

# Doctor to be?



Martyn Partridge starts the search for the Lee Kong Chian School of Medicine's students ✦ **CENTRE PAGES**



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EDITOR'S CORNER

## Yes man?

Earlier this month, I saw **Imperial College Union President, Scott Heath**, give a presentation about what he had learnt from his time in the role. He talked about following the ethos of the film *Yes Man*, where Jim Carrey plays a man who challenges himself to say 'yes' to everything for a year, with the aim of **seizing and creating as many opportunities as possible**. Scott reported that saying yes to even the most random of opportunities has resulted in unexpected benefits for the Union and Imperial students. Listening to Scott, it occurred to me that we could all benefit from being **more open to new ideas**. For me, I could embrace some of the more daring suggestions on my features planner and participate in the College's juggling club, despite my lack of coordination, or beat my **fear of extreme sports sessions** and train with Imperial's Olympic hopefuls at the crack of dawn. I think it's time to start saying yes and see what adventures this change of attitude takes us on.

EMILY ROSS-JOANNOU, EDITOR

Reporter is published every three weeks during term time in print and online. The next publication day is 3 May.

Contact Emily Ross-Joannou:  
✉ [reporter@imperial.ac.uk](mailto:reporter@imperial.ac.uk)

## New award scheme looks for leaders among schoolchildren

Imperial is to take part in a new national award scheme to inspire schoolchildren about university study. The Russell Group's Dux programme, announced by Schools Minister Nick Gibb MP, intends to recognise the top achievers in every secondary school in England, and those showing great potential.

Dux (which is Latin for leader or champion) is open to all maintained secondary schools, and will see teachers selecting a year nine pupil as their *dux*. They will be rewarded with a visit to one of the Russell Group universities.

Speaking at the launch, Nick Gibb said: "Visiting any of these great educational institutions, and seeing firsthand the possibilities that exist there, will open pupils' eyes to an exciting world in which they can not only take part, but thrive."

Imperial's participation is being coordinated by Alan West, Director of the Reach Out Lab. Alan said: "The prizewinners



Nick Gibb MP, centre, on a visit to the Reach Out Lab.

will work with current students and researchers on carbon capture and storage solutions, explore fuel cell technology that could power high performance, low emission cars, and experiment with new solar cell technology that could make solar energy cheap and accessible for all."

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

## Major funding boost for PhD training

The College is to receive more than £8 million in funding from the Engineering and Physical Sciences Research Council (EPSRC) as part of their £83 million national investment in doctoral training grants (DTGs).



This year's investment in DTGs is the largest the EPSRC has ever made and allocations have been awarded to 42 universities across the UK. The DTGs support the provision of a range of measures related to postgraduate training, including studentships for UK, EU and overseas nationals. The grants allow institutions to be flexible in terms of the duration of the studentship; between three and four years dependent on the project. The flexibility of the DTG mechanism also allows universities to leverage funds, for example from industry, to generate more money and potentially support higher numbers of students. There is also funding to support the very best students for an

additional one or two years after they have completed their PhD, to ensure that the impact of their work is more fully realised.

Professor Donal Bradley, Pro Rector (Research), said: "I am delighted that the EPSRC has chosen to support PhD students at Imperial. Without this, we would not be able to offer the scale of high-quality research training that we currently deliver to students in the engineering and physical sciences. The DTG will enable a new cohort of excellent students to strengthen their knowledge and skills, working with world-leading research teams on challenging and timely projects. Like EPSRC, we consider this to be an essential component in developing the UK's competitiveness."

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

# IMPERIAL FESTIVAL

FREE

All staff welcome

**FRI 11 MAY • 16.30–22.00**

**SAT 12 MAY • 12.00–18.00**

As part of the Imperial Festival celebrations, please join us for a special staff event **16.30–18.00** on **Friday 11 May**. Cheer on the teams competing in the Imperial Olympics, discover what your colleagues get up to by taking part in interactive demos and enjoy a free glass of wine in Imperial's pop-up pub, the Haemo Globe Inn. Sign up to receive your drink voucher and register attendance at:

**[www.imperial.ac.uk/festival](http://www.imperial.ac.uk/festival)**

## Admission requirements for Singapore medical school announced

Imperial and Nanyang Technological University (NTU) announced the admission requirements for the Lee Kong Chian School of Medicine in Singapore earlier in March. Students vying for one of the first 50 places at Singapore's newest medical school, which opens in August 2013, will need to demonstrate they have the skills to be an outstanding doctor, as well as hold first class qualifications.

The School will identify the students best suited for the new medical course through robust admission requirements which include the BioMedical Admissions Test (BMAT) and a series of multiple mini-interviews. The BMAT, which assesses skills in problem solving, communications and applying scientific knowledge, is used by UK universities, including Imperial, for admission to medical courses, but has not previously been a requirement of any university in Singapore.

Professor Martyn Partridge, Senior Vice Dean of the School and Deputy Director of Education in Imperial's Faculty of Medicine, said: "As well as our requirement for the highest academic qualifications, our students will be assessed



upon attributes, such as empathy and professionalism, on their commitment to medicine as a career and on their potential to meet exacting ethical standards. We want to develop the best students into the best doctors to serve the people of Singapore in the future."

**"We want to develop the best students into the best doctors to serve the people of Singapore in the future"**

The Lee Kong Chian School of Medicine, established in October 2010 to help to meet the demand for doctors in Singapore, will offer a five-year undergraduate medical course leading to the award of a joint Imperial-NTU MBBS degree. The admission requirements were announced to coincide with NTU's open house on 10 March, where prospective students were given a taste of the new medical course.

—CAROLINE DAVIS, COMMUNICATIONS AND DEVELOPMENT

*For more on the development of the Lee Kong Chian School of Medicine, see pages 8–9.*

## Cystic fibrosis gene therapy programme gets green light

Imperial researchers will begin the largest clinical trial of its type to test a new gene therapy treatment for people with cystic fibrosis (CF) thanks to a new grant from a government funding body.

One hundred and thirty adults and children with CF will take part in the trial starting this spring coordinated by the UK Cystic Fibrosis Gene Therapy Consortium (GTC). The GTC is a group of scientists and clinical teams from Imperial, the Universities of Oxford and Edinburgh, Royal Brompton and Harefield NHS Foundation Trust and NHS Lothian, who have worked together for the last decade to develop gene therapy for CF.

The trial will be funded by a £3.1 million grant from the National Institute for Health Research and the Medical Research Council.

CF is the most common lethal inherited disease in the UK, affecting around 9,500 people nationally and over 90,000 worldwide. Patients' lungs become filled with thick sticky mucus and they are vulnerable to recurrent chest infections, which eventually destroy the lungs. The cause of CF, mutations in a gene located on chromosome 7, was identified in 1989, opening the door to replacing this faulty gene using gene therapy.

Patients will receive the treatment by inhaling molecules of DNA wrapped in fat globules that deliver the replacement gene into the cells in the lung lining. Half the participants will receive the real treatment and half a placebo in a double-blind study.

Professor Eric Alton (NHLI), the GTC Coordinator, said: "This trial will assess if giving gene therapy repeatedly for a year will lead to the patients' lungs getting better. Eventually we hope gene therapy will push CF patients towards a normal life expectancy and improve their quality of life significantly."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT



### in brief



#### DSc for George

Andrew George, Professor of Molecular Immunology (Medicine) and Director of the Graduate School, has been awarded the DSc degree of Imperial College

London. His research for the doctorate involved investigating ways to prevent transplants from being rejected by the immune system. His group was the first to genetically modify corneas – an approach that could be used to block rejection in corneal transplantation. "I was very pleased and proud to get my DSc from Imperial," said Professor George.

#### Making the NHS a safer place

Imperial College Healthcare NHS Trust, in partnership with the College, has been awarded £7.2 million to establish a Centre for Translational Research in Patient Safety. The five-year award, from the National Institute for Health Research, extends the duration and scope of the existing Centre for Patient Safety and Service Quality in the Department of Surgery and Cancer, and brings together a range of disciplines to develop new ways of improving the safety, quality and effectiveness of healthcare services.

