FRINGE BENEFITS

Visitors to the first Imperial Fringe take things to heart as they get to grips with our research → CENTRE PAGES
Researchers unite to open up about animal research

Imperial has joined medical charities, research funders, the pharmaceutical industry and other universities in signing a declaration for greater openness on animal research following signs of a decrease in public support for animal research.

The results of a recent Ipsos Mori poll commissioned by the government reveal a 10 percentage point decrease in public support for scientific research involving animals since 2010.

Although levels of support remain high overall, with 66 per cent of people supporting animal experimentation for medical research, 40 per cent want to know more before they form a firm opinion.

Professor Maggie Dallman, Principal of the Faculty of Natural Sciences, said: “Animal research is a small but vital part of scientific and medical research in the UK. Terrorist activity by animal extremists in the past has led some scientists to fear what will happen to them if they speak publicly about their work.

“I hope this declaration will give organisations and scientists the confidence to speak out with the support of the wider research community.”

The declaration was signed by more than 40 research organisations, including 15 universities.

—KERRY NOBLE, COMMUNICATIONS AND DEVELOPMENT

Knee bone awarded Wellcome Trust fellowship for public engagement

Roger Kneebone, Professor of Surgical Education (Surgery and Cancer), has been awarded a prestigious fellowship from the Wellcome Trust to support his work promoting public engagement with science and medicine.

The Wellcome Trust Engagement Fellowships champion and develop upcoming stars in public engagement with science. The scheme, now in its second year, provides support for science communicators with a strong track record of delivering high-quality public engagement and aims to propel them to become leaders in their field.

Kneebone will build links between the College’s world-leading biomedical research and a wide range of public engagement events and venues, creating imaginative ways for scientists and the public to share ideas and influence one another’s thinking.

During his fellowship, Professor Kneebone will use his fellowship to build on his passion for education, and for communicating and exploring new ideas. In particular, he will look at how his field of surgery overlaps with the worlds of art, performance and craftsmanship.

The Engagement Fellowships are part of the Wellcome Trust’s strategic vision of working with researchers and the creative industries to help societies explore and become involved with biomedical science.

—ADAPTED FROM A NEWS RELEASE BY THE WELLCOM TRUST
College receives £35 million to support Imperial West plans

Imperial has been awarded £35 million to support the development of its new Imperial West technology campus in west London. The award, funded by the Higher Education Funding Council for England (HEFCE) through the UK Research Partnership Investment Fund (UKRPIF), will contribute to the development of the campus’ £150 million research and translation hub.

The 42,000-m² hub will be the focus of the seven-acre technology campus on the former BBC Woodlands site, alongside the A40. It will deliver world class education, research and translation activities, and foster partnerships with global stakeholders from business, industry, higher education and the NHS.

Incorporating 50 new units for spin-out companies, the hub will serve the needs of London’s enterprise community, expanding support for innovation drawn from Imperial and other leading universities. With an emphasis on the commercialisation of research to bring benefits to society and the economy, the site is expected to attract innovation businesses to co-locate and could offer a base in London to world class higher education institutions from outside the UK. The hub will also provide high specification, multidisciplinary research space for 1,000 scientists and engineers investigating next generation materials.

Sir Keith O’Nions, President & Rector, said: “The opportunities presented by the Imperial West technology campus are tremendously exciting. It will bring together world class teaching and research with our cutting edge translation activities, working closely with business, the NHS and industry. I am delighted that HEFCE recognised the huge potential with such a substantial award.”

Alongside the award from HEFCE – one of the largest awarded from the UKRPIF, the new £150 million research and translation hub will be funded by a £90 million contribution from investor Voreda, with the remainder funded by the College.

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

Imperial celebrates on Commemoration Day 2012

On 24 October more than 2,400 Imperial undergraduates gathered at the Royal Albert Hall to receive their degrees from the College’s President & Rector, Sir Keith O’Nions.

Receiving Student Awards for Outstanding Achievement on the day were Kadhim Shubber (Physics), Jason Parmar and Marco Crouch (both Chemistry), Nicolas Massie (Medicine), and Charlotte Ivson (Life Sciences), who have all been nominated by senior members of College staff for their contribution to student welfare, the College’s outreach work, and charity.

Imperial also honoured five members of staff who received Rector’s Medals at the ceremony. Professor Alan Spivey (Chemistry) and Dr Emma McCoy (Mathematics) both received Rector’s Medals for Outstanding Contribution to Teaching Excellence. Professor Alison McGregor (Surgery and Cancer) received a Rector’s Medal for Excellence in Pastoral Care.

A Rector’s Medal for Excellence in Supporting the Student Experience went to Dr Michael Barrett (Medicine), whilst Professor Adrian Sutton (Physics) received the Rector’s Medal for Outstanding Contribution to Teaching Excellence.

Lord Kerr of Kinlochard, who served Imperial as Chairman of the Court and Council from 2005–11, was awarded an honorary Fellowship, and alumnus Jonathan Spatz received an Imperial College Medal for his work with the Imperial College Foundation – a non-profit corporation based in Georgia, USA.

—ANTHONY WILKINSON, COMMUNICATIONS AND DEVELOPMENT
HRT gets the all clear

Taking hormone replacement therapy (HRT) is safe and can protect against heart disease without increasing cancer risks, reported the Daily Mail. Researchers found that women who take HRT at the start of the menopause for 10 years can reduce their risk of heart failure, heart attacks and premature death. Most importantly, the study revealed that there was no extra risk of cancer, strokes or blood clots, even 16 years after starting HRT. Dr John Stevenson (NHLI) said UK authorities should update guidance after starting HRT. Dr John Stevenson (NHLI) said UK authorities should update guidance that says HRT should be offered only to women with serious menopausal symptoms for the shortest time possible. “The strength of the study is its long duration, and this shows that HRT, started around the menopause, is really pretty safe indeed, even for longer-term use,” he said.

Predicting humour is difficult, researcher warns

Text prediction systems in phones, search engines and word processors often get things wrong, sometimes hilariously. A team of researchers in Finland want to harnass these predictive text errors to liven up the way humans interact with computer software. The researchers believe that they can write programs that mimic this unintentional humour. However, Michael Cook (Computing) warned that making computers funny can be fraught with difficulty. “With research on humour, there is always that danger that by analysing it too closely it loses some magic,” he commented to New Scientist.

Lion study

A pride of captive lions descended from the private menagerie of the Emperor of Ethiopia, Haile Selassie, is genetically distinct from all other lions in Africa, reported The Independent. The lions have a distinctive dark mane and are slightly smaller and more compact than other African lions. It is thought that there may be less than a few hundred Ethiopian lions living in the wild, and scientists are urging that their unique genetic makeup should be preserved by a captive-breeding programme. “Every effort should be made to preserve as much of the lion’s genetic heritage as possible,” said Susann Bruche (NHLI).

