



The journey begins

The pioneering staff and students at our
new joint medical school in Singapore

... **CENTRE PAGES**



A BROAD CHURCH

How Imperial Horizons is giving undergraduates a new perspective

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Imperial crews pick up trio of medals at Euros to buoy team GB

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Lorraine Craig on overseeing student expeditions worldwide

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EDITOR'S CORNER

New beginnings

It's the first time that I've been at College for the start of the academic year, and although a very familiar rhythm for most, it does **feel rather special** this time. Thousands of miles away in Singapore, first year medical students have just started on their **journey to become doctors** at the new Lee Kong Chian School of Medicine – a historic moment for the College (pages 2, 8 and 9). Closer to home, undergraduate students in London have perhaps **more reasons than ever to be excited** about their time at the College and the future. In this year's National Students Survey (NSS) Imperial gained its highest ever satisfaction score and response rate, thanks to the work every department and the Union have done to improve the student experience (page 3). Meanwhile, both first and second years now have the chance to study a diverse range of modules from the Horizons programme (page 10) so they will be better **prepared for the workplace** when landing their first job – which given the excellent prospects for Imperial graduates (page 4) shouldn't prove too difficult.

ANDREW CZYZEWSKI, ACTING EDITOR

Reporter is published every three weeks during term time in print and online. The next publication day is 24 October. Contact Andrew Czyzewski: reporter@imperial.ac.uk

Imperial celebrates LKCMedicine launch

Imperial recognised the contributions of staff and students to Singapore's newest medical school at an event on 10 September at South Kensington Campus.

The Lee Kong Chian School of Medicine (LKCMedicine), a collaboration between Nanyang Technological University (NTU) and Imperial, welcomed its first 54 students in August (see pages 8 and 9).

The LKCMedicine London Office has led on curriculum development and much of the organisation. Paul Ratcliffe, Singapore Project Manager, set out how the London Office delivered Imperial's responsibilities for the partnership despite the numerous challenges inherent in such ambitious international collaborations.

He said: "It's absolutely fantastic to be here tonight having seen the whole project through to fruition, and having just seen the first students welcomed a few weeks ago."

Dr Naomi Low-Ber, the school's Vice Dean (Education), gave colleagues an insight into the innovative LKCMedicine curriculum, which is pioneering the use of e-learning tools.

Claire Vassie, a fifth year Imperial medical student, told how she and some of her peers helped review these e-learning materials and forge early links between Imperial and LKCMedicine students.

Professor Dermot Kelleher, Dean of LKCMedicine and Imperial's Faculty of Medicine, closed the formal proceedings, paying tribute to NTU for their commitment and thanking staff at LKCMedicine for their dedication.

He said: "Creating the new medical school is a historic moment: for Imperial, for NTU, and for Singapore."

—ANDREW SCHEUBER, COMMUNICATIONS AND PUBLIC AFFAIRS



Support staff gather at Village Fete and BBQ

Support staff from across College gathered for a Village Fete and barbeque at South Kensington Campus on the evening of 9 September.

Many braved the rain to take part in an assortment of games and activities around the Queen's Lawn hosted by College support services divisions. Around 100 staff from the Hammersmith and Silwood Park Campuses made the journey, arriving by coaches.

The event, organised by the Support Staff Social Committee, aimed to respond to survey feedback that support staff had little opportunity to meet people from other areas of the College doing similar jobs to their own. Over 1400 registered initially with a good

turnout despite the rain.

"The Committee has organised events before – walks, staff choir, tours of the Queen's Tower – but we wanted to do something on a larger scale to give people the opportunity to meet a wider group of support colleagues," said Louise Lindsay, Director of Human Resources.

Imperial's new Provost Professor James Stirling took to the stage to address the audience of staff:

“While we are rightly famous for the quality of the teaching and research we also have an incredibly talented body of professional and support staff.”

WELCOME WEEK

FRESHERS' FAIR 2013

→ Tuesday 6 October
11.00 – 16.00



All staff are welcome to explore the Freshers' Fair and join the many Union clubs and societies.

Freshers' Fair is taking place across the South Kensington Campus with stalls at Dalby Court, Sherfield Building, Main Entrance, Sir Alexander Fleming Building, and Beit Quad.

You can find a full list of all the Union's clubs, societies and projects at:

imperialcollegeunion.org/a-to-z

Student satisfaction on the up

Students have given Imperial its best ever rating in the National Student Survey (NSS), according to the 2013 results released in August.



The feedback from 1,634 students – four-fifths of the graduating cohort – gives Imperial its highest student satisfaction score and response rate in the survey's history.

A greater proportion of Imperial students took part in the survey than any other university in England and Wales.

87% of final-year Imperial students responding to the survey “definitely” or “mostly” agree that their overall experience at the College was satisfactory.

This is a 1% improvement on the College's performance

last year and 2% higher than the sector average (85%).

The College's performance across all NSS question categories was better than in 2012.

The survey revealed particular progress in the Assessment and Feedback category, with a 66% satisfaction rate, an increase of 4% on last year and a 12% improvement over the past two years. Academic Support satisfaction rates reached 79%, also a 4% increase on last year.

The College achieved its highest ever rating for satisfaction with Learning Resources at 95%, the joint-second highest rating in the sector.

Over the past two years every Imperial department has focused on improving their student experience through departmental action plans.

In addition to this, recent student-centred reforms include: the Union's 'You Said, We Did' Campaign to promote changes in teaching; student-led teaching awards; a place for the Union President and Deputy President (Education) on the Advisory Group to the Vice Provost (Education); and the expansion of the Imperial Horizons programme to broaden the range of academic and professional training (see page 10).

—ANDREW SCHEUBER, COMMUNICATIONS AND PUBLIC AFFAIRS



Engineering honours for staff and alumni

Imperial academics received a record haul of honours from a prestigious engineering academy this summer.

The Royal Academy of Engineering announced the election of 60 new Fellows at its annual general meeting on 22 July. The Fellows include some of the UK's most accomplished engineers from academia and business. This now takes the number of Imperial Fellows to 84.

Among this year's cohort were Professors Jeff Magee, Dean of the Faculty of Engineering; Molly Stevens (Materials); Robin Grimes (Materials); Jianguo Lin, (Mechanical Engineering); Washington Ochieng (Civil and Environmental Engineering) and Stratos Pistikopoulos (Chemical Engineering).

Sir Keith O'Nions, President & Rector, said: “Our Faculty of Engineering is a world beater in terms of the quality, depth and breadth of research and teaching being carried out. It is absolutely fantastic news that such a

large group of Imperial academics have been recognised by the Royal Academy of Engineering. All six are leaders in their field and thoroughly deserve recognition for their outstanding contribution to engineering.”

Five Imperial alumni were also honoured including: Naomi Climer, President of Sony Media Cloud Services (Chemistry, 1986); Dr Richard Greaves, Group Chief Technology Officer, Meggitt plc (PhD Life Sciences, 1987); Professor Lin Li, Deputy Head, School of Mechanical, Aerospace and Civil Engineering, The University of Manchester (PhD Mechanical Engineering, 1988); Dr Andrew Rickman, Founder and Chairman of the Rockley Group (Mechanical Engineering; 1982) and Dr Andrew Shields, Assistant Managing Director, Toshiba Research Europe (Physics, 1986, PhD 1990).

The Royal Academy of Engineering also awarded a Research Fellowship to Dr Edmund Kelleher (Physics) in August for his work in next generation short-pulse visible and ultraviolet light lasers and an outstanding contribution to engineering.

in brief

Introducing the City and Guilds Building

More than 100 Mechanical Engineering and Aeronautics staff joined alumni and guests for the naming of Imperial's City and Guilds Building. The 18 September ceremony marked the launch of a major redevelopment programme for what was previously known as the Mechanical Engineering Building on the South Kensington Campus. The present building was completed in the early 1960s and stands on the site of the former City and Guilds College building, constructed in 1885. City & Guilds College, founded in 1884, merged with the Royal School of Mines and Royal College of Science to form Imperial College London in 1907. The refurbishment of the City and Guilds Building is due for completion in 2017.



Moving on up

Seventy eight Imperial academics will begin the autumn term with new positions in recognition of their research and teaching successes. The 2013 academic promotions round acknowledges the achievements of staff from the Faculties of Medicine, Engineering and Natural Sciences, the Business School and the Centre for Co-Curricular Studies.

A full list of the 2013 academic promotions can be found in the College Notice on the Central Secretariat's web pages: bit.ly/1aQlt3h

£22m to improve healthcare in NW London

The Department of Health has announced £10 million of renewed funding for a programme of research aimed at improving healthcare services. The National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care (NIHR CLAHRC) for Northwest London was established in October 2008 to help translate research from the lab bench to the hospital bedside. The NIHR CLAHRC for Northwest London is hosted by Chelsea and Westminster Hospital NHS Foundation Trust, with Imperial as the lead academic partner.



New centre to strengthen international science links

Imperial scientists will act as mentors for researchers from low- and middle-income countries (LMICs) in a new centre launched this month.

Wellcome Trust–Imperial College Centre for Global Health Research aims to make advances in preventing and treating major health problems of LMICs while fostering the careers of a new generation of scientists from partner institutions in Asia, Africa and South America.