#### THE world reputation rankings

In the *Times Higher Education* World Reputation Rankings 2012, published on 15 March, Imperial was ranked 12th in the world for teaching reputation (down from 10th) and 14th in the world for research reputation (down from 12th), leading to an overall reputational ranking of 13th, a fall of two places from 2011. Imperial maintained its position of third in the UK. The 2012 Reputation Rankings are based on a survey of academic opinion around the world.

#### New partnership takes off

On 15 March, Imperial and major aerospace manufacturer Aviation Industry Corporation of China (AVIC) agreed to establish a £2.5 million centre forming lighter and stronger aircraft components at the College. The researchers at the AVIC Centre for Structural Design and Manufacturing from the Department of Mechanical Engineering will also focus on developing advanced computer modelling to improve manufacturing processes.

## Harvesting energy and water from human waste

A prototype system for recovering drinkable water and harvesting hydrogen energy from human faecal waste beat more than 2,000 other proposals to receive funding from the Bill and Melinda Gates Foundation in November 2011.



The winning team of scientists from the Department of Materials, the University of Manchester and Durham University, believe the technology could be used in an inexpensive device by people in the developing world to generate clean water and energy from waste. It also could be used as a sustainable source of hydrogen energy to power homes.

The researchers say that the device will be portable, allowing installation in homes and remote locations. The technology is based on a porous scaffold that holds bacteria and metal nanoparticles. When faecal sludge is filtered through the scaffold, these particles react with the waste matter to generate the recycled resources. These can either be used immediately or stored for later use.

The first stage of the project will see the team developing a standalone sanitation device, making it easier and cheaper for

people in developing countries to adopt the technology where large sewage networks may not exist. Where sewage infrastructure is in place, the technology could be hooked into the system, minimising implementation costs for home owners.

Dr Martyn McLachlan (Materials) said: "In the future, we may see homes in the UK generating their own clean water, energy and fertiliser simply by doing what comes naturally to us all once or twice a day. More important are the implications for developing countries, where the provision of clean drinking water is essential for supporting life and self-generated energy could be used to support economic growth."

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

Read the full story: <http://bit.ly/harvestingwaste>

## Changes to teaching day

Imperial's Management Board has approved several changes to the College teaching day from next year onwards, to build in time for undergraduates to take part in activities which go beyond their discipline-based teaching.

Changes include a new time-slot on Monday afternoons for co-curricular activities and phasing out the current two-hour free period over weekday lunchtimes, with all Departments still being required to set aside at least an hour for lunch.

Professor Julia Buckingham, Pro-Rector (Education and Academic Affairs) said: "These changes will give room in the timetable to offer undergraduates classes going beyond their own areas of study, helping enhance their employment prospects in the future. We want to provide the oppor-



tunity for students to expand their perspectives and gain as much benefit from expertise around the College as possible, and this has meant carefully reviewing how the teaching day is structured."

"We want to provide the opportunity for students to expand their perspectives"

Two programmes, Business Imperial and Horizons, have been piloted, allowing students to engage with business and environmental issues through seminars.

The changes will be phased in, with alterations to lunchtimes and the Monday afternoon slot beginning introduced for first year students in 2012–13, taking in second years in 2013–14 and third year students and above in 2014–15.

Wednesday afternoons will continue to be free from teaching.

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

See the College Notice: <http://bit.ly/CollegeDay>

## Imperial scientists investigate childhood bacterial infections

Imperial researchers will study the genetic factors that influence children's susceptibility to bacterial infections in a €12 million research collaboration announced on 9 March.

Despite the availability of vaccines and antimicrobial drugs, large numbers of children continue to be affected by bacterial infections, both in developed countries and the developing world. They account for more than a quarter of child deaths globally.

As well as looking for genetic differences that affect susceptibility to disease and how severe the illness is, the project aims to understand how the genes identified affect

disease processes, using cell biology and functional genomics studies.

"This is a truly interdisciplinary project that will go beyond state-of-the-art genetics to tell us about the biological mechanisms underlying how genetic factors influence disease," said Professor Mike Levin (Medicine), who is coordinating the project.

"We hope to identify new therapeutic targets which would possibly allow treatments to be matched to individuals based on their predicted immune response."

The new project, called EUCLIDS, is funded by the European Union's Seventh Framework Programme for Research (FP7), and will



involve 14 partner institutions in six countries, with a budget of €12 million over five years.

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

## media mentions

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT



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THE GUARDIAN ▶ 8.3.2012

### Cosmic weather forecast



Scientists predict that we will see more solar storms over the coming months. As an active area of the Sun continues to generate solar flares, charged particles are ejected into space, which have the potential to cause geomagnetic storms as they crash into Earth's magnetic field. These could potentially cause disruption to satellites and even the national grid. The active area of the sun first rotated into Earth's view on 3 March. Speaking at the time, Dr Jonathan Eastwood (Physics) said: "At the moment, the Earth's magnetic field is trying to deflect the solar material around the Earth, and scientists in the UK and around the world are monitoring the situation to see if our magnetic shield will hold up."

LOS ANGELES TIMES ▶ 11.3.2012

### One year on

Twelve months after the Fukushima nuclear incident concerns over radiation exposure continue. However Imperial Visiting Professor Robert Gale (Medicine), together with radiation risk expert Owen Hoffman from SENES Oak Ridge Inc, says fears over an increase in cancer since the incident are unwarranted: "Humans are exposed to radiation every day. About 50 per cent comes from natural sources. The other 50 per cent is from manmade sources. When it comes to exposures like at Fukushima, the question is: what is the relative magnitude of the increased risk from Fukushima compared to our baseline cancer risk? Despite our fears, it is quite small."

WIRED ▶ 15.3.2012

### Size isn't everything



A meteorite believed to be the UK's largest is currently on display at a Royal Society exhibition. Size, however, is not enough to impress the scientists who examine meteorites for clues to the solar system's past. Speaking to *Wired*, Dr Zita Martins (Earth Science and Engineering) says the most important thing for her is what is under the surface: "The meteorites I'm interested in are the stony ones, specifically carbonaceous chondrites. Those are very rich in carbon, and I'm interested in them because they have lots of organic molecules." These molecules are the building blocks of life and central to theories suggesting life evolved on earth thanks to the delivery of such key ingredients by meteorites.

BBC NEWS ▶ 21.3.2012

### Brain boost

Researchers claim to have identified the mechanism by which electroconvulsive therapy (ECT) – a psychiatric treatment in which seizures are electrically induced in anaesthetised patients for therapeutic effect works for people suffering from severe depression. The scientists conducted a study involving severely depressed patients, taking MRI brain scans before and after treatment using ECT. The research suggests that ECT effectively reduces overactive connection strength between parts of the brain. Professor David Nutt (Medicine) said: "These findings make a lot of sense. This is why my research group is progressing psilocybin – which also disrupts this network, – as a treatment for depression."



## awards and honours

### MEDICINE

#### Pennell wins gold



On 4 February Dudley Pennell, Professor of Cardiology (NHLI) and Director of the Cardiovascular Magnetic Resonance (CMR) Unit, was awarded the Society for CMR gold medal in Orlando USA. The award recognises outstanding contribution to the field of cardiovascular magnetic resonance and to the society.

### ICT

#### ICT recognised for training materials

Imperial is one of five institutions in a consortium that won the 2011 Universities and Colleges Information Systems Association Eduserv award for excellence in developing information security training material. The award was presented at a ceremony on 14 March. The award-winning material was developed by a collaboration of ICT teams led by the University of Leicester which involved Imperial, Cranfield University, the University of Leeds and the University of York. The submission focused on a project to develop, at minimal cost, high quality training material on information security suitable for staff in a higher education institution.



### COMMERCIAL SERVICES

#### Prince's Gardens halls recognised

Steve Howe, Director of Capital Projects and Planning, and Jane Neary, Director of Commercial Services, picked up a Civic Trust award for the new halls of residence in Prince's Gardens at a ceremony on 2 March. The Civic Trust recognises excellence in the built environment and its awards are given to projects which make an outstanding contribution to the appearance of the local area. The halls, which

were completed in 2007 and 2009, were described by the panel as high quality, attractive, contemporary buildings which respect and respond to their surroundings.