DNA test today keeps wrinkles at bay

A London beauty salon has become the first in the world to try a new 30-minute DNA test that promises to match cosmetic products to a person’s genetic make-up, reported the Evening Standard. The simple saliva test, developed by Imperial researchers, analyses a customer’s DNA to determine what active ingredients in different beauty lotions will work best for each person. “Skin has so many genetic mutations,” said Professor Chris Toumazou (Electrical and Electronic Engineering) who invented the technology. “It’s very exciting to be able to bring this technology direct to consumers and show them how it will work.”

awards and honours

Buckle honoured for his dedication to health and safety

Professor Peter Buckle, Senior Research Fellow (Surgery and Cancer), has received one of the Royal Society for the Prevention of Accidents’ Distinguished Service Awards. The safety charity’s awards are reserved for individuals who make exceptional contributions to society through their work in health and safety. Professor Buckle is an ergonomics expert who is renowned for his abilities to promote collaboration between different professional and academic disciplines and organisations.

Customer First

The Faculty Education Office in the Faculty of Medicine has achieved the Customer First accreditation – the national standard for customer service. Chris Harris, Quality Assurance and Enhancement Manager, said: “There has been a whole-office commitment to improving our standard of service to students over the last 12 months and there are now customer champions in all of our campus offices. We are delighted this work has been recognised by the Customer First assessor.”

Barnes elected to Academy of Europe

Professor Peter Barnes (NHLI), pictured, has been elected a Member of the Academia Europaea or the Academy of Europe, whose members include leading European experts from the physical sciences and technology, biological sciences and medicine, mathematics, the letters and humanities, social and cognitive sciences, economics and the law. Professor Barnes was selected in recognition of his contributions to international research and teaching in respiratory medicine.

Scrapheap challenge

An undergraduate from the Department of Electrical and Electronic Engineering has come third in the Best Electronic Engineering Student category in the Science, Engineering and Technology Student of the Year Awards. Jonathan Hazell was recognised, at a ceremony at Kensington Town Hall on 26 September 2012, for a working radar system that he developed from a heap of hi-tech junk.
Increase in hospital admissions for throat infections

The number of children admitted to hospital in England for acute throat infections increased by 76 per cent between 1999 and 2010, according to research published on 19 October in Archives of Disease in Childhood.

Acute throat infection (ATI), which includes acute tonsillitis and acute pharyngitis, is one of the most common reasons for consulting a GP. The majority of ATIs are self-limiting and can be managed at home or by the GP, but a small proportion may require hospital admission.

The research, which was funded by a fellowship from the National Institute for Health Research, showed that the number of children admitted to hospital with ATI increased from 12,283 in 1999 to 22,071 in 2010 – a rise in admission rate of 76 per cent. Short hospital stays, lasting less than two days, increased by 115 per cent over the decade, and accounted for the majority of admissions.

Dr Elizabeth Koshy (Public Health), who led the study, said: “It is very concerning that there has been a major increase in hospital admissions for children with acute throat infections, particularly among those aged under five. We think this is likely to be due to problems at the primary and secondary care interface. Our findings relating to short hospital stays suggest that many of the children admitted with acute throat infections could have been effectively managed in the community. Our study highlights the need to urgently address the issue of healthcare access, with improved models of integrated care within primary and secondary care, to avoid potentially unnecessary hospital admissions for relatively minor infections in the future.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Tree of life branches out

Exploring the evolutionary tree of life is now as easy as navigating an online map, thanks to a new interactive website called OneZoom™, which went live on 16 October.

Since Darwin, biologists have struggled to draw a tree showing important details about the many known living organisms and how they are related to one another. Even relatively simple trees have been extremely challenging to visualise without huge sheets of paper or multiple computer screens.

Now OneZoom, which was partly inspired by the zooming technology of mapping software such as Google Maps, makes it possible to start with a broad view of life on Earth, then zoom in on any point to explore incrementally smaller categories of life, using intuitive mouse actions.

Dr James Rosindell (Life Sciences) developed OneZoom in collaboration with Dr Luke Harmon from the University of Idaho. “One-Zoom gives you a natural way to explore large amounts of complex information like the tree of life,” he explained. “It’s intuitive because it’s similar to the way we explore the real world; by moving towards interesting objects to see them in more detail.”

“We’re still looking at data on the screen in ways that can easily be printed on paper and that’s a serious visual constraint. But it’s no longer necessary to restrict ourselves because we mostly view the information on screen only. One-Zoom embraces this by laying out the data in an exciting, interactive way that could not be captured on printed sheets,” Dr Rosindell said.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

First footage of West African seahorse

Researchers have released the first-ever footage of a little-studied seahorse species with video captured off the coast of Senegal by MSc in Conservation Science student, Kate West (Life Sciences).

Ms West captured the footage whilst travelling on a Senegalese fishing boat. She was filming seahorses in the wild, and speaking to local people about their interactions with these unusual species of fish, as part of an investigation into West Africa’s burgeoning seahorse trade.

The study is being carried out by scientists at the Zoological Society of London’s (ZSL) Project Seahorse, Imperial College London, and the University of British Columbia, Canada.

Research to date indicates that trade in West African seahorses has risen dramatically over the past few years, with exports of about 600,000 annually. They are used primarily in traditional Chinese medicine.

“The West African seahorse is one of two native species caught locally for trade around the world,” Ms West explains. “But it’s shocking that so little is known about this fish when more than a tonne of them are officially exported each year. Poor diving conditions and underwater visibility make it more difficult to conduct field studies off the West African coast than in other areas where seahorses are found. No research has been done on this species, and nothing is known about its habitat, life cycle or population status, which is why this study is so vital for their conservation.”

“Our findings will be shared with the Senegalese and other governments, so they can meet their obligations to ensure that the seahorse trade is sustainable,” adds Chris Ransom, West and North Africa Programme Manager at ZSL.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT
New opportunity for rapid treatment of malaria

Imperial researchers have identified a new means to eradicate malaria infections by rapidly killing the blood-borne *Plasmodium* parasites that cause the disease.

Malaria causes up to three million deaths each year, predominantly afflicting vulnerable people, such as children under five and pregnant women, in tropical regions of Africa, Asia, and Latin America.

Treatments are available for this disease, but the *Plasmodium* parasite is fast becoming resistant to the most common drugs, and health authorities say they desperately need new strategies to tackle the disease.

This new potential treatment uses molecules that interfere with an important stage of the parasite’s growth cycle and harnesses this effect to kill them. The impact is so acute it kills 90 per cent of the parasites in just three hours and all those tested in laboratory samples of infected human blood cells within 12 hours.