It will build on the work of the Wellcome Centre for Clinical Tropical Medicine, established at Imperial in 1995, which has formed strong partnerships with numerous institutions worldwide and helped researchers establish their careers in clinical tropical medicine.

The new centre will have a broader scope, encompassing non-communicable diseases such as cancer, cardiovascular disease and diabetes in addition to infectious diseases such as HIV, tuberculosis and malaria. It will also support scientists from LMICs to apply for PhD and postdoctoral positions at Imperial, funded by Wellcome Trust fellowships, and receive mentorship from experienced researchers.

In addition, the centre will offer exchange visits, short courses, workshops, and distance learning. It will work closely with the Institute of Global Health Innovation to provide opportunities to collaborate with and be trained by researchers from other faculties and the Business School, such as engineers, physicists and computational biologists.

Professor Michael Levin (Medicine), the centre's director, said: "Imperial already has well-established partnerships with institutions in low and middle-income countries, but we want to make those links even stronger. We hope to contribute to scientific excellence within local institutions and build capacity in those countries to carry out internationally competitive research into the major health problems that affect them."

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS

Imperial tops graduate employment stakes

Imperial has been named 'University of the year for graduate employment' by a UK university guide this week.

The inaugural *Times and Sunday Times Good University Guide* places the College at the top of the table for graduate prospects, with 89.2 per cent of graduates going to professional-level jobs or postgraduate study. Imperial was also number one for graduates' starting salaries, with a calculated average of £31,304.

Welcoming the employability award Professor Debra Humphris, Vice Provost (Education) said: "Imperial has some of the most talented students in the world, and we're committed to helping them achieve their full potential. This

means providing an educational experience that's relevant and innovative, often with a significant practical element."

Elsbeth Farrar, the Director of the College's Careers Service, added: "Our students are uniquely placed to be targeted by a wide variety of potential employers with Imperial's STEM disciplines developing great analytical, numerical and problem solving skills. Many of our degree courses use project work and real industry scenarios as part of the curriculum which also contributes to the development of valuable employability skills."

The new guide follows the merger of the *Times* and *Sunday Times* individual league tables, and sees Imperial take fifth position in the overall UK university rankings.

—JOHN-PAUL JONES, COMMUNICATIONS AND PUBLIC AFFAIRS



European hat trick for Imperial rowers

Imperial crews built on a strong rowing season to secure three medals at the bi-annual European Universities Rowing Championships (EURC) in Poznan earlier this month.

That helped to lift Great Britain's medal tally to 12, placing them third overall behind Germany and hosts Poland.

Stuart Whitelaw, Head Coach at the Boat Club said: "The EURC is a fantastic event where European universities come together every year to fight it out for their university and country."

A gold medal went to Imperial's lightweight men's coxless four consisting of Tim Richards (Medicine), Wilf Kimberley (Life Sciences), Myles Holbrough and Paul Jones (both Materials).

Michelle Vezie (Physics), Myriam Goudet (Life Sciences), Georgie Phillips, and Hannah Patterson (both Medicine) made up Imperial's women's quadruple scull who won a silver medal, while the women's double scull (Michelle and Myriam) received a bronze.

It has been a season of achievements for Imperial's rowing crews, who had the strongest performance of any university at the British Universities and College Sports (BUCS) regatta in early May, and recently won the prestigious Prince Albert Cup at the Henley Regatta.

This year the entire Great Britain team was coordinated for the first time by Imperial's own Stuart Whitelaw. Neil Mosley, Head of Sport said: "Stuart has worked with a diverse field of talent from a number of UK universities, so for the entire team to place third under his guidance is a real credit to him."

—JESSICA ADAMS, COMMUNICATIONS AND PUBLIC AFFAIRS

media mentions

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS



Comets could spark life

THE GUARDIAN ▶ 15.09.13



Violent impacts from comets and other hurtling bodies can pepper planets and their moons with the molecular building blocks of life, according to Imperial scientists. Their research, reported in *The Guardian*, suggests that shock waves produced by such collisions can turn simple organic compounds into amino acids, which make proteins, cells and ultimately all living organisms. The findings suggest that rather than being a purely destructive force, the impacts increase the chances of life originating. “We know that impacts are very common in the solar system because we can see the craters left behind on different planetary bodies,” said Zita Martins (Earth Science and Engineering). “If impacts occur then more complex molecules can be made, so these building blocks of life could be widespread throughout our solar system.”

\$2 trillion bill to stabilise the climate

NEW SCIENTIST ▶ 18.09.13

There is still time to prevent global temperatures from rising by more than 2°C – but only if we part with some serious cash, reported *New Scientist*. To do this, we need to reduce annual global emissions of carbon dioxide from 30 gigatonnes to 15 gigatonnes by 2050. This can be achieved, according to a report from the Grantham Institute for Climate Change at Imperial, but kicking the carbon habit will cost \$2 trillion per year, or one per cent of global GDP in 2050. “It sounds like a big figure,” said lead author Nilay Shah (Chemical Engineering), but it is probably cheaper than the alternative. “It’s not going to cost the Earth, quite the opposite.”

Weight key to womb cancer

BBC NEWS ▶ 11.09.13

The risk of womb cancer can be reduced by staying slim and exercising, new research suggests. Endometrial cancer – cancer of the womb lining – is the fourth most common of all cancers in women in the UK. Scientists at Imperial carried out a review of research on the disease, and concluded that almost half of cases of womb

cancer in the UK (about 3,700 a year) could be prevented by keeping slim and active. “If you are physically active and if you don’t have excess body weight you can reduce your risk of womb cancer and improve your health in general,” study author Dr Teresa Norat (School of Public Health) told *BBC News*.

Death rates provoke alarm

CHANNEL 4 NEWS ▶ 11.09.13

Mortality rates in NHS hospitals are startlingly high compared with other countries, according to data compiled by Professor Sir Brian Jarman (School of Public Health) and reported on *Channel 4 News*. Professor Jarman collected hospital data from six other advanced economy countries, adjusting them where possible to take into account the different health systems. In 2004, the death rate in English hospitals was 22 per cent higher than the average of all seven countries and 58 per cent higher than the best country. “I expected us to do well and was very surprised when we didn’t,” Professor Jarman said. “But there is no means of denying the results. They are absolutely clear.”

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awards and honours



ENGINEERING

Feedback facility claims innovation award

Two Imperial students are developing a new web application to help improve the student experience, after winning an award for their innovative idea. Thomas

Lim and Dario Magliocchetti-Lombi (both Electrical and Electronic Engineering) have been awarded £5,000 by digital technology charity Jisc to continue their work on TeachBack, a student feedback application for graduate teaching assistants.

MEDICINE

Care for the capital

The Mayor of London has invited Professor Lord Ara Darzi to lead an analysis of healthcare needs and services in the capital. Professor Darzi, Director of the Institute of Global Health Innovation at Imperial, will head up the new clinically-led London Health Commission, which will conduct an evidence-based investigation into healthcare provision and resources

for Londoners. The commission will take into account London’s specific health challenges such as its high rates of tuberculosis, HIV and sickle cell anaemia alongside mental health conditions, a rising population and child poverty.

BUSINESS SCHOOL

Clean tech prize for start-up

Econic Technologies, an Imperial spinout company founded by Professor Charlotte Williams (Chemistry), has won a prestigious European competition for clean technology start-ups. Econic’s method of manufacturing plastics using waste CO₂ gas from industrial processes caught the judges’ eyes at the Climate-KIC UK Venture Competition held at the Royal

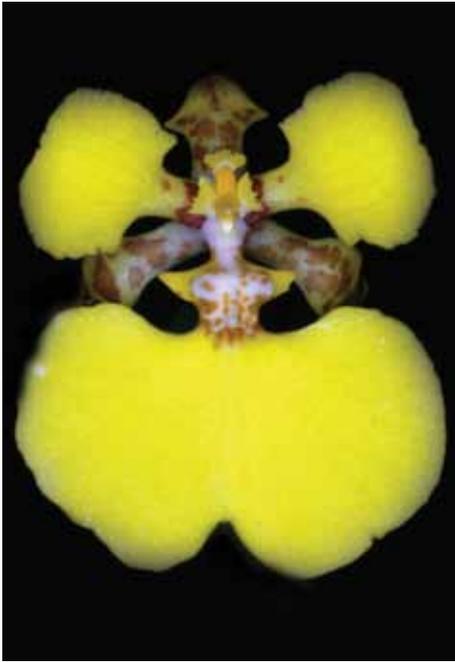
College of Music. The company secured a €20,000 investment prize and a place in the Climate-KIC finals which will take place in Wroclaw, Poland, on 22 October.

MEDICINE

Respiratory presidency for Barnes

Professor Peter Barnes (National Heart and Lung Institute) has been appointed President of the European Respiratory Society, which is the largest respiratory society in the world. Professor Barnes’ work is focused on cellular and molecular mechanisms of asthma and chronic obstructive pulmonary disease and developing therapies and biomarkers for these diseases.

Copycat orchid uses trickery to reproduce



Bees are tricked into pollinating orchids that disguise themselves as the brightly coloured flowers of neighbouring plants, according to new research.

