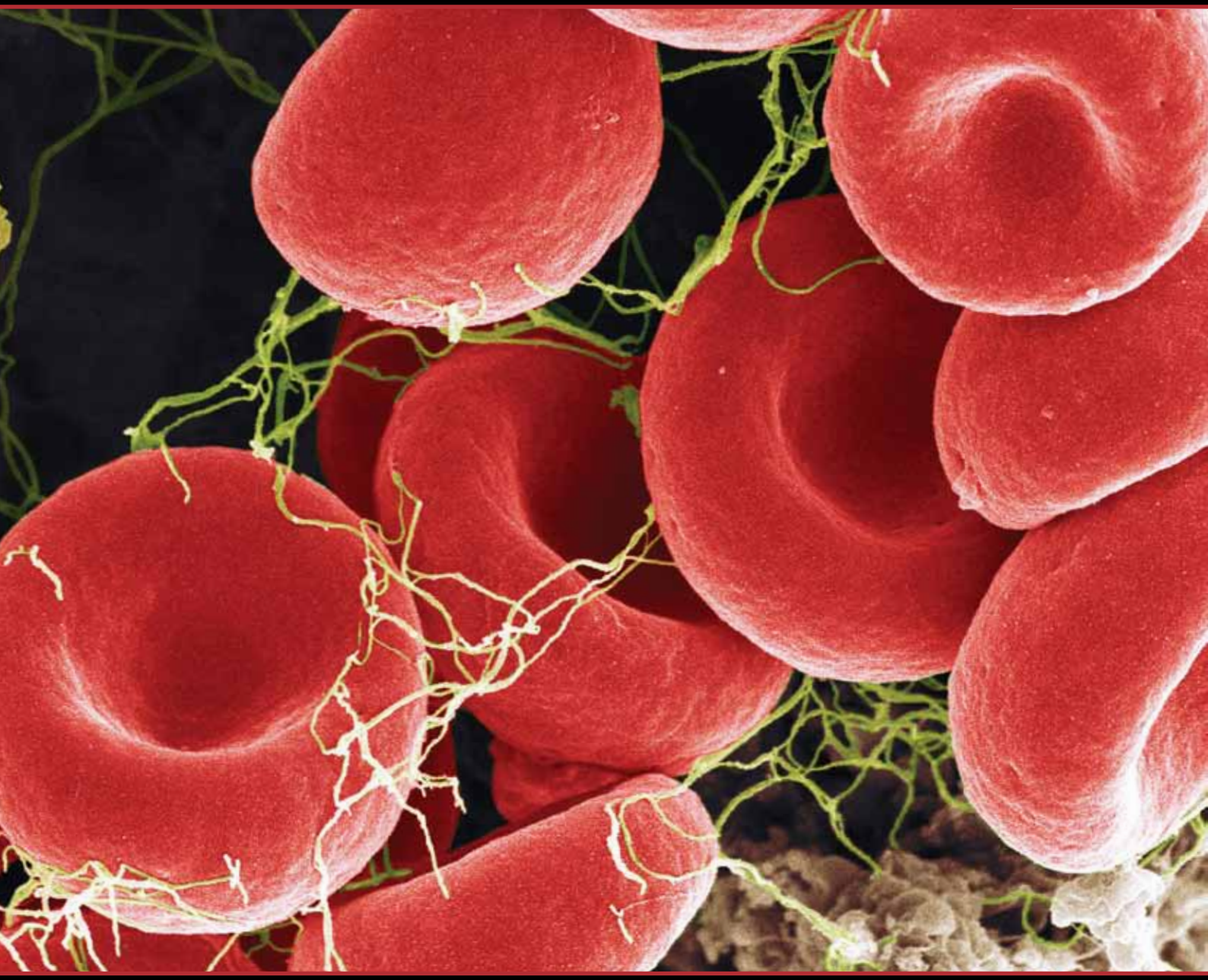
UNIVERSITY OF BIRMINGHAM

2013

Medlines

An annual publication from the College of Medical and Dental Sciences



A new approach to blood clot prevention

Also in this edition: **Repatriation of our anatomy collection; Community-Based Medicine – training the next generation of doctors; Value in the 'art of medicine'**

Goodbye Lawrence...

Professor Lawrence Young, former Pro-Vice-Chancellor and Head of College of Medical and Dental Sciences has left the University after 34 years.

Lawrence had been at the institution since 1978 when he enrolled to do his undergraduate degree in Medical Biochemistry. He started his postdoctoral training in 1984 under Alan Rickinson in the Department of Cancer Sciences and worked in the Department, eventually becoming the Head of the Cancer Division in 2001. In 2008 he became the Head of College of Medical and Dental Sciences.

Under Lawrence's leadership, the College saw its highest research income grant and the best National Student Survey scores to date. He also oversaw various new initiatives including the establishment of Birmingham Health Partners, the development of Pharmacy and excellent progress in the College's commercial engagement activity.

Lawrence said, 'We have created an outstanding environment for research and teaching. Our research is world-leading and makes a real difference to patients' lives. We have worked hard over the last five years to ensure that our students benefit from being in this research-rich environment. Our commitment to improving the student experience is evidenced by our new foyer which symbolises the change in how we work with, and value our students.'

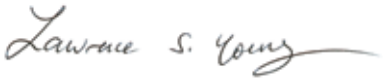
In January, Professor Young started his new role at the University of Warwick as Pro-Vice-Chancellor for Research (Life Sciences and Medicine) and Capital Development. He also leads on engagement with China across the University.

'I always said that the founding Head of College role was a five-year job. It's good to be able to grow and form something, but it needs fresh eyes now and a new approach to take it to the next level.

'My new role at Warwick will be very different. I'll be experiencing a different institution with a different culture and I'll have to build new relationships, it will be a challenge but at the same time exciting and revitalising.

'I'm very sad to be leaving so many good friends and colleagues. The College works as a team and our success is a tribute to the support, loyalty and dedication of staff at all levels.

'Warwick isn't far away and I will be maintaining my various research collaborations with colleagues here. I also hope to use my position at Warwick to forge better interactions across the region, and particularly with this university. 'I will become an Honorary Chair at the University of Birmingham once I leave and of course I will remain an involved alumnus of the institution. I've been loyal and dedicated to Birmingham and it will always be a major part of me.'



Lawrence S. Young

Hello Eric...

