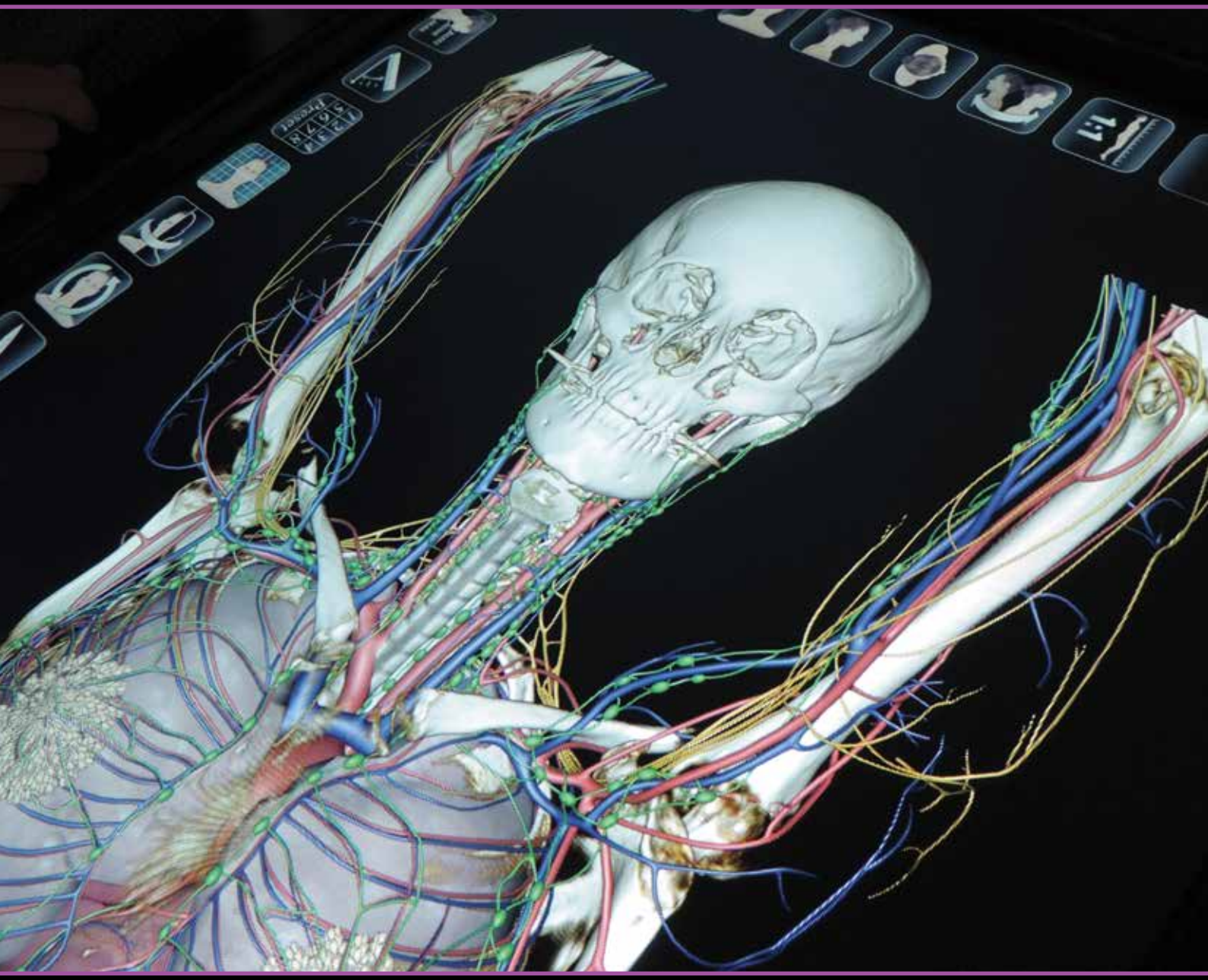
UNIVERSITY OF BIRMINGHAM

2014

Medlines

An annual publication from the College of Medical and Dental Sciences



Leading the way in learning

Also in this edition: **A new MBChB structure; the shape of training review; meet the new Chief Inspector of General Practice**

Welcome to the 2014 edition of *Medlines*

Professor Eric Jenkinson has taken up the post as Pro-Vice-Chancellor and Head of College of Medical and Dental Sciences.

Much has happened in the past year in the College. In research terms we have had the second most successful year in the past decade so far, with more than £4.5 million of new awards up to May. This is particularly pleasing in what is currently a difficult and challenging funding environment. Applications to study on our postgraduate courses are also up as well as seeing a notable rise in international numbers. Being awarded *The Times* and *The Sunday Times* University of Year 2013–14 will no doubt have had some impact upon this.

Pharmacy has begun its first year and is currently undergoing the next stage in the accreditation process with the General Pharmaceutical Council. We have also re-established our Physician Associate course, which has been very popular and as a result we have welcomed two intakes over the current year. We have plans to grow our Medical Science programme and we are also looking to expand our medical laboratory science courses, including blood sciences and our postgraduate research offering overall.

Of course, expansion must be balanced alongside widening access and ensuring we are matching or exceeding students' expectations on the nature of their experience. We are working hard to improve our teaching environment and the quality of our education, aspects of which are addressed in this issue of *Medlines*.

We cannot act in isolation and our relationship with the NHS is key. The appointment of our new Dean of Medicine, Professor David Adams alongside Professor Kate Thomas, Vice Dean and MBChB Director of Medicine, will be instrumental in taking forward our medical teaching and developing our external interface with the NHS. Birmingham Health Partners (BHP), a strategic alliance between the University, University Hospitals Birmingham NHS Foundation Trust, and Birmingham Children's Hospital NHS Foundation Trust, brings together clinical, scientific and academic excellence. BHP is currently leading the development of a new exciting Institute of Translational Medicine (ITM), a world-class translational research facility in Birmingham, which will be housed in the old QE. The work has commenced on site ready for completion in June 2015.

I hope you enjoy reading this edition of *Medlines* and hearing about our progress, our research and our plans for the future.

Eric Jenkinson
Pro-Vice-Chancellor and Head of College of Medical and Dental Sciences

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The University of Birmingham Alumni and Friends

The Barnes Library and foyer refurbishment donor boards are now in pride of place in the Doug Ellis Learning Hub.

The donor boards list all those that have generously contributed towards the project and made it possible.

Thank you.

Alumni congratulations!

