

Game on

Second Life creates new learning opportunities for Imperial medics

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CHALLENGE**
Winners write
the future

CENTRE PAGES

in brief

Topping the charts

Imperial has been named as one of the six universities most consistently rated among the best in Britain. According to a report published by the Higher Education Funding Council for England (HEFCE), Imperial, Cambridge, Oxford, LSE, University College London and Warwick have always appeared in the top 10 in three university league tables. HEFCE analysed rankings produced by *The Times*, *The Sunday Times* and *The Guardian* which rate universities on features including graduate job prospects, teaching quality and research.

The Bologna process: an update

The Pro Rector (International Affairs) has issued a briefing informing staff of the work undertaken at Imperial, in the light of the Bologna declaration,



and summarising the Senate's decisions concerning the College's Bachelor's and Master's programmes. The Bologna declaration was adopted

by ministers of education of 29 European countries at their meeting in Bologna in 1999. It proposed a European Higher Education Area in which students and graduates could use prior qualifications gained in one country as acceptable entry requirements for further study in another. To read the briefing visit: www.imperial.ac.uk/staff

'Oscars of the internet' shortlisting

Imperial's Centenary website (www.imperial.ac.uk/centenary) has been shortlisted from 10,000 entries from 60 countries for a Webby award, regarded as the Oscars of the internet, in the School/University category. The nomination also makes the site eligible to win a People's Voice Award which is judged by members of the public. To cast your vote, visit: <http://peoplesvoice.webbyawards.com>

Leading technology festival comes to call

More than 300 developers, technologists and designers came to Imperial between 4–5 April to take part in a festival aimed at fostering the next big technological breakthrough. The Over the Air



festival was co-sponsored by the Imperial College Internet Centre and provided a platform for senior staff from some

of the world's biggest technology companies including Google and Nokia to swap ideas with independent developers.

New Institute for Shock Physics

On 7 April the College announced the launch of a new £10 million research institute to study the science behind shock waves, high velocity collisions and extreme pressures and temperatures.

The Institute for Shock Physics, based in the Faculty of Natural Sciences, will carry out research which can be applied in many ways, including analysing the effect of meteorite impacts on planets, spacecraft and satellites, understanding how tsunamis are formed, using shockwaves to break up kidney stones, and understanding the high pressure conditions that occur at the core of planets.

Professor Steven Rose (Physics), who has been appointed interim Director of the new Institute, explains the importance of its mission, saying: "The Institute will bring together a team of scientists and engineers who each specialise in different aspects of shock physics: experimental, theoretical



and computational. Together this group of specialists will work to understand and accurately predict the outcomes of very fast impacts, wherever they take place."

Funding for the new Institute over the next five years has been provided in part by the Atomic Weapons Establishment, although no defence research will be carried out at the Institute.

The funding will facilitate the appointment of six new academic research appointments, a director, programme director and assistant, as well as 20 new PhD studentships.

— DANIELLE REEVES, COMMUNICATIONS

Special events bring in high profile speakers

Six high profile, leading scientists are speaking at Imperial this spring and summer as part of two special series of lectures and conversations.

Nobel Conversations: Discovering the Unexpected, conceived by Nobel laureate Professor Stanley Prusiner, currently Visiting Leverhulme Professor at Imperial, sees three Nobel Prize winning scientists coming to the College to talk about what led them to their major discoveries, taking questions from the audience and providing an insight into receiving the highest accolade in science.

The series kicked off on 7 April with Professor Hartmut Michel of the Max Planck Institute in conversation with Professor Prusiner. Professor Michel discussed his work in the 1980s to grow crystals from cell membrane proteins, which won him the Nobel Prize for Chemistry in 1988.

The next conversations will be held on 17 June with Sir Peter Mansfield and 22 May



Professor Hartmut Michel

"These events give the audience a unique opportunity to learn how major scientific discoveries are made"

with Professor Stanley Prusiner — both are Nobel Prize winners.

Professor Chris Kennard, Deputy Principal of the Faculty of Medicine, who organised the series with Professor Prusiner, said: "These events give the audience a unique opportunity to learn how major scientific discoveries are made, and the trials and tribulations that lie behind them. Stan Prusiner and I are delighted to welcome

the speakers to the College this year."

In addition, the *China Now* lecture series will see three leading Professors from the College delivering talks on the themes of health, the environment and energy which demonstrate Imperial's links with China.

The *China Now* lectures will run from 30 April until 18 June and will feature: Professor Sir Roy Anderson, Sir Brian Hoskins and Professor Nigel Brandon.

Professor Mary Ritter, Pro Rector for International Affairs, said: "This lecture series will address some of the most important scientific, engineering and medical challenges facing the world in the twenty-first century, and will illustrate how Imperial's research and collaborative links with China are addressing these problems."

— DANIELLE REEVES, COMMUNICATIONS

► For more details and ticketing information, visit: www.imperial.ac.uk/events

Science and society role for Robert Winston



Lord Winston has taken up a role as Professor of Science and Society at Imperial. The freshly created Chair will focus on developing paths for better engagement between scientists and the public through a range of initiatives.

Professor Winston's programme over the next five years will include conducting research into the most effective methods of science engagement and evaluating its impact.