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

Eric joined the University in 1979 as lecturer in Anatomy. He has a wide ranging knowledge of the College having, in the past, chaired a number of key committees including the Advisory Group on Planning & Resource Allocation, the Postgraduate Committee and the Space Committee. He was appointed Professor of Experimental Immunology in 1992 and subsequently has been Head of the Division of the Immunity and Infection, Head of the School of Immunity and Infection (2000–2012), and Director of the MRC Centre for Immune Regulation (2004 to present).

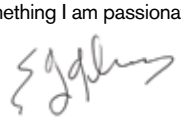
Professor Jenkinson is known internationally for his research on the thymus and T-cell development. This work has made an important contribution to our understanding of the role of the thymus in providing immunological protection against viruses and other pathogens and in regulating the development of auto-immune disease.

Eric played a key role in setting up the Institute of Biomedical Research which sits next to the Medical School building and is a £28 million development with state-of-the-art laboratory accommodation for over 300 scientists. 'It's important to create an environment that equips our researchers with the right facilities and infrastructure to enable them to compete on an international stage and that is something I am committed to,' he says.

As well as being an internationally recognised researcher, Professor Jenkinson still teaches embryology on the MBChB and BMedSc courses. He says, 'I think it's important for senior staff to maintain engagement with teaching.

'We want students to appreciate that they are being taught by researchers and clinicians who are leaders in their field and to feel that they are being taught in a cutting-edge environment – that's the Birmingham experience. It's a culture we already have and I'd like to see it develop even more.

'It's exciting to see people learning and to witness basic science lead to patient application. Today's students are tomorrow's doctors and researchers, ensuring they get the best possible experience while they are here at Birmingham and equipping them with skills for use in their professional lives is something I am passionate about.'



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

News in brief

Antipsychotic medication risk factors

All GPs in the country have been sent the Lester UK Adaptation of the Positive Cardiometabolic Health Resource.

Produced by Professor Helen Lester and a group of national experts in the field of diabetes, cardiovascular disease and mental health, the laminated A4 sheet is an algorithm that GPs can use when they have someone with psychosis on antipsychotic medication that tells them what risk factors to watch out for and what actions to take.

It has been fully endorsed by the Royal Colleges of General Practitioners, of Psychiatrists and of Physicians as well as by the Royal College of Nursing, Care Quality Commission, Rethink and Diabetes UK.

This work is really bringing research evidence into the heart of the GP consultation, helping to chip away at the 20-year differential mortality for people with serious mental illness (compared to the general population).

Unfortunately Helen passed away on 2 March, but her remarkable academic legacy will continue through her research team at Birmingham.

Teaching satisfaction on the rise

Medicine and Medical Science teaching satisfaction scores have climbed up the leader board in the National Student Survey (NSS).

Medicine recorded an overall 90% satisfaction rating, up 5% on 2011, while Medical Science gained an overall satisfaction rating of 97%, up 10% on 2011. The NSS asks final-year undergraduates 23 questions across eight areas, including teaching standards; assessment and feedback; academic support; organisation and management; and learning resources.

In future *Medlines* will be produced once a year and the next edition will be in electronic format. Therefore if you would still like to receive Medlines, please make sure we have your most current email address.

You can update your details with the alumni office on +44 (0)121 414 2744 or via alumnioffice@contacts.bham.ac.uk or simply let us have your feedback.

Don't worry, if you haven't got an email address, but would still like to receive your hard copy, please let us know.

Front cover: Blood clot, coloured scanning electron micrograph (SEM)

Community-Based Medicine: training the next generation of doctors

Next time you visit your general practice, have a look to see whether you can see a notice with the University's crest on it, indicating that undergraduate medical students are learning there.

Since 1995, Primary Care Clinical Sciences (PCCS) has designed and organised learning for groups of four to six students under the supervision of General Practitioners in over 100 practices across the West Midlands. Birmingham was one of the first universities to develop early clinical experience for students in the community and PCCS continues to run one of the largest programmes in the UK.

Students start to attend practices one day a fortnight from week two of Year 1. In the first two years at medical school they learn in lectures and small groups, with Community Based Medicine (CBM) providing their introduction to patients and their problems. This enables the students to put their theoretical learning in a clinical context and motivates them to master complex material. Students also learn to talk to patients, starting to develop a professional persona. They also put into practice their ethics teaching through obtaining patients' consent to talk to and examine them and through patients sharing confidential information.

As students progress they attend a different practice each year, experiencing great diversity of patients and settings: from inner city to rural. We have a team of staff, comprising GPs who work in the University two days a week and educationalists, who design both materials for the GPs to deliver and assessments, training the GP tutors to fulfil both roles. By the fifth year medical students are able to see patients independently and construct a plan of management of the patient's problem – they then call in the supervising GP who will check their findings and endorse or correct their plan.

Academic staff are supported by an outstanding administrative team who amongst other tasks made 2,406 placements last summer. In 2012 the General Medical Council undertook a quality assurance visit to the Medical School and commended 'The well organised community-based medicine

placements, and the opportunity this provides to students to link clinical and basic sciences at an early stage of the programme' as one of the areas of good practice. An accolade for both University staff and the over 350 GPs with whom we work.

Thank you to all alumni who teach students and provide placements. We are immensely grateful for your time and support.

Kate Thomas
Vice Dean for Student Development and Support and Lead for Community-Based Medicine

A new approach to **blood clot prevention**

Many people going into hospital have concerns about contracting the hospital acquired infection – MRSA. Little do they realise that the risk of acquiring, and dying from, hospital-acquired, venous thromboembolism (VTE) is many times greater. In fact, hospital acquired VTE kills more people than breast cancer, road traffic accidents, HIV/AIDS and MRSA combined.

Poor public knowledge of VTE, largely confined to clots associated with air travel, is not surprising when the risk is also underestimated by hospitals, who continue in failing to provide appropriate clot preventing drugs. What is more surprising is the lack of appreciation of these risks amongst healthcare professionals.

VTE includes deep vein thrombosis (DVT) and pulmonary embolism (PE), and risk factors include: immobility, acute illness, major and orthopaedic surgery, malignancy, pregnancy, increasing age and obesity. A combination of these factors further increases the risk. However, VTE is largely preventable. Routine risk assessment on hospital admission and the use of effective preventive strategies such as compression stockings and small doses of anticoagulants can reduce the 32,000 deaths that occur each year.