In the plant world, successful fertilisation comes down to enticing pollinators, such as bees, to transfer pollen from one flower to another. This is usually in return for a reward.

The Oncidiinae group of orchids is one of the most diverse groups of flowering plant in the world, with around 1700 different species being found across South and Central America.

Researchers from Imperial and Kew Gardens have been looking at a specific orchid of the *Oncidiinae* group, which does not offer any reward: the *Trichocentrum ascendens* from South America.

In a 10-year study they found that the *Trichocentrum* tricks pollinators by closely mimicking the colour and flower shape of another plant family, the Malpighiaceae, whose flowers

produce a plentiful supply of oil.

Vincent Savolainen (Life Sciences), Professor of Organismic Biology explains: “These reward-giving flowers have evolved a very special colour called bee-UV-green, that is highly distinguishable to bees’ sensitive eyes. The *Trichocentrum ascendens* and other *Oncidiinae* orchids copy the special colour so precisely that bees are unable to distinguish between the flowers, visiting an orchid and pollinating them without the reward they may expect.”

Some now believe this evolutionary trick is the key to the orchids’ success. By not producing nectar, they can divert more energy to growing strong and producing more successful future generations.

Professor Savolainen continues: “In this case the scale and accuracy of the mimicry has surprised us, as it happens so many times and involves so many orchid species.”

—JENNY MITCHELL FOR COMMUNICATIONS AND PUBLIC AFFAIRS



New project hopes to wean crops off nitrogen fertilizer

Researchers at Imperial will join a global effort to reduce the reliance on nitrogen fertilisers for future crop production.

This will make crop production cheaper and more sustainable, as well as reducing the environmental impact of arable farming.

Two projects at Imperial have been awarded over \$3.75m jointly by the Biotechnology and Biological Sciences Research Council (BBSRC) and US National Science Foundation (NSF).

Professors Bill Rutherford and Martin Buck together with Dr James Murray (all Life Sciences) will search for a ‘lost’ nitrogen-fixing bacterium that was originally discovered in soil covering a charcoal fire in Germany. The aim is to scour the planet for the missing bug, and any related bacteria. Once found,

they will test for a very special nitrogen-fixing enzyme that was originally reported to be able to work in the presence of oxygen, which is unlike all other known nitrogenase enzymes.

Professor Rutherford said: “All other nitrogenases are inhibited by oxygen and thus do not function in air, greatly limiting their use in biology and biotechnology.

“This oxygen-tolerant enzyme is therefore something of a holy grail; a mystery waiting to be solved and one that could have a major impact not only on the mainstream thinking in the field but also on what is possible biotechnologically.”

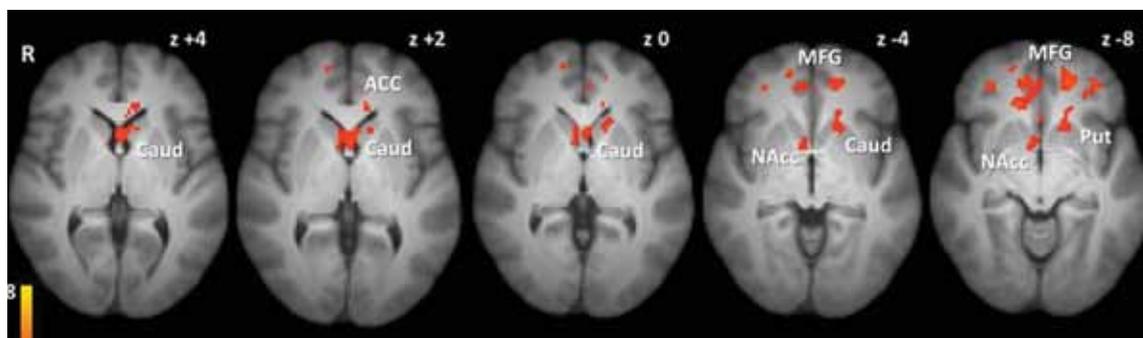
The second project will re-engineer the processes in bacteria that use solar energy to drive nitrogen fixation, so that it can ultimately be done inside plants and thus reduce the need for fertilisers.

—MICHAEL JONES, COMMUNICATIONS AND PUBLIC AFFAIRS



The need for nitrogen

Nitrogen is a key element in living things, and although abundant in air, it exists in a form that is impossible to use. In nature, only bacteria are capable of capturing nitrogen from the air. All other species rely on nitrogen-fixing bacteria to convert nitrogen into a state where it can be used to make proteins, RNA and DNA. Some plants obtain nitrogen from bacteria with which they have developed a symbiotic relationship. Other plants rely on picking up nitrogen from the soil, and since this is often at low levels, plant growth is often limited by nitrogen availability. To counteract this, nitrogen fertilisers are applied to crops, increasing the nitrogen levels in the soil and increasing crop yields. By 2015, it is estimated that nearly 200m tonnes of nitrogen fertiliser per year will be required for crop production. Not only is fertiliser expensive to manufacture, it also uses up lots of fossil fuels in the manufacturing process. Added to this, the fertiliser not absorbed by crops is often washed away into rivers and streams and leads to environmental problems.



Weight loss surgery changes brain's response to food

Gastric bypass surgery changes how the brain responds to food, reducing not only hunger but also the drive to eat for pleasure, an Imperial-led study has found.

The research helps to explain why gastric bypass patients lose more weight over the long term than those who undergo a gastric band operation (see box-out).

“This may have important implications for the way we treat patients with obesity and could help pave the way for a more personalised approach when deciding on the choice of bariatric procedure,” said lead researcher Dr Tony Goldstone (Institute of Clinical Science) from the MRC Clinical Sciences Centre.

The scientists used functional magnetic resonance imaging (fMRI) to examine the brains of 61 men and

women who had lost weight from either a gastric bypass or gastric band surgery carried out on average eight to nine months previously, as well as a control group of unoperated participants. These three groups were of similar body weight.

They found marked differences in the brain's response to food in patients after gastric bypass, compared to gastric band surgery. Patients who had gastric bypass had less activity in the brain's reward regions when shown pictures of food compared with those who had gastric banding.

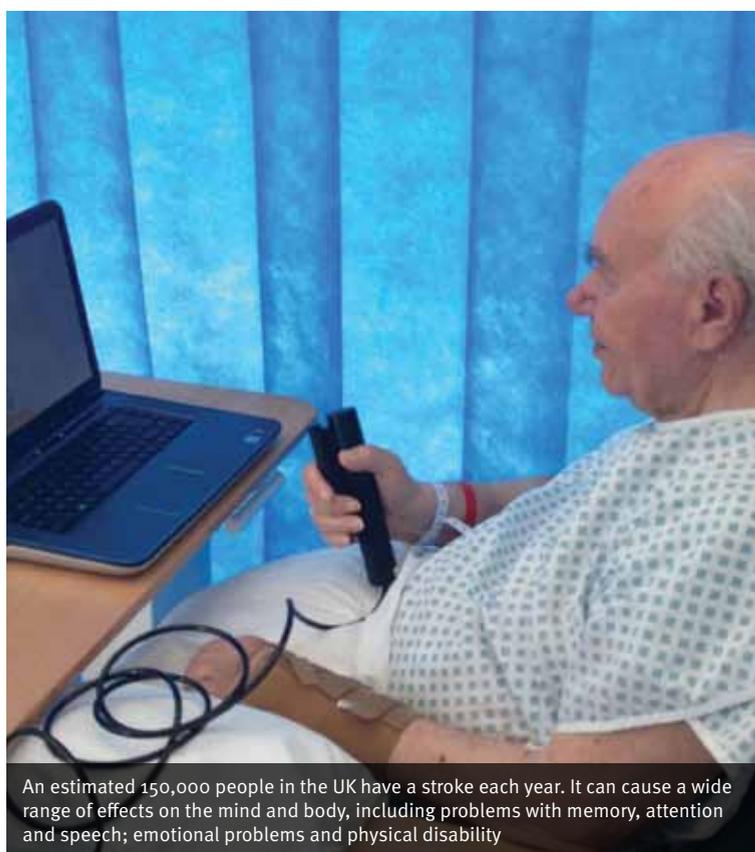
Patients after gastric bypass also rated high-calorie foods as less appealing to look at and less pleasant to eat, had healthier eating habits and ate less fat in their diet than patients after gastric banding or the unoperated control group. Both the gastric bypass and banding patients had similarly reduced hunger compared with the unoperated group.

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS



Weight loss surgery: bypass or band?

An estimated 10,000 weight loss procedures were carried out in the UK in 2011, of which 31 per cent were gastric banding and 55 per cent were gastric bypass. The gastric bypass procedure involves creating a small gastric pouch, which means that food makes contact with the intestines earlier than normal, bypassing the stomach. This makes the gut release more satiety hormones, meaning patients feel less hungry after gastric bypass. The same does not happen in gastric banding. In this procedure, an adjustable band around the stomach reduces hunger by increasing pressure on the nerves in the stomach, making the brain think it's full. Gastric banding is a quicker, simpler surgical procedure, but over 20 years, people who undergo gastric bypass surgery lose on average 25 per cent of their body weight, compared with 14 per cent for those who have a gastric band.