The research was carried out by chemists at Imperial and biological scientists from the research institutions Institut Pasteur and CNRS in France. Their work is published in the journal *Proceedings of the National Academy of Sciences (PNAS)*.

Lead researcher Dr Matthew Fuchter (Chemistry) said: “*Plasmodium falciparum* causes 90 per cent of malaria deaths, and its ability to resist current therapies is spreading dramatically. Whilst many new drugs are in development, a significant proportion are minor alterations, working in the same way as current ones and therefore may only be effective in the short term. We believe we may have identified the parasite’s ‘Achilles’ heel’, using a molecule that disrupts many vital processes for its survival and development.”

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

Test developed to detect early-stage diseases with naked eye

Scientists from Imperial have developed a prototype ultra-sensitive sensor that would enable doctors to detect the early stages of diseases and viruses with the naked eye, according to research published in the journal *Nature Nanotechnology* on 25 October.

The team, from the Departments of Bioengineering and Materials, report that their visual sensor technology is 10 times more sensitive than the current gold standard methods for measuring biomarkers. These indicate the onset of diseases such as prostate cancer and infection by viruses including HIV.

The researchers say their sensor would benefit countries where sophisticated detection equipment is scarce, enabling cheaper and simpler detection and treatments for patients.

Professor Molly Stevens, (Materials and Bioengineering), said: “It is vital that patients get periodically tested in order to assess the success of retroviral therapies and check for new cases of infection. Unfortunately, the existing gold standard detection methods can be too expensive to be implemented in the world where resources are scarce. Our approach affords for improved sensitivity, does not require sophisticated instrumentation and it is 10 times cheaper, which could allow more tests to be performed for better screening of many diseases.”

Dr Roberto de la Rica, co-author of the study (Materials), added: “We have developed a test that we hope will enable previously undetectable HIV infections and indicators of cancer to be picked up, which would mean people could be treated sooner. We also believe that this test could be significantly cheaper to administer, which could pave the way for more widespread use of HIV testing in poorer parts of the world.”

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

It’s life, but not as we knew it

There may be many times more animal species than previously estimated, after a new study identified more reliable ways to predict biodiversity across the planet.

Professor Timothy Barraclough (Life Sciences) and his former Imperial colleague Dr Diego Fontaneto were among a multinational team that has proposed a new way to measure the number of species of tiny creatures. The outcomes of the research are vital for recording biodiversity, which is often used as an indicator for the health of an ecosystem or the wider environment.

The previous studies within the field had used variations of a particular gene – rDNA 18S – as a marker to estimate the range of species.

The new method uses a number of biological characteristics to identify species and has proved to be successful in classifying different animals, many of which are too small to be seen without a microscope. The group, whose research was published in *Proceedings of the National Academy of Sciences (PNAS)* on 2 October, also recommend that future studies use their system instead of the past practice.

“Previous studies appear to underestimate the diversity of life. Our approach uses a different type of DNA barcode, which is not only more accurate but also suggests that far greater numbers of species exist,” said PhD student Cuong Tang (Life Sciences), who conducted the research.

The results of the study apply especially to efforts attempting to record diversity in the world’s soils and sediments. Switching from the previously used method to this alternative DNA barcode could lead to far higher estimates of diversity than previously estimated.

—MICHAEL JONES, COMMUNICATIONS AND DEVELOPMENT
Developing foresight

Dr Simon Schultz, Senior Lecturer (Bioengineering) discusses the future of academic collaboration with industry.

“Earlier this year, I stood in front of an audience of corporate R&D directors and suggested that in the future their brains could be eaten by cannibals ... on Hampstead Heath. Career suicide? No, exactly the opposite, in fact. I was speaking at Imperial’s 2032: Tech Foresight conference – a unique experiment to bring academics and industry together to explore the unintended effects that the research I’m doing in my lab right now might have in the future (and, I hasten to add, the cannibals were a worst-case societal modelling scenario, not an expected outcome).

I am director of the Neural Coding Laboratory in Bioengineering, where my research on the brain circuitry underlying perception and cognition doesn’t at first seem like work which would grab the attention of corporate research funders. Yet it is increasingly important that industry and universities work more closely with each other; and not just with a focus on today’s core business activities.

Whilst there is growing insecurity about the research funding available through more traditional channels, the amount of corporate research funding available is on the increase, as is the recognition that universities are vitally important to industry. It is clear that in the near future, industry’s contributions will be ever more important to the research done at academic institutions like Imperial – not only in the form of research funding, but also in the less tangible benefits that a close relationship with the outside world can bring to a university.

Take the Tech Foresight conference as an example: academics and business people coming together to consider where we might be in 20 years’ time, through interactive sessions which culminated in the creation of a timeline to the future and in three scenarios, focused on technological developments and the societal conditions that could affect the way we adopt these new technologies.

The hazards of looking into the future and trying to say something meaningful can be easily imagined – its rewards were a surprise though. The benefits for the corporate attendees were clear; a glimpse of the kind of research happening at Imperial that could truly overturn the world in which they do business. We discussed technologies which could, in the future, pose all kinds of opportunities – and dilemmas – for industry; for instance, brain computer interfaces are likely to offer many improved ways for workers to interact with information. However, might they also offer more dubious temptations; by allowing businesses to monitor – and dictate – an employee’s work ethic, for example?

For my part, it was also fascinating to first look back and consider how things have changed since I wrote my doctoral thesis in the area of computational neuroscience and to then look forward and imagine what my current PhD students will be working on when they reach my stage in their careers. We made no explicit predictions, but there was real value in taking that time to stop and consider the consequences of my research and to reflect on what kinds of new research might be possible in the future, given developments in technology to come. Moreover, it was thought provoking to discover, through speaking on the day with other academic ‘Foresighters’, that some of the changes I see in my field of research – the decline of the role of ‘big pharma’ and the rise of smaller neurotechnology companies, for example – are trends felt by people across the board.

The need to look to the future – not to predict where we will be in 20 years but to consider a broad range of possible scenarios – is one which we all feel; academics, business people, universities, society. H.G. Wells, an alumnus of the Royal College of Science (now part of Imperial), wrote an essay in 1932, in which he called for experts who would consider the consequences of the changes going on in the world around them. He titled it Wanted: Professors of Foresight and I think he might have been onto something.”

Next year’s conference will be held on 10 May 2013 and the hunt is on for Professors of Foresight. If you are interested in learning more please email Eleanor Harding: e.harding@imperial.ac.uk.
Spooky science

Smoking marshmallows, a vibrant heart muscle and cobwebs galore – welcome to the Science Behind Our Fears event, held in the Main Entrance on 25 October. Reporter finds out more about the first of the Imperial Fringe events, which will provide staff and students with opportunities to try out public engagement throughout the year.