### NATURAL SCIENCES

#### Wave research funding

Dr Greg Pavliotis and Professors Richard Craster and Andy Parry (Mathematics) have been awarded funding of £678,000 by the Engineering and Physical Sciences Research Council to investigate three fields of wave study in applied maths. They aim to predict the how waves reflect off designed structured surfaces and how they change when they encounter a micro-patterned surface. They also hope to model how waves diffuse through a physical mesh.



## Patient safety issues in developing countries

A new study published in the *British Medical Journal* has outlined for the first time the frequency and nature of harm to patients brought about by healthcare in developing countries. The study, published on 12 March, sponsored by the World Health Organisation, involved researchers at the Centre for Patient Safety and Service Quality at Imperial.

The researchers looked at patients from 25 hospitals in Egypt, Jordan, Kenya, Morocco, Tunisia, Sudan, South Africa and Yemen. They found that harm to patients caused by their healthcare, rather than their disease, is a major public health problem, as it is in the developed world, but in these countries patients are more likely to die from such harm.

Common adverse events recorded in the study included hospital-acquired infections, patients being given the wrong drugs, adverse drug reactions, surgical complications and delays in diagnosis. Across the countries studied, eight per cent of hospitalisations involved at least one adverse event to the patient. Over 80 per cent of these events were judged preventable and 30 per cent contributed to the death of the patient.

“We know that safety is a concern in all advanced healthcare systems,” said Professor Charles Vincent, Director of the Centre (Surgery and Cancer). “This study tells us that it’s an equal concern in developing countries.”

“The vast majority of adverse events are preventable. Better training and supervision of clinical staff and the use of clinical protocols could help to reduce harm caused by healthcare.”

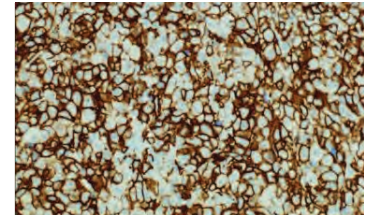
—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

## Gene clue to how virus causes cancer

Virologists and immunologists at Imperial and the University of Zurich have identified mutations in Epstein-Barr virus (EBV) that increase the capacity of the virus to cause cancer, in a study published on 12 March in the *Journal of Clinical Investigation*. The research reveals that EBV carries a tumour suppressor gene – the first such gene known in a cancer-causing virus.

EBV is one of the most common viruses in humans, persistently infecting more than 90 per cent of the population. The virus can remain in the body for many years without any obvious symptoms, but it also causes glandular fever and is associated with several types of cancer, including lymphoma.

The new research has found that EBV normally carries a gene that suppresses cancer, at least in part by making infected cells secrete a protein called CXCL10 that alerts the host immune system. Mutations that inactivate this gene allow the



virus to escape detection by the immune system and cause cancer.

“This is the first known example of a cancer-causing virus carrying a tumour suppressor gene,” said Professor Martin Allday (Medicine), who led the study with Professor Christian Münz of the University of Zurich. “We can speculate that this gene might help ensure the long-term survival of the host without serious disease, which

allows the virus to persist in human populations.

“The findings have highlighted the importance of factors like CXCL10 that attract immune cells in the surveillance of tumours.

Understanding how these factors are

regulated and work in tumours may assist in the development of better strategies for manipulating the immune system in cancer therapies.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

“This is the first known example of a cancer-causing virus carrying a tumour suppressor gene”

## Making machines from yeast



Imperial scientists are one step closer to making more complex microscopic biological machines, following improvements in the way that they can ‘rewire’ DNA in yeast, according to research published in the journal *PLoS ONE* on 16 March.

The researchers, from the Centre for Synthetic Biology and Innovation and the Department of Bioengineering, have demonstrated a way of creating a new type of biological ‘wire’, using proteins that interact with DNA and behave like wires in electronic circuitry. The scientists say the advantage of their new biological wire is that it can be reengineered over and over again to create potentially billions of connections between DNA components. Previously, scientists have had a limited number of wires available with which to link DNA components in biological machines, restricting the complexity that could be achieved.

The team has also developed more of the key DNA components needed for reprogramming yeast to perform different tasks. Scientists currently have a limited catalogue of components from

which to engineer biological machines.

Future applications of this work could include tiny yeast-based machines that can be dropped into water supplies to detect contaminants, and yeast that records environmental conditions during the manufacture of biofuels to determine if improvements can be made to the production process.

Dr Tom Ellis, senior author of the paper, (Bioengineering) says: “From viticulture to making bread, humans have been working with yeast for thousands of years to enhance society. Excitingly, our work is taking us closer to developing more complex biological machines with yeast. These tiny biological machines could help to improve things such as pollution monitoring and cleaner fuels, which could make a difference in all our lives.”

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

# Brain power

Reporter speaks to Professor Paul Matthews, head of the new Division of Brain Sciences, who has big ideas for neuroscience and mental health at Imperial.

## Why is Imperial launching a Division of Brain Sciences?

In recent years, government and public funders have been increasing their focus on brain diseases, especially chronic problems, such as depression, schizophrenia and bipolar disorder, and the late-life disorders of Alzheimer's disease and stroke. The Faculty of Medicine wants to ensure that Imperial continues to lead with prominent research programmes that advance understanding and treatments in neurosciences and mental health.

## What are the special opportunities for Imperial?

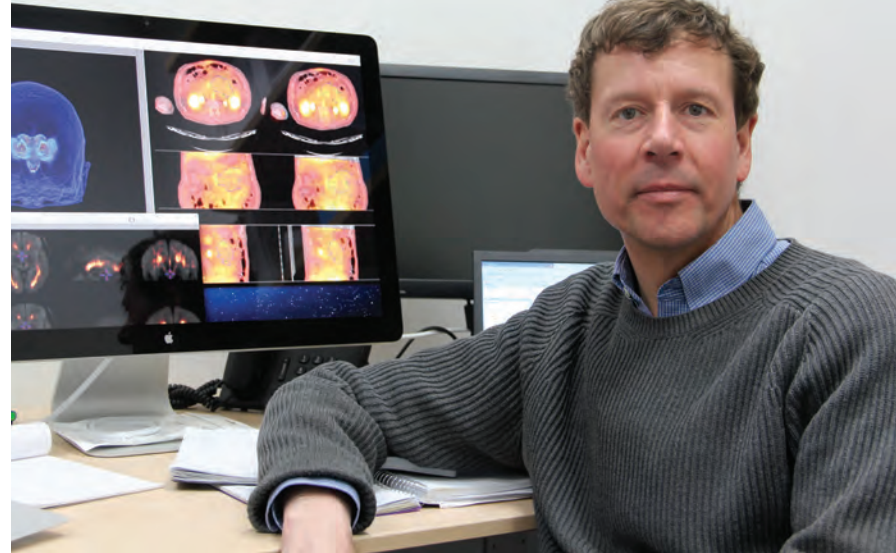
Last year, I convened an external expert panel to look closely at what was happening in the College. We quickly came to some exciting conclusions. There are areas of unique strength in the brain sciences. Some of these are outside the Faculty of Medicine, in, for example, bioengineering, physics, chemistry and computing. Here in the Faculty of Medicine, we have innovative leaders developing new concepts for diagnosis and treatment. These include pioneering applications of molecular imaging to the diagnosis and monitoring of neurodegenerative disorders, bringing new stem cell treatments to multiple sclerosis and finding new ways of tackling problems of addiction or personality disorders, to name just a few. We also have some special strengths in the fundamental neurosciences.

However, what we lacked was a sense of cohesion and support for neurosciences and mental health. The Rector and the Faculty Principal strongly endorsed the creation of a new Division of Brain Sciences to link mental health research, neuroscience and neuropsychopharmacology (the science of how drugs affect the mind). By pulling together everyone under one roof, we can develop synergies and enhance the foundation for further growth. It will create a nationally unique academic research grouping.

## What are the challenges in turning Imperial into a major force in brain sciences?

First, we need to help individually successful investigators in the College appreciate that our strength lies in the fact that we are a community of scholars who can support each other, rather than a set of individual entrepreneurs who happen to share a common space. We need to find new and better ways of working together for brain sciences, within and across the faculties.