An estimated 150,000 people in the UK have a stroke each year. It can cause a wide range of effects on the mind and body, including problems with memory, attention and speech; emotional problems and physical disability

Brain-training games could help symptoms of stroke

A majority of stroke patients have problems paying attention and could be helped by brain-training computer games, a new study suggests.

Researchers at Imperial found that problems such as difficulty filtering out distractions, difficulty following instructions, and reduced alertness are much more common in stroke patients than doctors realise.

They showed that brain scans and bedside tests can be used to diagnose these three types of attention problems, each of which could be addressed with computer

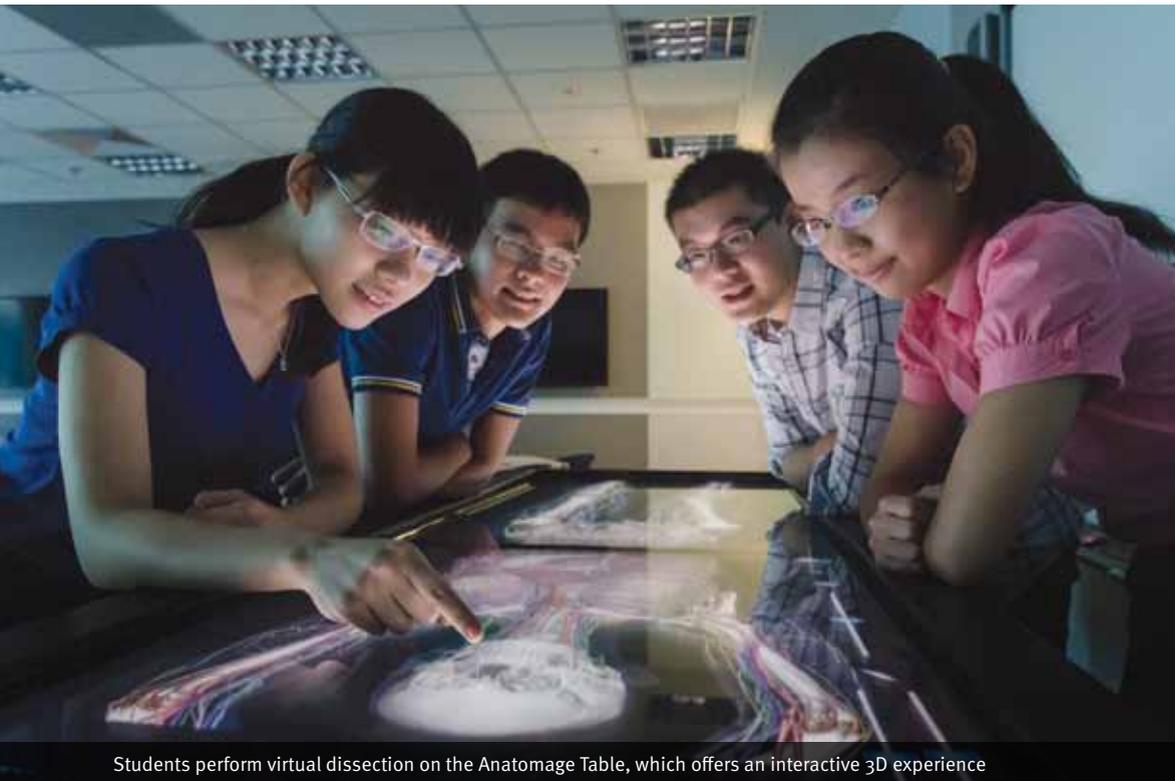
games tailored to the patient's requirements.

The study involved 110 patients being treated at Charing Cross Hospital, a major centre for stroke care in west London. Five of them were already diagnosed with a serious attention disorder called neglect, but computerised tests showed that over half of them had attention problems that hadn't been recognised.

“We've shown that specialised computer games are very sensitive at picking up deficits in stroke patients,” said the study's senior author Dr Paul Bentley (Medicine). “They can also be tailor-made for each patient to rehabilitate them for the specific deficit they show. These findings therefore suggest a new strategy by which stroke treatments can be personalised depending on information gained from patients' brain scans.”

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS

LKC Medicine: The journey begins



Students perform virtual dissection on the Anatomage Table, which offers an interactive 3D experience

Last month, 54 nervous but excited first year medical students donned white coats and stethoscopes to mark what promises to be the journey of a lifetime.

Beside them stood a team of equally excited teachers who will guide them on this journey and deliver a pioneering medical curriculum at a new and unique medical school.

The Lee Kong Chian School of Medicine (LKCMedicine) in Singapore is a partnership between Imperial and Nanyang Technological University (NTU) – one of the fastest rising universities in Asia.

The story so far

It all began five years ago when the Singaporean Government, noting a pressing need to train more doctors to meet the country's healthcare needs, approached Imperial, seeking expertise in medical education. The government initiated the collaboration with NTU – a university which, like Imperial, was established with a focus on engineering and science.

For both partners it was a unique and unmissable opportunity to redefine the way Singaporean medicine is taught and delivered, as Professor Jenny Higham, Senior Vice-Dean of LKCMedicine and Vice Dean of Imperial's Faculty of Medicine, explains.

“If you have a very long-standing course with large numbers of students which relies on partnerships with myriad health organisations, the ability to change anything is very complex.

“Whereas when you start with a blank piece of paper – with a new cohort of students, new buildings, new teachers and a new environment – it's a totally different experience.”

The result of that process is a truly innovative curriculum incorporating elements of simulation, team based learning and early clinical exposure. For example, first year students who are learning about the science that underpins breathlessness, chest pains and heart palpitations will get the opportunity to examine a patient who has had a heart attack.

LKC MEDICINE TIMELINE



All students will have iPads, giving them access anytime and anywhere to a suite of e-learning materials that support the course content. Students are also expected to solve problems together using specially designed, team-based learning facilities that hook into iPads and project work onto large flat screen displays.

Second opinion

All this proved particularly attractive to one of the new students, Dylan Fones, who notes that this is the first time aspiring medical students in Singapore have had a choice. Until this year the Yong Loo Lin School of Medicine (YLL) at the National University of Singapore was the only medical school in Singapore training undergraduate medics.

“I believe that LKCMedicine, with the help of Imperial’s pedigree, can be a real trailblazer in the field of medicine,” Dylan says. “YLL clearly has experience and strong foundations whereas LKCMedicine is new and untested. But convention isn’t quite for me.

“The idea that the culture and traditions of LKCMedicine will in part be determined by us, the first students, is quite surreal. Most of my life I’ve been following customs and listening to instructions from others, so to be setting things in stone myself for once is exciting.”

Of course the team of teaching staff also had to weigh up what it meant to join a brand new medical school, with many making the move from prestigious institutions in Europe.

Dr Jason Maroothynaden was previously based at Imperial in Professor Roger Kneebone’s group in the Department of Surgery and Cancer. He originally came out to Singapore to contribute to a series of open days and special lectures promoting LKCMedicine, demonstrating the group’s simulated ‘pop-up’ operating theatre. At LKCMedicine Jason is Head of Technology

in Medical Education and a Team Based Learning Facilitator.

“I didn’t really plan to leave St Mary’s where I was based, but in the end the opportunity to be part of something new and exciting proved enticing – I wanted to make my mark in the world of medical education. This is a once-in-a-lifetime opportunity to create new simulation methods and apply my novel hybrid simulation ‘know how’ directly into an undergraduate medical curriculum.”

Research ambitions

While the need to train more doctors for Singapore was the driver behind the development of LKCMedicine, research will play an ever more important role as the school evolves. This will prove crucial in the future when tackling big and growing health challenges such as diabetes, metabolic disease and cancer.

Among the staff with a research focus is Professor Daniella Rhodes, a Fellow of the Royal Society who spent 40 years working for the Medical Research Council’s Laboratory of Molecular Biology in Cambridge. Taking compulsory retirement at 65, she wanted to continue with her research into genome function and chromosome telomeres which has particular relevance to ageing and cancer. Since moving to LKCMedicine she has been awarded a large research grant from the Singaporean Government’s Ministry of Education.

“I felt it was my last real opportunity to escape Cambridge and it was one of the few places where I thought I would have the same level of intellectual freedom the MRC afforded me,” she says. “My research has the potential to impact on medicine and patients, but it is very much basic science which I believe is important.”

Daniella also praised the infrastructure at LKCMedicine: “We’re getting a state of the art electron microscope, the first such

“The idea that the culture and traditions of LKCMedicine will in part be determined by us, the first students, is quite surreal.”

machine of its kind in the world – and we’re attracting young and talented postdocs from around Europe.”

The road ahead

Although LKCMedicine is a new and untested school with a pioneering curriculum, it is not a complete step in the dark. Imperial’s undergraduate medical course has fed into the development of the new curriculum and will act as a benchmark in the future, offering comparators for students’ performance. Jenny notes that there will be regular formal and informal feedback from students: “One of the things we need to do is respond to the feedback we get. We have an idea, we’ve set a vision but this will be informed by students currently on the course, the teaching, and very importantly the end product – good doctors.”

For first year student Rachel Lim Wei Shan, the inspiration to be a good doctor was sparked when her grandfather was admitted to hospital.

