a factor in the development of rheumatoid arthritis? Each year around half a million people in the UK are treated for the painful chronic joint condition, which is estimated to cost the NHS around £56 million annually in England alone – with the cost to the UK economy as a whole thought to total up to £4.8 billion.

Scientists at Birmingham are at the forefront of efforts to find links between rheumatoid arthritis (RA) and the most prevalent chronic inflammatory condition in humans – periodontal, (or deep-seated gum) disease – which affects up to 50% of UK adults to some degree and 85% of adults aged 65 and over in the UK.

A brand new translational study known as GumJo (Gums and Joints) is bringing together experts in dentistry and medicine to investigate to what extent periodontal disease may be implicated in the development and progression of RA and, if so, to develop new approaches to treat it.

Funded under the European Union's Seventh Framework programme and involving 11 EU partners, the four-year study builds on the University's renowned expertise in inflammatory disease.

The European consortium is co-ordinated by Dr Piotr Mydel at the University of Gothenburg. Professor Thomas Dietrich, Head of Oral Surgery at the School of Dentistry is heading the Birmingham group. GumJo is a multi-disciplinary collaboration between the Periodontal Research Group led by Professor Iain Chapple, Dr Paul Cooper, the University of Birmingham's Rheumatology Research Group (RRG) headed by Professor Chris Buckley, Dr Paola de Pablo, an expert in the epidemiology of inflammatory disease and Dr Dagmar Scheel-Toellner as well as Dr Helen Cooper, of the School of Biosciences.

'During the last 15 years, data has emerged which links periodontal disease to all sorts of systemic inflammatory conditions, including heart disease and stroke,' explains Professor Dietrich. 'The big question is: to what extent is it causal and to what extent coincidental? We feel now is a good time to look into this in more detail.'

The new research, which has featured in the journal *Nature Reviews Rheumatology* (de Pablo, Chapple, Buckley, Dietrich), will use samples of blood, gum fluid and saliva collected from RA patients in Birmingham. 'We want to shed some light on the link between what is happening in the gingival crevice and whether this is related to what happens in the joints,' says Professor Dietrich. 'While the research is largely laboratory-based, we are currently building up a cohort of RA patients in the West Midlands so that we essentially follow them through the course of their disease, including testing them for periodontal phenotype.'

'We are aiming to develop markers for this bug so that we can then carry out clinical trials and potentially help to push forward drug development.'

One of the pathogens believed to play a key role in periodontal disease – the bacterium *porphyromonas gingivalis* – has been found to secrete an enzyme that can produce changes in proteins, which can be a scientific marker for RA. 'GumJo is essentially about looking more closely at this very specific pathogenic link,' says Professor Dietrich. 'We are aiming to develop markers for this bug so that we can then carry out clinical trials and potentially help to push forward drug development.'

'It is clear that the inflammation associated with RA is strongly associated with collateral damage in organs other than the joint, such as the cardiovascular system and bones,' says Professor Buckley. 'Members of the RRG, including Dr Andrew Filer and Dr Karim Raza, are interested in why inflammation persists in RA and, in particular, why it has a predilection for the joint. The fact that inflammation in the gums is associated with inflammation in the joints adds an exciting new dimension to our work.'

The GumJo project coincides with the School of Dentistry stepping up research into combating periodontal and pulpal disease.

Experts are exploring the complex biology of periodontal disease and are using their findings to translate basic science into new diagnostics and treatment strategies.

One project is exploring the molecular processes of periodontal inflammation, including how certain micronutrients may modulate inflammation at a genomic level. Scientists are also using Birmingham's world-leading mass spectrometry capability to, for the first time, sequence every protein in saliva to observe how these change in patients with gum disease.

'This funding provides an exciting opportunity to discover whether periodontitis stresses the immune system to the extent that it starts to produce autoantibodies against the joints,' says Professor Chapple. '*P.gingivalis* is a major periodontal pathogen which produces an enzyme that modifies human proteins into a form that we believe can induce antibodies to be produced by the patient against their own tissues, as happens in RA. We can model this process and, using highly sensitive mass spectrometry methods, we can measure the amounts of these modified proteins in gum fluid. There are some complex studies planned but we have a great team of scientists in Birmingham working together on this important project alongside our European colleagues.'

The GumJo team estimates that around 10% of patients with RA will be found to also suffer from moderate to severe periodontal disease. 'It is early days but if our hypothesis is correct and new treatments can be found, then even a proportionately small reduction in cost could result in substantial savings for the NHS and the economy,' says Professor Dietrich.