Second, we must help our scientists rediscover their long-term vision. We live in a world where it is too easy to focus on the immediate next steps and take safe decisions based on what is possible now. We want people to think boldly, and go well beyond anything they've done before. With this approach, I believe that extraordinary things could happen!



While embracing bold and creative thinking, we also need to acknowledge the challenge of funding in a more uncertain future. The College has given the Division resources to initiate its development and has provided a clear remit to grow. If we can come together around a big and compelling vision, and demonstrate how that can be transformative, then I am confident that the necessary funding will follow.

## What will success look like?

Those of us who care for patients are aware of how few therapies we have that have a major impact on brain disorders. As physicians and scientists in a major medical school, we have an overarching responsibility to direct our efforts towards making a step change in treatment. We will closely monitor the progress of this ambition – measurable by changes in health outcomes, by new treatments or diagnostic methods in the clinic, and by a research portfolio that includes concepts that will deliver tomorrow's treatments.

We are also here to create new knowledge and we need to set a high bar. We do not want to just add to the detail of the science;

“While embracing bold and creative thinking, we also need to acknowledge the challenge of funding”

we want to see Imperial contributing to changes in concepts of how the brain works and of brain disease.

Finally, to make our efforts

sustainable, we must share our knowledge and educate. We need to focus on ensuring that we are getting the most outstanding trainees and that we contribute to their development, so that excellent people come here and leave us as unparalleled! We also need to extend our reach outside the walls of Imperial. New teaching tools, such as web-based media, will allow us to teach students not just here, but across the world.

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

*The Division of Brain Sciences will launch on 2 April*



# Show and tell

Headphones plugged into shiny iPads, clusters of Singaporean school students are sitting in the **Lee Kong Chian School of Medicine** seminar room, tapping in responses to multiple choice questions designed to test their understanding of the online lecture they have just watched. The prospective students are among 800 who visited the Lee Kong Chian School of Medicine on 10 March, 18 months after Imperial signed an agreement to partner with Nanyang Technological University (NTU) to develop a new medical school in Singapore.

Over the course of the School's first open day, through e-learning sessions and demonstrations of medical simulations, the visitors received a taste of the innovative curriculum developed by a dedicated team of over 60 people in London and Singapore. Professor Martyn Partridge, Deputy Director of Education in the Faculty of Medicine and Senior Vice Dean of the School, has been its driving force and was one of the first to meet the prospective students as they came through the door.

Martyn has been developing the School's curriculum since October 2010, when he went to Singapore to analyse what was needed to train a new generation of doctors for the country. Until then, he had assumed that much of Imperial's MBBS medical degree curriculum would simply be transferred to the Singaporean course. In speaking to local people, GPs, the Ministry of Health and Ministry of Education, however, it quickly became obvious there was a thirst for something new. "We agreed we needed to start from scratch," Martyn explains.

Over the next few months, Martyn and Professor Jenny Higham, Deputy Principal of the Faculty of Medicine, assembled a team headed by Dr Naomi Low-Ber, Curriculum Development Lead and a consultant gynaecologist, to take on the mammoth task of developing a five-year curriculum. Naomi was well versed in curriculum development, having been involved in projects to improve Imperial's medical degree, in addition to working on a national

undergraduate curriculum project for the Royal College of Obstetricians.

Naomi and her team started by evaluating Imperial's existing degree, alongside the medical curricula used at other UK and international institutions, to explore what new approaches might be beneficial to the Singaporean course. "We wanted to build on the strengths of the Imperial curriculum but innovate where we felt it would improve student learning. We also wanted to look for methods and approaches to embed caring and compassionate behaviours," she explains.

Naomi consulted extensively with junior doctors, who had recently graduated from Imperial, to seek their views on what they enjoyed about the course and their ideas for how to excite and inspire incoming students.

Experts in Singapore were also involved at every stage of the development to ensure the curriculum would offer training relevant to the country's healthcare needs. Thanks to their input, the School's students will be well-equipped to deal with the country's high prevalence of diabetes and infectious diseases like dengue fever, but will have less in-depth knowledge of rarer conditions to Singapore, such as cystic fibrosis or sickle cell disease.

## Clinical scenarios

Naomi explains that one of the key aims of the curriculum is to give students wide experience of healthcare, allowing them to specialise in a range of fields when they graduate, whether their interests take them into primary care or research. To work out how to



Pictured, from top: Professor Martyn Partridge; prospective students try out the e-learning methods on open day; simulated surgery sessions at Imperial were a source of inspiration for the team designing the curriculum.





deliver such breadth, the team looked at the structures of other courses for inspiration, and homed in on the importance of early clinical exposure to bring to life what students learn in the classroom.

First year students taking a cardiorespiratory course will learn about the science underpinning breathlessness, chest pains and heart palpitations. They will then get the opportunity to examine someone, either in a hospital or a polyclinic, who has had a heart attack, allowing them to better understand the condition signalled by the symptoms and how it is treated. “Sitting in a lecture theatre can be very frustrating without really knowing how what you are learning links together. It’s about understanding the context – that’s what makes excellent doctors,” says Martyn.

The School has been established to meet the healthcare demands of Singapore’s ageing population, so helping students to understand the needs of the patients they will be treating is a key aim of the course. Building on the experience that features in Imperial’s MBBS course, Singapore students will have the chance to follow either an elderly patient or a patient with

a chronic condition for two years and learn about their day-to-day life, and how they are looked after by the healthcare system.

Martyn is insistent that the curriculum should reflect the reality of modern medicine. “Whether the students go on to be a neurosurgeon or a GP, a major part of their careers will be spent caring for patients who are elderly or who have chronic medical conditions. We want them to learn from an early stage how satisfying and enjoyable it can be to do this well,” he says.

#### Innovative teaching

In addition to interactive face-to-face teaching on basic science and clinical attachments, the course’s teaching techniques will include simulation, allowing students to get hands-on experience of medical scenarios in a realistic environment. Students will be exposed to actors posing as patients, giving them practice in dealing

with patients’ emotions and reactions to medical situations, and allowing them to develop and refine their clinical practice

“We wanted to build on the strengths of the Imperial curriculum but innovate where we felt it would improve student learning”

skills without putting people at risk. “By using simulated patients, we aim to make our students feel confident in taking histories, examining patients and doing simple procedures. So, when they eventually get

to a real patient or work with a teacher on an attachment, they are better equipped to learn from that episode,” explains Naomi.

All students will be given iPads in the first year, giving them easy access anytime and anywhere to a suite of e-learning materials that support the course content. The e-learning materials will also be used as a tool for reflection, helping students to evaluate their learning experiences.

Doctors cannot deliver the highest quality of care to patients in isolation, so the new medical course will emphasise teamwork skills. Using specially designed,

team-based learning facilities that hook into iPads and project work onto plasma screens, students will be encouraged to solve problems together. Seventeen-year-old Toh Wer Shien, from the Anglo Chinese School, trialled the approach at the Open Day and was impressed by the School’s use of technology to support communal learning. “You don’t just learn from textbooks or journals but from one another, as you debate the issues,” he said.

#### Sharing expertise

Martyn says that both Imperial and NTU are gaining from the sharing of expertise through the collaboration. For example, he hopes that innovations used in the Singapore School could be incorporated into the medical degree at Imperial. There has been particular interest in the team-learning approach and a taster session organised by Naomi for medical students, junior doctors, clinicians, scientists and administrators in the Faculty of Medicine has already received excellent feedback. “The consensus was that team based learning is an excellent way to teach large groups while keeping them fully engaged and accountable,” she says.

When the curriculum is put into practice in 2013, it will be carefully monitored and evaluated using feedback from staff and students to enable developments and refinements. For Martyn, the success of the curriculum will be signalled ultimately by the accomplishments of the School’s graduates: “I can’t wait to see our excellent doctors working in a range of professions, and for patients to recognise their doctors’ care and compassion as characteristics of a doctor from the Lee Kong Chian School of Medicine.”

—EMILY ROSS-JOANNOU,  
COMMUNICATIONS AND DEVELOPMENT

# inside\*

## story

### mini profile

## Rob Gross

Reporter speaks to Dr Rob Gross about the many 'hats' that he wears at Imperial. In particular, his role as Policy Director at the Energy Futures Lab (EFL) and his penchant for fast(ish) things.