Congratulations to the following people, who received Queen's Birthday Honours in 2013:

- Jeremy Johnson MBE (BSc, 1971; MBChB, 1974)
- Rosalyn Proops MBE (MBChB, 1974)
- Kathryn Ward MBE (MBChB, 1975)

Congratulations to the following people who were awarded in the New Year's Honours 2014:

- Tara Bartley OBE (MSc, 2004)
- Geoffrey Hanlon MBE (MBChB, 1976)

We are *The Times* and *The Sunday Times* University of the Year 2013–14!

As well as all-round excellence, it was Birmingham's approaches to challenges including student recruitment and graduate employability that impressed *The Good University Guide* expert panel.

What makes Birmingham special for you? Email mds-alumni@contacts.bham.ac.uk or tweet us @unibirm_MDS

Front page picture: Anatomage table

Institute of Translational Medicine (ITM)

A new £24 million facility is being built where academics, clinicians and industry can all co-locate to create a globally unique translational medicine centre. As part of the old Queen Elizabeth Hospital, the space is being transformed into an Institute of Translational Medicine (ITM) which will sit at the heart of one of the largest and most diverse patient catchment regions in Europe.

The ITM will be a single point of entry for individuals, organisations and businesses seeking to maximise biomedical research translation for the benefit of industry, the economy and ultimately patients. As a central meeting point and working hub, it will allow clinicians, academics, methodologists, patient groups and industry partners to maximise their interaction and develop productive networks. It will facilitate the efficient assessment of cost-effective new drugs, medical devices and diagnostics to more rapidly bring them to market and use within mainstream clinical settings. It will include a large clinical area that will provide an infrastructure for the recruitment and follow-up of patients participating in the translational research programmes within the ITM.

Programmes of clinical trials will evaluate the effects and safety of new therapies in NHS practice, taking findings from first-in-man studies through to trials that demonstrate the impact of the therapy on patient outcomes, including quality of life.

The ITM will build a vibrant translational community to facilitate the collaborative relationships with industry that are required for fast and efficient evaluation of new treatments and healthcare innovations in NHS practice. It will aim to remove four traditional silos that significantly block progress in translational medicine: bench to bedside; bedside to bedside; primary care to secondary care; children to adults. By bringing together all professional groups that are involved in the design and delivery of clinical and translational research, the ITM will break down the divisions that have prevented a truly integrated, multidisciplinary, patient-centred approach.

Due for completion in summer 2015, the ITM will host five key thematic areas involving internationally-renowned clinical and non-clinical academics conducting integrated research programmes in:

- Cancer
- Devices and Diagnostics
- Rare Diseases
- Auto-immune Disease
- Chronic Disease (non-Cancer)

The ITM Birmingham is delivered by Birmingham Health Partners, which brings together the clinical, scientific and academic excellence of University Hospitals Birmingham NHS Foundation Trust (UHB), the University of Birmingham and Birmingham Children's Hospital NHS Foundation Trust (BCH) as well as the Department for Business Innovation and Skills.

For more information visit:
www.birminghamhealthpartners.co.uk/institute-of-translational-medicine.htm

Maori remains make the long journey to their **ancestral home**

A collection of Maori skeletal remains and a tattooed Maori head discovered at the University of Birmingham were handed back to New Zealand in a spiritual ceremony last year. The *toi moko* (preserved head) and *köiwi tangata* (skeletal remains) were uncovered by staff in the anatomy department – but how they arrived at the University or even in the UK is shrouded in mystery. They have never been used or displayed by the University and have remained in storage for many years.

A delegation from the Museum of New Zealand Te Papa Tongarewa from Wellington visited the University in October and held a repatriation ceremony where the remains were given back to the Maori people.

Dr June Jones, Senior Lecturer in Biomedical and Law, said: 'We had no records about how these items came to be in storage at the University, but when they were uncovered, we knew we had to give them back. We believed that to keep them would be wrong. They belong back with their own people, to be treated with the dignity and respect they deserve.'

Dr Jones has worked tirelessly to establish where the remains, as well as some which she returned to Native Americans in California last year, originated from and was delighted to be able to contact Te Papa to offer the remains to them.

To view the ceremony visit YouTube and search for '**Maori Remains Repatriation Ceremony**'.

Researchers look to give sports clubs a **heads-up on concussion** dangers

A study looking into what happens to the brains of sportspeople in the aftermath of a concussion, and what could happen if they suffered a subsequent head injury, has been launched by researchers at the University.

Dr Michael J Grey, Reader in Motor Neuroscience and Mr Tony Belli, Reader in Neurotrauma and a consultant neurosurgeon at the Queen Elizabeth Hospital, want to discover new ways to identify how vulnerable the brain is in the minutes, hours and days following an initial concussion.

They are particularly interested in the condition known as second impact syndrome, which occurs when a player who has sustained one concussion receives a second bang to the head. The cumulative effect of this second knock, even if slight, can be as severe as injuries sustained in a car crash, because the brain has not sufficiently recovered from the first injury.

Mr Belli's research to date has found that concussion causes an alteration of the brain metabolism associated with neuronal dysfunction and is detectable by a special brain scan, MR spectroscopy (MRS).

These alterations are more significant when an individual has suffered multiple head injuries, and they may correlate with the risk of neurodegenerative conditions such as Alzheimer's and Parkinson's.

The new three-year study will include biomarkers for concussion sufferers which have not yet been considered.

The researchers hope that it could eventually lead to a completely objective test for sportspeople suspected of suffering a concussion which would aid in the very difficult return to play decision.

Virtual world to help relieve patients' pain

Researchers in Birmingham are hoping to use the hi-tech world of virtual reality in a bid to relieve the pain of hospital patients.

Staff at Queen Elizabeth Hospital Birmingham (QEHB) and the University of Birmingham are working on using computer game technology to alleviate patients' pain and discomfort through distraction therapy.

Patients would be able to wander around a virtual world based on the natural delights of Devon, with simulated 'walks' along a coastal path or through woodland.

Critical Care Registrar Dr Charlotte Small, who is leading the clinical side of the project, said: 'The work we are looking at is the use of virtual reality in a number of ways, initially around pain management.

'These mainly involve the changing of dressings of burns patients and complex trauma involving military patients, but we are also looking at the issue of phantom limb pain.

'We are looking to design a purpose-built system so it can be used by patients with even severe injuries.'

As part of the two-year project, a study was carried out over several weeks within the QEHB burns unit which looked at the effectiveness of pain relief treatment ranging from paracetamol to morphine.

It found that more than a third (37 per cent) of burns patients still experienced moderate or severe pain when their dressings were changed even when given morphine or other pain relief medication.

The project, which focuses on 'virtual nature therapy', will involve two virtual worlds which have been developed at the University of Birmingham. They consist of Virtual Wembury and Virtual Burrator, both of which exist for real in Devon.