He said: "The science we do is largely owned by the public and all members of society should feel they are a part of what we do. As scientists, we need to be much more open about the nature of science and its limitations and more engaged with the ethical impact that our work may have."

Finding methods to ensure that scientists communicate effectively with the public will be a key focus, with the aim of further embedding science communication techniques in Imperial's teaching. He explains: "It is vital for scientists to be able to talk about our research. We need to encourage more students to recognise the importance of this and be able to talk about their work to make it relevant to as many people as possible. This will also have the benefit of stimulating thinking about the impact of scientific work on society in general."

"The science we do is largely owned by the public and all members of society should feel they are a part of what we do."

The role will also include helping to expand Imperial's wide range of outreach activities, establishing a dedicated schools laboratory and seminar facility based at the College to give pupils and teachers experience of hands-on science in areas such as DNA analysis and robotics. He adds: "Giving young people the chance to get involved in practical work in a scientific environment is the key to inspiring them to see science as exciting."

Welcoming Lord Winston's appointment to the new Chair, Rector Sir Richard Sykes said: "Robert Winston is one of the UK's most prominent scientists and has an impressive track record of drawing a diverse cross-section of society into scientific conversations. I'm delighted that he will continue this vital work at Imperial."

In addition to his new role as the Chair in Science and Society, Lord Winston will retain his Emeritus Professorship of Fertility Studies at the College.

—ABIGAIL SMITH, COMMUNICATIONS

£8.9 million award boosts heart research

Finding innovative ways to prevent, diagnose and treat heart and circulatory disease is the focus of a new Centre of Research Excellence at Imperial, established this month through an £8.9 million award from the British Heart Foundation (BHF).

Medical researchers, scientists and engineers from 20 different disciplines at Imperial will join forces in the new Centre. Imperial's clinical researchers will trial new therapies for heart disease and collaborate with geneticists and cell biologists, who are exploring the genes involved in heart disease. Geneticists will team up with computer scientists to analyse the wealth of new data available and biochemists will collaborate with engineers studying the mechanics of blood flow, to design new ways to diagnose and treat heart disease.

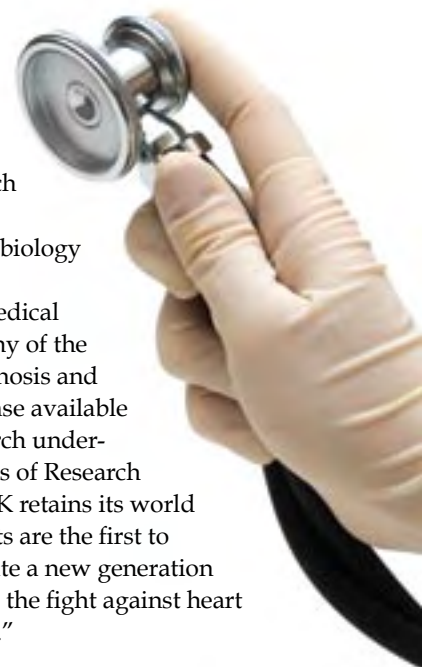
The six-year award will support new interdisciplinary research and training programmes, including a PhD training programme for 27 engineers, medical students and bioscientists. The College will also be recruiting 14 postdoctoral fellows and eight specialist registrars.

The BHF hopes that within the lifetime of the award, highly trained researchers will leave the Centre to establish new research groups focusing on heart disease.

Professor Michael Schneider, Director of the new Centre and Head of Cardiovascular Science, said: "I am ecstatic about the award. At Imperial, the BHF Centre can be described best as a triangular alliance among cardiovascular medicine, the underpinning biomedical sciences like genetics and stem cell biology, and leading edge research in the physical sciences such as chemical biology, computational biology and bioengineering."

Professor Peter Weissberg, Medical Director at the BHF, added: "Many of the advances in the prevention, diagnosis and treatment of cardiovascular disease available today are the result of past research undertaken in the UK. The BHF Centres of Research Excellence will ensure that the UK retains its world leading edge and that UK patients are the first to benefit. This investment will create a new generation of world class researchers to lead the fight against heart disease over the coming decades."

—LAURA GALLAGHER, COMMUNICATIONS



► The April magazine podcast features an interview with Professor Schneider: www.imperial.ac.uk/media/podcasts

media mentions

—DANIELLE REEVES, COMMUNICATIONS

THE NEW YORK TIMES ▶ 16 MARCH

A decongestant for city streets

New York is considering a congestion charging scheme, similar to the one in London, to reduce the heavy flow of traffic on Manhattan's crowded streets. London's system brought in about \$429 million last year, but 42 per cent of that money was used to collect the fees. Despite the cost of the scheme London is expanding its plans and later this year will increase the charges for vehicles with large engines to reflect their high carbon dioxide emissions. Commenting on this development, Scott Le Vine (Civil and Environmental Engineering) told *The New York Times*: "People can see a tangible benefit with congestion pricing, but it's another leap of logic to say what kind of car they should be driving."