“The doctor’s warmth and sincerity in treating my grandfather greatly touched me and inspired me to work towards a career of giving in medicine. Now that I’m embarking on that journey I feel excited, yet a little overwhelmed! It is a brand new chapter in my life, working towards a career that is likely to span the next 40 to 50 years.”

And that’s very much the legacy that Imperial and NTU wish to deliver in the long term: a whole generation of doctors equipped to deal with whatever health challenges the next half century throws up.

March 2012

Over 800 prospective students visit LKCMedicine for its first open day, receiving a taste of the curriculum through e-learning sessions and demonstrations of medical simulations.

May 2012



A ground-breaking ceremony takes place to celebrate the start of work on LKCMedicine’s Novena Campus at Mandalay Road, opposite Tan Tock Seng Hospital, the medical school’s primary teaching hospital.

November 2012

Over 800 students sit the BioMedical Admissions Test (BMAT), an aptitude test used by UK medical schools including Imperial. LKCMedicine is the first medical school in Singapore to include BMAT among its admissions requirements.

April 2013

More than 400 prospective students, shortlisted from over 800 applications, are interviewed.

LKCMedicine staff move into the school’s new headquarters on Mandalay Road.

August 2013



The first 54 students of LKCMedicine begin their training. At the school’s inaugural white coats ceremony the students affirm their commitment to medicine and receive their first stethoscopes and white coats.



Expanding Horizons



After a successful introductory year, the Imperial Horizons programme, which aims to broaden the education of students, will be rolled out to second years from the start of the academic year.

At this year's June Open Days, prospective undergraduate students had the chance to find out about a new, and possibly surprising, aspect of studying at Imperial. Among the usual departmental and Union information was, for the first time, a stand focused on the Imperial Horizons programme — which offers students the chance to study humanities courses alongside their degree programme.

"We were busy the whole time," recalls Dr Elizabeth Hauke (School of Professional Development), who delivers part of Horizons. "Students were really excited to come and talk to us about it and were really impressed by the options available. Parents thought it was a really positive thing too."

Horizons was developed as a means to complement the education of undergraduate students giving them an edge in their future career — as well as simply being a way to inspire creativity. It came about after feedback from employers that although Imperial graduates tend to be excellent academically, they sometimes lack the skills required in the workplace. Horizons replaces the Humanities programme which has been running for over 25 years but to which students had limited access in the past.

Horizons consists of about 50 courses from four fields of study — namely, Business and Professional Skills; Languages and Global Citizenship; Global Challenges; and Science, Culture and Society — each offering a number

of different modules from 'Japanese Level 1' through 'Science and Faith'.

The Global Challenges courses examine the interface between science, society, politics, ethics and culture in attempting to address pressing matters of worldwide concern. It is designed specifically to put students' main degrees in a broader context.

As such, Elizabeth, who devises and delivers all the course content, consciously opts for alternative forms of learning.

"I want to give the students a different experience so that they develop skills they wouldn't necessarily pick up sitting in a lecture theatre. We have discussions, debates, group sessions and poster presentations. Students feel able to take risks and express their own opinions, saying things they might not feel confident saying if they know they're being marked towards their degree — to me that's really valuable."

After a few pilot courses in the Spring of 2012, the full programme was rolled out for all freshers at the start of the academic year in October 2012, with over 1500 students enrolling on at least one course over the year. Feedback on the Student On Line Evaluation (SOLE) tool showed that 72% of students taking Horizons courses rated the content as 'very good or good', while 80% rated the structure and delivery of the teaching sessions as 'very good or good'.

Now the scheme is being extended to second year students, allowing them to continue deeper into areas they studied in the first year, or take

up something different.

One such individual, Alex Mytenka a Geology student, took both Introduction to Business and a Global Challenges course in his first year at Imperial, and will now try out Italian in his second year.

"Horizons provided some respite from my main degree, but it also started me thinking about alternative career options that I could explore in the future — for example I could go into the business and finance side of my course rather than straight up geology,"

says Alex. "On the other hand Global Challenges complemented my degree because I could apply the geology I had learnt to water-resource challenges, for example."

Uttara Raju, a second-year physics student completed a 'Science and Policy' module from the Science, Culture and Society area in the first year and 'was hooked' from the start. She now intends to continue in the same area, studying a 'Politics' module in the second-year.

"What this course has done is increase my confidence when discussing how science affects policy," says Uttara. "I feel I would be able to have an informed discussion about scientific policy and I am much more interested in learning about the wider aspects of science."

The Horizons programme is still evolving and there are some issues to be ironed out, such as how completed modules are formally recognised.

It's increasingly looking like Horizons could become a valued part of the wider experience Imperial offers to students.

“What this course has done is increase my confidence when discussing how science affects policy.”

inside*

story

mini profile

Lorraine Craig

Dr Lorraine Craig (Earth Science and Engineering) has been Chair of the Exploration Board since 2006 and has overseen and advised on many successful adventures to every corner of globe, including this year's 'big wall' climbing trip to Yosemite, US.

Firstly, tell us about the two penguins wearing ties in your office.

That's a nod to my background in polar research, particularly geology field trips to Svalbard and Greenland.

The penguins are actually from the early Antarctic expeditions in the 1900s, but the ties are awards of mine for fellowships of the Royal School of Mines and Imperial Student Union!

What's the application process for expeditions?

First the team submit a plan anywhere between three and 40 pages long. They'll then get grilled by the Board which consists of a diverse group of 20 people, some Everest mountaineers, health experts, representatives from the Union, the College and the various associated Colleges. After preliminary approval, I'll see them a few more times or



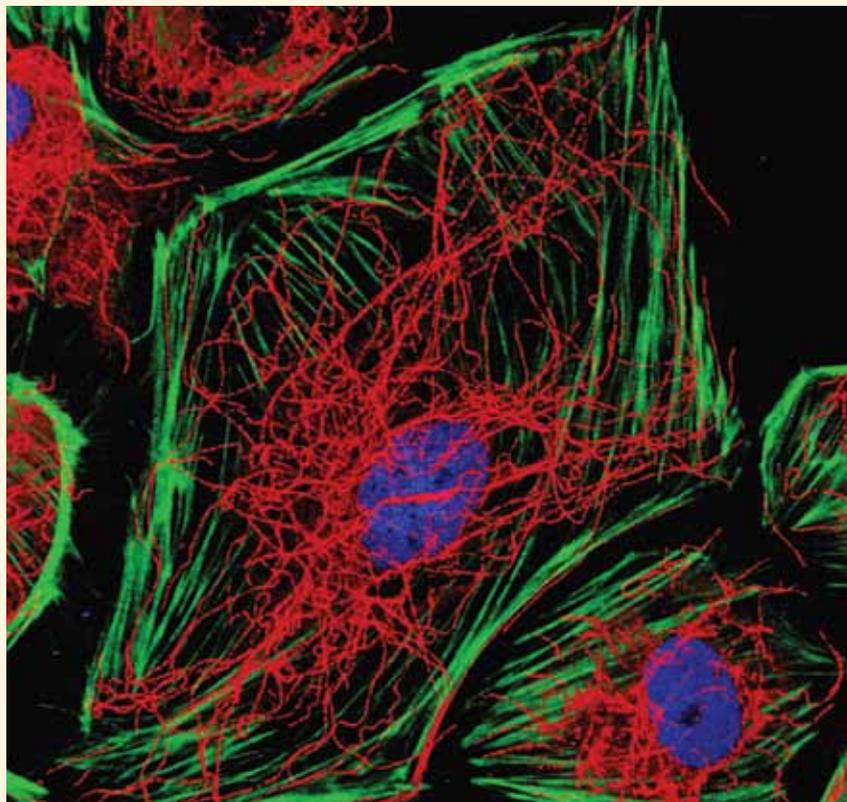
recommend someone to polish the plan. We see them for final time in June just before they go, which is along the lines of "remember to stay within your comfort zone, and tell your parents where you're going."

Any particularly hairy moments over the years?

We received an emergency call from a team in Alaska a few years ago. They'd climbed a peak and were skiing down with their equipment. One of the students slipped, fell on an ice screw and opened up three big gashes in their leg. It was night, the satellite phone was

running out and they had problems getting hold of the helicopter pilot. Eventually we got through and the first thing I asked was: 'how's the weather?' I knew if it was good they'd have the student out the next day; if not we had a real problem on our hands. Luckily it was the former. Our emergency incident plan worked based on a proper evacuation procedure risk assessment.

“We received an emergency call from a team in Alaska a few years ago...luckily our evacuation procedure worked.”



Life Blood

Since time immemorial humans have rightly linked blood flow to life and health – although this has often led to misguided interventions such as bloodletting and leeching.

We now have a quite comprehensive understanding of the role of the circulatory system in human physiology; but researchers are still trying to better understand how blood vessels form, how they are repaired after damage and the precise role they play in various conditions including heart disease, cancer and dementia.

Key to this field of vascular science are endothelial cells, which line the entire circulatory system – from the heart to the smallest capillaries – controlling what goes in and what goes out.

Drs Anna Randi and Graeme Birdsey (National Heart and Lung Institute) are focused on better understanding how these cells behave and function.