The virtual worlds were initially developed by postgraduate students at the University's Human Interface Technologies Team, led by Professor Bob Stone, College of Engineering and Pysical Studies. The initial motivation for the virtual reality project came as a result of Ministry of Defence-funded research addressing the potential use of simulation technologies for future physical and psychological therapies.

Pioneering stem cell therapies to be trialled in Birmingham

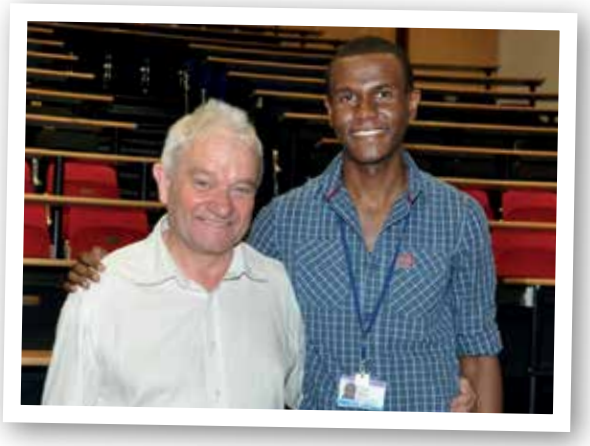
University of Birmingham researchers are to lead a worldwide collaboration of scientists looking at the possibility of transplanting stem cells from one person to another to reduce inflammation in the liver.

Professor Philip Newsome and Dr Gideon Hirschfield will lead the €5.4 million Mesenchymal stem cells (MSC) to Reduce Liver Inflammation (MERLIN) programme which will include the first clinical trial of mesenchymal stem cells in liver disease in the UK.

The EU-funded programme will study how mesenchymal stem cells can reduce inflammation in the liver of people suffering from primary sclerosing cholangitis (PSC), a disease which causes inflammation and thickening of the bile ducts, build-up of bile in the liver and life-threatening liver disease.

A Nobel visit

Garrick Wilson, Research Fellow of the Viral Hepatitis Research Group, invited Nobel Prize-winner Sir Paul Nurse (BSc, 1970) to deliver a lecture to early career researchers at the University of Birmingham.



Despite receiving, and rejecting, an average of five invitations per day to present at institutes all over the world, or give key note lectures at high-profile conferences, Sir Paul accepted Garrick's offer almost immediately. When asked why, he replied: 'I have never been invited to hang out with the young people before.'

Sir Paul delivered a seminar titled 'Controlling the Cell Cycle' which captivated and inspired the whole audience. The Leonard Deacon Lecture Theatre was so full there was barely any standing room.

You can view Sir Paul's talk on the University's YouTube channel: **www.youtube.com/watch?v=eBsS8X7Wq9E**

New hope for premature babies at risk of brain damage

Babies who suffer a bleed on their brain could be saved from debilitating brain damage after researchers at the University of Birmingham found that a new drug can prevent the swelling of the organ which causes it.

The researchers found that Decorin, a drug which has been shown to have anti-scarring properties, prevented hydrocephalus, the swelling of the brain, in juvenile rats, opening up the possibility of it as a treatment for the severe condition, which, until now, has only had surgery available as a treatment.

Several hundred newborn babies each year suffer a brain haemorrhage at birth, which then usually leads to hydrocephalus, where cerebrospinal fluid (CSF) cannot drain away from the organ due to a build up of tissue. If left untreated, hydrocephalus can lead to severe and debilitating brain damage, affecting all aspects of development, including speech, physical co-ordination and learning.

The only treatment to date for newborns who suffer a bleed on the brain is to insert a drain, known as a shunt, down into their abdomen to drain the excess fluid back into the bloodstream. However, the shunt, which is permanent, often becomes obstructed or infected, which can then lead to the same symptoms as hydrocephalus itself.

The University of Birmingham team showed that when Decorin was administered directly into the brain over a period of two weeks in experimental models of hydrocephalus, it stopped the development of hydrocephalus. The drug works by blocking a cytokine which is known to promote cell proliferation and fibrogenic growth, a buildup of tissue which then causes the swelling of the brain seen in children with hydrocephalus, thus preventing against brain damage.

Professor Ann Logan, Professor of Molecular Neuroscience at the University of Birmingham, led the research. She said: 'The discovery that this drug can prevent hydrocephalus in experimental models is hugely exciting, as it paves the way for us to develop new treatments for babies with this devastating condition.'

The shape of **training**

by **Professor David Adams, Dean of Medicine**

The shape of training review chaired by Professor David Greenaway, the Vice Chancellor of The University of Nottingham, was set up in response to the need to consider how to train doctors in a rapidly changing healthcare landscape.

The review was commissioned by the organisations responsible for medical education and training including the GMC and the Medical Schools Council. The review consulted widely and asked what kind of doctors will patients need in 30 years' time? In particular what balance will be needed between specialists and generalists and how can training be made more flexible to meet the changing needs of the health service and patients? The report was published in October and the main conclusions are:

- Following broad specialty training, doctors will go on to train in more specialised areas where there are local patient and workforce needs
- Medicine has to be a sustainable career with opportunities to change roles and specialties throughout doctors' careers
- Full registration should move to the point of graduation from medical school, provided there are measures in place to demonstrate graduates meet the GMC's standards at the end of medical school
- Doctors in academic training pathways need a training structure that is flexible enough to allow them to move in and out of clinical training while meeting the competencies and standards of that training

So how will this affect medical training in the future? The report concludes that doctors will need to be increasingly flexible to cope with changes in the nature of healthcare. This applies to their approach to individual patients and more generally to the course of their career. They will need to develop new skills to cope with advances in medical science and changes in how healthcare is delivered. For example, the increasing use of personalised medicine requires doctors to have a range of knowledge from understanding genetics and molecular medicine to being able to assess the patient's psychological and social circumstances. At the moment delivery of expert care tends to be siloed into traditional organ-based specialties whereas increasingly doctors need to assess the underlying disease process, which is often not confined by anatomical boundaries. This holistic approach will require strong general training underpinned by an understanding of research methodologies as well as specialist expertise. We thus need an appropriate balance between generalists and specialists and between primary and secondary care. Initial principles must be established during undergraduate training but there will be an increasing need for continuing postgraduate education and in some cases retraining during a career.

The review also emphasised the need for a strong academic training pathway, not only to deliver the next generation of clinician scientists but also to allow frontline clinicians to be trained in research. A medical workforce that understands research and is able to implement it into practice is vital to make sure research and innovation are embedded in the NHS. Together with strong academic leadership this will not only bring benefits to patients but also deliver economic growth as part of the government's life sciences strategy. An important aspect will be flexibility with academic trainees being able to obtain clinical competencies at different rates depending on their time in research. I was particularly pleased to see the report state that the term 'out of programme activity' to refer to periods of research during postgraduate training should be abandoned. Research must be seen as an integral part of the training programme and not a dispensable luxury.