No one is suggesting that removing patients' teeth might be a way to stem the progression of RA, but effective treatments of periodontitis are available and, with drugs currently used to treat RA often having unpleasant side effects, rheumatologists and their patients will be awaiting the team's findings with interest.

GumJo is due to begin later this year.

As *Medlines* went to press the School of Dentistry announced that it had received funding approval from the National Institute of Health Research for a Patient Benefit programme for a pilot study of 60 Birmingham patients with rheumatoid arthritis and severe periodontal disease to investigate whether treating their gum disease has a beneficial effect on the joints.





AFRICA BECKONS for adventurous alumna

Melissa Weighill (MBChB, 2008)

Before starting her medical degree at Birmingham in 2003, Melissa Weighill spent several months as a volunteer in a small impoverished community in Kenya.

'We did a lot of work with young people and I really enjoyed my time there but I also felt frustrated that I didn't have the kind of professional skills that could really make a difference to people's lives,' she remembers. 'I promised myself that I would develop these skills and one day return to Africa.'

Now the 25-year-old Brighton-based junior doctor is set to fulfil her ambition having taken the bold decision to leave her general medical post at the Royal Sussex County Hospital and make the journey to Uganda to spend several months working as a volunteer medic in a small rural clinic.

'I am a medic at heart and had applied to do my core medical training in South Thames when a friend told me they were going to Uganda,' she explains. 'I didn't take a gap year before my degree and I thought if I don't do something like this now I probably never will, so that kind of made up my mind.'

'I'm really excited about the opportunity to work in a country which so urgently needs the help of people with good medical experience.'

Both of Melissa's parents are doctors who have previously worked in Birmingham, so medicine was a natural career choice for her and she was delighted to gain a place at the Medical School.

'I found the training quite tough,' she recalls. 'It was very intense; we had up to eight hours of lectures every day to start with, but years three to five were very different because we spent so much of our time in a clinical setting and our lectures were clinically based so you had plenty of hands-on experience. I don't think this has always been the case for some of my friends who have done their medical training elsewhere.'

She particularly recalls working with hepatologist Dr Douglas Thorburn at the Queen Elizabeth Hospital in Birmingham, where she helped to assess patients for liver transplant operations. 'It was a fantastic experience, particularly when we were asked to present at a conference in Dublin; that was a highlight of my training.'

Her first job after graduating was in Worthing. 'I was brought up in Brighton and I wanted to be near the sea again so I did my foundation year 1 rotation in haematology and general surgery and renal medicine at Worthing Hospital. I have spent my second year in

Brighton and Sussex University Trust working in Neurology, general surgery and General Medicine and I have thoroughly enjoyed it.'

In Uganda she will help to staff a medical truck that acts as a satellite for the base clinic, serving remote villages. 'I'm told we may see up to 200 patients a day. I am expecting to see many young women who suffer complications after giving birth without access to hospital facilities.' After leaving Africa, she is due to undertake more voluntary work, joining a medical project setting up a clinic in the remote Indian foothills of the Himalayas.

'I think both projects will be a great experience,' she says. 'I am prepared for the basic standards of living I know I will encounter. But I think the biggest shock will be the enormous change in standards of medicine.'

'We are used to ordering chest X-rays and taking blood for testing as standard procedures before starting treatments, but here everything will be based on clinical examination. I'm sure this kind of thinking on my feet will stand me in very good stead for when I return to the UK.'



Hospital memories

In the June edition of *Bitesize*, our alumni e-newsletter, we asked for your memories of the Queen Elizabeth Hospital. Thank you to everyone who sent in a memory! There were some really interesting accounts, but unfortunately because of space we are unable to print them all. So here is a selection and you can see the others at www.your.bham.ac.uk by searching under 'your memories'.

'My first job was in the General Hospital in Birmingham (now the Children's Hospital). I worked with Professor William Wynn and when the Queen Elizabeth was going to open, he moved to be the senior physician there. He asked me to go and work with him as the first house physician and it was an honour to be asked. I remember the QE opening on 1 January 1939. It was opened by a convoy of ambulances from Selly Oak Hospital on a snowy day.'