Primary healthcare professionals have little involvement in VTE aftercare and patients may self-administer thromboprophylaxis for up to 35 days, a procedure that may be potentially unreliable. Led by the University of Birmingham, the ExPeKT study is examining and defining the role of primary care in thromboprophylaxis and exploring the information and care that high-risk patients receive prior to hospital admissions or after discharge. The outcome will be to develop a pathway for the co-ordinated care and the integrated management of thromboprophylaxis between hospital and the community; in effect bridging the void for patient care.

Dr Lorraine McFarland
Research Fellow, Primary Care
Clinical Sciences

Birmingham Fellow developing new treatment for **breast cancer**

A researcher at the University is pioneering a new approach to breast cancer research, seeking to combat the increasing resistance to treatments of the disease that claims around 11,000 lives annually.

Alumnus and Birmingham Fellow, Dr Clare Davies (Medical Science, 1998, PhD Cancer Biology, 2003) returned to the University to take up a post as a Murphy Birmingham Fellow. The Birmingham Fellowship scheme was launched in 2011 to appoint world-leading researchers to a permanent academic post at the University.

Dr Davies's research is seeking to understand a group of enzymes, known as Protein Arginine Melthyltranferases (PRMTs), which are elevated in breast cancer patients. The research will explore whether the increased amounts of PRMTs contribute to the development of breast cancer or occur as a consequence of the disease.

Mirena coil is best treatment for heavy periods, major trial shows

The hormone-releasing Mirena coil intrauterine device (IUD) is a better treatment for heavy menstrual periods than other conventional medical approaches, according to results of a major clinical trial led by scientists from the Universities of Birmingham and Nottingham.

The ECLIPSE trial found that over two years, patient reported outcomes improved more with LNG-IUS than with other treatments, including women's experience of practical difficulties, social, family and work life, and psychological and physical health.

DR ANTHONY COX, LECTURER IN CLINICAL PHARMACY, TALKS ABOUT HIS CAREER AND THE PREPARATIONS BEING MADE AS THE COLLEGE OF MDS EMBARKS ON DELIVERING ITS NEW PHARMACY PROGRAMMES.

'The first half of my career was in the NHS working as a clinical pharmacist, and I always enjoyed the teaching and mentoring of staff. After obtaining a teacher-practitioner post, teaching undergraduate pharmacy students at City Hospital, I took up a part-time Teaching Fellow position at Aston University. My work as a Pharmacovigilance Pharmacist at the West Midlands Centre for Adverse Drug Reactions led me to complete a PhD examining the reporting of adverse drug reactions, following which I obtained my first lecturer post in Pharmacy.

'I've had links with academic colleagues in the medical and dental schools at Birmingham for a number of years and when the opportunity arose to develop a new Pharmacy programme at a university of this calibre, it seemed a natural move to make. Very few people have the chance to develop an entirely new course from the ground up. The strengths of Birmingham in teaching and research, and the other health professions on site, make this an ideal location. Since coming here I've been deeply impressed by the professionalism and enthusiasm of both academic and support staff at Birmingham. It's a lovely working environment.

'The flagship for Pharmacy is the new MPharm degree. This is the professional degree which is required to become a registered pharmacist. We plan to take a cohort of 70 students in October 2013. Alongside these programmes, we are already operating a Doctorate in Pharmacy, and will be establishing an accredited course for non-medical prescribing.

'I have enjoyed the blank canvas we've had to write our new curriculum. Watching it start to come to life is fascinating. We've had great support from colleagues within our College in developing an integrative and collaborative programme. The mind maps we drew on the wall a few months are now approved modules and the course content is now in development. We've been involved in open days, and the interest in our undergraduate course has been high. 2013 is going to be an exciting year.'

Did you know?

The University has one of the largest international communities in the UK. We have more than 4,500 students from 150 countries worldwide – and 27% of our academic staff are non-UK nationals, demonstrating that Birmingham attracts the brightest talent to its academic community from around the globe.

Scientists discover how **iron levels** and a **faulty gene** cause **bowel cancer**

High levels of iron could raise the risk of bowel cancer by switching on a key pathway in people with faults in a critical anti-cancer gene.

Cancer Research UK scientists, based at the University of Birmingham and the Beatson Institute for Cancer Research in Glasgow, found bowel cancers were two to three times more likely to develop in mice with a faulty adenomatous polyposis coli (APC) gene that were fed high amounts of iron compared to mice who still had a working APC gene. In contrast, mice with a faulty APC gene fed a diet low in iron did not develop bowel cancer at all.

Co-author Dr Chris Tselepis, a Cancer Research UK scientist at the University of Birmingham, said: 'Our results suggest that iron could be raising the risk of bowel cancer by increasing the number of cells in the bowel with APC faults. The more of these cells in the bowel, the greater the chance that one of these will become a starting point for cancer. We're now planning to develop treatments that reduce the amount of iron in the bowel and so could lower the risk of developing bowel cancer.'

The study could also explain why foods such as red meat, which have high levels of iron, are linked to an increased risk of bowel cancer.

Adding chemo to radiotherapy halves risk of deadly bladder cancer returning

Bladder cancer patients given low doses of chemotherapy combined with radiotherapy were nearly 50% less likely to relapse with the most lethal form of the disease compared to patients given radiotherapy alone, a major trial funded by Cancer Research UK shows.

The success of the trial – led by The Institute of Cancer Research (ICR) and The University of Birmingham – could mean fewer patients need their bladder removed and provides a viable alternative for frailer patients who are too weak for surgery.

Study co-leader Professor Nick James says: 'Many cases of bladder cancer are related to smoking and, with around eight out of ten cases occurring in people over 65, patients are often in relatively poor general health when diagnosed. The alternative is to give radiotherapy, but around a third of these patients will go on to relapse with invasive disease and will need their bladder removed anyway. So these results really provide a lifeline for those too old or weak for surgery and mean that, in future, fewer patients will need their bladder removed.'

Three hundred and sixty patients from around the UK were included in the study. Around half were given two commonly used chemotherapy drugs – fluorouracil and mitomycin C – in addition to the radiotherapy treatment.

Thirty three per cent of patients receiving chemotherapy in addition to radiotherapy (known as chemoradiotherapy) had a relapse within their bladder or surrounding tissues within two years, compared to 46% of those who had radiotherapy alone.

Among those that did relapse in the chemoradiotherapy group, around one in five had invasive cancer – the most serious form of the disease. This was compared to around one in three among those given radiotherapy alone.