Finally, the report strongly recommends that full registration should move to the point of graduation from medical school. This has proved contentious; advocates of the present system say that it allows training and fitness to practise to be monitored beyond medical school, providing more opportunities to support failing doctors. However, the report points out that the current system puts the emphasis on medical schools to judge fitness to practise during foundation years when their students could be working anywhere in the UK. Moving to a system where graduates are required to meet the GMC's standards at the end of medical school will ensure they are clinically competent and have appropriate experience and insight into patient needs at graduation. It will also place responsibility for F1 doctors firmly with postgraduate institutions, which will have to make sure they provide appropriate training, support and governance. The report makes practical recommendations for implementing the conclusions and stresses that this must be done without causing disruption to current

training. I think our course in Birmingham already delivers the type of doctors suggested by the report but we need to consider whether we should make changes to meet the new challenges. For example should we incorporate more translational medicine into the programme together with an even stronger emphasis on research to provide our students with the ability to integrate rapid changes in biomedical science into clinical practice? The need in the future for doctors to be flexible and to work within teams suggests we should continue to emphasise the important links between primary and secondary care and how healthcare is delivered as part of a multidisciplinary team. Finally, we will have to consider the implications of moving to registration at graduation if, as seems likely, this is adopted in the future. Overall this is a detailed and thoughtful report which reflects the fact that the review consulted widely, it also has the advantage of being readable. The report can be downloaded from www.shapeoftraining.co.uk where there is also an interview with David Greenaway in which he explains the report's findings to a doctor in training.

The BNF Birmingham legacy

Our new pharmacy programme may have only just started, but Birmingham has been instrumental in the development of the most important pharmacy-based publication of all time.

A national institution, the *British National Formulary* (BNF) is the medical reference book that details advice on prescribing and dispensing drugs safely. Used by pharmacists, doctors, dentists and nurses among others, the BNF is seen as the gold standard for prescribers and dispensers both in book form and electronically.

Impressively, three of the four Senior Medical Advisors and Chairs of the advisory group to the BNF have been Birmingham Medical School staff or alumni – Professor Martin Kendall (MBChB, 1964), Professor Owen Wade and Sir Charles George (MBChB, 1962).

Today the BNF is an essential part of modern healthcare and is available in hardcopy and online. University of Birmingham staff including Professor John Marriott, Dr Jamie Coleman, Professor Robin Ferner, as well as Professor Martin Kendall, continue to play key roles on advisory boards.

Long may the Birmingham BNF legacy continue.

Six chances *to impress*

Prospective medical school students no longer have to face a daunting 15-minute 'all or nothing' admissions panel. Now, thanks to the new multiple mini-interview process, they have six short, focused interviews to show they have what it takes.

Ask an alumnus about memorable experiences at the University of Birmingham Medical School and chances are 'the interview' will be among them.

For most medical school candidates, the admission process is nerve-wracking. It's common knowledge that good grades alone aren't enough. Impressing at interview is so important that applicants are tempted to reinvent themselves for what may be their one shot at medicine – and that was causing a problem.

Last year, the University of Birmingham Medical School adopted the multiple mini-interview (MMI) approach. Instead of a 15-minute interview with a panel of two or three people, candidates had four one-to-one focused interviews, each lasting six minutes – a little like 'speed dating meets the modern job interview'.

This new process has developed even further. For 2013–14, the four interviews become six as the programme adjusts its admission structure and process to better reflect the demands of the modern world.

The objective of the interviews is to assess the personal attributes of candidates; to get under the skin of prospective students to judge whether they'd make good doctors. Dr Austen Spruce, College Head of Undergraduate Admissions, said the interview is used to ensure that the 345 places on offer every year go to the most able students.

The panel approach was becoming less and less effective for a number of reasons.

From the candidate's point of view, success or failure before the panel could turn on what an interviewer decided to ask and whether the candidate got off to a good or bad start in replying. Topics discussed could vary enormously from one candidate to another, and the format allowed little or no opportunity for a fresh start.

For the interviewer, the 'all or nothing' nature of the panel process encouraged the kind of preparation that 'wasn't helpful in working out who was most suited for studying medicine,' said Dr Spruce.

The 'whole point' of MMIs was to get away from listening to rehearsed speeches. A question about the candidate's motivation to study medicine would be 'like flicking a switch. It was like reading from a piece of paper.'

The MMI process is designed to get applicants thinking on their feet: considering a topic, structuring an argument and discussing it.

'It's very consistent and it's fairer for the candidate,' said Dr Spruce. 'Every candidate gets a similar experience.'

Two related reasons prompted the Medical School to adopt the new MMI format. There was little evidence that a semi-structured panel interview was able to predict a student's performance on the programme, but the opposite was observed for the MMI approach.

Dr Spruce said 'pretty good evidence' had begun to emerge that MMI scores correlate with performance. Among contributors to that evidence base were some of the University of Birmingham's competitors who had already switched to MMIs.

The Medical School set up its MMIs initially with four stations, each focusing on different characteristics of the candidates, each with one interviewer whose task was to assess

candidates' motivation and aptitude through practical tasks, role play and questioning in six minutes.

The four were increased to six with the addition of stations focused on ethics and general reasoning. 'The literature suggested the more stations, the more reliable the outcome,' said Dr Spruce.

The interviews are conducted in two stages: for three weeks from mid-November, and for three weeks in February. Interviewers meet 36 candidates a day but the process is designed so each interviewer is involved in two to three half-day sessions.

The questions asked do change day to day, and the department listens carefully to feedback from candidates and interviewers, tweaking the process as necessary. 'We're trying to head off any candidate hearing what they might encounter and preparing or memorising an answer,' said Dr Spruce.

It's too early to assess the validity of MMIs, the first students who went through that interview process are still in the first year of the course. But the stakes are high; for many applicants it may be their only chance of getting into medicine.