Before 1939 the two teaching hospitals were Queens and the General. The Queens was showing its age and was to be replaced by a new hospital known, from its very inception, as the Centre Hospital and this was the official name that appeared on all the correspondence at that time. Sometime in the early days the Queen (later to be known as Queen Elizabeth, the Queen Mother) came around to the new hospital. I don't know if it's true, but there is a story about how the QE was named. After her tour, the hospital was to be named and in an aside to her aide she asked about the name and he said 'the Queens, Ma'am'. 'Oh, of course', she said, 'I name this hospital the Queen Elizabeth' and so it stuck!

The QE was a very pleasant building but its steel girder and concrete construction made it rather noisy.

I was a Resident Medical Officer (RMO) and lived on the QE site. I lived there from 1939 to 1945, before being called up and it was like home and a real family. We all used to take it in turns to watch out for the bombs and you could see them being dropped over Selly Oak.

We used to get injured soldiers from Dunkirk and Normandy and casualties from the Blitz from the surrounding Birmingham area to the hospital also.

After the war in 1948, I applied for a consultant job at the teaching hospital and stayed there until I retired.'

David Humphreys (MBChB, 1938)

'I was a medical student when I was first in residence at the QE and spent a month on the Obstetric Unit. Delivering babies was the most interesting 'hands on' experience we had in the five year course. I remember quite vividly delivering a baby of a 14-year-old girl who just thought she was putting on weight until she went into labour!'

In 1962 I was Resident Surgical Officer (RSO) at the QE working with two great QE Surgeons – R K Debenham and Victor Brookes. Later as Senior Registrar I worked with Professor Geoff Slaney who was President of the Royal College of Surgeons. A great hospital full of outstanding characters and memories.'

Selwyn Glick FRCS (MBChB, 1958)

'I was a student, and later House Physician on the Medical Professorial Unit at the QE in the late 1950s, when the hospital had been in use for about 20 years. It was disparagingly known by General Hospital staff as 'The Marble Halls'. Unusually by today's standards there was in-patient accommodation on each of the seven floors, thanks to nearly all Out Patient work being focused at the General Hospital and support and administrative needs for space in those days being much less. Rubberised floors and under-floor heating were innovative features. The latter dried up shoe leather for anyone who worked and lived there 24/7! The open bays at the ends of the wards, reminiscent of the days of TB sanatoria, were, in due course, closed off to make day rooms for patients; accommodation which was no doubt considered unnecessary in pre-war days, when prolonged bed rest was often the order of the day. Sterilisation of needles and syringes in those 'non-disposable' days took place at ward level. The need for which the architects had been unaware, so it had been necessary to adapt a cupboard in each ward to provide a site for this purpose.'

It will be sad to see the QE go. A magnificent building in its day, however, it is the people, not the building which makes for a great hospital; but they are another story.'

Keith Wright
(MBChB, 1959)



Queen Elizabeth Hospital north entrance



New

Old

Landmark stem-cells trial offers hope for liver patients



Dr Philip Newsome

Of the top five causes of death in the UK, including heart disease and cancer, liver disease is the only one that is still rising. Obesity-induced fatty liver disease, alcohol and Hepatitis C are all contributing to this surge, which threatens to become an epidemic.

Birmingham has an international reputation for carrying out pioneering work into liver disease, including liver transplantation, Hepatitis C research and on-going work into the treatment of liver cancer. But with numbers of patients requiring transplant far outweighing the number of donor livers available, the need for new treatment approaches has never been greater.

The University's capacity for translational work in liver disease received a major boost in April 2008 with the news that Birmingham had been chosen to be home to a new £6.5 million Biomedical Research Unit (BRU). The BRU, of which Professor David Adams is director, focuses on translational cell therapy for liver disease and is one of only 16 National Institute for Health Research-funded BRUs announced by the government.

Now up and running, one of the liver centre's first initiatives is the world's biggest study into

how stem cell research can help people with advanced liver disease.

Known as *REALISTIC, this landmark National Institute of Health Research-funded clinical trial is based on new approaches to therapy that have been pioneered in Birmingham and are based on using patients' own blood cells, including stem cells, to suppress liver damage and promote healing. Birmingham scientists have already piloted a cell-based vaccine that stimulates the patient's immune system to fight liver cancer and the unit is allowing them to develop this and other approaches into translational treatments.

'Developing alternative treatments to transplant is very important for people with advanced liver disease,' explains Dr Philip Newsome, Consultant Hepatologist and Senior Lecturer in Hepatology in Birmingham's Centre for Liver Research. 'We wanted to focus on people who have liver cirrhosis as at the moment there are no specific treatments for them, and there is real potential for benefit.'