Last May, the Imperial Festival opened the College to thousands of members of the public for the first time and the subsequent evaluation revealed there was a huge appetite in the College to repeat this type of event on a more regular basis.

“Imperial Fringe aims to provide staff and students with a more informal platform to discuss their work and to encourage more members of the community to give public engagement a try,” explains Natasha Martineau, Head of Research Communications (Communications and Development).

Over the next six months the College will be holding Fringe events most months, drawing together research from across the College on topical themes, such as bones, or timely issues like last week’s on Halloween.

The Science Behind Our Fears event drew in around 350 visitors many of whom were young people.

Events Officer Harriet Martin (Communications and Development) was really pleased with the turnout.

“We really wanted to tap into the growing appetite for hands-on, science-related evening events that young people are flooding to across London,” she says.

Cryogenics and the end of the world

One of the most dramatic stalls of the evening was run by PhD student Leon Vanstone (Aeronautics), who was based on a tricycle with a white umbrella, decorated with small black skeleton heads.

There, he demonstrated to staff, students and members of the public how to freeze and smash roses using liquid nitrogen, in order to explore the subject of cryogenics. Leon also fed visitors freshly iced marshmallows, which smoked when you crunched them.

Cryogenics is the concept of cooling legally-dead people to liquid nitrogen temperature (-210 °C) where physical decay essentially stops. Leon used his experiment to tackle the Halloween-appropriate topic of apocalypse; more specifically, ‘When the world is over, what can humans do next?’ One of the ideas is to use cryogenics to freeze and transport people to a new star thousands of light years away to ensure the survival of the human race.

Leon explained to visitors that the technology for cryogenics isn’t yet possible because the effect of freezing on people’s internal membranes is not known.

“I love doing live experiments and talking about the ethical questions of our research with members of the public,” says Leon.

Leon regularly gets involved in public engagement activities at the Natural History Museum, as well as helping out with homework.

“I really enjoy speaking to the public about the kind of things we do in the lab, and sometimes using crazy analogies”
Can you die from fright?

Brandishing a real pig heart procured from the local butcher, research postgraduates Pete Wright and Matt Tranter (NHLI) drew visitors to their stall where they discussed whether it is possible to ‘die from fright’. “People are well aware of the dangers of heart attacks,” says Pete, “but in our industrialised society, the average person is so far removed from the visceral that we wanted to give them the chance to actually feel the myocardium – the muscular tissue of the heart – and, in my opinion, the most amazing material in the universe!”

Pete and Matt both work in Professor Sian Harding’s group, with Pete using microscopy to consider how receptors in the heart are affected by stress and Matt looking at menopausal women who have suffered from cardiac arrest following stressful scenarios.

Although Matt had never had any experience of being involved in a public engagement activity like this before, Pete had volunteered at the Imperial Festival in May, where he talked to the public about cardiac stem cells. “These type of events take you out of the narrowly focused mindset of the lab and remind you how exciting what you are doing really is,” he explains. He recalls being asked some very bizarre questions, such as, “can we eat muscle grown from stem cells” and “is it a good food to take to space?”

Modelling a zombie outbreak

The most contagious stall of the event was run by Junior Research Fellow Dr Deirdre Hollingsworth and Dr Wes Hinsley (both Public Health). Deirdre’s role at Imperial is to build computer models of how infectious diseases are transmitted, to help inform policy during an outbreak such as the swine flu epidemic in 2009. Wes provides high performance computing support for academics and, as a postdoctoral researcher at Imperial, developed computer modelling software called the Global Epidemic Simulator.

At the event, the team used a greatly simplified interactive version of the global simulator to show the behaviour of an infectious outbreak of Halloween-esque figures such as zombies, werewolves, witches and vampires. The specific characteristics of a disease, along with people’s mobility and any intervention policies applied, are key factors in predicting the spread of real outbreaks. Deirdre explains the theory of the simulation: “Zombies are infectious when they are symptomatic – you can easily spot a zombie. So if you can isolate everyone who looks like a zombie you can control a zombie outbreak.” Wes goes on to explain how werewolves have seasonal behaviour in that at certain times of the year, they make more ‘contacts’ than at other times. This behaviour is comparable to influenza, which people in the UK most commonly catch in autumn, perhaps due to the social effects of the previous school holidays, or to the change in weather.

In addition to showing visitors the computer model, Deirdre also concocted a simulated epidemic at the event – getting volunteers to infect unsuspecting visitors with ‘infection cards’. Those infected had to go up to the stall where their ageband and the time was fed into a computer, with real-time data analysis projected onto the wall. They were then invited to roll a dice and then infect that number of other people to propagate the epidemic. “By the end of the event we had 136 cases, mainly in 20–30 year olds”

Both Deirdre and Wes hope the exercise will help people gain more of an understanding about media coverage of epidemics. “When the swine flu epidemic hit, there was a lot written in the media about it, but there wasn’t much about the dynamics of outbreaks,” says Deirdre. “I hope from our demos that people will gain an awareness that there are scientists who model outbreaks and carefully consider the effectiveness of interventions based on the likely characteristics of the disease.”

Continuing with the zombie theme, visitors to the event also had the chance to enjoy talks by Frank Swain, science writer and broadcaster, who is currently writing How to make a Zombie: the real life (and death) of science reanimation and mind control.

Stephen Roberts, Acting Head of Face-to-Face Learning at the Natural History Museum, was one of the many visitors to enjoy the first Fringe event. “It was a delight to see so many enthusiastic conversations taking place and such a vibrant atmosphere,” he says. “These Thursday nights will be another excellent addition to the increasingly rich cultural landscape that we all enjoy on and around Exhibition Road – I am looking forward to the next one.”

“Can you die from fright?”

Exhibiting at the Fringe

1 Leon Vanstone (Aeronautics)
2 Matt Tranter (NHLI)
3 Dr Wes Hinsley (Public Health)
Xiaodong Zhang

Reporter speaks to Professor Xiaodong Zhang (Life Sciences), Director of the Centre for Structural Biology (CSB) at the College, about receiving a Wellcome Trust Senior Investigator Award.

How did you feel when you heard you had won the award?

It felt very surreal. The award gives me a lot of freedom to explore things that I probably couldn't have done before and provides financial security for my group for the next five years.

What is your main field of research?

I study the repair process of DNA which has been damaged by toxic chemicals, such as smoke or drugs.

How is the funding going to benefit the CSB?

The award gives me a lot of freedom to explore things that I probably couldn't have done before.

The award is personal. However, what I am doing is part of the Centre’s mission as well. The CSB has been awarded the Wellcome Trust multi-user equipment grant, which allows us to update our major facilities. As the director, my goals are to achieve even higher quality of research in structural biology and to promote collaboration between scientists.