### What are some of your roles here at Imperial?

I am the Director for the Centre for Energy Policy and Technology, Head of the UK Energy Research Centre's Technology and Policy assessment function, Convenor of the Energy Policy option and Thesis Term Director of the MSc Environmental Technology course at Imperial.

### Can you describe your role at the EFL?

The key aim of my role is to investigate the economic potential of new technologies, such as solar and wind power. Understanding the economic dimension is the key to energy research. It also helps inform governments, so that they can adopt effective policies that put our energy usage on a more sustainable path.

### What are you working on?

A recent EFL project with the UK Energy Research Centre looks at why the overall cost of off-

shore wind has gone up. We found that problems include bottlenecks in the supply chain, currency fluctuations and a rise in commodity prices. More widely, we're looking at the future costs of gas, nuclear and other renewables.

### Is it true that you are a car enthusiast?

Well, yes, admittedly it's not a very green hobby, but I do have a 1965 Austin Healey Sprite

in the garage at home. It doesn't work at the moment and it has been off the road for about 10 years.

Like most Imperial academics, you juggle a number of roles. How do you do it?

All academics have to combine teaching, research and engagement with the wider community as part of their job and it is a constant juggling task. That's probably why I haven't had a chance to put the Sprite back together yet.

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

## The Elephant in the Room

Professor Jonathan Waxman is Clinical Chair in Prostate Cancer in the Department of Surgery and Cancer at Hammersmith Campus. He founded the Prostate Cancer Charity, the first national organisation promoting research and patient support for this condition. Jonathan writes about how he was inspired to write *The Elephant in The Room*, his recently published collection of short stories about the lives of cancer patients and the doctors treating them.



writing it by myself. The stories are fictionalised accounts of real people

"The book was inspired by my friend, the novelist J.G Ballard, whose book *Crash* was adapted into a film by David Cronenberg. Jimmy helped me

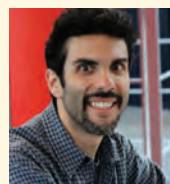
publish my first novel, by introducing me to his agent. I had the privilege of looking after him when he became ill. When Jimmy developed cancer, I asked him if he would write a book with me; a discourse between a doctor and his patient, explaining the view from both sides of the clinic. The aim was to help people who had cancer understand what it was all about. When Jimmy became too ill to write, I thought that I would try

“I try to explain how cancer patients feel, but also explore the feelings and the doctors who care for them”

and their struggles, and in them I try to explain how cancer patients feel, but also explore the feelings and the doctors who care for them. The elephant is a metaphor for what's obvious, omnipresent and

perhaps ignored. One of my favourite things about my job is getting the chance to help patients through their illness. Seeing patients get better is amazing, but being allowed to observe the love between a patient and their family and friends is the best thing in the world.”

For more information about the book visit: [www.jonathanwaxman.co.uk](http://www.jonathanwaxman.co.uk)

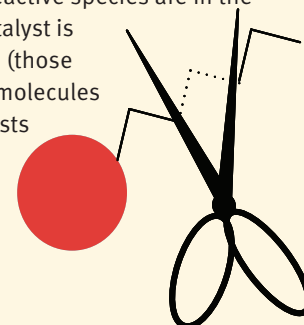


### ► SCIENCE FROM SCRATCH

## Catalysis

explained by Antonio Torrissi, MSc Science Communication

In nature, spontaneous chemical reactions can be fast like combustion, or slow like rust formation. Catalysis is the field of chemistry that pushes slow chemical reactions to go faster. A catalyst loosens the chemical bonds in a molecule and can be seen as a pair of scissors cutting the ties between atoms. The catalyst causes the molecule to break down into smaller parts which can quickly form new bonds with another molecule and ultimately generate new molecules. Catalysis can be homogeneous, where catalyst and reactive species are in the same physical state, or heterogeneous, where the catalyst is in a different physical state compared to the reagents (those substances taking part in the chemical reaction). Biomolecules called enzymes are examples of homogeneous catalysts that control the chemical reactions in living beings. Metals like platinum act like heterogeneous catalysts in catalytic converters of cars to transform toxic gases, products of the engine's combustion, into gases such as CO<sub>2</sub> and nitrogen.





## Irrational avoidance of the unpleasant

On 14 March, Jeremy Grantham, philanthropist and co-founder of asset-management firm Grantham Mayo Van Otterloo, gave a special lecture at Imperial entitled *Attitudes in America to investing, resource limitations and global warming: irrational avoidance of the unpleasant*. His lecture explored the mismatch between finite resources and exponential population growth, and questioned what can be done to address this in the world's most powerful economy. Reporter spoke to Jeremy before his lecture, to find out what goes on in the mind of a successful businessman with such a keen interest in the future of the planet:

**What do you think is the most unpleasant thing American investors are avoiding?**

I think the thing investors get most agitated about, partly because it's what they're paid to do, is climate change. You would say that was irrational unless you recognise what a substantial investment of time and money people put into it when they have interests in energy. There are many in the USA whose beliefs lead them to deny the science behind climate change.

**Do you think this issue is mirrored in the UK and internationally?**

The Australians have a pretty healthy dose of climate change avoidance thanks to people in

the prominent mining industry who attempt to influence government decisions through the use of muscle power. In Britain it's hard to tell how some of the critics of climate science are motivated; are they doing it because they're contrarians who want to go against the likes of the [pro-climate change stance of the] Royal Society? Or are they doing it because they enjoy the limelight and the sense of their own influence? Or are they just such natural passionate contrarians that they will challenge the science whatever the facts? Probably some of them are merely hired guns, like professional 'experts' in a murder trial.

**What are you most proud of having achieved?**

For me, it's running a really substantial, ethical investment firm that puts its clients first, which, believe me, is not that common. And on the environmental side, we're really proud of the work done at the Grantham Institutes at Imperial, the London School of Economics and the Indian Institute of Science. In general, scientists have been quite wimpy but I think these three institutions have tried to make the point that these are the facts, unpleasant or not, and that they really matter.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

For the full interview see: <http://bit.ly/JGrantham>

## Presenting to parliament

Dr Arjun Ghosh, a cardiologist and final year PhD student at Imperial and the MRC Unit for Lifelong Health and Ageing, attended parliament on 12 March to present his work to a range of politicians and a panel of expert judges, as part of SET for Britain – an organisation which supports Britain's early-stage and early-career research scientists, engineers and technologists. Arjun (pictured with his local MP Lynne Featherstone) describes his experience:



"I was excited to take part in the event as it was my first time in parliament and it was a fantastic opportunity to give visibility to my work, which will benefit many patients, to key decision-makers in healthcare and to other scientists. I presented a poster on the effects that raised blood pressure in early adult life can have on the heart in late adulthood. I was judged against dozens of other scientists in the only national competition

"I enjoyed the challenge of communicating my research to a lay audience"

of its kind, after being shortlisted from hundreds of applicants. I wanted to show the importance of the work researchers do to change clinical practice, and how necessary it is for that work to be supported at a government and policy level. During the day I learned about related research and also got to discuss possible future collaborations. It was quite a different experience from my day job, and I enjoyed the challenge of communicating my research to a lay audience. I would definitely recommend it to other Imperial researchers."



## Varsity 2012

Imperial College's rugby first XV ended a decade of defeats to finally lift the J.P.R. Williams Cup on 21 March. In a historic night at the Twickenham Stoop Stadium, the College team scored an outstanding win against Imperial College School of Medicine, running away to a 31–0 victory. Despite a strong start with both teams enjoying equal possession, the scoreboard remained untroubled until Syarif Hertog (Mechanical Engineering) broke through after 23 minutes to cross the line and break the deadlock. Four further tries followed as more than 1,000 students, staff and alumni witnessed a fine display of rucking, running and kicking which the Medics had no answer for. Man of the Match, Jack Flanagan (Physics), said: "It feels amazing. We've waited 10 years for this – it's such a good feeling."

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

IMPERIAL STUDENTS SHARE THEIR EXPERIENCES OF LIFE AT THE COLLEGE ON THE STUDENT BLOGGERS WEBSITE.