Resuscitation for Medical Disciplines

On Monday evenings during term the Medical School fills with first-year students learning how to save lives. It's all part of a novel peer-led Basic Life Support (BLS) course, run by Resuscitation for Medical Disciplines (RMD), which has caught the attention of the British Heart Foundation (BHF) and the Faculty of Intensive Care Medicine (FICM).

Started 17 years ago by three medical students, this unique initiative each year trains 68 students to teach and assess over 600 interprofessional first-year healthcare students in vital BLS skills. Having previously been commended by the General Medical Council (GMC), RMD has recently secured formal endorsement from the both the BHF and the FICM, and looks set to expand again next year to teach both the new Pharmacy undergraduates and over 3,000 local school children.

'It's a course led by students for students and is one of its kind' says Professor Paul Stewart, Dean of Medicine. 'It's such an impressive, high-quality course it has now been endorsed by the British Heart Foundation.'

This prestigious endorsement, which has been forged through the efforts of the committee of nine students who oversee this unique course, will lead to Birmingham healthcare students teaching cardiopulmonary resuscitation (CPR) and basic first aid as part of the BHF 'Heartstart' scheme in 20 schools selected from the University's Access to Birmingham (A2B) network.

It has also led to evolving partnerships between RMD and West Midlands Ambulance and Fire Services, through which the Medical School has secured an automated external defibrillator and first aid training places for College staff.

Not only that, but the Birmingham BLS course is now recognised to be the largest in Europe and provides students with prestigious European Resuscitation Council (ERC) BLS provider and instructor qualifications. RMD is involved in research and has published five papers in the last two years, in addition to presenting six posters at international conferences.

Chris Jones, final-year medical student and Chairman of RMD says: 'The recent FICM and BHF endorsement is testament to the tremendous effort that students involved in RMD apply to ensure that the Birmingham BLS course continues to thrive and save lives. We're very proud to have been recognised in this way.' Dr Jonathan Hulme (MBChB, 1997) was one of three students who established the course in 1995 and his involvement continues to date; supported by Professor Julian Bion, who leads the BLS module.

Defibrillator opening ceremony

I REMEMBER…
The successful Rhodesian experiment

'Together with 15 others I was a member of the first graduating class of the University satellite Medical School (The Godfrey Huggins School of Medicine) in Rhodesia, Africa. I have often reflected on the success of that Medical School and share these thoughts.

'The first Rhodesian Medical School students graduated in 1968, and through to 1977 approximately 300 students graduated with Birmingham MBChB degrees. The standards were high thanks to the early Professors, and then their successors. Further, approximately 25 Rhodesian medical students graduated with an intercalated BSc after studying for a year in Birmingham.

'These graduates practise worldwide, and have excelled. One became a Dean of a medical school, some are medical professors, while others are internationally renowned surgeons, medical directors, and medical specialists working for prestigious organisations.

Dr Robert Bell with his wife Jeanette

'The legacy left by the Rhodesian Medical School has been immense. Good clinical standards and practices were transferred down to the current Zimbabwe Medical School, and to this day faculty and student exchanges take place with the University of Birmingham.

'The Birmingham experiment was well worthwhile.'

Dr Robert Bell (MBChB, 1968)

One of the 1968 Rhodesia/ Birmingham graduates

George Webster FRCS, Professor of Surgery (Urology) at Duke University, USA, has amongst others received lifetime achievement awards from the British Association of Urologic Surgeons and the American Urologic Society in 2011.

Left to right George Webster, centre Aida Politano (wife of Victor Politano [deceased] inaugurator of the award) and President of the AUA, Datta Wagle, MD)

STUDY HIGHLIGHTS VALUE OF
clinical officers in childbirth

GREATER DEPLOYMENT OF MID-LEVEL HEALTHCARE PROFESSIONALS TRAINED IN OBSTETRICS COULD SAVE THE LIVES OF THOUSANDS OF MOTHERS AND BABIES IN DEVELOPING COUNTRIES, REPORTS AMIE WILSON.

Maternal and perinatal death rates are high in developing countries, with 287,000 women dying annually.

Developing countries are often burdened by a shortage of trained doctors and skilled birth attendants. Rural areas are particularly affected, as doctors and midwives predominantly congregate in urban areas.

Clinical officers are mid-level healthcare professionals who perform many medical and surgical tasks carried out by doctors. There are perceived benefits of using clinical officers when compared with doctors, such as enhanced retention within the local health systems.

As caesarean section is the most common major surgical procedure in sub-Saharan Africa, and must be performed in a timely fashion to save a mother's life. Clinical officers could potentially play an important part in increasing accessibility and availability of obstetric care.

Until recently there was uncertainty about their safety. Yet our meta-analysis published in the *BMJ* suggests that caesarean section by clinical officers does not result in a significant increase in maternal or perinatal mortality. Therefore, it is reasonable to suggest that by greater deployment of clinical officers, in areas where there is poor coverage of doctors, the accessibility of emergency obstetric care for women in developing countries will be enhanced.

Skilled birth attendance, by a healthcare professional who is trained to manage normal pregnancy and birth, has been shown to improve maternal and perinatal outcomes, but many women in developing countries are not attended by a skilled birth attendant. Poor access to health services, shortage of healthcare workers, and cultural and financial barriers mean that traditional birth attendants (TBA) attend up to 90% of births in some regions; these are women without any regulated training or governance.

There has been contention around this cadre for some time, and although Cochrane suggested they were promising in reducing perinatal deaths, there was insufficient evidence on their impact. However, our study found a reduction in

adverse perinatal and neonatal outcomes with strategies incorporating TBAs. Studies reporting on maternal mortality found a statistically non-significant reduction.

We are therefore led by the best available evidence to conclude that TBAs may be a practical, complementary solution for many women in developing countries, particularly in rural areas and should not be discarded, as previously.

The evidence synthesis on interventions to reduce maternal mortality continues. We are currently looking at emergency transportation, cell salvage, contraceptive interventions and women's participatory action groups to improve maternal and perinatal outcomes.

Amie Wilson is a doctoral researcher at the University of Birmingham and a practising midwife.

Remains of the day

In 2012, following months of negotiation with the US Embassy in London and US Customs Officials, Dr June Jones, senior lecturer in biomedical ethics, set off for Central California to take seven skulls and four bone fragments back to their place of origin. Here, Professor Paul Stewart, Dean of the Medicine, describes the background to the repatriation project while Dr Jones charts her experience in excerpts from the diary she kept during her 'journey of a lifetime'.