“A lot of work over many decades has clearly identified these cells as key to maintaining healthy, happy and functioning blood vessels,” says Anna.

The team works with cell cultures obtained from the blood vessels of human umbilical cords. Like their native counterparts, these endothelial cells form a single layer on a plastic dish.



Dr Graeme Birdsey

Using microscopy in combination with molecular techniques such as fluorescence antibody tagging they can identify and track important signalling molecules and structures.

The image shown above, dubbed spaghetti junction, was recently shortlisted for an image competition run by the British Heart Foundation. It shows how the cell is supported and held in the correct shape by elongated actin stress fibres (green) and a tangled web of microtubules (red).

This structure ensures that cells are organised in a tight single layer to prevent leakage and allows cross talk between cells, which is important for coordinating a response to wounding amongst many other functions.

To see the full interview with Graeme and Anna visit: <http://bit.ly/121hEJ>

Student blogger Liam

Congratulations on your place!

blog SPOT



First of all well done to all of you who secured a place at imperial, it really is something to be proud of and definitely worth celebrating. I thought I'd write a short post giving some advice for the first few weeks of term.

1. Use the Facebook groups
2. Check out the union website
3. Check your email
4. Don't pack the kitchen sink
5. Go to the freshers fair
6. Try something new
7. Keep your door open on the moving in day
8. Eat well
9. Try things outside university
10. Go out and meet new people

For the full list of Liam's tips visit: imperial.ac.uk/blog/studentblogs

Prize fund gives green light to study gridlock in Peru

Peru is famous for the Inca Trail, a supply route once part of an advanced empire. But two Imperial students went to examine much more modern roads.

Maud Macary and Melina Cristina (both MSc Transport, Department of Civil and Environmental Engineering) spent five weeks in Peru's capital Lima getting to grips with gridlock as they researched the city's transport network for their dissertations. Their expedition is thanks to the Basu Prize for Civil Engineering.

The sprawling capital provided a fascinating case study for the two students. With a population of 9.5 million, one-third of Peru's population, the city's residents use 425 bus routes operated by 307 companies.

Maud looked at the bus and tram network, meeting the local authorities and sitting in on planning meetings, before experiencing the oversupply problem first hand. Her research took her all over the city, and she was able to analyse the feasibility of government plans to formalise the bus system.



Melina examined the experience of pedestrians in Lima. At least 25% of the population make the journey to work or school on foot, but the design of the city favours vehicles and pedestrians account for 78% of traffic accident fatalities. In her research, Melina focussed on potentially unsafe pedestrian infrastructure, such as badly placed barriers or missing pavements.

Both students are writing up their dissertations which are due in late August. Melina said: "The trip made a real difference to our work. Being in the city challenged our assumptions and gave us the opportunity to meet both the people driving change and those affected by it."

—CALUM MACLEOD FOR COMMUNICATIONS AND PUBLIC AFFAIRS

New starter

Peter Wilcox (Estates Facilities) joined the College in July as Assistant Building Manager for St Mary's Campus.

What path led you to St Mary's?

I was working as a property manager in Liverpool but I wanted to move to London and the chance to work for a leading university was too good to pass up.

What appealed to you about the role?

I relished the opportunity to be involved with such a diverse building portfolio and one with such significance – to be working just yards away from where penicillin was discovered is inspiring. Being part of the Imperial community and working with top professionals is exciting and it's satisfying to think that I am helping to support them in some way.

The royal baby was delivered at St Mary's last month – what was that like?

The St Mary's swimming pool refurbishment started just days before the royal baby was due, so hundreds of journalists and photographers from all around the world had set up camp outside the hospital, making access for the pool contractors and scaffolding deliveries difficult. We had to be patient though and work closely with the Trust, as we knew that we weren't the only ones waiting for an important delivery!

You must have needed a drink after that. What do you relax?

I needed several! I mainly relax by listening to a wide variety of music, or by having a good workout in the gym. Sometimes it's nice to blow the cobwebs away with a ride in the countryside on my motorbike.





INVENTOR'S CORNER

Battling blood cancers

Professor Guido Franzoso (Medicine) leads a research group developing novel drugs for the treatment of blood-based cancers, in particular multiple myeloma. This work led to the formation of Imperial spinout company Kesios Therapeutics Ltd last year.

How do you go about tackling these blood cancers, which by their nature are dispersed and difficult to get at?

I began by trying to understand a protein complex called nuclear factor-kappa B (NF-KB), which controls a very important gene signalling pathway responsible for the body's response to inflammation and infection. Many types of tumours show activation of this pathway so we wanted to get to the bottom of it. I was interested in the 'downstream' genes and encoded proteins that NF-KB activates to drive tumour development and inflammation.

What did you find?

A key protein called Gadd45beta, which prevents the death of tumour cells by binding to and inhibiting its partner MKK7, a protein responsible for cell death. We have now developed

a series of drugs that de-stabilise this partnership, leaving MKK7 free to destroy tumour cells.

How is this different from current approaches?

Not one NF-KB inhibitor developed to date has been effective in killing tumour cells without also causing harm to normal healthy cells, which has very undesirable side effects for the patient. While Gadd45beta is highly active in the cancer cells of multiple myeloma patients, it is silent in many normal cells, so by targeting its gene we have demonstrated a truly disease specific approach.

What's next?

Following very promising pre-clinical studies, the next step is to proceed with phase I and phase IIa clinical trials in multiple myeloma, with the support of a substantial MRC translational grant. Additionally, through Kesios, we have started a programme that will build a pipeline of Gadd45beta targeted therapeutics tackling a broader range of cancers.

—KAILEY NOLAN, IMPERIAL INNOVATIONS

For help in finding a commercial application for your research visit: bit.ly/YQZ1VI



Imperial Fringe on tour

The Imperial Fringe went on tour for the first time asking the question 'What makes me me?' at the Imperial West campus.

As plans evolve for the College's new campus in White City, the Fringe programme travelled to Imperial West on the evening of 12 September, bringing an evening of activities about the science of identity as a way to get to know our new neighbours.

Brain simulations, kitchen science demonstrations for prison inmates and a photo booth that gave visitors a fantastic new look filled up the Common Room at the Wood Lane Studios GradPad. Meanwhile the community space in Brickfields Hall was transformed into a mock-up operating theatre.

Researchers spent the evening discussing their research with visitors, including people who live and work in the local area as well as alumni and school students from further afield.

At one exhibit, the brain of neuroscientist Dr John McGonigle was rotating on a giant 3D screen. Visitors donned coloured glasses to view the delicate structure of his neurons, while he explained that what they were seeing and how these cells are physical connections central to his identity.

—SIMON LEVEY AND JESSICA ADAMS, COMMUNICATIONS AND PUBLIC AFFAIRS

Teenagers gain sharp insights from stabbing simulation

A group of teenagers from east London saw first-hand how knife crime affects victims and their families at an event organised by Imperial researchers.

Doctors, nurses, policemen and paramedics staged a life-like simulation in Haggerston Park in which the victim, played by an actor, was stabbed with his own knife that he carried to protect himself. The group watched as the victim, a young man, was rushed into surgery in a

mock operating theatre. The teenagers were taking part in Saracens Rugby Club's Hitz programme, an initiative designed to foster confidence in disenfranchised young people from challenging backgrounds. Some of them had been involved with knives in the past. The event was organised by Mr Howard Tribe and Mr Alexander Harris, both of Professor Roger Kneebone's group in the Department of Surgery and Cancer.

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS



"The idea was not to tell them that knives are bad as they already know that, but to educate them about the potential personal impact and wider consequences of a stabbing. Hopefully it will give them the knowledge to think differently when they have to make a decision about whether to pick up or use a knife in the future."

MR TRIBE

Rock steady

Imperial students rocked out electric tunes on a famous TV show to demonstrate how their prototype generator could help make sustainable music.

The PhD students, Billy Wu, Michael Parkes and Sam Cooper, took their zero-emission hydrogen fuel cell powered generator to the BBC's Energy Day. By playing their electric guitar live on children's show Blue Peter and on BBC Breakfast, they demonstrated how noisy and polluting diesel generators that are typically found at music festivals could be replaced by their sustainable version.

The Imperial team built their prototype generator over the last five years in the Department of Mechanical Engineering as part of the Imperial Racing Green project, which brings students from different engineering disciplines together to design, build and race low emission vehicles. Developing the generator



enables the students to learn about fuel cells and electric vehicle technologies.

The visit by the team to the BBC was funded by the Energy Futures Centre for Doctoral Training.

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

Hear more about the prototype fuel cell generator in the 28 August edition of the Imperial Podcast: bit.ly/17EL3Wj

long
service

Staff featured in this column have given many years of service to the College. Staff listed below celebrate anniversaries during the period 1 September–30 September. The data is supplied by HR and is correct at the time of going to press.