Student blogger Ali on  
**the perfect supervisor:**

“Before I started my PhD, colleagues in labs I worked in described a student’s perception of their supervisor much like Marmite. You either love them, or hate them. This can be true, but it depends on one major factor: what you are looking for in a supervisor. There are a couple of people I think would make good supervisors:

- 1) Mr Miyagi from Karate Kid: How AWESOME would it be if there was a ‘WAX ON, WAX OFF’ equivalent to science. ‘PIPETTE UP, PIPETTE DOWN. CLONE IN, CLONE OUT!’
- 2) YODA from Star Wars: Imagine that you don’t just have any supervisor? Nope, you have the oldest and most wisest of supervisors.”

[www.imperial.ac.uk/campus\\_life/studentblogs](http://www.imperial.ac.uk/campus_life/studentblogs)

blog  
SPOT



## Master chefs

Three of Imperial’s chefs have won the main course category in the British University Chef’s Challenge, held in Blackpool on 26 and 27 March.

The Challenge, organised by the University Caterers Organisation to showcase talent in the industry, saw chefs prepare a four-course meal in two hours, under strict competition criteria. Imperial sous chef Steven Robertson had been preparing for the event since September, together with colleagues Martin Stafford and Andrew Crook – all of whom work in the Sherfield Building kitchens.

Steven says: “When everyone else was thinking

“It’s worth all the effort. It’s a really exciting competition and gives you a fantastic buzz when you’re taking part.”

of their Christmas dinners in December, we had the dishes we’d be serving in March going round in our heads.”

Since then a group of lucky tasters, including Commercial Services Director, Jane Neary, have had the chance to sample courses, such as their award-winning herb crusted rack of lamb with sweetbreads, suet kidney pudding, dauphinoise potato, morel mushrooms and rosemary port jus, over the course of 10 tastings. Their suggestions have helped the chefs to create the perfect menu. The chefs,

meanwhile, have been giving up free time and evenings to prepare the courses under timed conditions, factoring in the minutes they will need to put aside to talk the judges through their ingredients.

“It’s worth all the effort. It’s a really exciting competition and gives you a fantastic buzz when you’re taking part. Any prize is also great for our own professional reputations and for the College,” adds Steven.

For photos of the team’s culinary creations, visit [www.imperial.ac.uk/reporter](http://www.imperial.ac.uk/reporter)

### ▶ TIME OUT

## Cooking society

Hot apple fritters, sweet pumpkin pie, olive bread fresh from the oven... You’d be hard pressed not to feel peckish after reading about some of the edible treats members of the ICU Cooking Society have made. The society teaches them how to cook healthy and delicious food, and to have fun while doing so.

The idea for the society came from a group of freshers in Pembridge Hall, who began cooking together regularly in 2009. “We’d cook traditional food from our home countries and then try out a bit of everything, accompanied by a drink or two,” says Enrico Fantoni (Chemistry), one of the

group’s founding members.

They now run a packed programme of food and cooking-related events, which have ranged from cooking a full turkey for Christmas dinner to a visit to one of Gordon Ramsay’s restaurants. They’ve organised a pizza and pasta-making evening, a session on making sushi and a lesson devoted to the delicious world of desserts.

The society is open to anyone and the members vary from beginners to those who are so good that they are invited to lead sessions. Current Chairman, Chan Sze Chun (Bioengineering), says: “At the start of the Cooking Society, some people were really hesitant and just stared at the pots. But we run sessions which cover the basics and the members just grow in confidence – we recently had to make a roux – a white sauce that is known for its difficulty – but everyone managed to pull it off!”



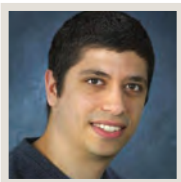
Members of the Cooking Society make salmon and tuna nigiri.

### Highlights

- **Meeting times:** usually once a week
- **Cost:** £15 to join
- **Society size:** around 30 paying members, 120 on Facebook
- **Experience required:** all levels and skills welcome
- **More information:** search Facebook for ‘IC Cooking Society’

“The club isn’t just about cooking; it’s a connection of cultures. This year we plan to run events with all sorts of other union clubs like the Buddhist Society, the Italian Society and the Chocolate Society. It’s a society of societies!” Sze Chun adds.

—JESSICA ADAMS, COMMUNICATIONS AND DEVELOPMENT



## INVENTOR'S CORNER

# Flexible computing

Dr George Constantinides is a Reader in Digital Systems and Head of the Circuits and Systems Group in the Department of Electrical and Electronic Engineering. His research focuses on improving the flexibility and energy efficiency of computational systems and he has formed the Imperial spin-out company Novocore, with Dr Christos Bouganis (also Electrical and Electronic Engineering).

### What do you hope to achieve through your research?

Standard computer architectures like those you find in desktop PCs are general purpose and not suited to specific applications. We want to design customised systems that can be tailored to perform specialised tasks, such as real-time face recognition, automatically, without using large amounts of hardware. In embedded systems, which are small specialised systems within larger devices, such as mobile phones, the capacity to engage with apps has increased, but battery life has reduced significantly. There is a market for devices which are considerably more energy efficient.

### How will you do this?

The complexity of hardware systems lies in producing the hardware itself. However, by changing the way



A low cost, small FPGA platform uses very little energy compared to current hardware systems

the hardware is designed, we can ensure it ends up cheap, simple and power efficient. We use FPGAs (field programmable gate arrays), a technology which allows us to reconfigure hardware design, using small low energy platforms. This avoids the need to design a new chip, costing potentially millions of pounds, for every new technology.

### What next?

Energy efficiency is no longer only a concern for embedded systems, and companies like Google, who use computer systems that operate at the highest possible level, must now monitor their energy consumption. We are working with high performance computing specialists to find out how our technologies can be applied in these areas. Through Novocore, we are trying to bridge the gap between research and industry.

—KAILEY NOLAN, IMPERIAL INNOVATIONS

## course review



By course attendee Dr Joanna Shearer, Head of International Student Recruitment and Marketing (International Office)

### Leadership and Management Development Programme

#### 1 Why did you go on the course?

When I was recruited to this newly developed student recruitment role three years ago, I was new to management. I had done a lot of teaching and thought it might be similar, but after a few months I realised it required a completely different set of skills.

#### 2 What did you learn?

This has been the ideal course for me, as, over the past few years, I've had the opportunity to develop a new team from scratch. Everything I needed to do, from thinking about what roles I required, conducting recruitment and selection, to setting objectives for PRDPs and managing successful teams, has been contained within the course.

#### 3 How has it been helpful in your role?

I hope this programme has allowed me to give my team the freedom in their roles that they deserve, whilst engaging them as a team to achieve common goals. I am incredibly proud of what they have accomplished over the past few years, and of their contributions and insight to the international student recruitment strategy.

[www3.imperial.ac.uk/staffdevelopment/ldc/leadership](http://www3.imperial.ac.uk/staffdevelopment/ldc/leadership)

## Judging the next generation of global health innovators



On 21 March, five students pitched their ideas for a pilot project or prototype addressing global health challenges to a panel which included Sarah Brown, Adjunct Professor at the Institute of Global Health Innovation (IGHI) and wife of the former Prime Minister, Gordon Brown. The winner was named as John Chetwood (Medicine). Sarah shares her experience of being a judge:

"When I am asked to do anything with students, I usually think that I am just invited

on behalf of my Twitter followers. If I talk to students on any topic away from politics, it is invariably about social media. So, it was a welcome diversion to join two health experts to assess five rather brilliant research projects as the 'lay person' for IGHl Imperial. I do have an ancient science degree but everything has moved on so far since then, it is barely worth mentioning. I loved

the energy of each presentation, the breadth of research topics from cancer clusters through river salinity to the hip topic of frugal innovation, and the individuality of each set of PowerPoint images. I think we identified the right winner but, truthfully, every one of the students should persevere with their worthwhile and fascinating projects. I wish I had had that confidence and experience when I was 20!"