NATURE ▶ 25 MARCH

How sperm and egg fuse into one

Scientists have come one step closer to understanding exactly how sperm and egg merge to create a new individual, *Nature* reported on 25 March. An international team of scientists found that a protein called HAP2 plays a key role in this process. Speaking to *Nature*, Dr Oliver Billker (Life Sciences), one of the study's lead authors, explains how this protein is found in a wide range of organisms, from single-celled parasites such as malaria to insects and simple animals such as sea anemones. "The very first animal would have had this gene," he said. So far the team have been unable to find HAP2 in mammals.



THE TIMES ▶ 26 MARCH

Roads will be the death of us

An unpublished study from the Department of Transport says that Britons have a one in 200 chance of being killed in a road crash, *The Times* reported on 26 March. The new statistic shows that the death rate on Britain's roads has improved only marginally in the past decade. Professor Andrew Evans (Civil and Environmental Engineering) told *The Times*: "Many people will be surprised to learn how high the risk is of their life being ended in a road crash. We are much too ready to accept the risk on the roads as the inevitable price of freedom of mobility."



NEW SCIENTIST ▶ 18 MARCH

How anaemia beats malaria

New Scientist has reported that the 50-year mystery of how an inherited form of anaemia seemingly protects people from malaria may have been solved. After the drastic loss of red blood cells following a malaria attack, children with alpha thalassaemia end up with more total haemoglobin than those without. Researchers claim this shows that thalassaemia protects against malaria through a 'safety in numbers' strategy which allows more cells to survive an attack by the parasite. Professor Geoffrey Pasvol (Medicine) told *New Scientist*: "This does look like a novel and plausible explanation for how alpha thalassaemia protects against malaria."



Imperial College Healthcare **NHS**
NHS Trust

NEWS

New Clinical Research Unit

The Kennedy Institute Clinical Trials Unit at Charing Cross Hospital opened on 8 April, creating new opportunities for Kennedy Institute researchers investigating the causes of arthritic disorders and developing new treatments. The unit, intrinsically linked to the Trust's department of rheumatology, will enable researchers to carry out concurrent clinical trials involving up to 100 patients.

Professor Stephen Smith, Chief Executive of the Trust and Principal of the Faculty of Medicine, said: "This unit is a great example of what the Academic Health Science Centre is all about—breaking down artificial barriers between universities and hospitals and creating better patient environments and outcomes and greater patient satisfaction."

MD focuses on excellent service delivery

The Trust's new managing director, Claire Perry, has spoken of her priorities in the office she took up on 1 April. She said: "At the Trust we have a bold and exciting vision that can only be realised by creating a bedrock of excellent service delivery. Getting things right with high quality patient services will give us licence to innovate and become world class."

Claire, who has more than 15 years' experience as an NHS chief executive, also called for tougher goals in relation to patient satisfaction and quality of outcomes. She added, "There will be a lot of people watching us – all leading organisations are under intense scrutiny."

CPGs all on board

Six of the Clinical Programme Groups (CPGs), the AHSC building blocks, established their boards on 1 April. Each board consists of a programme director and heads of nursing, finance, education, operations, research and an HR skills consultant. The appointments of lead nurses, service managers and lead clinicians are expected by June.

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Awards recognise health and safety excellence at Imperial

The annual Rector's Award for Health and Safety and two Commendation Awards were presented to staff and students at a meeting of the College's Court in March.

The winners represent the Departments of Life Sciences and Physics and, for the first time, an Imperial College Union student society.

Rector Sir Richard Sykes, who presented the awards, thanked them for their work above and beyond the usual line of duty. He added: "Health and safety issues have to be among the most critical organisational risks facing the College."

The Rector's Award was won by David Gentry, Safety Manager in the Department of Physics, who has set up a system that ensures that safety is incorporated into all the management processes of the Department through induction, training and guidance. He said: "I have always tried to approach people personally in order to encourage good practice and proactive attitudes to safety."

Stressing the collaborative nature of health and safety work, he added: "I'm indebted to the members of the Safety Unit for my training and their continued assistance."

Stefan Hoyle, Safety Manager in the

"Health and safety issues have to be among the most critical organisational risks facing the College"

Department of Life Sciences, was also recognised with a Commendation Award for his work in transforming safety practices and procedures by carrying out an in depth safety audit, setting up training programmes and making safety information available online. Describing health and safety as "a moral duty", he commented:

"It is only possible due to the actions of staff and students in the Department who help me to coordinate information and make sure it gets to where it is needed."

A second Commendation Award was presented to the ICU Underwater Club, which organises diving trips in the UK and

abroad, for the priority that it gives to health and safety requirements. The award was collected by natural sciences undergraduate Emma Keller, who said: "The nature of scuba diving means that health and safety is a number one priority. All club members have put a lot of work into making sure that rules and regulations are followed and that procedures and equipment are checked and double checked. It's fantastic to be recognised by the College with this award."

—ABIGAIL SMITH, COMMUNICATIONS

awards and honours

Optical honour for Natural Sciences Principal

Faculty of Natural Sciences Principal Professor Sir Peter Knight has been announced as the 2008 recipient of the Optical Society of America (OSA) Ives Medal, which recognises overall distinction in optics and is the highest award the Society can bestow. The medallist is asked to present an address at the OSA's annual meeting in October.