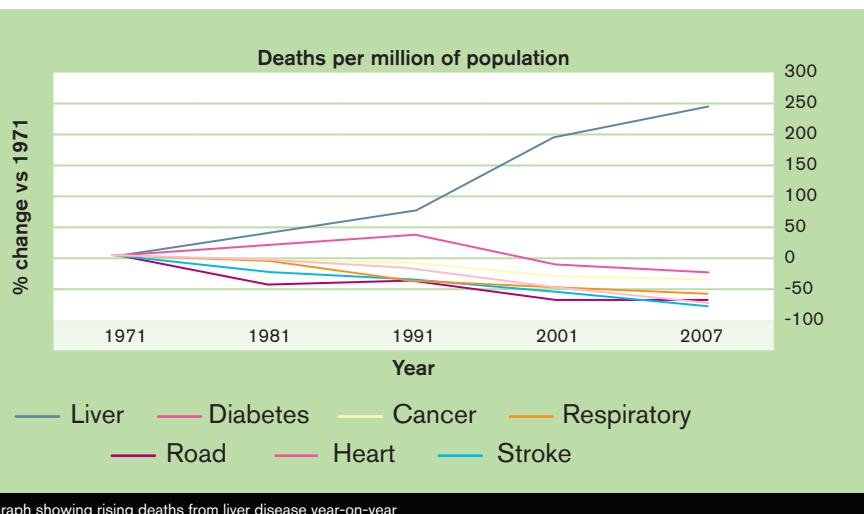
'The REALISTIC trial is targeting people with liver cirrhosis before they progress to very end-stage liver disease. The challenge, and

hope, of using stem cell therapies is that firstly, they will remodel and break down some of the scar tissue, and secondly, will encourage proliferation of liver cells. These concepts are already supported by exciting data from small-scale human studies, but have never been scrutinised in a large clinical trial in patients.'

'This is the largest ever stem cell trial in liver disease, and builds on the expertise of many world-leading facilities at the University of Birmingham.'

The randomised trial involves three groups of patients; a control arm, a second arm in which patients receive injections to mobilise haematopoietic (the most versatile) stem cells from the bone marrow into the circulation, and a third arm in which the mobilised haematopoietic stem cells are collected from the patients' blood, purified, then batched for re-delivery into a peripheral vein every month for three months.

'We are trying to tease out to what extent you only need to mobilise haematopoietic stem cells into the circulation with Granulocyte colony-stimulating factor (GCSF) – and to what extent is it important to purify cells and give them back at repeated points,' says Andy King, an NIHR research fellow at Birmingham who is working on the trial. 'This will be the first time that a trial has looked at the effect of repeated infusions of stem cells in patients with liver disease. We think the cells we deliver don't become liver cells but stimulate cells that are there to regenerate again. In liver cirrhosis, replication of liver cells is blocked by the scarring that is present, so we are trying to over-ride this by using stem cells which can stimulate these cells to regenerate.'



Alcohol is contributing to the rise of liver disease



The aim is to halt or reverse the progression of disease. Dr Newsome adds: 'Our primary end point is looking for improvement in liver function. We will be using scans and blood tests to observe scarring in the liver and also to look to see if quality of life is improved as a result of this trial.'

'We have had many patients contacting us to see if they would be eligible for the study, highlighting the need among patients who don't have a prospect of alternative treatments at the moment. People have been very keen to participate. One of the reasons we liked the acronym REALISTIC is because we wanted an intervention that could be rolled out and repeated with relative ease, and one which captured the sentiment of a trial that minimises intervention for patients.'

With 81 participants, this will be part of a two-centre study involving Birmingham and Edinburgh and brings together some of the UK's most eminent liver disease scientists. In Edinburgh the study is being co-ordinated by Professor Stuart Forbes.

In Birmingham participants will be recruited from the liver unit and will receive treatment via the University's Wellcome Trust clinical research facility. Blood will be processed in the National Blood Transfusion Centre on Vincent Drive.

'This is the largest-ever stem cell trial in liver disease, and builds on the expertise of many world-leading facilities at the University of Birmingham, such as the cancer trials unit which is world renowned. We are very fortunate to have this unique co-location of units and expertise,' says Dr Newsome.