California burial grounds

The College of Medical and Dental Sciences holds a collection of human skulls and bone fragments from many places around the world, writes Paul Stewart. The records relating to how the collection was formed are either not available or incomplete, so little is known about the origin of the items. Our collection is not on display, and is not used for teaching or research.

In my time as Dean, I have received many requests from cultures across the world claiming the materials might belong to their origins. The question is what to do about them?

Believing that repatriation was the only ethical response to our discovery, a decision was made to attempt repatriation of any of the remains which had good provenance. The first part of the collection to be repatriated was the Californian collection from the school's anatomy collection. Each item had a label attached stating that it had originated from a grave in the San Luis Obispo area of California. Dr June Jones was asked to contact tribes in that area to investigate whether there was any interest in repatriation. The Salinan tribe from the San Luis Obispo area responded enthusiastically.

June Jones has demonstrated outstanding professionalism in her handling of this humanitarian and ethical issue, for which we are all grateful.

June with tribal leader

June's DIARY

Tuesday 8 May

Sealing the box containing the bones I feel a mixture of anxiety, relief and a huge sense of responsibility for what is about to happen. The San Luis Obispo area is home to the tribe of Salinan Native Americans and has been their ancestral land since prehistoric times. The box is large and my car is not, but with the aid of a colleague we get the box safely on board and I set off for the journey of a lifetime.

Wednesday 9 May

I have been in discussions for several months with the US Embassy in London and their specialist customs team in Atlanta Georgia, so I have all the required paperwork and contact details at the ready, in case of any problems. At US Customs I am greeted with the opening question: 'What's in the box, lady?' I produce all the paperwork and tell my story. Again, I am met with nothing but interest and a genuine desire to help the process go as smoothly as possible.

Our first stop is at the Sheriff's office, to meet the County Coroner who will take possession of the skulls until the reburial. First, they have to be inspected by expert archaeologists to confirm that the remains are Native American. Apparently confirmation is gained by examining the molar teeth, which are 'shovel' shaped from years of grit in the diet. Each skull is carefully examined and confirmed as Native American, so reburial arrangements can proceed. We leave the skulls with the coroner and travel 30 minutes to John Burch's home, where I am staying.

Thursday 10 May

John is the Spiritual Elder of the Salinan tribe, so he knows the land in a special way. We travel to Mission San Antonio, where Salinan Indians were rounded up and converted to Catholic Christianity. We travel to 'the Indians', an area of sacred rock formations in the San Lucia Memorial Park, and then to the Ventana Wilderness Trail. Being in these sacred landscapes with John is so special.

We are interviewed by KCOY TV. It becomes apparent that although around 700 Salinan Indians still live in the San Luis Obispo area, little is known about them outside of their own community. There is also great interest in a UK

university making the initial contact to begin and pay for repatriation. **www.kcoy.com/story/18306360/native-american-remains-returned-to-the-central-coast**

Friday 11 May

Following permission from the Native American Heritage Commission the reburial is to take place today! It is a very moving and symbolic moment to see the Elders formally receive their ancestors for reburial from the Sheriff. We then travel to the site of reburial, which is kept secret to avoid people coming to the grave site to dig up the ancestors again – yes, that actually still happens today! Tribal songs of welcome are sung to the ancestors, and their remains are laid to rest in a communal grave, side by side for the first time in over 100 years. The overwhelming theme I hear throughout the day, from State Officials and Tribal members, is how grateful everyone is to the University of Birmingham for repatriating the ancestors. As one Tribal leader said to us as we gathered around the grave: 'Tonight our ancestors will sit around the fire together in their own land for the first time in many years.'

Dr Jones's diary was first published in the Dean's Blog on the medical school website.

Tackling infection in Africa

David Miles, a postdoctoral research associate in Professor Paul Moss's group in the School of Cancer Sciences, reports from Malawi on a collaborative project with the Wellcome Trust to better understand immune response.

Recent work on African children has shown that their immune systems develop very differently to children in high-income countries. There are many possible reasons, including poor nutrition and having to deal with many more infections. One intriguing possibility is suggested by the finding that infants in Africa are all infected with cytomegalovirus (CMV) or Epstein-Barr virus (EBV) very early in life.

Most of us fortunate enough to live in high-income countries will be infected with one or both of these viruses at some time in our lives. Our immune system will respond as it does to any invader, with a counter attack of T-cells and antibodies to drive it out. It won't succeed because both of these viruses have been co-evolving with human beings since before there were human beings, and have evolved the ability to evade the immune response and become quiescent passengers for the rest of our lives.

African infants who are infected do not become ill, but the effect on the immune system is dramatic. CMV infection is the major driver of the CD8 'killer T-cell' population for at least the first two years, while EBV appears to limit the ability to produce antibodies in response to vaccines.

What remains unknown is how the immune systems go on to develop and mature through adulthood. There is a substantial body of work on the subject of immune ageing from high-income countries, but nothing from Africa. As we know the immune system develops differently in infancy, it is likely to develop differently through adulthood.

To plug an important knowledge gap, the University of Birmingham has established a collaboration with the Wellcome Trust unit in Blantyre, Malawi. We are recruiting adults aged 20–69 from Blantyre's Chilomoni township, and assessing their immune response to influenza, CMV and EBV. By comparing these immune responses, we can follow changes in the immune system with age and see whether very early infection with CMV and EBV affects the way the immune system handles them later in life.

The Wellcome Trust unit has advanced immunology facilities located next to a research ward in the largest hospital in Malawi, so we can collect samples and carry out complex assays on cellular immune function immediately.

We hope this collaboration will lead to further studies of the immune system in Africa, and ultimately we hope that a better understanding of how the immune system works will lead to the rational design of interventions to limit the very high number of people who suffer from infectious diseases in Africa.

In April 2012 I travelled to Cape Coast, Ghana where I spent one month working in Central Regional Hospital for my elective, **writes medical student Rachel Pounds**.

I worked in the obstetrics and gynaecology department and divided my time between the ward, delivery suite, theatres and outpatient clinics. I helped midwives during deliveries and assisted obstetricians in theatre during caesarean sections, abortions and other gynaecological operations.

I undertook a research project where I found the caesarean section rate, the indications for surgery and the proportion that are elective and emergency procedures. I also interviewed all women who delivered by caesarean section during my visit and evaluated whether they are involved in the decision to perform surgery, informed of the indication, their attitudes towards caesareans and how much knowledge they have regarding the procedure.