What will you use this award to investigate?

One thing I want to look at is the detection of DNA damage using cell biology and biochemical techniques. Such damage sends signals that trigger a cascade of cellular events that eventually lead to action by the cell.

What are your hopes for your research in the future?

I want to be the major contributor in dissecting the DNA pathway at the atomic level. If we understand that, in principle it could help us understand cancer development and devise novel treatments for patients.

Keeping research afloat

PhD Student Peter Wright (NHL) writes about a petition he is organising to protect transportation of animals for medical research.

“As a PhD student at the National Heart and Lung Institute I conduct research into heart failure using animal models. Animal experimentation is a central pillar of modern medical research. Every Nobel Prize awarded for Physiology or Medicine over the last 40 years (save for one in plant science) has been informed by animal work.

Yet there are individuals and groups who claim in vivo research is devoid of scientific value. Some are well-funded charities and all claim to represent the majority of the public.

Recently they have caused huge disruption for the scientific community. Ferry companies and airlines have stopped essential transportation of animals destined for UK research labs. This is in response to concerted lobbying and, in the worst cases, intimidation of employees.

Somewhat understandably these companies have bowed to this pressure and ceased to handle animals for research. The use of specialist couriers will make the process of research slower and more expensive.

Animal rights groups have exerted undemocratic pressure on the UK research community and the wider economy. Their moral arguments, which they often support with pseudoscience, continue to convince a sizeable segment of the population. It is time for universities and researchers to present the true scientific argument for in vivo research. For this reason I’m petitioning the Government to persuade these organisations to resume transport of animals for medical research. The government should then protect the legitimate right of these companies to do so.

You can sign the e-petition Protect transportation of animals for medical research at http://petitions.direct.gov.uk/petitions/40111.

The hygiene hypothesis

Cleanliness isn’t always next to godliness; it’s actually possible to be too clean. The hygiene hypothesis states that a child growing up in an overly clean environment is left more susceptible to allergy development in later life. Allergic reactions occur when the body’s immune system overreacts and generates an inappropriate response to a harmless substance, such as pollen in hay fever. The effects of over-reaction to pollen can range from a slightly runny nose to constriction of the airways and suffocation. By existing in an increasingly clean environment, a result of twenty-first century hygiene and healthcare improvements, a greater number of children aren’t sufficiently exposed to various infectious agents or parasites. Without exposure to such minor infectious agents, immune system development is skewed and the child fails to develop a well-balanced immune system. The hygiene hypothesis was put forward in 1989 in the British Medical Journal, as a way to explain why children in large families developed fewer allergies compared with only children – in large families infectious agents are more likely to spread from child to child. In short, send your kids outside – mud and dirt really are good for you!
Politicians of the future

Described by United Nations Secretary-General Ban Ki-Moon as an “exercise that gives students a full taste of the complexity of international relations”, the London International Model United Nations conference (LIMUN) is coming to Imperial from 15–17 February 2013. Franca Hoffmann (MSci Mathematics with a Year in Europe) is on the LIMUN press team and she went along to the launch of the event on 18 October. She tells us about her experiences.

“London International Model United Nations is an independent charity which aims to extend cultural empathy, understanding of international affairs, and knowledge of the United Nations amongst young people through the organisation of an annual Model United Nations (MUN) conference.

“In an era when challenges spill over borders and have global reach, our future depends on how well we work together. I spoke to Philippe Rival, President of the Imperial College MUN society about how LIMUN can help reach this goal.”

He said, “These conferences bring together the best and brightest debaters, speakers and inspirational figures in the global student community for a three-day discussion about world news and current affairs.

“Students should be interested in MUN, because scientists, engineers, doctors all share the common trait that their work revolves around finding a solution to a problem using knowledge and reasoning. People from Imperial know what it means to go and find an answer, and they even go to such lengths as to give up their night’s sleep on such problems.”

www.limun.org.uk

Meeting the royals in Malaysia

Dr Rob Ewers (Life Sciences) is the lead scientist of the Stability of Altered Forest Ecosystems (SAFE) project – one of the world’s largest ecological experiments – based in Sabah, Malaysia. The study is designed to understand how forest ecosystems are affected by human pressure, and examines what happens when a forest is logged and then fragmented. Rob reports on what happened when the project received a visit from the Duke and Duchess of Cambridge this summer.

“I was visiting Malaysia to check on the progress of the project in July and heard that we were going to receive a visit from the royal couple. They were visiting the Danum Valley conservation area, which is located nearby and operated by the Royal Society Southeast Asia Rainforest Research Programme, an important partner for the SAFE project.

The Duke and Duchess flew to Danum by helicopter, taking a tour over the SAFE project site. Then they visited Danum Valley, where we met in a room in which shoes aren’t allowed, which I wasn’t expecting – I was wearing odd socks but I don’t think they noticed!

I was leading one of the research groups they spoke to, along with my wife Dr Cristina Banks-Leite (a newly appointed lecturer at Imperial), and we discussed aspects of SAFE, for example, how we were investigating the responses of more than 3,000 species to human pressures, as well as tracking changes in carbon emissions, water quality and disease vectors, like mosquitoes.

Kate and William were highly intelligent and very personable. William said he appreciated the pragmatic approach we take and that it’s important to avoid extreme positions. SAFE’s project philosophy is to accept that industry has pressures and cannot simply ignore them to improve conservation. We work in collaboration with industry to improve the impacts of agriculture on forest ecosystems, as opposed to locking horns with them in battles over conservation issues. Kate was interested in how the project linked with other studies around the world. I’d like to think they were impressed with what we were doing.”

For more on the SAFE project visit: www.safeproject.net

www.imperial.ac.uk/reporter

speak out

Story ideas?

We welcome contributions from across the College. The next publication day is 22 November. Reporter is published every three weeks during term time in print and online at www.imperial.ac.uk/reporter

Contact the Editor:
reporter@imperial.ac.uk
+44 (0)20 7594 6715
**Patient-doctor cycle team blaze Olympic route**

Francesco Dazzi, Clinical Professor of Stem Cell Biology (Medicine), pictured right, completed the LLR bikeathon on 16 September in support of the Leukaemia Lymphoma Research charity.