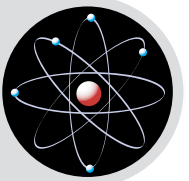


Merit Awards for Life Sciences researchers

Two Royal Society Wolfson Research Merit Awards have been presented to Professors Dan Davis and E.J. Milner-Gulland (both Life Sciences) in recognition of their outstanding achievements and great potential. The Merit Awards offer universities support to enable them to attract and retain young researchers.

Physics thesis recognised for originality

The Culham Thesis Prize, presented annually by the Institute of Physics (IOP) for original, significant new work, has been awarded to Louisa Willingdale (Physics) for her experimental and numerical work on the acceleration of ions to high energies by laser-plasma interaction. Dr Willingdale presented her work at the IOP's Plasma Physics Meeting at the beginning of April.



£9 million for respiratory and cardiac research

A four-year grant worth £9 million from the National Institute for Health Research has been awarded to Imperial and the Royal Brompton and Harefield NHS Trust to fund two major new respiratory and cardiac Biomedical Research Units. The Units will lead innovative research in respiratory and cardiovascular medicine, translating advances in medical research into benefits for patients and supporting the expansion of current research in these areas.

Obesity researchers win Young Investigator Awards

Obesity research at Imperial has been recognised with awards to researchers in the Division of Investigative Science. Senior lecturer Dr Carel le Roux has received the European Association for the Study of Obesity's 2008 Young Investigator Award, while PhD student Ahmed R. Ahmed has won the equivalent award from the International Federation for the Surgery of Obesity.



Rector Sir Richard Sykes with the winners of the health and safety awards, Emma Keller (left), David Gentry (second from right), and Stefan Hoyle (right)

Bird study sheds light on formation of new species

The rate at which new species are formed in a group of closely related animals decreases as the total number of different species in that group goes up, according to new Imperial research published in *PLoS Biology*.

The study used detailed analysis of the family trees, or phylogenies, of 45 different bird families. By examining the rate at which new species have arisen in each of these family trees over a period of millions of years, scientists saw that the rate of appearance of new species seemed to be much higher in the early stages of the tree, compared to more recent lower rates.

In order for new species to thrive they need to evolve to occupy their own niche in the ecosystem, relying for survival on certain foods and habitats that are sufficiently different from those of other closely related species.



Competition between closely related species for food and habitat becomes more intense the more species there are, and researchers believe this could be the reason for the drop-off in the appearance of new species over time.

Dr Albert Phillimore (NERC Centre for Population Biology), the lead author on the paper, explains: "The number of niches in any given region is finite, and our research supports the idea that the rate of speciation slows down as the number of niches begins to run out. In essence, it seems like increased competition between species could place limits on the number of species that evolve."

— DANIELLE REEVES, COMMUNICATIONS

Lowering the blood pressure of elderly patients cuts mortality significantly

Lowering the blood pressure of elderly patients could cut their total mortality by a fifth and their rate of cardiovascular events by a third, according to a new study presented at the American College of Cardiology in Chicago and published in the *New England Journal of Medicine*.

The 3,845 patient Hypertension in the Very Elderly Trial, which is coordinated by scientists from Imperial, is the largest ever clinical trial to look at the effects of

lowering blood pressure solely in those aged 80 and over. Patients were given either a placebo or a diuretic with the addition of an ACE inhibitor, in tablet form, once a day.

The research shows that the benefits of treatment include a 21 per cent reduction in total mortality rate, a 39 per cent reduction in stroke mortality rate, a 64 per cent reduction in fatal and non-fatal heart failures, and a 34 per cent reduction in cardiovascular events.

The benefits were apparent within the first year of follow-up.

Previous smaller and inconclusive studies

had suggested that whilst lowering blood pressure in those aged 80 or over reduced the number of strokes, it did not reduce, and possibly even increased, total mortality.

Emeritus Professor Christopher Bulpitt, the lead investigator on the study, said: "Before our study, doctors were unsure about whether very elderly people with high blood pressure could

see the same benefits from treatment to lower their blood pressure as those we see in younger people. Our results clearly show that many patients aged 80 and over could benefit greatly from treatment."

— LAURA GALLAGHER, COMMUNICATIONS



'Mother cells' could lead to future Parkinson's treatments

'Mother cells' which produce the neurons affected by Parkinson's disease have been identified by scientists, according to research published in the journal *Glia*.

The new study focuses on dopaminergic neurons – brain cells which produce and use the chemical dopamine to communicate with surrounding neurons. The researchers found that these important neurons are created when a particular type of cell in the embryonic brain divides during the early stages of brain development in the womb.

If a person suffers from Parkinson's disease, it is the depletion of these dopaminergic neurons and the associated lack of dopamine in the body which causes chronic and progressive symptoms including tremors, stiff muscles and slow movement.

This knowledge can be used to develop techniques to create replacement neurons for people with Parkinson's

The international research team used mouse models in the laboratory to examine the early stages of brain formation. They discovered that dopaminergic neurons are formed by precursor cells identified as 'radial glia-like cells' by the scientists because of their similarity to radial glia cells which are already known to build other parts of the brain.