"Every one of the students should persevere with their worthwhile and fascinating topics"

## obituaries



### ANTHONY RIPPON

Anthony E. Rippon, former Academic Laboratory Manager (Medicine), died on 22 February 2012. Dr Atul Purohit and Professor Desmond Johnston (both Medicine) share their memories of their former colleague:

“Tony Rippon started at St Mary’s Hospital Medical School in 1965 as Technical Head of the Steroid Research Unit. In 1974, his role expanded as the unit merged with the academic Department of Chemical Pathology and he began to take

on College-wide responsibilities. Tony became Chairman of the Medical School Laboratory Managers Committee and represented the technical staff of the Medical School’s Safety Committee. He also took responsibility for the technical management of the clinical endocrinology research laboratories. When St Mary’s merged with Imperial, the Rector, Lord Oxburgh, invited him to sit on the Technicians’ Training Committee. Tony worked long and hard, without seeking any personal reward. He was someone of the highest integrity and with unquestioned loyalty to the College.

Tony was an active member of the Medical School Arts Committee and he and Kevin Brown jointly organised annual staff and student art exhibitions. Tony’s wood turnings were always a popular feature and in 1995 he was awarded the Rector’s Award for improving the environment of St Mary’s through art.

Tony retired in 2005 and in 2006 he was awarded an Associateship of Imperial College in recognition of his contribution to Imperial for over 40 years. He will be sorely missed by us all.

He is survived by his wife Lynda, daughter Natalie and son Matthew. To share your memories of Tony visit: [www.imperial.ac.uk/reporter](http://www.imperial.ac.uk/reporter)

long  
service

Staff featured in this column have given many years of service to the College. Staff listed below celebrate anniversaries during the period 30 March–24 May. The data is supplied by HR and is correct at the time of going to press.

### 20 years

- Professor Andrew Olver, Professor of Tribology, Mechanical Engineering
- Professor Mike Laffan, Professor of Haemostasis and Thrombosis, Medicine
- Dr Christian Onof, Senior Lecturer, Civil and Environmental Engineering

### 30 years

- Professor Marek Sergot, Professor of Computational Logic, Computing
- Professor Kellogg Stelle, Professor of Physics, Physics
- Emeritus Professor Kim Parker, Senior Research Investigator, Bioengineering
- Mrs Mandy Thorpe, Faculty of Medicine

### 40 years

- Mr Alan Smith, Technician, Aeronautics

## College Secretary retires after 25 years’ service

After 25 years of service, including five as College Secretary, Dr Rodney Eastwood retires this month. During his career, Rodney has helped Imperial through many important milestones, including achieving independence from the University of London, and four mergers with London medical schools. *Reporter* caught up with him to find out about his career:

### Can you describe your role?

I always struggle to explain concisely what I do! A large part of my job involves acting as the College conscience, ensuring Imperial stays on the straight and narrow.

### How did you end up at the College?

Since starting out as a computer programmer at the Natural History Museum in 1974, I have always

worked in ‘Albertopolis’, working my way up Exhibition Road to join Imperial as a Planning Officer in 1987. I took on more responsibilities for planning and, later, strategy, before being appointed College Secretary in 2007.

### What are you most proud of in your career?

I’ve always been very proud that we were able to obtain the freehold on land to the south of Imperial College Road, where the Sir Alexander Fleming, Chemistry and Flowers Buildings stand. It took some careful and protracted negotiation with the Science Museum in the late 80s and early 90s, which, being young and impetuous, I pursued to the end.

“A large part of my job involves ensuring Imperial stays on the straight and narrow”



### Has your career brought you into contact with any memorable people?

When the Labour government was consulting universities regarding top-up fees in 2003, I went with the then Rector, Sir Richard Sykes, to meet Tony Blair. I remember the first thing to greet me on entering Number 10 was young Leo Blair’s toy tractor, abandoned in the hall.

### What are your retirement plans?

I’m looking forward to having a little more time for travel and perhaps some new hobbies to add to making music. I have acquired a breadmaker so I’m hoping to start baking! And, despite spending my career on Exhibition Road, I have visited some of the museums pitifully infrequently, so I’m going to enjoy having time to explore them.

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

## Welcome new starters

Mr David Adey, Physics  
 Mr Bashar Ahmad, EEE  
 Ms Angelica Ale, Life Sciences  
 Mr David Alonso Chacon, NHLI  
 Dr Paul Armstrong, NHLI  
 Ms Julie Bennett, Business School  
 Miss Emily Brewster, NHLI  
 Mrs Maria Broadbridge, Physics  
 Miss Lauren Burton, Security Services  
 Dr Rona Chandrawati, Materials  
 Mr Benjamin Condry, Civil and Environmental Engineering  
 Dr Anne Courmol, Physics  
 Dr Rachel Culley, Faculty of Medicine  
 Dr Sean Donnellan, Physics  
 Ms Valina Doynynska, Catering Services  
 Mr Jimanta Dutta, NHLI  
 Mr Derek Eaton, EEE  
 Miss Julia El-Sayed Moustafa, Public Health  
 Dr Anezka Fiserova, Medicine  
 Dr Tom Ford, NHLI  
 Mr Joseph Franklin, Materials  
 Dr Kun Fu, Business School  
 Dr Esther Garcia Tunon Blanca, Materials  
 Dr Nicolas George, Chemistry  
 Ms Vera Gielen, NHLI  
 Ms Sharon Gould, Medicine  
 Mr Jost Henkel, Physics  
 Mrs Amanda Hinks, Surgery and Cancer  
 Miss Angela Innes, Climate KIC  
 Dr Andrew Innes, Clinical Sciences  
 Dr Eleanor Jay, Materials  
 Miss Shannon Jewell, Sport and Leisure

Mr Ioscani Jimenez Del Val, Chemical Engineering  
 Mr Asher Kaboth, Physics  
 Mr Edmund Kelleher, Physics  
 Mr Haseong Kim, EEE  
 Dr Sara Lamas Oliveira Marques, Life Sciences  
 Miss Heather Lambie, NHLI  
 Mr Eoin Leen, Life Sciences  
 Mrs Judith Leworthy, Surgery and Cancer  
 Dr Yiyang Lin, Materials  
 Mr Stuart Lowe, Materials  
 Mr James McCloskey, Business School  
 Dr Paul McKay, Medicine  
 Dr Qiu Meng, NHLI  
 Ms Lynne Messenger, Finance  
 Dr John Mina, Chemistry  
 Dr Kalnisha Naidoo, Medicine  
 Dr Jose Palacios Fabrega, NHLI  
 Dr Athanasia Panousopoulou, Computing  
 Miss Nisha Patel, Faculty of Medicine  
 Mr James Patterson, Computing  
 Ms Ilaria Pepponi, Medicine  
 Dr Tiago Pereira Da Silva, Mathematics  
 Dr Cristina Perez Becerril, Medicine  
 Mr John Phillips, Chemistry  
 Mrs Christine Pinsent, Business School  
 Ms Ranjana Poudel, Physics  
 Dr Albert Power, Medicine  
 Dr Benoit Raymond, Life Sciences  
 Mr Andres Rivera Pena, EYEC  
 Mr Callum Romeril, Research Office  
 Dr Luciana Rubinstein, Public Health  
 Dr Eleanor Sandhu, Clinical Sciences  
 Mr Satpal Sangha, Bioengineering

Dr Savvas Saouros, Chemistry  
 Mr Vincent Sauvage, Surgery and Cancer  
 Dr Shira Schnitzer, Communications and Development  
 Dr Giovanni Sena, Life Sciences  
 Ms Kayane Shadarevian, Business School  
 Ms Deepti Sood, Surgery and Cancer  
 Dr Izabela Szostkiewicz, Life Sciences  
 Miss Danlu Tong, Chemical Engineering  
 Mr Matthew Treadgold, Faculty of Medicine  
 Miss Samrawit Tzehaie, Surgery and Cancer  
 Dr Andrew Ulijasz, Medicine  
 Miss Jane Whitton, Public Health  
 Mr Andrew Wilson, Faculty of Medicine  
 Dr Melanie Wood, Medicine  
 Mr Hugo Wride, Computing