“I am one of the consultant haematologists running the bone marrow transplantation programme at Hammersmith Campus. One of the worst complications of this procedure is graft-versus-host disease (GvHD) which can be lethal or produce life-long problems. A couple of months ago in my clinic I was seeing Valeri Stoitchkov, a patient affected by severe chronic GvHD. Valeri’s skin and muscles are stiff as a result of the disease but he has not lost enthusiasm for life. He cycles to work every day and this is what softens his movements and gives him energy. Knowing that I like cycling – I regularly put my life at risk mountain biking – he asked me whether I would cycle with him in the LLR bikeathon, this year along the Olympic route. The distance was much longer than I usually ride and I was still bearing the consequences of a recent shoulder injury. But I felt immediately compelled by his example and by the fact that my research is actually focused on GvHD. We managed to cover about 95 miles and, believe me, especially for Valeri, this was gruesome. But it was a great lesson for all who work in the field. It took managed to cover about 95 miles and, believe me, especially for Valeri, this was gruesome. But it was a great lesson for all who work in the field. It took...”

To support Francesco and Valeri visit: [www.justgiving.com/Francesco-Dazzi](http://www.justgiving.com/Francesco-Dazzi)

---

**Fuelling up**

Serving up healthy salads, pies and other energy-packed items, there’s a new catering outlet on the South Kensington Campus aptly named Fuel. Reporter spoke to Jemma Morris (Commercial Services) about the new eatery.

“Our new outlet Fuel, which replaces the book store on the walkway, offers a fresh approach to grab-and-go style eating, and the self-service salad bar is designed to offer more healthy options to staff and students.

Here are my top five fun facts about Fuel:

- ONE warming soup and ONE homemade stew is available each day
- Fuel sells TWO flavours of award winning Pieminster pies daily
- The team had just THREE weeks to prepare for its first customers – from initial concept to opening
- FOUR friendly team members are waiting to help you
- Fuel sells freshly made smoothies and superfood salads – great for stocking up on your FIVE a day”

Fuel is open from 11.00 – 15.00 Monday to Friday. [www.imperial.ac.uk/eatinganddrinking](http://www.imperial.ac.uk/eatinganddrinking)

---

**Women in SET**

Try this experiment; close your eyes, and imagine a scientist. Now think about the individual who sprang to mind… were they male or female? Perhaps inadvertently, most of us would have had a male figure in mind, and it’s exactly this stereotype the Imperial College Women in SET (Science, Engineering and Technology) Society aims to challenge.

SET areas tend to be male-dominated in academia as well as in the private sector and, here at Imperial, the picture’s no different. In the 2011–12 academic year, male students outnumbered females by two to one on average, with the starkest disparity in the Department of Aeronautics, where males outnumbered females by almost five to one.

Enter the Women in SET Society, one of whose aims is to encourage the next generation of talented females to take up SET subjects at university, which they do by inviting London schoolgirls to campus for an annual open day.

Laura Johnston (Mathematics) explains: “The objective is to provide the young girls with role models. It’s humbling to see how well the girls engage with us; it makes me feel like I’ve done my bit for the next generation of female scientists!”

The society also tries to equip female students at Imperial with the skills they need to forge successful careers. Fourth year student Veronica Gouveia (Chemistry) is most proud of career-focused events like last year’s panel discussion Women in Industry, involving representatives from Bloomsbury publishing house and the IT consultancy firm, Thoughtworks.

She says: “The events are hands-on and can have a direct impact – lots of girls who attended got internships as a result. For us, it’s about supporting women in whatever career they choose and helping them grow in confidence.”

—JESSICA ADAMS, COMMUNICATIONS AND DEVELOPMENT
Rob Krams is Professor of Molecular Bioengineering at Imperial. His research group is using synthetic biology – the field of identifying and synthesising gene networks in cells – to develop better diagnostic tools for patients suffering from ‘vulnerable atherosclerotic plaques’; unstable lesions that form in the blood vessels of advanced atherosclerotic patients.

What is atherosclerosis and why have you targeted it?
It is a disease in which plaque builds up inside arteries. One third of patients with advanced atherosclerosis die in the UK and Europe and 70 per cent of these patients have an advanced vulnerable plaque. The plaques sit in the vessels and upon physical exertion, the blood pressure rises, which ruptures this plaque and leads to abrupt closure of your vessels. This can lead to brain damage and heart attacks.

How are you approaching this problem?
We cannot be sure if an atherosclerotic patient has a plaque as they display no symptoms, so we want to avoid using unnecessary, invasive diagnostic tools such as catheters. We are collaborating with several departments to develop non-invasive molecular imaging tools and using MRI contrast material as a diagnostic agent to identify molecules sitting in the plaque. We also use computing methods to identify networks of genes in atherosclerotic subjects and build these networks into the cells of mice, enabling us to evaluate how vulnerable plaques can be prevented.

How can this be developed for therapeutic purposes?
We want to study isolated atherosclerotic gene networks, transfer these into mouse tissue and study whether the mice become better protected against atherosclerosis. If we can recognise a gene network that is specific to a targeted molecule then we can develop new specialised drug treatment. This is far more effective than statins – the drugs used to currently treat atherosclerosis – which affect the whole vascular system and carry significant side effects.

—KAILEY NOLAN, IMPERIAL INNOVATIONS

PA Away Day

Personal Assistant, Mrs Charlotte Beard (Capital Projects and Planning), reports on her experience of attending the PA Away Day over the summer. The PA Networking Group offers development, support and networking opportunities for Imperial staff who perform a PA type function.

What was the aim of the event?
The aim of the event was to strengthen the PA Network and consider our individual development needs.

What did you learn?
We looked at approaches to ‘working smarter’ and thinking about the way we are perceived by others. We also looked at the seven ‘Imperial Expectations’ – a set of statements which articulate how the College expects its leaders, managers and supervisors to behave, such as championing ‘a positive approach to change and opportunity’. All seven of the statements are equally important and relevant to our roles.

What element of the day did you find the most helpful?
I really enjoyed the opportunity to get to know colleagues, especially those whose names I recognised from emails, but had never met. Even during breaks we were discussing where we work in the College and other factors affecting our roles. The network is a great resource for anyone in an administrative support role, whether “PA” is in your job title or not.

If you are interested in joining the PA Network, please contact: pa-network-committee@imperial.ac.uk

Graduating students share their thoughts on the big day

Reporter caught up with some students just before they went in to the ceremony at the Royal Albert Hall, and asked them what their personal highlights of 2012 were.

ASSISH KARIR, MATHEMATICS

“You work around the Royal Albert Hall for three years so it’s quite nice to actually be here, together with everyone you’ve studied with. Having seen a few Commemoration Days it’s nice to be part of it.”

CONNIE NG, MATHEMATICS

“I worked very hard and now I’ve got my degree, I’m so happy. I’m going on to study law, which is a significant change after mathematics, but I’m looking forward to it.”