**REALISTIC (REpeated AutoLogous Infusions of STem cells In Cirrhosis)*

2010 honorary graduates



Dr Tim Harris

Dr Tim Harris, Doctor of Science, DSc

Tim Harris is Chief Technology Officer and Director of the Advanced Technology Program at the USA-based SAIC-Frederick, Inc, which develops treatments for patients with cancer and AIDS. The former President and CEO of Novasite Pharmaceuticals, he attained a BSc (Hons) Biochemistry in 1971 and a PhD in Virology in 1974 from the University of Birmingham before starting work as a government research scientist at the Animal Virus Research Institute. His industrial work includes periods at Celltech (now UCB Pharma), Sequana/Axys and Glaxo Group Research. He founded SGX Pharmaceuticals, where he spent six years as CEO.



Professor Robert Lamb

Professor Robert Lamb, Doctor of Science, DSc

Robert Lamb is Investigator of the Howard Hughes Medical Institute in the USA. He is editor-in-Chief of *Virology* and is on the editorial board of *Journal of Virology*. An alumnus of the University of Birmingham, he attained a BSc (Hons) in Biochemistry in 1971 before being awarded a PhD in Virology and later an ScD at Cambridge University. He is Professor of Molecular and Cellular Biology at Northwestern University and Professor of Microbiology and Immunology at Northwestern University Medical School.



Professor Barry Everitt

Professor Barry Everitt FRS, Doctor of Science, DSc

Barry Everitt, renowned as an international authority on brain function, is Professor of Behavioural Neuroscience and Master of Downing College, Cambridge. He was awarded a PhD in Anatomy from the University of Birmingham in 1970 and undertook post-doctoral research at the University before moving to the Karolinska Institute in Stockholm. He has served on several national and international advisory committees.

In addition to our honorary graduates, both the Chancellor's Prize and the Vice-Chancellor's Prize were awarded to two of our medical graduates during the Degree Congregations. These prizes are given to the two most outstanding students across the whole University. Very many congratulations to Ross Elledge (MBChB, 2010) and to Fozia Roked (MBChB, 2010).

Barnes and foyer update

Planning continues for the refurbishment of the Medical School building foyer and Barnes library ground floor as reported in the last edition of *Medlines*. This project is expected to be completed in autumn 2011.

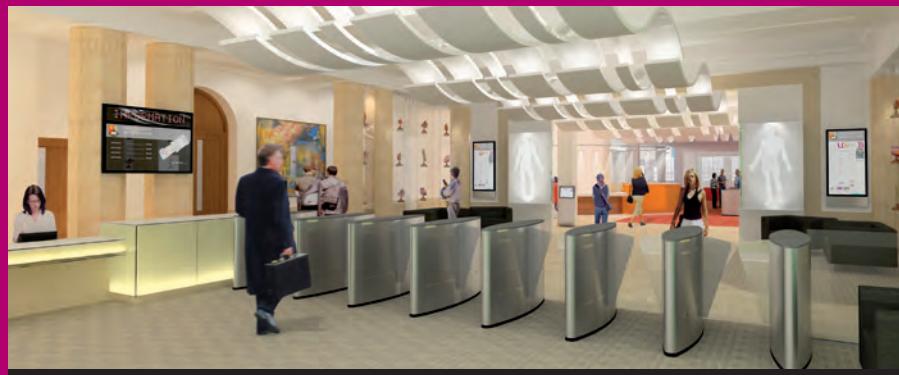
Professor Lawrence Young, Head of College of Medical and Dental Sciences said: 'This redevelopment will augment the considerable improvements made to the Medical School building over the last six years, allowing us to recognise and build on the achievements of generations of medical professionals, and equipping us for the century to come.'

We are busy putting together final designs for the area. Here are some sneak preview artist's impressions for our alumni on how the new space will look!

We'll be contacting you to let you know more about the project soon. To find out more contact Michelle Morgan, College Alumni Relations Manager on +44 (0)121 414 3488 or at m.morgan@bham.ac.uk.



Existing lobby



Artist's impressions

Hundreds of alumni return for reunions

Almost 400 alumni and their guests came back to Birmingham for a day of memories, meeting old friends and exploring campus at the University's anniversary reunions.

Medicine and Dentistry alumni celebrating their 25, 35, 50, 60 and pre-60 anniversaries attended the day on 12 June – some travelling from afar-afiel as Germany and Ghana just to be there.

Alumni were given talks by Professor Chris Lote, Mr Don Spence and Professor Deborah White about what it's like to study Medicine and Dentistry now before having lunch, listening to a panel discussion in the Leonard Deacon Lecture Theatre and touring parts of the campus.