I thoroughly enjoyed working in Ghana, learnt a number of new skills, saw interesting medical conditions that I have never seen before in UK hospitals and assisted in a large number of operations. It was exceptionally eye opening to work in an African hospital and learn how medical conditions and treatments differ to those found in Britain.

At times I found it very challenging, especially working in such difficult conditions with the unhygienic and unsanitary wards and the lack of medical and surgical equipment. However, it was extremely rewarding and a very exciting experience. It is definitely one I will never forget. The main image that will stay with me is the friendliness, happiness and optimism of the staff and patients who were always extremely pleasant, had a smile on their faces and made my elective such an enjoyable and fulfilling experience.

Abigail Mackintosh is a final-year medical student.

During April and May last year I undertook a six-week elective placement at the Gender Identity Clinic in London. During my second year at university, I became interested in this field of medicine following a student-selected study module. My elective seemed like a fantastic opportunity to further this interest and carry out some research in the process.

During my placement, I carried out a research project looking into whether there is an increased prevalence of autistic spectrum disorders in the patient population at the Gender Identity Clinic. Alongside my research, I spent time in psychiatric clinics, assessing patients' suitability to progress along the journey of gender reassignment. I also saw some of the endocrinology clinics, where patients' hormone treatments were monitored, and also observed some of the male to female gender reassignment surgery.

My research has revealed a significantly increased prevalence of autistic spectrum disorders in the patient population at the Gender Identity Clinic, suggesting a link between autistic spectrum disorders and gender identity disorder. This placement has gone a long way to further my personal and professional development and I presented my research at the National Medical Student Research Conference in October.

I am currently in my final year and am applying for an FY1 job next year. I do not necessarily want to work in this field of medicine, but I feel the experience and transferable skills I have gained during this placement will help me in whatever speciality I choose in the future.

Lawen Karim is a third-year medical student. She tells us about her elective in Kurdistan.

For my elective I decided to embrace my roots and return to my Motherland, Kurdistan. Kurdistan is a semi-autonomous region located in the Republic of Iraq. Since the early 90s, the Kurds have enjoyed the right to self-govern and rule. They currently have their own constitution, parliament and ministries which are separate to the Republic of Iraq.

I spent the full six weeks of my elective programme at the Shahid Dr Xalid hospital in Koysinjak which is located in the Irbil province. A typical day for me would consist of attending the morning ward round with the consultant in charge of the ward and his team. It was my duty to examine each patient and present my findings to the team. It was my responsibility to ensure that any further investigations and tests decided by the consultant were completed before the end of the day.

The rest of the day was spent at the outpatients department where I was given the responsibility of managing my own list of patients. It was my duty to take a full history, examine and manage each patient independently. There was a lack of supervision due to the long patient lists and the shortage of doctors. Not being a fully qualified doctor, I was very uncomfortable with this aspect of the elective and so I made sure that every diagnosis and management plan I produced was checked by my supervisor.

Overall it was a fantastic experience. The skills I gained in this process have been invaluable and I am certain they will help me in the future.

Do you live or work abroad?

Tell us about your experiences and get in touch with other alumni where you live.

We have International Alumni Groups in 24 countries. To find out more email alumnioffice@contacts.bham.ac.uk +44 (0)121 414 2773.

Student Electives

The Elective is an important part of the MBChB, designed to be a stimulating, rewarding and enjoyable experience, writes Dr Connie Wiskin. Successful completion of an Elective project is a graduation requirement, but with tremendous focus on choice, and relevance to the individual student.

The Elective is a substantial learning opportunity where students expand their own professional development, learn how to organise a large-scale project, and represent the College of Medical and Dental Sciences internationally. In summary, students self organise a five-week period of study in the medical/healthcare context of their choice. This can be in or out of the UK, and we encourage participants to be creative in their approach to learning. They need to:

- Identify a home supervisor (local)
- Come up with a feasible project, and secure a placement/setting (with a nominated location supervisor)
- Set their own aims and objectives
- Undertake a health, safety and risk assessment of the project/location
- Submit a 1,000-word protocol
- Undertake five weeks of learning time,
- Behave in a way that makes the world see the calibre of Birmingham students

…and finally come back, write a 3,000-word report in the style of a published (or inspirational) piece and talk honestly to their supervisor about what happened.

Dr Connie Wiskin, Academic Lead Student Selected Component Module Lead – Electives.

Value in the **'art of medicine'**

Paul Cullis has no doubt about what he most values from his time as a medical student at Birmingham – apart from having met his future wife here! '*We were taught the art of medicine,*' he says. '*At Birmingham medical school you developed a very strong foundation in clinical medicine. I learned to take a patient's history and do a physical examination very thoroughly. I learned to relate to people, to have empathy. It was a really important aspect of the teaching.'*

Dr Paul Cullis – Neurologist

Today, Dr Cullis is an eminent physician who is Section Chief of Neurology at St John Hospital and Medical Center and Clinical Associate Professor of Neurology at Wayne State University School of Medicine, Detroit, US. He has special expertise in movement disorders, such as dystonia and Parkinson's disease, and stroke, and has been named by his peers as one of metropolitan Detroit's top neurologists in the *Hour Detroit* magazine's Top Docs surveys each year from 2007 to the present.

'As time has gone by, everything has become much more science focused,' he reflects. 'We turn out doctors who are scientists but they don't interact fully with their patients. That was something I learnt to do at Birmingham by example, from the people who taught me.'

He particularly remembers a surgeon in the medical school, Mr Arnold Gourevitch. 'A surgery had gone wrong,' he explains. 'A lot of surgeons would have dodged the issue, glossed over it; but he sat down with the patient and was entirely honest, saying he felt the surgery should be done again. I think patients appreciate honesty and can handle bad news if they trust their doctor to be straight with them.'

London-born Paul moved at the age of four with his family to North America. 'We finally settled in Detroit and when it was time for me to go to medical school my parents said, 'why not go back to Birmingham?' It made sense because we had friends and relatives in the city and my father (Frank Cullis) had graduated from the Birmingham medical school in the early 1940s. I wrote to the then Dean of Admissions, Dr BT Davis, and was accepted to do a first MB in 1973.'

Nearly four decades ago there were few international students at the medical school, he recalls. 'I met an Australian student named Garth Deacon the first day and we became very good friends and graduated together. When I found out at the 30-year alumni reunion that he had died suddenly at a relatively young age, it was very sad.'