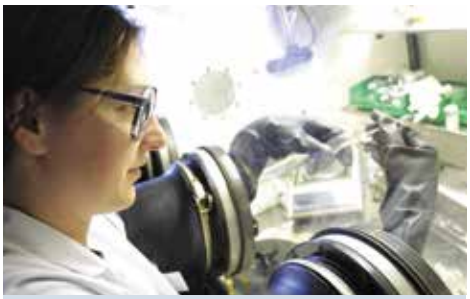
The pros and cons of MMI

For:

- Evidence suggests better results can be achieved with multiple interviews
- The system is fair: each candidate is asked the same precise questions
- Candidates have six opportunities to make a fresh start should they need to
- Each interview focuses on a different characteristic
- The format and scoring system make it easier to identify the most capable candidates

Against:

- Logistically setting up six interviews is more difficult than the single panel approach
- The administration of the MMI system is more complex
- Should questions become known, candidates could memorise their answers, thus taking away the spontaneity of the interview
- Some interviewers prefer a flexible approach to questioning



Widening participation

Our approach to admissions caught the eye of the government's Social Mobility and Child Poverty Commission, chaired by former Health Secretary Alan Milburn. The commission was set up in 2012 to monitor progress in tackling those two inter-related obstacles to the full realisation of potential, and in its first annual report, issued in October 2013, it made clear the scale of the challenge and what it sees as the shared responsibilities of those in a position to do something about it.

'Entrenched inequality and flatlining mobility have been decades in the making,' the report said. 'Breaking the transmission of disadvantage from one generation to the next is a painfully slow process.'

In the past 18 months, a 'notable increase in commitment and activity' designed to widen access to the medical profession has been seen across the sector, including in relevant educational institutions.

Observing that students of equal ability tend to score higher grades if they attend fee-paying schools, the commission commended those medical schools that are beginning to use contextual data during selection as part of their attempts to level the playing field.

'Alongside established widening-participation activities, the University of Birmingham recently took into consideration students' schools for a small number of applicants when offering interviews and found that those selected contextually performed as well at interview as those selected on a traditional basis.'

Dr Austen Spruce, College Head of Undergraduate Admissions, said the reference was 'obviously pleasing'.

'The government is keen for medical schools to be expanding the social diversity of their intake of students, and so are', commented Dr Spruce.

The University's Outreach programme with its Access to Birmingham (A2B) scheme offers another way for disadvantaged applicants from the West Midlands to enter medicine; A2B accounted for 15 students in the 2013 intake.

LEADING THE WAY...

It's a great pleasure to have been invited to write a few words of introduction for this article. In the year that I have held the position of Director of Education in the College of Medical and Dental Sciences, there have been a multitude of positive and innovative changes to ensure our students receive a first-class learning experience. This high standard has only been achieved through the dedication of our staff and the continuous development of our resources, learning methods, facilities and career opportunities. As a major international institution for research and education in medical and dental sciences, we aspire to lead the way through our learning practices to ensure our students develop the skills they will require to succeed in the modern workforce.

Professor Prem Kumar, Director of Education

BY bringing learning to life

The College has invested in innovative e-learning resources which are opening doors to more interactive avenues of education that are directly tailored to individual student needs.

One way this has been achieved is through the introduction of over 800 electronic voting pads, or more commonly known as 'clickers'. These hand-held devices, used primarily in first- and second-year lectures, enable students to answer questions in an 'ask the audience' style, essentially allowing the student and lecturer to connect with each other. This has led to a more productive mode of learning as the lecturer can gain direct feedback in terms of understanding of the material delivered and change the flow of the lecture accordingly.

In addition to this, thanks to the University's investment in lecture capture technology, students are now able to revisit and revise information delivered within a lecture at a time and pace convenient for them.

Dr John Couperthwaite, former Operations Manager Education Technology within the College, explains: 'Within a week we can be scheduling 80 lectures to be recorded, the screen gets recorded with the audio, and the students can replay within their own time. We have had an excellent reaction to these; many students check them out within a few days to refresh their notes, but they are most popular for revision purposes.'

E-learning practices have not only proved valuable to the lectures themselves, but also when students are out on placement. Two years ago the College introduced the tablet loan scheme, iLearn, giving a selection of students the opportunity to borrow an iPad, Google Nexus or Kindle Fire for the duration of their academic year.

Fifth-year MBChB student Fatemeh Hadien, who took part in the programme during her fourth year, commented: 'I immediately noticed the difference after receiving the iPad. It was of great value, especially when I was out on placement. It meant that I could research information, terminology and watch video clips on the ward, rather than waiting until I got home. I also found it useful for note taking during lectures as it allowed me to annotate diagrams there and then. It cut out the middle man so to say, making learning much more direct.'

THROUGH state-of-the-art-facilities

One of the University's most-loved lecture theatres, the Arthur Thomson Hall, will be undergoing a refurbishment this summer. The hall will experience a full 14-week renovation programme to include: an upgrade to the ventilation system, a redecoration of the hall, and a reconsideration of the raked seating area. It is also hoped that the student body will have some input into the overall look and feel of the place ensuring that this continues to be a space used and highly valued by the students.

BY developing dynamic career opportunities

This year, the College was pleased to announce the re-opening of the Physician Associate Postgraduate Diploma (formally known as the Physician Assistant).

Since re-launching, the demand for the course has been staggering, so much so that the College introduced a second intake of applicants for the same academic year. Its popularity is hardly surprising, particularly as the role of the Physician Associate (PA) is a rapidly growing one within the UK, and the University is only one of three UK institutions to offer this programme.

We discuss with Professor of Primary Care and Assistant in General Practice Jim Parle, the part the Physician Associate plays within healthcare, the types of people who are entering this profession and what the future holds for this exciting new role.

Professor Parle explains: 'Physician associates will support doctors in the diagnosis and management of patients and are trained to perform a number of roles under the supervision of a doctor including performing examinations, taking medical histories and diagnosing illnesses – fundamentally their role is that of a junior doctor.

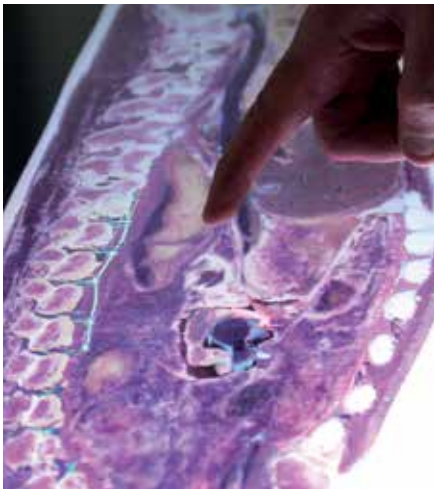
'Some of the students we have who enrolled on the course have come from clinical backgrounds such as radiographers, nurses and pharmacists, but the majority of them are new to the health world.'

However Jim explains how it is this diversity which has been fundamental to the students' learning: 'They are all bringing an understanding of the science world but from slightly different directions which works incredibly well with problem-based learning. It means that when students are given a health-related scenario to solve they can all bring to the table their expertise and experience. The students work in small

groups sharing, collaborating and learning from one another.'