One of the authors of the paper, Dr Anita Hall (Life Sciences), explains the potential of the team's findings: "Now that we understand how these neurons are produced, we hope that this knowledge can be used to develop novel therapies including techniques to create replacement neurons for people with Parkinson's which could be implanted into the brain to bolster their vital supplies of dopamine."

— DANIELLE REEVES, COMMUNICATIONS



Vets have twice the risk of miscarriage

Female veterinarians are twice as likely to have a miscarriage if they do not protect themselves from certain occupational hazards, according to a new study published in the journal of Occupational and Environmental Medicine.

The study looked at the experiences of 1,197 female vets working in clinical practice, who graduated from Australian veterinary schools between 1960 and 2000, responding to a questionnaire-based survey.

The researchers found that there was a more than twofold increase in the risk of miscarriage in women exposed to anaesthetic gases for more than an hour a week without using equipment to remove the gas from the air, known as a gas scavenger.



There was also a twofold increase in those who used pesticides at work, and an 80 per cent greater risk of miscarriage in those who performed more than five X-ray examinations per week compared with those who performed five or less. Veterinarians are often unable to leave the room whilst performing an X-ray because they have to hold the animal being X-rayed in order to restrain it.

"We hope that our research will make vets aware of the need to fully protect themselves whilst they are working, especially if they are planning to have a baby."

The researchers are calling for female vets to be better informed of the potential risks to their pregnancies, as many are not making use of the safety equipment available for their protection.

Dr Adeleh Shirangi (Epidemiology and Public Health), corresponding author of the research, said: "We hope that our research will make vets aware of the need to fully protect themselves whilst they are working, especially if they are planning to have a baby."

—LAURA GALLAGHER, COMMUNICATIONS

Complexities of wetting theory explained



The relationship between a thin liquid film or drop of liquid and the shape of the surface that it wets has been explained with a new simplified mathematical formula published this month in *Physical Review Letters*.

The study of wetting focuses on the process by which a liquid makes a surface completely wet, such as occurs if a glass of water is poured over a glass surface. However, liquids do not always make surfaces completely wet, and droplets can form on the surface, such as when water is poured on a waxy material.

Scientists know that if the temperature increases these droplets can gradually flatten out, until the surface is completely wet, and is an example of a phase transition. Exactly how this transition to complete wetting takes place has been contested by physicists for 25 years.

Understanding the precise interaction between liquids and surfaces is important for a number of areas, including the chemical industry and new nanotechnologies.

Professor Andrew Parry (Mathematics), the author of the new paper, has devised and tested a new way to explain this process. His formula takes into account fluctuations in the drop of liquid between the solid surface it sits on and the air above it, which have not been included in any previous formula.

"Previous descriptions have all ignored or misrepresented these interactions and consequently were at odds with experimental results and computer simulations. The new formulation appears to explain all these outstanding problems in a very elegant manner," said Professor Parry.

—DANIELLE REEVES, COMMUNICATIONS

Meteorites are rich in the building blocks of life

Amino acids that are the building blocks of life have been found in their highest ever concentration in two ancient meteorites which crashed to Earth millions of years ago, Imperial scientists claim.

The research team found amino acids in two ancient meteorites called CR chondrites, which were found in Antarctica in the 1990s. By analysing the carbon content of these

"Our increasing understanding of the materials available for the first living systems suggests that we are all products of cosmic chemistry"

meteoritic amino acids the scientists were able to determine that, unlike Earth-based amino acids which prefer a lighter variety of carbon, their samples were made from a heavier carbon which could only have been formed in space.

The scientists believe their research, published online in the journal *Meteoritics and Planetary Science*, provides fresh insights into the origins of life on Earth.

Lead researcher Dr Zita Martins (Earth Science and Engineering) explained: "We know that approximately 3.8 to 4.5 billion years ago the Earth



underwent heavy bombardment from meteorites which brought molecules to our planet, just before life emerged on Earth. However, there is a gap in knowledge about how life came into being. Our work has shown that it may have been meteoritic amino acids and other biologically useful compounds that spurred life into existence."

Dr Martins says her work provides new insights into the chemistry of the early solar system and the resources available for early life. She said: "Our increasing understanding of the materials available for the first living systems in the solar system suggests that we are all products of cosmic chemistry."

—COLIN SMITH, COMMUNICATIONS

Writing the future

Students tackle the big issues in essay writing competition

Erika Cule, a third year undergraduate studying biochemistry at Imperial, and Hassan Al Halwachi from Sherborne School in Dorset, were announced as winners of the 2008 Science Challenge essay writing competition in a grand ceremony held at the Science Museum on 18 March.

The annual essay competition, which is open to Imperial students and school pupils, is now in its third year. It is organised by a team of Imperial undergraduates who are keen to encourage fellow young scientists to develop their writing and communication skills, alongside the lab-based skills more commonly associated with science students.

Erika's essay imagined a future where you can buy the complete sequence of your genome to find out how you might die, and Hassan's explained how new innovative engineering techniques could save the world from global warming.

The competition was judged by a panel of leading figures from the worlds of science, business and journalism including Imperial's Rector

Sir Richard Sykes, Professor Lord Robert Winston and BBC journalist Pallab Ghosh. Erika and Hassan were selected from a shortlist of six school pupil finalists and six Imperial student finalists.