During his time here Paul met Anne Greaves, who was reading French. They fell in love and went on to marry. 'We spent a lot of time at the Gun Barrels pub on the Bristol Road,' he laughs. 'In fact, looking back there were a lot of parties, it's all a bit hazy really. We had so much fun.

'We went to the Alumni reception at the House of Lords two years ago and met up with some of our friends from Birmingham. We went out to dinner and there were six married couples who had all met during their time at Birmingham.'

He recognises that times have changed when it comes to study. 'I think today's students are much more serious,' he muses. 'They are goal directed and tend not to be able to enjoy their time as much as we did. It is most important to enjoy your time in medical school because it's a crucial time of your life. Studies are important but growing as a person and forming relationships with your classmates is very important too.'

An early interest in neurology was nurtured and became more focused as time went by. 'Most people decide very quickly whether to be a physician or a surgeon. If you decided to be a physician, it was a case of what aspect of medicine you would specialise in. My father worked in rehabilitation so he saw a lot of neurological problems and I was probably influenced by that.

'During my neurology rotation in Birmingham I met Dr Edwin Bickerstaff, a well-known neurologist based at the Midland Centre for Neurology and Neurosurgery in Smethwick. I did my neurology training with him and I believe he was a classmate of my father's. He nurtured my interest.'

Paul graduated with Distinction in Clinical Pharmacology in 1979 and went on to spend six months in the neurosurgery department at the Queen Elizabeth Hospital and six months there with Professor Hoffenberg. Returning to Detroit, he was a neurology resident at Wayne State University School of Medicine from 1980–3 where he received a Fellowship in Electromyography from 1983–4. He moved to King's College Medical School, London the same year and completed postgraduate training in movement disorders in the Department of Neurology there with Professor CD Marsden. Paul and Anne still reside in Detroit.

Jenni Ameghino

Please let us know your speciality!

Contact us on alumnioffice@contacts.bham.ac.uk or +44 (0)121 414 2744.

A lasting legacy

Sir Arthur Thomson (1890–1977)

Franta Belsky Arthur Thomson bust

Decades of student cohorts have had their lectures, exams and showcase events in the Arthur Thomson Hall, but who was the man behind the name?

Sir Arthur Peregrine Thomson was a well known and respected physician in Birmingham and the Dean of Medicine of the medical school between 1951 and 1959.

Born in British Guiana, Sir Arthur took his medicine degree at the University of Birmingham. He was quickly recognised as a prize student, successively becoming a Queen's scholar, Ingleby scholar and Russell memorial prizeman and achieving a first-class honours in 1915 in medicine, surgery, obstetrics and gynaecology.

After graduation, he served in the British Army during the First World War and was awarded the Military Cross and the Croix de Guerre and retired with the rank of Major. After peace was declared, he returned to Birmingham where a successful medical career followed.

In 1919, Thomson became a physician at the General Hospital where he developed an interest in diabetes and began to teach subsequent generations of Birmingham students. It was said that 'one of the things that drove him to displeasure was the grammar of the students and made them read the prayer book to help'. Also engaged at the Children's Hospital, he did notable work on the epidemiology of rheumatic fever and published articles about convalesce of children with heart disease. His work led in 1921 to the conversion of a residential school for disabled children into the Baskerville School for children with rheumatic heart disease. Other research arose from an outbreak of psittacosis, an epidemic associated with diseased parrots, in 1930, and subsequent studies focused on the problems of ageing and chronic sickness.

Dr Jonathan Reinarz, Director of History of Medicine says: 'Sir Arthur's career spans an important time in medical history when medicine transformed from an unrecognisable

Arthur Thomson Trust 30-year reunion

form into something we are familiar with today. He was part of the last generation of true generalists when specialities were only starting to be recognised. Although he focused on certain conditions and specialties such as diabetes, paediatrics and geriatrics, he never professed to be specialist in any of these. But his way of working was coming to an end.'

In 1947, in recognition of his research and teaching activities and his high-professional standing, Arthur Thomson was appointed as a part-time Professor of Therapeutics at the University. Four years later, he became the Dean of the Medical Faculty and, in 1952, Vice-Principal of the University. He had achieved some of the highest positions and accolades in his profession and sat on many of the profession's most important committees and boards, so much so that, in 1959, he was knighted.

His obituary emphasises that he would be remembered for his 'friendship, sparkling wit, his culture, his great generosity, his kindness, his constant consideration for the feelings and welfare of others and his courage in adversity.' He was known for his 'unwavering devotion to the medical school', and it was no surprise that, in 1963, he set up a Trust fund to which he contributed the majority of his wealth.

Today, the Arthur Thomson Trust continues to support students and alumni alike. The Trust funds a number of initiatives including:

- The Medicine and Dentistry annual 30-year reunions
- Two annual lectures, one by an invited Arthur Thomson Professor and the other on an aspect of the History of Medicine
- Refreshments for graduates, their relatives and teachers on graduation day and a buffet after the annual prize-giving ceremony
- Bursaries for students wanting to intercalate and grants to enable students to work in laboratories or carry out other projects during the summer vacation designed to enhance their careers
- Travel bursaries to medical and dental students for their electives
- Financial help in response to individual requests from students who want to attend prestigious conferences or other major events

Honorary graduates

Dr Andrew Vallance Owen – Doctor of the University

Dr Andrew Vallance-Owen graduated from the Birmingham Medical School in 1976 and is currently Chair of the Guild Trustee Board. A trained surgeon, he joined the staff of the British Medical Association as Scottish Secretary, and then Head of Policy. He recently retired from BUPA, where he was accountable for the safety and quality of care of BUPA's 11 million customers. He is a keen advocate of improved doctor-patient communications, measurement of clinical performance and shared decision making, and is actively involved in the fields of healthcare and education, including chairmanship of UK Trade and Investment's Healthcare Business Group.

Professor Sir Alex Markham – Doctor of the University

Professor Sir Alex Markham is Professor of Medicine at the University of Leeds, and has over 15 years' experience in the pharmaceutical and diagnostics industries. He studied a PhD in Chemistry at Birmingham and in 1990 was recognised by the Queen's Award for Technological Achievement for the worldwide development of DNA fingerprinting for forensic and medico-legal applications. He was Chief Executive of Cancer Research UK from 2003 to 2008, and currently chairs the Clinical Practice Research Datalink, which will research the use of NHS electronic patient records. Professor Sir Alex was knighted for 'Services to Medicine and Healthcare' in 2008.