20 years

- Mr Paul Crudge, Workshop Technician, Department of Chemical Engineering
- Ms Jenny Zhenli Huang, Senior Library Assistant, Library Services
- Professor Karim Meeran, Professor of Endocrinology, Department of Medicine
- Dr Ambrose Taylor, Reader in Materials Engineering, Department of Mechanical Engineering
- Professor Boguslaw Zegarliniski, Professor of Pure Mathematics, Department of Mathematics

30 years

- Professor John Barrett, Head of Numerical Analysis, Department of Mathematics
- Mr Tyrone Wright, Improver, Estates

40 years

- Professor John Cosgrove, Professor of Structural Geology, Department of Earth Science & Engineering

Graduating with honours



Andrew George has been at the College for 21 years, starting as a lecturer in the Royal Postgraduate Medical School (RPMS), rising to Professor of Molecular Immunology. He moved to South Kensington to head up the Graduate School and the School of Professional Development. He is leaving at the end of the month to take up a new role of Vice Principal (Education & International) at Brunel University.

What are you most proud of?

At Imperial I am very proud of the developments in the Graduate School and the School of Professional Development – down to the commitment of so many people. However, I think what I will be most proud of are the students that I have been involved with as a lecturer, tutor or supervisor. When I look at my book shelves with the students' theses on it I have strong memories of them, what they achieved in their time with me and what they have gone on to.

Who are the most memorable people you have met during your career?

Probably my colleagues. I have enjoyed working with a diverse range of scientists, mathematicians, chemists, clinicians and engineers – all of whom bring their own insight and perspective on issues. When I first started at Imperial I joined a group that met on Thursday evenings to critique each other's grant applications. Perhaps not surprisingly it was tough when the group contained people like Mark Walport (now Chief Scientific Officer), John Savill (Head of MRC) and Robert Lechler (Vice Principal at King's) – all knighted for services to science!

What have you done outside the College?

One of the fun things about being an academic is that you get to do a range of things outside the 'day job'. For me a large part of that has been research ethics. I was chair of the Hammersmith Research Ethics Committee for 10 years, and now chair the national body that provides ethical oversight to the NHS ethics committees. It has been a challenge to try and make sure that research participants are protected, while facilitating ethical research.

Farewell moving on

Dr Mohammed Abdullah, EEE
 Mr Oshiorenoya Agabi, Bioengineering
 Dr Amy Agahi, Medicine
 Dr Maria Ahmed, Surgery and Cancer
 Miss Werd Al Najim, Medicine
 Dr Waqar Ali, Life Sciences
 Miss Amy Allinson (5 years), Computing
 Mr Samuel Alston (13 years), Registry
 Miss Cherry Alyahya (7 years), Medicine
 Dr Nicola Ambrose, NHLI
 Dr Jesper Ankersen (14 years), Aeronautics
 Mr Adeel Aqil, Surgery and Cancer
 Mr Tim Arbabzadah, Imperial College Union
 Mr Edward Astle (5 years), College Headquarters
 Miss Oluyomi Awofeso, Life Sciences
 Dr Abdelmalik Bachir (5 years), EEE
 Mrs Alexandra Baines, Faculty of Medicine
 Miss Rani BAL, Faculty of Medicine
 Dr Travis Bayer, Life Sciences
 Mr Paul Beaumont, Imperial College Union
 Dr Pawel Bembnowicz, Computing
 Dr Nina Bertini, ESE
 Dr Georg Bohn, Medicine
 Dr David Boland, EEE
 Dr Robert Bracewell, Mechanical Engineering
 Mr Richard Bradshaw, Chemistry
 Miss Carolina Branco Estevo, Medicine
 Dr Caterina Brandoni, Environmental Policy
 Dr Ilaria Bravi, Medicine
 Ms Gemma Brennan (6 years), Medicine
 Dr Michael Bresalier, CHOSTM
 Miss Stephanie Brims, Development Division
 Dr Paul Brookes, Chemistry
 Ms Brigid Buckley, EYEC
 Mr Victor Casambros, Imperial College Union
 Dr Angela Cassidy, CHOSTM
 Dr Andrea Cavallaro, Materials
 Miss Tina Chan, NHLI
 Mr Ping-Lin Chang, Computing
 Dr Kathryn Charles, Surgery and Cancer
 Mr Jianzhong Chen (9 years), Computing
 Miss Jee-Sun Cho, Life Sciences
 Dr Deborah Chong, Medicine
 Mrs Karen Clarke (25 years), Aeronautics
 Miss Hannah Cockerill, Faculty of Medicine
 Mr Stuart Cook, Materials
 Mr Stuart Croghan (10 years), ICT
 Dr Aaron Dale, Life Sciences
 Dr Christopher Dancel, Physics
 Dr Alwyn Dart (9 years), Surgery and Cancer

Dr Kate de Mattos-Shipley, Medicine
 Mr Clebson De Mendonca, Imperial College Union
 Mr Marcelo Degaspiri Lima, Catering
 Dr Romain Demangeon, Computing
 Mr Thomas Digby, Occupational Health Service
 Mr Paul Dingwall, Chemistry
 Mr Dahir Dini, EEE
 Mr Nicolas D'ippolito (5 years), Computing
 Dr Shobana Dissanayake, Medicine
 Miss Clare Dodds, Development Division
 Dr Luigi Dolcetti, Medicine
 Miss Christine Doran, International Office
 Dr Lydia Durant, NHLI
 Professor David Edgerton (20 years), CHOSTM
 Dr Joshua Ellul, Computing
 Dr Noushin Emami, Life Sciences
 Dr Davide Fabozzi, Chemical Engineering
 Mr Cheng Fang, Civil and Environmental Engineering
 Dr Patrick Farrell, ESE
 Miss Julie Fitzpatrick (6 years), Medicine
 Dr Maria Forti Buratti, Medicine
 Mr Samuel Foster, Physics
 Miss Aisling Fowler, Life Sciences
 Dr Jean-Baptiste Fressoz, CHOSTM
 Mr Joe Gale, Public Health
 Dr Manoj Gambhir (9 years), Public Health
 Mr Pranavan Ganesanayakam (9 years), ICT
 Dr Laura Garcia Alvarez, Medicine
 Mr Aulo Gelli, Public Health
 Dr Ben Goddard, Chemical Engineering
 Dr Samuel Godfrey, Medicine
 Ms Sandy Gray (13 years), Life Sciences
 Mr Charlie Greenhill (6 years), Surgery and Cancer
 Dr Sabine Guenther, Surgery and Cancer
 Dr Laura Gunn, Public Health
 Dr Josef Habib, NHLI
 Mr Ankur Handa (5 years), Computing
 Miss Lucy Handford, Communications and Public Affairs
 Mrs Elizabeth Hansford, Life Sciences
 Miss Barbara Harder, Computing
 Ms Adrianna Harezlak (5 years), Sport and Leisure
 Dr Richard Hayden, Computing
 Dr Andrew Heyes (18 years), Mechanical Engineering
 Dr Polly Hiron, Surgery and Cancer
 Mr Michael Hoevel, Environmental Policy
 Dr David Hoffmann, Physics
 Miss Joanna Holeniewska (5 years), Faculty of Medicine
 Mr Michael Hollinshead (11 years), Medicine
 Mr Ramtin Hosseini Kamal, Civil and Environmental Engineering
 Dr Nien-Jen Hu (6 years), Life Sciences

Dr Wenlong Huang, Surgery and Cancer
 Mr John Hughes (23 years), Humanities
 Mr Doug Hunt, Imperial College Union
 Dr Tudor Ionescu, EEE
 Dr Eleanor Jay, Materials
 Dr Yunfeng Jiang, Mathematics
 Mr Edward Johns, Computing
 Dr Andras Juhasz, Mathematics
 Dr Nicola Kalk, Medicine
 Dr Christos Kalyvas (8 years), Chemistry
 Dr Aleksandra Kata, NHLI
 Miss Philippa Kennedy, Institute of Global Health Innovation
 Mr Arshad Khan, Life Sciences
 Mr Hanme Kim, Computing
 Dr James Kimber, Chemical Engineering
 Mr Jeong Ko, Medicine
 Miss Marion Koch, Medicine
 Dr Chuay Koo, Surgery and Cancer
 Dr Martijn Kool, Mathematics
 Dr Artemis Koukounari, Public Health
 Mr Marios Koutsakos, Medicine
 Mr Dimitrios Kouzapas, Computing
 Ms Anastasiya Kruhlik (6 years), Sport and Leisure
 Dr Adam Kucharski, Public Health
 Dr Nicole Kudla, Civil and Environmental Engineering
 Miss Laila Lamzouri Edagdaqui, Catering
 Miss Rebecca Lane, Imperial College Union
 Dr Alessandra Lanfrancotti, NHLI
 Miss Roslyn Lavery, Mathematics
 Dr Derek Lavery (5 years), Surgery and Cancer
 Professor John Laycock (41 years), Medicine
 Professor Robin Leatherbarrow (29 years), Chemistry
 Mr Bjorn Lellmann, Computing
 Dr Sebastien Leurent, Physics
 Miss Becky Lewis, Business School
 Mr James Lockley, Library
 Dr Luciene Lopes, Medicine
 Miss Michelle Lopez, EYEC
 Dr Jenifer Loudon, Surgery and Cancer
 Dr Natalie MacDermott, Medicine
 Dr Marcus Martineau, Surgery and Cancer
 Dr Miriam Martinez Biarge, Medicine
 Dr Rachel Mason Dentinger, CHOSTM
 Miss Jenny McCullough, Library
 Dr Sara Mitchell, Life Sciences
 Dr Philip Molyneaux, NHLI
 Miss Joanna Moore, Surgery and Cancer
 Dr David Mozley, Research Office
 Dr Haní Muammar, EEE
 Dr Reto Mueller, Mathematics
 Miss Tahmila Nahar, Materials
 Dr Kalnisha Naidoo, Medicine
 Mr Jack Nicholls, Environmental Policy
 Mr Edward Noel-Hill, Accommodation
 Ms Sarah Nolas, Life Sciences