Daniel Burrows, a third year physics student at Imperial who helped to set up the Science Challenge, congratulated the winners, saying: "The standard of writing by both the school entrants and Imperial students this year was extremely high, so the two winners should feel very proud of their work. The Science Challenge is going from strength to strength: we've had twice as many entries this year, and I hope it will inspire some of our entrants to consider careers as science communicators in the future."

Hassan won a cheque for £2,000 and a VIP behind the scenes trip for his school to the National Physical Laboratory in Middlesex. All five school runners up received a cheque for £100. Erika won a cheque for £2,500, a MacBook computer and a trip to CERN in Switzerland to see the world's largest particle physics experiment, the Large Hadron Collider particle accelerator. This year's Science Challenge was sponsored by Shell.

— DANIELLE REEVES, COMMUNICATIONS

► To see video footage from the Science Challenge 2008 grand final go to: www3.imperial.ac.uk/news/sciencechallenge

▼ Excerpt from
To what extent is geo-engineering the solution to the climate change problem?
by Hassan Al Halwachi



For years, we have been tackling global warming by trying to increase energy efficiency and reduce greenhouse gas emissions (mitigation). During that time, another approach, which involves modifying earth's environment, has been simmering on the back burner.

Could 'geo-engineering' make any difference in our combat against global warming? ...Volcano eruptions cause the temperature of the earth to cool down

because of the massive amounts of sulphates released, which have the ability to reflect sunlight.

Therefore, using rockets to release sulphates into the stratosphere has been proposed. Nevertheless, this process could damage the ozone layer. Moreover, if released in low altitudes, sulphates may cause acid rain and respiratory diseases.

A less risky method would be cloud seeding. Special yachts could be used to spray tiny droplets of sea water into the atmosphere to promote the formation of clouds, thus increasing earth's reflectivity (albedo). This process is eco-friendly and could be stopped at any time. Perhaps the only impediment is the unknown effects of this process on rainfall patterns.

To read Erika and Hassan's essays in full, plus the 10 other shortlisted essays, go to the Science Challenge Website: www.rcsu.org.uk/sciencechallenge/2008.php



Winner of the Imperial student category in the 2008 Science Challenge, Erika Cule wowed the judges with her creatively written fictional essay, in which her futuristic principal character receives the complete sequence of her genome for her 16th birthday. *Reporter's* Danielle Reeves went to find out more...

What made you choose to answer the question “How would knowledge of my genetic make-up affect my lifestyle?”

As part of my Biochemistry degree I've studied a module on genetics and genomics, so it jumped out at me among the other question choices.

What made you choose to write a fictional story essay?

It just came to me! Some elements of the story are autobiographical—the genetic traits of the main character are similar to some of mine. I also wanted to examine what would be the use of knowing your genetic 'destiny' when you cannot change it, and thought a story was a good way to do this. I've not done any creative writing since school, but once I'd made up my mind, it just seemed to work!

What are you doing when you graduate? Will science communication be part of your career?

I'm going to do a PhD in bioinformatics and theoretical systems biology here at Imperial. I hadn't considered science communication before this competition, but it's definitely a possibility—I strongly believe scientists need to talk openly about their work as there are a lot of misconceptions about science among the general public.

▼ Excerpt from
*How would knowledge of my genetic
makeup affect my lifestyle?*
by Erika Cule

Installed on a sofa with a coffee, I logged on. Among the dozens of birthday greetings was the message from sequencing@454.com.

Subject: Your Complete Genome Sequence.

Birthday Greetings, Elizabeth.

Thank you for ordering Your Complete Genome Sequence High Quality Version from 454.com... Your annotated sequence has been uploaded to the Worldwide Depository of Genomes. It can be identified by your unique GenomeID, which you are free to distribute to potential employers, insurers or acquaintances, at your discretion.

I caught my breath and took a gulp of coffee. I had been waiting for this since 454 launched its service two years ago. My grandmother, a geneticist by training, was as excited as I was about reading my future. I ordered a muffin and skipped through to “Metabolic Diseases”. Unsurprisingly, a set of seven SNPs inferred a haplotype strongly associated with type II diabetes. With three of my grandparents, together with the obese half of the population, now insulin dependent, the emerging consensus among endocrinologists was that TIID represented the wild-type genotype of the twenty-first century. I pinched my waistline. The muffin lost its appeal.

Business school to evaluate telecare

Tanaka Business School researchers have been awarded £350,000 by the Department of Health to evaluate technology to support elderly people and those with long term chronic diseases in their own homes.

Telecare, which has been trialled in a number of countries at a local level since the 1990s, uses information and communication technology to monitor vital signs and movement remotely. Patients gain independence and are able to convalesce in their own homes, which is known to improve recovery rates.

“The task now is to translate this into practical lessons that can help its widespread adoption”

The UK is at the forefront in developing such technologies, and the new research will focus on its rollout into mainstream care services. Through the Whole System Demonstrators (WSD) programme, telecare services will be launched in three regions – Cornwall, Kent and Newham in East London – and the results used to consider how the technology can be used more widely.