So what lies ahead for the future of the Physician Associate? Jim paints a very positive picture for the future of the PA: 'Since starting the course we have gone from two trusts offering this role to approximately 35 and I can only see this continuing to grow. The prospects of our students have been excellent, with the majority of those completing the course working in physician associate roles across the country and all of them earning at least £30k.'

THROUGH cutting-edge technology



The College of Medical and Dental Sciences has invested in an anatomage table, a computerised virtual dissection table which allows students to perform dissection without the need for scalpels, medical instruments or any of the worries of getting it wrong. The University is only one of a small handful of institutions in the whole of the UK to be using this cutting edge technology.

Dr Carmel Toms, Anatomy Demonstrator at the University, explains how this investment has complemented the delivery of anatomy teaching: 'An anatomage table is an interactive computerised teaching tool, where CT scans of human beings have been reconstructed so students can look through them in a digital way, giving them a good overview of human anatomy. Students get the opportunity to essentially perform electronic dissection.

'It's also more real to their clinical experience, very similar to how CT scan will be presented in a hospital, so it starts to build those foundations of how students can recognise radiological images which are going to form the rest of their professional careers.'

To find out more about the anatomage table, watch our video clip here: **www.youtube.com/watch?v=VlMdZr_a3Gk**

An inspector calls

As a new inspection system for GP services gets underway, *Medlines* meets Professor Steve Field (MBChB Medicine, 1982), England's first Chief Inspector of General Practice for the Care Quality Commission.

A dedicated GP with an impressive CV, Professor Steve Field is more than qualified to be the man charged with inspecting and improving GP and dental services across England. The former Chairman of the Royal College of GPs still sees patients at a practice in inner city Birmingham and is Chairman of the National Inclusion Health Board.

His experience training doctors and dentists as the former Postgraduate Dean for the West Midlands has shaped a new inspection system focusing on raising standards and looking at integrated care across primary, secondary and social care services.

Inspections now involve trained GPs as well as patients, practice nurses and practice managers. Every GP surgery will be inspected by April 2016 and, using data sources and the inspection results, the surgeries will be rated as outstanding, good, needs improvement or inadequate. 'The work we're doing is based on successful work with training practices in the West Midlands and an educational learning model. The original programme of GP inspection came to an end and I was hired in order to introduce a clinically led system with GP involvement,' Professor Field says. 'Patients want to know if their surgeries are safe, following evidence-based medicine, responsive to their needs, caring and compassionate. This role is a great opportunity for me to use my experience to really improve the quality of general medical and dentistry practice.'

Professor Field was unable to reveal exactly how problems at practices deemed as inadequate would be addressed but said work was ongoing with NHS England about how the service responds to inadequacies.

Results from inspections of 1,000 GP practices hit the headlines in December 2013 and Professor Field said he was surprised so many were found to be non-compliant with basic regulations on cleanliness, the storage of vaccines and out-of-date drugs.

'Those inspections highlighted to me the need for more clinical involvement on visits. But we need to look at care as well as basic regulations, and this involves the integration of social care and GP services. For example, there are difficulties around the prescribing and administering of drugs for many patients in care homes and we're also listening to the challenges GPs face very carefully, such as the difficulties they have referring patients with mental health problems.'

Professor Field has wanted to be a GP since he was a child, and remembers his student days at Birmingham Medical School very fondly. He still meets team-mates and opponents he played at football when he travels around the country for meetings.

'It was such an intense, wonderful five years of sport, learning and friendships that have endured. Many people who teach you in your first week later become your friends and colleagues; the health world is just like that,' he says.

Could you be an inspector?

Professor Field and his team are looking for GPs willing to help carry out inspections. Birmingham Medical School alumni who would like to get involved and become an inspector must be prepared to commit a minimum of ten days a year and will be trained and receive payment. For further details, contact: **enquires@cqc.org.uk**

Staff news

Professor Chris Lote joined the University in 1973 as a lecturer in Physiology, and retired 40 years later, in 2013, as Professor of Experimental Nephrology.

He initially studied at the University of Manchester and, after completing his doctorate in 1971, had a Physiology lectureship in Manchester for two years before his move to Birmingham. Although over the years in Birmingham he has taught all aspects of Physiology, his teaching – and research – focus has always been the kidneys. The first edition of his best-selling textbook, '*Principles of Renal Physiology*', was published in 1982, and the book has been continuously in print since then (the fifth edition was published in 2012).

When Professor Lote came to Birmingham in 1973, the annual medical student intake was 160. It is now over 400. So Professor Lote calculates that he has taught at least 10,000 Birmingham medical graduates! He says: 'Wherever I go in the country, I seem to meet people who say "I remember your lectures". In 1991, he was involved in developing and introducing the Medical Science (BMedSc) course, and was admissions tutor for that course from 1991 to 2001. However, in 1995 he was also appointed Admissions Dean for the Medical Faculty, with responsibility for all the Faculty's courses. Although faculties were abolished and we now have the colleges, Professor Lote continued (with various titles) as Head of Admissions, until his retirement. He was also Medicine Admissions Tutor 2001–2012.

His plans for the future? He says: 'For most of my life, the "future" has been a sort of mythical era when I would have time to do all the things I want to do. Somehow, it still seems like that. I am now finding though that I have much more time for sailing, and more time for friends and family. But I haven't really stopped working. There will be another edition (or two) of the book, and I'm still regularly invited to teach on various CPD courses around the country.'

Professor Lote does however miss teaching the Birmingham students. His legendary lectures were always delivered without notes or PowerPoint. And the fact that he has consistently, over many years, been voted the best lecturer, suggests that the students may miss him too!

Dr John Shuttleworth has retired after 26 years at the University of Birmingham. John joined the University in 1987 as a Research Fellow and became a lecturer in 1990. In 2006, he was appointed as Programme Director for the Medical Science programme, and, until his retirement, headed up a team that ensured the successful running of the programme. In retirement John plans to devote more time to pursuing interests in reading, photography, painting, wood carving and hill walking. He also hopes to spend more time with his family and take the dog for longer walks!

Professor Paul Stewart, former Dean of Medicine, has taken up the post of Dean of Medicine at the University of Leeds. In his 24 years of service to the institution, his leadership has been invaluable to both the College and the University in delivering excellence in clinical teaching and research, as has his own important contribution as a clinical academic.