NATHAN FERROL, MATHEMATICS

“My highlight has to be the Olympics. I was actually a volunteer at the stadium, so I was really close to the action, and it was a just a great experience being there and seeing everyone cheering.”
KATHLEEN GOFF

Kathleen Goff, a former secretary at St Mary’s Campus, died on 30 July 2012. Nigel Palmer, formerly Librarian at St Mary’s, pays tribute to his colleague:

“Katy spent virtually all her working life at St Mary’s Hospital Medical School (now St Mary’s Campus) from 1953–92, as secretary to four successive heads of the Bacteriology Department, Professors Robert Cruickshank, Robert Williams, Alan Glynn and Charles Easmon. Cruickshank was the immediate successor to Sir Alexander Fleming, discoverer of penicillin.

During these 39 years, apart from her work in a busy department, Katy made a great contribution to medical school life by conveying her love of art to its students and staff.

She served as secretary to the Medical School Arts Committee from 1990 until her death and was a member of the Hospital Arts Committee, which aimed to bring about an enhancement of the environment within the school by adorning its previously bare corridors, staircases and function rooms with a variety of paintings and other works of art.

Katy’s unique achievement, however, was to organise single handedly around 200 lunch time art lectures from the early 1980s to 2012.

Although she retired in 1992, Katy remained a familiar face on the arts scene at St Mary’s. She was a regular worshipper at Westminster Abbey and had a circle of friends in Covent Garden, where she lived. She will be greatly missed in all these places.”

JON WEAVER

Jon Weaver, Lecturer in Polymeric Biomaterials (Materials and Bioengineering), died from cancer on 4 July at the age of 32. Professor Molly Stevens (Materials and Bioengineering), pays tribute to him, with inspiration from friends, colleagues and students.

“Jon was a brilliant scientist and an incredible person. He began working at Imperial in April 2010, based jointly between the Departments of Materials and Bioengineering. His potential was rapidly recognised and he received a prestigious five-year Royal Society Fellowship. He is probably the only academic in history to have been offered the fellowship despite turning up in jeans – a testament to how true to himself he was! In 2011 Jon’s scientific achievements were recognised by the UK polymer science community, and he received the Macro Group Young Investigator’s medal. Jon was an outstanding teacher and supervisor. He always took time to explain to his academic colleagues the basics of the polymer world. For his students he was an attentive, caring and inspirational leader who managed to get the best out of them. They nicknamed him The WeaverTron for his numerous creative ideas. His enthusiasm about science was completely infectious; he could talk for hours about it and was completely generous in his scientific advice and ideas. Time spent with him would often be time spent laughing. Jon’s love of science was such an important part of him, he worked hard at it but at the same time, it gave him immense joy and satisfaction, and his impact on the science community was enormous. We will all miss him greatly. He is survived by his wife, Emma, his daughter, Lily, and his parents, Mark and Anne.

For the full obituary see: www.imperial.ac.uk/people/j.weaver

An interview with Rifat Atun

Last week Professor Rifat Atun, Professor of International Health Management and Head of the Healthcare Management Group (Business School), launched a book he edited, Closing the Cancer Divide: An Equity Imperative at the London School of Hygiene and Tropical Medicine. Reporter spoke to Rifat about what gets him up in the morning and why he wanted to tackle inequities in policies to address cancer.

Why did you think health policy needed to be improved?

Health systems, and especially hospitals, are typically rewarded for treating sick people but there is very little reward for maintaining good health. This is where there is a real anomaly. Policies support sickness systems as opposed to health systems, yet we call our system in the UK the National Health System.

What motivates you in your role?

I always get up early to leave for work because there are so many opportunities for achieving good health and empowering people. We now have new technologies, innovative medicines and new diagnostics, but often these are not taken up appropriately.

What have you learned about the approach to global health over the last 20 years?

What’s important in global health is not what one individual can do, but instead it is about working as a team. It takes actors from different international institutions, as well as country leaders, to come up with solutions to complex problems.