Chancellor's prize winners

Two outstanding medical students were awarded prestigious prizes as part of the University of Birmingham's annual degree congregations. Helen Leach and Jake Mann received the Chancellor's and Vice-Chancellor's prizes at their degree congregation in July.

Both graduated with MBChB Honours (the equivalent of first-class Honours).

Alumni congratulations

Congratulations to Dr Margaret Guy (MBChB, 1976) on being awarded MBE for services to healthcare. She received the award for her long standing service at the Phyllis Tuckwell Hospice and for her voluntary work as Chair of Hospice Home Support.

Congratulations to Brenda Billington (MBChB,1974) on being awarded an OBE for services to Ophthalmology. She was previously Consultant Ophthalmic Surgeon, Royal Berkshire NHS Foundation Trust, Reading.

Technical Manager recognised in Queen's Birthday Honours

A highly experienced technical manager, who has worked at the University of Birmingham for nearly half a century, has been awarded an MBE in the Queen's Birthday Honours.

Trevor Hayward joined the University 47 years ago as a 16-year-old trainee technician. Mr Hayward has been recognised for his 'outstanding contribution' to academic life at the medical school, 'supporting successive cohorts of staff and students and contributing to the development of internationally competitive research.' The citation added that he had been a role model for 'crucial, but often overlooked, technical management in the HE sector'.

Fertility expert awarded MBE

Dr Jackson Kirkman-Brown, Science Lead for the Birmingham Women's Fertility Centre and Director of the Centre for Human Reproductive Science at the University of Birmingham, has been awarded an MBE in the Queen's New Year Honours.

He is one of the UK's leading researchers in the field of reproductive medicine and heads cutting-edge studies into the science behind fertility for the benefit of couples struggling to conceive.

Dr Kirkman-Brown and his team, including medical personnel from the RCDM and the QE and Women's hospitals, are on call around the clock to deal with men whose injuries may threaten their fertility.

Could you contribute to a step change in cancer research?

We are working to improve research into cancer diagnosis and treatment with the help of the newly launched Circles of Influence campaign. Working closely with alumni and supporters, we want to inject additional funding into three key areas:

- **Brain cancer** is a dangerous and debilitating condition that affects hundreds of children across the UK every year. One in three of those children will die and those who survive are often left with significant disability. New research in the College of Medical and Dental Sciences is helping to improve diagnosis and treatment by using state-of-the-art scanning equipment to better identify the sort of tumour a child has before invasive surgery takes place.
- **Breast cancer** is the second leading cause of death of women in the UK, with some women at increased risk. New approaches are being developed at the University of Birmingham addressing which women are most at risk and how to treat them, forming the bedrock for the development of new breast cancer drugs.
- **Prostate cancer** is the most common cancer in men in the UK, with more than 35,000 new cases every year. A third of those men will die. The University of Birmingham is at the forefront of treatment and development in prostate cancer, undertaking a new clinical trial that will test treatment for men in whom the disease has progressed and alternatives have stopped working.

If you would like to make a contribution towards this work, or would like to fundraise on our behalf, please contact the fundrising team on +44 (0)121 414 8894.

Events and reunions

Reunion: Classes of 1988, 1978, 1973, 1968, 1963.

The University is hosting its annual anniversary reunions on Saturday 8 June 2013. Contact the alumni events team on +44 (0)121 414 9084 or via alumnievents@contacts.bham.ac.uk for more information.

Dean's Lecture

Wednesday 15 May
Leonard Deacon Lecture Theatre, Medical School
The Dean of Medicine, Professor Paul Stewart will be delivering his annual lecture entitled 'Our Medical School 2013'.

Class of 1983: 30-year reunion

Friday 11 October 2013

The Medical School Patrons

The Medical School Patrons is an exclusive cub which celebrates our leading donors' investment in the future of the Medical School.

Membership is open to those who have made a contribution of £1,000 or more in a year and those that have made a bequest to the University.

As a Patron, you will be invited to a series of events in the Medical School including a reception that the Dean of Medicine will host, annual lectures and you will receive a special label pin badge. Importantly, your role as a Patron will give the Dean a unique opportunity to hear your views on how the Medical School is developing.

Thank you to everyone who is already a Patron, your support is very much appreciated.

If you would like to find out more contact us on alumnioffice@contacts.bham.ac.uk or +44 (0)121 414 2744.

The University is launching several new postgraduate courses in 2013:

- MRes Cancer Sciences
- MSc Immunology and Immunotherapy
- MSc Pharmaceutical Enterprise
- MSc Translational Medicine: Interdisciplinary Biomedical Technologies
- MSc Urology
- PGCert for Clinical Commissioning Group (CCG) leads (in association with NHS Clinical Commissioners) **http://www.birmingham.ac.uk/schools/social-policy/departments/health-services-management-centre/news/2012/10/new-pg-cert-for-ccg-leads.aspx**

For more information and to see all of our postgraduate courses visit: **www.birmingham.ac.uk/students/courses/index.aspx**

Follow us on Twitter: www.twitter.com/unibirm_MDS

International postgraduate scholarships now available

The College of Medical and Dental Sciences is now offering scholarships to international students applying to four of our postgraduate programmes. Up to12 scholarships of £2,000 each will be available to international students applying for 2013 entry, three to each of the MSc Clinical Oncology, MSc Immunology and Immunotherapy, MSc Pharmaceutical Enterprise and MSc Translational Medicine: Interdisciplinary Biomedical Technologies programmes.

For full information visit our International Scholarships web page **www.birmingham.ac.uk/mds-international-scholarships**

Centre for Professional Development courses

discount available for alumni

If you are looking to update your professional skills, then short courses could be for you.

Some courses are assessed and carry accreditation while others offer a Certificate of Attendance. Courses are delivered by some of the UK's most respected clinicians and health professionals.

Alumni are entitled to a discount on selected University-led courses. In order to take advantage of this discount contact the Centre for Professional Development (CPD) directly with your name, course studied and year of graduation.

Our website is updated regularly so please keep checking for new announcements, or sign up to our CPD newsletter to receive updates straight to your inbox at **www.birmingham.ac.uk/mds-shortcourses** or follow us on Twitter **@uobcpd**

Our courses:

Identifying and managing occupational asthma: an overview and update
Thursday 9 May 2013
25% discount for alumni

Child Protection Training for Senior Clinicians'
Wednesday 29 – Thursday 30 May 2013
10% discount for alumni

Basic Pharmacology for Podiatrists
Tuesday 18 June 2013
25% discount for alumni

Medlines

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