## Farewell moving on

Dr Kevin Balbi, Life Sciences  
 Dr Claudio Belotti, Physics (5 years)  
 Miss Sharandeep Bhogal, Medicine  
 Dr Christopher Bird, International Office  
 Mr Adam Britton, Life Sciences  
 Miss Charlotte Burstrom, Life Sciences  
 Dr Thomas Collins, NHLI  
 Miss Emma Coxhill, Imperial College Union  
 Dr Lise de Jonge, Materials  
 Dr Eric de Silva, Public Health  
 Dr William Edmands, Surgery and Cancer  
 Mr Nathan Eng, Mechanical Engineering  
 Dr Benjamin Field, Medicine  
 Dr David Gamez, Computing  
 Mr Oriol Garcia Rovira, Catering Services  
 Dr Andreas Georgiou, Computing  
 Mr Petros-Zewdie Getahune, Catering Services (9 years)  
 Ms Emily Gillespie, Environmental Policy  
 Miss Elisabetta Grecchi, Medicine  
 Mr Gary Hahn, NHLI  
 Mr Andrew Hammond, Life Sciences  
 Dr Jeff Hardy, Faculty of Engineering  
 Mr Roger Hare, Physics (33 years)  
 Dr Yaik Ho, Medicine  
 Mr Yassine Houari, Environmental Policy  
 Mrs Fatma Ibrahim, EYEC  
 Dr Michalis Koutinas, Chemical Engineering (5 years)  
 Dr Santosh Kumbharkar, Chemical Engineering  
 Ms Tracy Lane, Environmental Policy  
 Miss Nicola Lloyd, Public Health  
 Miss Martina Lundberg, NHLI  
 Mr Rafat Malik, Corporate Partnerships  
 Dr Andrea McDonald, Public Health  
 Dr Alexandru Milcu, Life Sciences (6 years)  
 Dr David Miller, Chemistry  
 Miss Komal Nayak, Medicine  
 Dr Keng-Wooi Ng, NHLI  
 Miss Damaris Njoroge, Library  
 Dr David Noonan, Computing  
 Miss Kemi Olafare, Finance (8 years)  
 Dr Mayca Omega, Medicine  
 Dr Lorenzo Pellis, Public Health  
 Ms Reen Polonsky, Surgery and Cancer

Ms Ruth Poulter, Faculty of Medicine (7 years)  
 Dr Sarah Robinson, Life Sciences  
 Mr Andy Rutt, Civil and Environmental Engineering  
 Dr Jobanpreet Sehmi, NHLI  
 Mr Anil Sharma, NHLI  
 Dr Robert Shaw, Life Sciences  
 Dr Andriy Shevchuk, Medicine (8 years)  
 Dr Shweta Singh, Life Sciences  
 Dr Andre Studer, Chemistry  
 Dr Marcus Swann, Surgery and Cancer  
 Mr Geoff Thompson, Medicine (5 years)  
 Miss Helena Tutill, Medicine (10 years)  
 Mr Ivan Vallado Echevarria, Medicine  
 Miss Carmelina Vinci, Registry  
 Mr Graham Wadsworth, Medicine  
 Miss Katie Wetherell, EYEC  
 Ms Farah Williams, Medicine  
 Miss Fiona Wong, Environmental Policy

## retirements

Dr Celia Maier, Public Health (10 years)

This data is supplied by HR and covers the period 20 February –11 March. This data was correct at the time of going to press.

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

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

## PHOTO EXPO

Chris Allan (Occupational Health) became an artist at the age of 25, when he painted a picture of Audrey Hepburn for his fiancée, as he was unable to afford the original. His exhibition of paintings and sculptures will be shown at the Blyth Art Gallery over the next month. Chris's large monochrome paintings and light-reflective studies feature a range of subjects, including loneliness and solitude in city life. In addition, he exhibits a quirky set of statues he has found and adapted that explore the nature of the human form.

Visit Chris's exhibition in the Blyth Galley until 26 April



## Speak out

### Story ideas?

We welcome contributions from across the College. The next publication day is 3 May. Reporter is published every three weeks during term time in print and online at [www.imperial.ac.uk/reporter](http://www.imperial.ac.uk/reporter)  
 Contact Emily Ross-Joannou:  
 ✉ [reporter@imperial.ac.uk](mailto:reporter@imperial.ac.uk)  
 ☎ +44 (0)20 7594 6715



1 MAY ▶ PUBLIC LECTURE

### The LHC project at CERN: exploring physics moments after the Big Bang

What is the origin of mass? Why is the universe composed of matter rather than antimatter? Experiments at the Large Hadron Collider (LHC)

at CERN are addressing some of the most fundamental questions about the origin, evolution and composition of our universe. In the fifth Peter Lindsay Memorial Lecture, Professor Tejinder Virdee (Physics) outlines some of the challenges faced by scientists building and running experiments operating in the harsh environment created by hundreds of millions of high energy proton-proton collisions every second.



14 MAY ▶ PUBLIC LECTURE

### Optogenetics and other tools for the analysis of neural circuits

Understanding how neural circuits implement brain functions and how these computations go awry in brain disorders is a top priority for

neuroscience. Research into genetically encoded reagents that can powerfully and precisely activate and silence specific neuron types in response to pulses of light could be used in the treatment of neurological and psychiatric disorders. Professor Ed Boyden, Associate Professor of Biological Engineering and Brain and Cognitive Sciences at MIT, talks about the potential of this new field in the 2012 Bagrit Lecture.

## take note

### Survey about staff accommodation

As part of proposed plans for the new Imperial campus on Wood Lane, the College is exploring opportunities to offer private residential accommodation, which may include apartments for staff. An anonymous survey has been launched to seek input to the proposals from staff, specifically their accommodation requirements and what pricing would be attractive.



To complete the survey, visit:  
<https://www.ox-p.com/imperial>

30 MARCH ▶ PUBLIC LECTURE

### A retrospective on 50 years as an academic chemical engineer

Professor Stanley Sandler, University of Delaware



24 APRIL ▶ PUBLIC LECTURE

### Bootstraps, spurs and gift horses: the financing journey

Panel includes Professor Bart Clarysse (Business School)

25 APRIL ▶ SEMINAR

### Structural biology of cell surface signalling assemblies

Professor Yvonne Jones, University of Oxford

25 APRIL ▶ CONFERENCE

### Complexity and risk

Industry and academic speakers



1 MAY ▶ MUSIC

### Lunchtime concert

Abbracci piano quartet

2 MAY ▶ PUBLIC LECTURE

### New vistas of Mars

Professor Sanjeev Gupta (Earth Science and Engineering)

3 MAY ▶ MUSIC

### Lunchtime concert

Cavaleri Quartet



3 MAY ▶ PUBLIC LECTURE

### Athena Lecture: Insights into the career of a neuroscientist

Professor Dame Nancy Rothwell, University of Manchester

3 MAY ▶ SEMINAR

### Refugee scholars at LSE

Dr Felicitas Starr-Egger (Humanities)

11-12 MAY ▶ FESTIVAL

### Imperial Festival

A celebration of Imperial research and culture



17 APRIL ▶ SEMINAR

### Dendritic cells in influenza and asthma

Professor Bart Lambrecht, Ghent University, Belgium

18 APRIL ▶ PUBLIC LECTURE

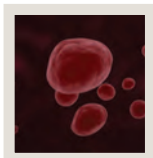
### Behind the scenes at the Lifelong Health Project

Professor Armand Marie Leroi (Life Sciences)

24 APRIL ▶ PUBLIC LECTURE

### Regeneration and the immune system

Professor Nadia Rosenthal (NHLI)



## MEET THE READER



### Scott Heath, President, Imperial College Union

#### What are you doing in the picture?

I'm reading my copy of *Reporter* to Mike the Micrometer – the Union mascot made of gun metal which normally resides under my desk! Micrometers are used to accurately measure wires and other components. It was created in 1966 and is deliberately heavy to make it difficult to steal!

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

I would turn it into a broadsheet for the shock value and I'd create a satirical column pretending to be members of senior staff.

#### Who would be your cover star?

I'd like to see a group of the PAs who support the senior staff at the College on the cover. I'm in contact with them regularly to set up meetings but I've never had the chance to get to know them, and I think they'd have some interesting stories to tell for the centre spread feature!

Want to be the next reader featured in *Reporter*? Send in a picture of yourself with a copy of *Reporter* in your location of choice to: [reporter@imperial.ac.uk](mailto:reporter@imperial.ac.uk)

## Stay in the loop

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