Professor James Barlow and Dr Jane Hendy (Tanaka Business School), along with researchers from a consortium of universities led by UCL, will be evaluating the clinical and cost effectiveness of telecare and its impact on care services during the WSD programme.

Professor Barlow said: “Telecare is now embedded in government health and social care policy but it has yet to be embedded in mainstream services. There is a great deal of expertise in the UK in the development of telecare products and the challenges in introducing them. The task now is to translate this into practical lessons that can help its widespread adoption and diffusion.”

—ELLIOTT WHITE, TANAKA BUSINESS SCHOOL

Engineering firm shares expertise



Caroline Bailey, a first year undergraduate who took part in the course, is pictured here with her miniature bridge

Offering engineering students the opportunity to learn from industry experts, academics from the Department of Civil and Environmental Engineering are working with staff from the engineering company Buro Happold to teach creative design to undergraduates studying civil and environmental engineering.

The initiative complements the College’s *EnVision* strategy, a major scheme focusing on the way the Faculty of Engineering educates its undergraduates and prepares them for their future careers.

Thanks to the new partnership, civil and environmental engineering students recently benefited from the

expertise of structural and infrastructure engineers from Buro Happold, headed up by Dr Mike Cook, who visited Imperial to discuss work on projects including the Millennium Dome and the redevelopment of the Battersea Power Station.

Students were asked to solve real life engineering problems faced by these projects – for example, designing and building miniature model pedestrian

bridges as a solution to getting future residents and shoppers from the redeveloped Battersea Power Station across the Thames.

One of the driving forces behind the initiative, Dr Sunday Popo-Ola (Civil and Environmental Engineering) explained: “Project based learning is increasingly becoming a way of teaching engineering students of the twenty-first century, and our creative design course at the College is leading the way in making sure that our future engineers have the relevant training”.

—COLIN SMITH, COMMUNICATIONS

Student entrepreneurs’ £25,000 win

A group of budding student entrepreneurs won £25,000 last month at the final of the New Business Challenge, organised by Tanaka Business School.

To enter the New Business Challenge, students had to write a 10-page business plan and understand the financial and intellectual property aspects of launching a new product.

On 13 March the winning interdisciplinary team was awarded the prestigious prize for their device called Tap Sprinkler, which focuses on providing quick and easy fire protection in the kitchen. It is a sprinkler system that aims to reduce the number of domestic fires that start in the home.

Yusuf Muhammad, a second year student from the Industrial Design

Engineering (IDE) course, was part of the winning team. He said: “I’m in shock! We thought we had a good chance but there are so many other great ideas here, I can’t believe it. I think the key to our success is our interdisciplinary team. Between us we have a lot of great ideas.”

The other members of the winning team were Paul Thomas and Jeung Whoo-Choi, who are also studying on the IDE course, and William Makant and Alan Hart, MBA students in Tanaka Business School.

Speaking about the competition, Rector Sir Richard Sykes said: “This is a great event, because entrepreneurship is at the heart of what Imperial is all about, and what it has always been about.”

—NAOMI WESTON, COMMUNICATIONS



► For more information visit: www.imperial.ac.uk/entrepreneurship/entrepreneurschallenge

► To watch interviews about the New Business Challenge and to meet the winning team, visit: www3.imperial.ac.uk/news/entrepreneurshipchallenge

Medics enter virtual world

Imperial's students are among the first in the UK to use *Second Life*, the internet-based virtual world, as a learning tool.



A group of third year medical students have been accessing virtual patients on a three-dimensional respiratory ward in *Second Life* as part of a pilot study of game-based learning. A total of 24 students are participating in the pilot, which is comparing their knowledge of key data with that of 21 students taught via an online module.

Second Life has grown explosively since its launch in 2003 and the opportunities created by this online world are widespread. First-time users are invited to create their own unique virtual persona in the form of an 'avatar', which they then operate to participate in *Second Life* activities.

For the medical students using *Second Life*, once inside Imperial's virtual hospital, they are welcomed by the Head of Undergraduate Medicine, Professor Jenny Higham. They encounter teleport signs to the 'students union' and 'research centre', where they can interact with other users, and are directed to the respiratory ward.



On the ward, students have access to virtual patients with different medical conditions who they can examine and provide different diagnoses for. Financial and hygiene issues are embedded in the delivery of each case. Students are given credit to buy different investigations, and certain triggers, such as not washing hands, will halt their investigations.

The organiser of the pilot project is Senior Learning Technologist Maria Toro-Troconis, who is completing a PhD in game-based learning within the Faculty of Medicine and Luleå University of Technology, Sweden.

She says: "Imperial is one of the first universities in the UK to be trialling this sort of technology. It is a really exciting opportunity to show everyone within the College how applied game-based learning in a

multi-user virtual environment (MUVE) can be used to enhance face-to-face teaching.

Initial findings from the pilot show that while students are generally receptive to

working within the learning environment, they have problems with access and need time to feel comfortable interacting with the virtual patients. Maria explains that the virtual ward can become very crowded when students are working there at the same time.

She comments: "This is very much the beginning of applied game-based learning. The way it evolves and becomes part of our mainstream learning and teaching activities will depend on how the technology grows and becomes familiar to us.