Dr Pumza Nongena, Medicine
 Dr Johannes Nordstrom, Mathematics
 Mr Stefan Nubert, Imperial College Union
 Dr Thomas Oates, Clinical Sciences
 Miss Mel O'Brien (6 years), Mechanical Engineering
 Ms Judy O'Connor, Clinical Sciences
 Dr Brian O'Halloran (5 years), Physics
 Dr Antonios Oikonomopoulos, Computing
 Dr Francisco Orozco Cano, Computing
 Mr Andrew Owens (5 years), Medicine
 Professor Ian Owens (13 years), Life Sciences
 Miss Lydia Paniccia, NHLI
 Dr Casian Pantea, EEE
 Dr Georgios Papageorgiou, Public Health
 Dr Brijesh Patel, Surgery and Cancer
 Dr Angela Pathiraja, Surgery and Cancer
 Dr Kar Poon, NHLI
 Miss Jane Proudfoot, NHLI
 Ms Jennifer Randall (15 years), Library
 Miss Priya Raniga, Medicine
 Ms Natasha Rao, Faculty of Medicine
 Dr Bhargavi Rao, Public Health
 Miss Rebecca Robey, Medicine
 Mr Giulio Romano, Imperial College Union
 Mrs Emily Ross-Joannou (5 years), Communications and Public Affairs
 Dr Luciana Rubinstein, Public Health
 Ms Claudia Rueb, Surgery and Cancer
 Mr Darryl Ryan (8 years), ICT
 Mr Sanju Saha, Catering
 Dr Srikrishna Sahu, Mechanical Engineering
 Dr Samira Salek-Ardakani, NHLI
 Dr Antonino Salerno, Computing
 Professor Ammon Salter (10 years), Business School
 Dr Mario Sassano, EEE
 Dr Henry Savage, NHLI
 Mr Ahmad Sayasneh, Surgery and Cancer
 Dr Jan Schlueter, NHLI
 Dr Samantha Scholtz, Clinical Sciences
 Mrs Eileen Scott, Careers Service
 Dr Federica Secci, Medicine
 Miss Farah Seedat, Medicine
 Ms Kayane Shadarevian, Business School
 Dr Marco Siano, Physics
 Mr German Sibay (5 years), Computing
 Mrs Katharine Silk, Clinical Sciences
 Ms Cris Silva-Santisteban Mondoneda, Life Sciences
 Mr John Skolout, Environmental Policy
 Miss Jennifer Smith, Medicine
 Dr Clare Smith, NHLI
 Miss Natasha Smyth, Public Health
 Miss Rowan Stace, Faculty of Medicine

Ms Kaylene Steenkamp, Clinical Sciences
 Mr Anton Stefanek, Computing
 Dr Song Sun, Mathematics
 Ms Tayjal Taylor, Faculty of Engineering
 Mrs Inez Talbot, Medicine
 Miss Fiona Tam, Catering
 Miss Natasha Tanna, Human Resources
 Mrs Weng Teh (5 years), Faculty of Medicine
 Dr Helena Tellez Lozano, Materials
 Mr William Thomas, CHOSTM
 Dr Thomas Thorne (5 years), Life Sciences
 Dr Gianpaolo Tomasi, Surgery and Cancer
 Dr Andre Trindade Pereira, Physics
 Dr Danielle Tucker, Business School
 Miss Amy Turner (5 years), NHLI
 Dr Clare Turner, Medicine
 Dr James Turton, Surgery and Cancer
 Dr Joris Vankerschaver, Mathematics
 Dr Karine Vauche, NHLI
 Professor Junia Vaz de Melo (5 years), Medicine
 Mr Shiv Vohra, Imperial College Union
 Dr Kenji Wakabayashi (6 years), Surgery and Cancer
 Dr Li-Pen Wang, Civil and Environmental Engineering
 Dr Baojun Wang, Mathematics
 Dr Leonard Wanigasooriya (7 years), Mechanical Engineering
 Dr Klaus Wanisch, Medicine
 Miss Vivienne Watson, Careers Service
 Dr Thomas Weil (26 years), ICT
 Ms Sarah West, Occupational Health Service
 Mr Henry Whittaker, Imperial College Union
 Mr Alex Will, Catering
 Dr Nicola Winstone, Medicine
 Dr Tim Witney, Surgery and Cancer
 Dr Abigail Woods (8 years), CHOSTM
 Ms Sarah Worton, Professional Development
 Miss Beata Wrotniak, NHLI
 Dr Abigail Zabron, Medicine

This data is supplied by HR and covers staff leaving the College during the period 15 July–11 September. This data was correct at the time of going to press. For Moving In, visit the online supplement at www.imperial.ac.uk/reporter

✉ Please send your images and/or comments about new starters, leavers and retirees to the Editor at reporter@imperial.ac.uk

The Editor reserves the right to edit or amend these as necessary.



9 OCTOBER ► PUBLIC TALK

The UK in a China-centric world

The rise of China will change the world in the most profound ways, not just economically but also politically and culturally. For two centuries the world has been dominated by the West but that era is fast coming to an end. In the term's first Imperial Business Insights

talk, author and China expert Martin Jacques asks whether we can adapt quick enough to a world dominated by China and other fast growing global economies.



15 OCTOBER ► PUBLIC TALK

Ada Lovelace day

The annual celebration of women in science, technology, engineering and maths is this year hosted by the College and features a line up including Professor Molly Stevens (Materials), Dr Bernadette Byrne (Life Sciences), UCL's Professor Sophie Scott and MP Chi Onwurah.

With live demonstrations, biomedical wonders, neuroscience, inspiration, laughter and song, Ada Lovelace Day Live is an event not to be missed! Tickets can be purchased online using discount code 'imperial'.

take note

Staff LGBT network relaunches



Imperial's lesbian, gay, bisexual and transgender (LGBT) staff network, Imperial 600, will celebrate its relaunch on Wednesday 16 October. The network welcomes LGBT staff and postgraduate students. Join our email list to receive invitations to our wide range of social events. Straight allies are also welcome.

For more details visit:
<http://is.gd/imperial600>

27 SEPTEMBER ► PUBLIC TALK

Science Uncovered

Imperial research returns to the Natural History Museum



2 OCTOBER ► PUBLIC TALK

Can autonomous machines be trusted?

Professor Alessio Lomuscio (Computing)



3 OCTOBER ► MUSIC

Lunchtime concert

The Tippett Quartet

4 OCTOBER ► SEMINAR

Combating non-communicable diseases

Talks and discussion

7 OCTOBER ► SEMINAR

Beyond the engineer of 2020 – what is the future for engineering education?

Professor Daniel Hastings, former Dean for Undergraduate Education, MIT



8 OCTOBER ► MUSIC

Evening concert

Lendvai String Trio



10 OCTOBER ► MUSIC

Lunchtime concert

Chloë Hanslip and Danny Driver

10 OCTOBER ► SEMINAR

How could underground development contribute to slope safety in Hong Kong?

Ir Raymond Chan Kin Sek, President, Hong Kong Institution of Engineers



16 OCTOBER ► PUBLIC TALK

Jiggling molecules

Professor Erich A Müller (Chemical Engineering)



16 OCTOBER ► PUBLIC TALK

From safety-I to safety-II: the past and future of safety management

Professor Erik Hollnagel, University of South Denmark

17 OCTOBER ► SEMINAR

The Centre for Blast Injury Studies Network event

Symposium and poster competition

17 OCTOBER ► MUSIC

Lunchtime concert

The Badke Quartet

24 OCTOBER ► MUSIC

Lunchtime concert

London Tango Quintet

24 OCTOBER ► PUBLIC TALK

20 maxims of an entrepreneur

Luke Johnson, Entrepreneur



MEET THE READER



Image credit: Glenn Micheal Harper

Anthony Hennelly, Sports Development Officer, Sport and Leisure Services

What are you doing in the picture?

Taking part in a world record breaking 5-a-side football match where we played for 46.5 hours. Some friends and I were raising money for the charity Inspiring Futures, which helps to promote development in Africa by better equipping school teachers and preventing malaria.

What would you do if you were editor of Reporter for day?

I would run a sports special issue covering the work that our sports scholars and clubs and societies do in representing the university in competitions throughout the year. It would also be a chance to highlight the positive impact sport and physical activity has on both students and staff in general at Imperial.

Who would be your cover star?

Well there are a few colleagues who I am sure would love to be the focus of a cover shoot! I'd have to choose Precious Enoch from Ethos as he always has a huge smile on his face and is great with staff and students.

Want to be the next reader featured in Reporter? Send in a picture of yourself to:

✉ reporter@imperial.ac.uk

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