We'd like to welcome **Ellie Griffiths** as a new member of the Development and Alumni Relations team in the College of Medical and Dental Sciences. Ellie is joining us from Acorns Children's Hospice and The Brain Tumour Charity. Her role is to work closely with our alumni and supporters to help raise vital funds to invest in our college, its students and the world-class research that takes place at our university. If you're interested in finding out about our current projects, or would like to get involved then please feel free to contact Ellie on e.griffiths.4@bham.ac.uk

A decade of **winners**

Every year each of the five colleges in the University is asked to nominate two students they think most deserve the two most prestigious prizes the University bestows to graduating students. The Chancellor's Prize (C) is awarded each year to a mature final-year undergraduate whose academic performance has been outstanding and who has also made a contribution to the general life of the University. The Vice-Chancellor's Prize (VC) is awarded once each year to a final-year undergraduate. It takes into account scholarship, as well as personality, leadership and initiative.

In 2013 two medical graduates were awarded the Chancellor's and the Vice-Chancellor's prizes. These awards crowned an unprecedented run of ten consecutive years in which medical students won one or other or both of the prizes.

Kate Thomas, Vice-Dean, Programme Director and Senior Tutor for MBChB said: 'I have been writing the nominations since 2002 when James Davidon won the Vice-Chancellor's Prize. It is one of the highlights of my year to write about the most outstanding medical students. I am in awe of how many things our students are able to achieve in addition to their academic work. It's been lovely to hear what the prize winners are doing now and, I think, clear that their early promise is being fulfilled. Once medical students had won one or other or both of the prizes every year for six or seven years I started to get competitive, wanting to see whether we could win for ten years in a row, and we did in style! Now we have to see what we can do for eleven years!'

Medlines takes a look back over the past ten years and finds out what our prize winners are doing now.

Tell us what you are doing now, we'd love to hear!

Fozia Roked (VC)

I'm enjoying paediatric training and about to start A+E at the Children's Hospital while planning my wedding and trying to do as many outdoor challenges as possible. I'm planning a trip abroad to deliver medical assistance in a Syrian refugee camp.

Ross Elledge (C)

After my Foundation years I went on to do Core Surgical Training in plastic surgery, after which I was successful in gaining a specialty training post in oral and maxillofacial surgery in the West Midlands. I am currently employed as an ST3 at Worcestershire Royal Hospital and am also working towards a Masters degree in Medical Education with the University of Dundee.

Robert Tidswell (VC)

I currently work in Intensive Care at Kings College Hospital, having completed Academic Foundation Training at Imperial College investigating immunological dysfunction in acute liver failure syndromes. I hope to continue my interest in critical illness through a career in intensive care medicine.

Jake Mann (VC)

I am currently an FY2 doctor in Leeds. I am lead author for a physiology textbook and run a national pre-clinical science revision course. From September I will be starting an Academic Clinical Fellowship in paediatrics at Cambridge.

Majd Protty (C)

I am now pursuing an Academic Foundation Programme at the University Hospital of Wales with both clinical and academic roles. My clinical rotations are cardiology, orthogeriatrics and intensive care medicine, whereas my academic projects revolve around cardiovascular sciences and medical education.

Sam Jeffery (VC)

After leaving Birmingham I spent three years deployed around the world as a Royal Navy Medical Officer. I am now a Specialty registrar in neurosurgery in Bristol.

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

David Lissauer (VC joint)

I'm a clinical lecturer in Obstetrics and Gynaecology at the University of Birmingham. I am combining academic work with clinical duties as an Obstetrics and gynaecology registrar at Birmingham Women's Hospital NHS Trust.

Samantha Lissauer (née Pollock) (VC joint)

I'm a paediatric registrar, having done all of my training in the West Midlands since graduating, apart from a brief spell (one year) in Malawi. I am currently taking time out of programme to do research; a PhD in viral hepatitis with Jane McKeating at the University. My clinical interest is in paediatric infectious disease.

James Fullerton (VC)

I'm a Specialist Registrar in Clinical Pharmacology at University College London Hospital (UCLH) and a Wellcome Trust Research Training Fellow, undertaking a PhD at UCL exploring the effect of systemic inflammation on innate immune function.

Liz Acaster (né Haydon) (C)

After my first two years as a junior doctor in the West Midlands I moved to Oxfordshire, where I specialised in Oncology at the Oxford University Hospitals NHS Trust. I missed general medicine and the diagnostic and holistic sides of practice, so I've now changed to the General Practice Vocational Training Scheme. I got married last year, and we have a lovely house in the countryside which we have enjoyed doing up. We would highly recommend country living to anyone! We have recently had our first baby so life is very exciting at the moment.

David Wood (VC)

I am currently living in Sydney where I have just qualified as a consultant in paediatric emergency medicine. I am due to start work as a consultant in Brisbane in February 2014 and I have an interest in clinical leadership, education and simulation. I am married to Clare (née Harrison) Wood and have two children, Callum (age 3) and Annabelle (age 2), so I go to work for a break! We are now Australian citizens who still support England in the cricket – but perhaps we shouldn't...

Chris Jones (VC)

I'm in my first year after graduating and am currently working as an Academic FY1 Doctor at the Queen Elizabeth Hospital, additionally remaining active in both research and teaching within the Medical School.

Helen Leach (C)

I am currently working as an FY2 doctor in Intensive Care in Coventry and I am in the middle of applying for speciality training in general practice and core medical training.

Megan Foreman (C)

I'm now the proud mum of an eight-month-old boy and I'm currently on maternity leave. We've been enjoying some precious time together as a family after a particularly tricky year. (My husband has unfortunately been seriously ill). I'm now looking forward to returning to work in the East Midlands deanery in the summer to complete my training in General Practice.

Events

British Science Festival
6–11 September
This year, the University will host the national British Science Festival, incorporating our annual Community Day.

Medicine 30- year reunion, class of 1984
Friday 10 October
Tour of Medical School at 5.30pm; dinner at 7.00 for 7.30pm
Medical School
Contact: Karen McNaughton, k.m.mcnaughton@bham.ac.uk or Keeley Dudley, k.dudley@bham.ac.uk

Sands Cox Society AGM
Friday 3 October
BMI Birmingham
Contact: Sharon Charles, Sands Cox Society Executive Secretary, SharonMCharles@btinternet.com

Centre for Professional Development courses

- **Managing a patient with a history of Anaphylaxis**
  10 September 2014 – £150
- **Diagnosis and Management of Headache Disorders in primary care**
  14 November 2014 – £150
- **Atrial Fibrillation Management and Stroke Prevention**
  24–26 November 2014 – £500
- **Management of Heart Failure in primary care**
  26–29 January 2015 – £500

Contact: Amy Partleton – 0121 414 2677 a.partleton@bham.ac.uk or Tamara Ball – 0121 414 3281 t.c.ball@bham.ac.uk

Take part in our research

Are you in good health, over the age of 65 and within one hour of the University? Would you like to make a contribution to research within the University? If so we'd love to add you to our Birmingham 1000 Elders group.