Welcome new starters

Miss Charlotte Allen, Life Sciences
Miss Amanda Allotey, ESE
Dr Mark Almond, NHLI
Dr Vasiliiki Anagnostopoulou, Mathematics
Dr Toby Andrew, Public Health
Mr Epameinondas Antonakos, Computing
Dr Hena Afzil, Medicine
Miss Sasha Ashbourne-Lewis, NHLI
Dr Ryan Barnett, Mathematics
Dr Elena Barquero Bardon, Public Health
Dr Ian Bastow, ESE
Dr Parvin Begum, Clinical Sciences
Mr Scott Biagi, Humanities
Mr James Booth, Computing
Ms Areti Boulieri, Public Health
Mr James Booth, Computing
Mr Dimitrios Kouzapas, Engineering
Mr Jonathan Downing, Materials
Dr Jacob Eldering, Mathematics
Mr Rhys Farrer, Public Health
Professor Jorge Ferre Marrades, Medicine
Mr Jason Filos, ESE
Dr Nicola Fitz-Simon, Medicine
Mr Samuel Foster, Physics
Miss Larsissa Franklin-Nembhard, Surgery and Cancer
Ms Marta Gabrych, Humanities
Mr Enrique Gallego Colon, NHLI
Mr Christos Georgakis, Computing
Dr Mindy Gore, Medicine
Mr Tim Grove, NHLI
Mr Gabor Gubicza, Mechanical Engineering
Mr Florian Guittion, Computing
Dr Matthew Hubgood, Chemical Engineering
Mr Ioan Hadade, Mechanical Engineering
Mr Andras Hajdu, Climate KIC
Dr Foizia Hamid, Public Health
Mr Mohammed Hankir, Clinical Sciences
Mr Matthew Hannon, Environmental Policy
Dr Joseph Henson, Physics
Mr Mohammad Hoque, Civil and Environmental Engineering
Dr Yanghong Huang, Mathematics
Mr Archie Hughes-Hallett, Surgery and Cancer
Professor Debra Humphris, Educational Quality
Miss Misha Imtiaz, Chemical Engineering
Dr Ivans Jeromlows, Catering
Dr Iain Johnston, Mathematics
Dr Emrys Jones, Surgery and Cancer
Mr Andrew Jones, Computing
Mr Remi Joubaud, Mathematics
Ms Narvada Jugnee, Medicine
Dr Andreas Kafizas, Chemistry
Mr Angelo Karunaratne
Munasinghe Arachchige
Bioengineering
Dr Aidan Keane, Life Sciences
Ms Teresa Kennedy-Lydon, NHLI
Mr Ariel Kernberg, Humanities
Miss Farida Keshavjee, Medicine
Ms Eleanor Kirk, Humanities
Dr Alexandre Kleinberger, Professional Development
Mr Ioannis Konstantelos, EEE
De Dr. John Kotsis, Surgery and Cancer
Mr Dimitrios Koulapas, Computing
Dr Dmitry Kovrizhin, Mathematics
Mr Adam Kucharski, Public Health
Dr Helga Laszlo, Public Health
Dr Jessica Le Van, Surgery and Cancer
Miss Clare Leeson, Medicine
Ms Lydia Leon, Surgery and Cancer
Dr Anders Lervik, Chemistry
Miss Justine Lesforis, Faculty of Medicine
Ms Jingjing Li, Humanities
Miss Juliane Liepe, Life Sciences
Mr Nuno Loisas Tome, Catering
Dr Ismael Lopez Duarte, Chemical Engineering
Dr Kevin Lovekock, Chemistry
Mr Calum MacLeod, Human Resources
Dr Alexander Mallijskyevs, Chemical Engineering
Miss Sreelakshmi Mallappa, Surgery and Cancer
Patricia Marchetti, Chemical Engineering
Dr Jared Marklew, Chemistry
Dr Jonathan Marshall, Mathematics
Dr Stephan Martin, Mathematics
Ms Meg Mashbat, Medicine
Dr Andreas Mautner, Chemical Engineering
Dr Damia Mawad, Materials
Mr Francesco Mazzarotto, NHLI
Ms Louise McGrath, Public Health
Mr Rory McCarthy, Environmental Policy
Dr Alasdair McCarthy, Faculty of Medicine
Dr Melissa Merritt, Public Health
Mr Miguel Meuleman, Business School
Mr Jakub Michalicszyn, Computing
Dr Irene Miguel-Aliaga, Clinical Sciences
Mrs Ana Mijic, Civil and Environmental Engineering
Miss Harriet Mills, Public Health
Dr Sinan Mir, Public Health
Mr Ryan Mitchell, Medicine
Miss Jo Monier, Life Sciences
Mr Neil Murphy, Public Health
Miss Saia Naeem, Chemistry
Mr Amanda Shevanti
Nayagam, Medicine
Miss Joanna Norton, Finance
Mr Vincent Oktovin, Human Resources
Dr Niamh O’Sullivan, Medicine
Dr Dimitrios Papadaskalopoulou, ESE
Dr Athanasios Papaiouannou, Computing
Mr Vasileios Papaiouannou, Chemical Engineering
Dr Karthick Parashar, EEE
Dr Matthew Parkinson, Computing
Miss Katarzyna Parzych, Medicine
Dr Yasmin Pasha, Medicine
Dr Sara Pasquetti, Mathematics
Dr Vanash Patel, Surgery and Cancer
Mr Neil Patel, Surgery and Cancer
Miss Clare Pearson, Public Health
Dr Federico Pesci, Chemistry
Dr Gemma Petts, Medicine
Mr Chin Phuah, Materials
Dr Ilse-Sanet Pienaar, Human Resources
Ms Fiachra Pilkington, EYEC
Mr Daming Wang, Chemical Engineering
Dr Sophie Yacoub, Medicine
Mr Kostas Zarifis, Computing
Mr Vikram Selvarajan, Catering
Mr Daniel Silk, Life Sciences
Mr Piotr Siciak, Faculty of Chemistry
Mr Wenzhe Shi, Clinical Sciences
Dr Hannah Shier, Chemical Engineering
Mr Piotr Siciak, Faculty of Medicine
Mr Daniel Silk, Life Sciences
Dr Aaron Sim, Life Sciences
Miss Jennifer Simeon, Public Health
Miss Anna Simmonds, Medicine
Dr Jennifer Simonotto, NHLI
Dr Mahesh Singh, Public Health
Dr Mohan Singh, Surgery and Cancer
Mr Dan Smith, Human Resources
Mr Thomas Smith, Life Sciences
Dr Shufang Song, Chemical Engineering
Miss Kylee Such, NHLI
Mr Martin Summersgill, Finance
Mr Donatas Talmontas, Catering
Dr Lionel Tan, Medicine
Dr Matthew Taylor, Physics
Dr Marius Theocharous, Civil and Environmental Engineering
Mr Llewellyn Thomas, Business School
Mr Alexander Thompson, Chemistry
Miss Morgan Todd, NHLI
Ms Maria Tomas Rodriguez, Professional Development
Mrs Dilek Unsal, Humanities
Dr Amy Unsworth, Professional Development
Miss Beatrice Valcarcel Salamanca, Public Health
Dr Nikhil Verma, Medicine
Ms Mariamela Vermeersch, Faculty of Engineering
Dr Benoît Vicedo, Physics
Mr Xiuli Wang, Chemistry
Mr Daming Wang, Materials
Mr David Weatherall, Humanities
Miss Xiaoyao Wei, EEE
Dr Zachary Whinnett, NHLI
Mr James Wilgoreth, Physics
Mr Anthony Wilkinson, Human Resources
Dr Matthew Wraith, Humanities
Dr Hui Xu, Mathematics
Dr Sophie Yacoub, Medicine
Miss Rachel Yan, NHLI
Ms Weizhen Yang, Computing
Mr Ismail Yildiran, Catering
Ms Fei Yu, Humanities
Dr Xin-Fang Zhang, Materials
Dr Julia Zollner, Surgery and Cancer

This data is supplied by HR and covers staff moving in from 26 September – 16 October 2012. See the online supplement at http://bit.ly/ReporterPDFs for staff moving on and retirements.
6 NOVEMBER ▸ PUBLIC LECTURE
Metamaterials: new horizons in electromagnetism
In the last decade a new area of research has emerged as a result of our ability to produce materials with entirely novel electromagnetic properties. Known as metamaterials because they take us beyond the properties of conventional materials, they display remarkable effects not found in nature, such as negative refraction. In the 25th Schrödinger Lecture Professor Sir John Pendry (Physics) explains the theory behind metamaterials with a negative refractive index that are used for applications including the invisibility cloak, in areas of telecommunications, solar energy harvesting and medical diagnostics.

21 NOVEMBER ▸ PUBLIC LECTURE
Designing a more resilient society: the role of digital technologies
Digital technology has transformed the way many of us live and work, but undeniably it has failed to reach certain groups, often the older generations. As we all live significantly longer the quality of the latter stages of our lives can be poor and therefore the demands for health and social care are set to increase without the budgets to pay for it. Join Mat Hunter of the Design Council for a discussion about the role of digital technologies in the provision of public services.

Teaching and learning workshops
The Educational Development Unit (EDU) has launched a revised programme of 34 workshops for 2012–13. They include practical guides to teaching and learning, opportunities to focus on developing essential skills for those with greater teaching experience, and workshops for staff teaching undergraduate medical students.

For more information visit: www.imperial.ac.uk/edudev/workshops

Stay in the loop
Visit www.imperial.ac.uk/events for more details about these events and others. To sign up for regular updates about Imperial events please email: events@imperial.ac.uk