The day was rounded off with a reunion dinner, with entertainment provided by a string quartet comprising two current students and two Class of 2009 alumni.

Jennifer Chapman (MBChB, 1970) said: 'I had a really wonderful time at the reunion

and us medics from the 40-year group had a great time together. The wild ones had calmed down and we found plenty to talk about.'

Did you graduate in 1986, 1976, 1971, 1961 or before? If so, save Saturday 18 June 2011 in your diary! You will receive full details of your anniversary reunion later this year.

To find out more about our events visit: www.birmingham.ac.uk/alumni



10-year reunion

The Medicine Class of 2000 is holding its 10-year reunion on Saturday 6 November 2010 at the Hyatt Regency Hotel Birmingham.

It's going to be a black tie event with dinner and disco. Partners welcome also.

Contact Sally Hetherington (nee Pope) (MBChB, 2000) who is organising the event at sallypope@hotmail.com to register interest.

Birthday Honours list

Two Medicine alumni have been awarded in the Queen's Birthday Honours list.

Mary Armitage CBE (BSc 1977, MBChB 1980) was awarded for services to medicine and Eric Walker MBE (MBChB, 1967) for services to travel medicine.

Congratulations to you both!

Conferences and events at the Medical School

Conferences and events

Scratching the surface: the history of skin, its diseases and their treatment 29 and 30 October

This conference seeks to address the subject of skin, its diseases and their treatment broadly since 1700. In the process, it aims to bring together individuals working in very different sub-fields in the history of medicine over the past three centuries. For all enquiries contact Kiran Hallan on k.k.hallan@bham.ac.uk

Women in clinical academic medicine lectures

The College of Medical and Dental Sciences has launched a new networking and social group for female clinical academics at all stages of their careers. The aim is to provide a forum for discussion, support and mentoring. The programme will comprise regular social events with key speakers, training workshops and an interactive website. For more information contact Lesley Ludlow on l.e.ludlow@bham.ac.uk



Medlines

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Medlines is the alumni newsletter for medicine at the University of Birmingham's College of Medical and Dental Sciences.

Views expressed in **Medlines** are not necessarily those of the University or a statement of University policy. All submissions may be subject to editing. The editor's decision is final.

Inaugural lectures

Searching for ghosts

Speaker: Professor Ciaran Woodman
Date: Wednesday 6 October, 5.15pm

How to decipher the brain code: from ions to circuits

Speaker: Professor Attila Sik
Date: Wednesday 13 October, 4.30pm

Parkinson's disease: past, present and future

Speaker: Professor Carl Clarke
Date: Wednesday 10 November, 4.30pm

Looking into the owl's eye; unravelling the mystery of Hodgkin's lymphoma

Speaker: Professor Paul Murray
Date: Wednesday 24 November, 4.30pm

All inaugural lectures are free and are followed by a drinks reception on the ground floor of the Wolfson Common Room, Medical School building.

Please RSVP to Michelle Morgan, College Alumni Relations Manager at m.morgan@bham.ac.uk or on 0121 414 3488.

We offer a range of postgraduate education opportunities including both research and taught programmes.

Opportunities are available on a full or part time basis leading to the qualifications of MD, PhD, MPhil, MSc, Postgraduate Diploma and Postgraduate Certificate. Continuing professional development (CPD) opportunities are also available as short study programmes.

Learn more

www.about.bham.ac.uk/colleges/mds/courses.shtml



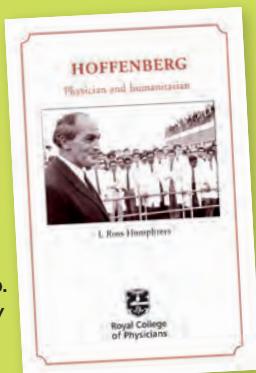
Hoffenberg biography published

The Royal College of Physicians has published a new biography called '*Hoffenberg – Physician and humanitarian*' detailing Professor Sir Raymond Hoffenberg's life.

Born in South Africa in 1923 – where he trained and practiced as a physician and from which he was banned for his anti-apartheid activities in 1966 – Raymond (Bill) Hoffenberg was to become a familiar and highly respected figure in the worlds of academe and medicine in the UK.

Raymond Hoffenberg was appointed to the William Withering Chair of Medicine in 1972 at the University of Birmingham where he founded a distinguished department of endocrinology.

To find out more visit the Royal College of Physicians:
<http://bookshop.rcplondon.ac.uk/details.aspx?e=296>



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