Our research varies from questionnaires to involvement in medical research including research into heart disease, infections in old age and falls. The involvement of the group has been crucial to the research activity of the University of Birmingham and in particular to the work carried out relating to older adults, and helps us to design, develop and deliver research that is directly relevant to your health and wellbeing.

For further information and to join the 1000 Elders please see our website at: www.birmingham.ac.uk/generic/mrc-aruk/involvement/index.aspx

Get your paperwork right

Right from the start of your medical career, organisations such as ECFMG will request proof of your medical education; awards, bursaries etc, as part of their application processes. In order to make these processes easier and quicker for everyone, it is a good idea to start compiling a folder now. It is advisable to forward any information that has been emailed to your University email account (confirmation of exam results, honours, distinctions or awards) to your personal email account as soon as possible.

There is a charge of £50 for processing the paperwork and £15 charge if you wish your documents to be returned via DHL. Please contact us at: **yr5generaladmin@contacts.bham.ac.uk** to forewarn us of imminent form completion, remembering to include your student ID and your date of birth.

Are you a Medical Science graduate?

Would you be interested in mentoring a current Medical Science student or providing a work placement?

To find out more contact the Mentoring Scheme Coordinator, Kam Manku, email k.s.manku@bham.ac.uk or telephone 0121 415 9027.

Honorary graduates

Congratulations to our two December 2013 honorary graduates.

Dame Julie Moore
Chief Executive of University Hospitals Birmingham NHS Foundation Trust.

Julie is a graduate nurse who worked in clinical practice before moving into management. After a variety of clinical, management and director posts, she was appointed as Chief Executive of University Hospitals Birmingham in 2006.

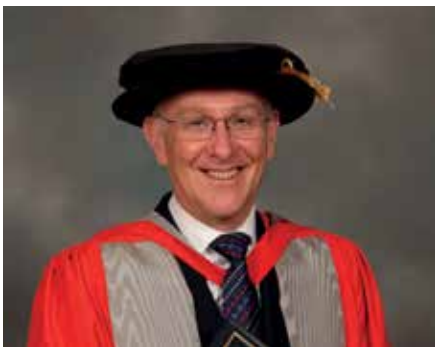
In 2013, Julie was awarded an Honorary Chair at the University of Warwick, and was included in the BBC Radio 4's *Woman's Hour* list of the 100 most powerful women in the UK.

Julie was made a Dame Commander of the British Empire in the New Year's Honours 2012.

Professor Peter Weissberg
(MBChB, 1976) – Medical Director of the British Heart Foundation.

Peter Weissberg trained as an academic cardiologist in Birmingham before going to Australia as an MRC Research Fellow studying the cell and molecular biology of atherosclerosis.

Shortly after returning to the UK he became the first British Heart Foundation (BHF) Professor of Cardiovascular Medicine in the University of Cambridge. In 2004 he became Medical Director of the BHF where he oversees funding for over half the cardiovascular research undertaken in UK universities.



Michael Langman

After junior appointments at several London hospitals, Michael Langman became a member of the scientific staff of the Medical Research Council's statistical and gastroenterological research units, where he worked alongside Richard (later Sir Richard) Doll, studying, among other diseases, the epidemiology of peptic ulcer.

In 1968 he was appointed senior lecturer in medicine at the University of Nottingham's medical school and, in 1974, professor of therapeutics in Nottingham. In 1986 he was appointed to the prestigious William Withering chair of medicine and headship of the Department of Medicine at Birmingham University's School of Medicine.

Michael was highly regarded by clinical colleagues and also by scientists. His research interests included the pathogenesis and epidemiology of colorectal cancer, drug induced gastrointestinal adverse reactions, and the benefits and risks of non-steroidal anti-inflammatory drugs.

In addition to onerous academic and clinical duties, Michael served on several important Department of Health committees. These included the Committee on Safety of Medicines, the Expert Group on Vitamins and Minerals (of which he was chairman), and the Joint Committee on Vaccination and Immunisation (JCVI), also as chairman. His chairmanship of the JCVI coincided with the controversy surrounding the mumps, measles, and rubella (MMR) vaccine and resulted in much unwelcome media attention. After retiring he was chairman of the South Warwickshire Ambulance NHS Trust.

Michael Langman was a 'man of many parts' – physician, epidemiologist, clinical pharmacologist, scientist, teacher, university and health service administrator, and national legislator. His quiet humility masked many of his talents and achievements.

He was an accomplished squash and tennis player and continued to play tennis even after bilateral knee joint replacements.

He leaves a wife, Rosemary, and four children.

Written by Alasdair Geddes and first published in the BMJ, 2nd June 2014, **www.bmj.com/content/348/bmj.g3477**

Professor Sir Michael Drury

Professor Sir Michael Drury, who died on 11th June, was a General Practitioner for 38 years, the first Professor of General Practice at the University of Birmingham and President of the Royal College of General Practitioners from 1985–88. He was a towering figure in general practice and, in many ways, the least likely major political figure imaginable – unassuming, approachable, patient, a superb listener, unflappable, interested – but a major influencer he was. Indeed, the current status of general practice owes much to him.

Initially Michael pursued a career in surgery in Kidderminster, where he performed everything from amputations to appendectomies. He did his National Service in the Royal Army Medical Corps in Korea and Malaya dealing with battle casualties using the skills he had acquired in Kidderminster. On his return to Britain in 1953 he joined a general practice in Bromsgrove. Michael's horizons began to grow and he became involved with the newly established Royal College of General Practitioners (RCGP). His intellectual curiosity led to his taking up a Nuffield Travelling Fellowship and travelling across the world looking at how primary care was organised. The paper he wrote on his return, published in the Lancet, emphasised the need for practices to be well organised in order to deliver effective and efficient care, with specialised nurses, administrative staff and a manager.

From the mid 1960s Michael was giving occasional lectures to the medical students at the University of Birmingham and in 1973 he was appointed as a part-time Senior Clinical Lecturer in General Practice. From 1985 to 1988 he was President of the RCGP. To his surprise, for he was a modest man, he was recognised in 1989 with a knighthood for services to medicine, one of the very few GPs to be thus honoured.

Above all else, to spend time in Michael's company was to be rendered helpless with laughter. His quick wit and his ability to tell stories, often against himself, with impeccable comic timing, were renowned and much sought after.

He was a colossus without pretension, a visionary without expectation, a truly exceptional role model and inspirational leader. He leaves his wife Joan, children Mark, Linda, Simon and James and five grandchildren.

Professor Kate Thomas
Vice Dean and Programme Director MB ChB

Medlines

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