Maria was in charge of writing the specification for Imperial's region on *Second Life*, working alongside Professor of Respiratory Medicine, Martyn Partridge.

Maria explains the process: "We wanted to replicate all the teaching hospitals but that was very challenging. Instead, we recreated the Sir Alexander Fleming building as our main teaching hospital, with the Queen's Tower as a recognisable landmark. Other features, including other faculties and departments, can be added as interest in the site grows."

Maria believes that demand for virtual patients is a result of new challenges in medical education: "A shortage of doctors and higher numbers of students mean that there is less time for teaching. Virtual patients, especially in three-dimensional format, can be of real value in supporting clinical teaching."

She adds: "*Second Life* is a reflection of where the Internet is going. The aim is not to replace face-to-face communication, but to enhance the learning experience."

— WENDY RAESIDE, COMMUNICATIONS

► To explore *Second Life*, visit: www.secondlife.com

► To find out about Imperial's virtual hospital, visit *Second Life* on: www.elearningimperial.com

Imperial academics are making use of *Second Life* technology in other innovative ways:

Scientists, including Dr James Kirkpatrick (Physics), Dr Tara LaForce (Earth Science and Engineering) and Simon Colton (Computing), have recently given virtual lectures on the Nature Network's Second Nature Island. To find out more and to download podcasts of the lectures visit: www.nature.com/secondnature

The inaugural conference of the International Virtual Association of Surgeons (iVAS) will take place in *Second Life* on 22 April, organised by the Department of Biosurgery and Surgical Technology. To find out more, email j.leong@imperial.ac.uk or j.kinross@imperial.ac.uk.



Lord Ara Darzi, Professor of Surgery at Imperial, has been working with the UK's National Physical Laboratory (NPL) to create a virtual hospital in *Second Life*. Branded "Second Health", the initiative has been developed as a demonstration of how Londoners might experience hospital care in the near future.



inventors corner

Professor Christoph Tang has successfully licensed proteins and related technology, identified through his exceptional research, to commercial partners for the development of a potential vaccine for meningococcal meningitis type B.



Professor Tang has been Principal Investigator of the Pathogenesis and Prevention of Bacterial Meningitis research group for six years. He is passionate about his translational research, which enables a discovery in the lab to be turned into a life saving therapy, and is driven by the benefits it could offer to society.

As a medical professional, Professor Tang has a real insight into the clinical aspects of his research. For several years he worked in hospitals in Africa and treated patients suffering from bacterial meningitis, which can also have serious complications such as loss of limbs, blindness and brain damage.

The bacteria that cause bacterial meningitis vary depending on a person's age, but Professor Tang explained that meningococcal bacterial meningitis is the most prevalent cause of disease. He said: "At present there are vaccines to prevent meningococcal meningitis type C but none to prevent type B," which is the most common form in the UK and the most severe.

A key part of Professor Tang's research is aimed at finding a vaccine to prevent this form of the disease. His group has developed screens which have enabled the discovery of various antigens—proteins that stimulate an immune response—for meningococcal meningitis type B. This is an important step forward, as from these antigens potential vaccines can be developed.

"Some of the antigens have been licensed to companies and are currently being investigated further," Professor Tang said. While working hard to find a vaccine he is also striving to increase his understanding of the disease since he believes that there are still elements of the disease which need more investigation in order to create an adequate vaccine.

"One in 10 people have the meningitis B bacterium living harmlessly in their noses and throats," he explained. "We don't know why these bacteria become harmful and spread into the bloodstream causing septicaemia and to the brain causing meningitis."

Professor Tang hopes his group will get closer to eradicating meningitis: "It would be great if our research could have an impact on public health worldwide," he said.

—MICHELLE COTTERILL, IMPERIAL INNOVATIONS

► For further information about Imperial Innovations please visit: www.imperialinnovations.co.uk or contact the technology transfer team on 020 7581 4949.

Giving something back

Earlier in April, eight Imperial students took a break from their books to help with spring planting in the Natural History Museum Wildlife Garden. The garden has been developed into different areas which represent a range of British lowland habitats including woodland, meadow and ponds.

Denise Chan and Syahidah Sahrom were amongst the students getting their hands dirty. Denise, a fourth year medical student, said: "The garden is really important to the Museum as school children use it for nature workshops in the Summer. I've walked past it so often, but never actually come in until now. I also chose to get involved as it's a good excuse to get some fresh air!"

Syahidah, who is in the third year of her biochemistry degree, is one of Imperial's regular volunteers. She comments: "It's a really great way of meeting other people in the College, and it's particularly good to get involved with projects like this, near to the College."

Caroline Ware, Wildlife Garden manager, is passionate about making the garden a resource for the local

community. She says: "We couldn't do it without the help of volunteers; we have a few PhD students who help during the week, but having a group come along is such a bonus for us."

—EMILY ROSS, COMMUNICATIONS

► For more information on how to get involved in Imperial's volunteering activities visit: www.imperial.ac.uk/volunteering

► The Natural History Museum Wildlife Garden is open to the public from 1 April–31 October and visitors are welcome at all other times by appointment. For more information visit: www.nhm.ac.uk/visit-us/galleries/orange-zone/wildlife-garden



Denise Chan (left) and Syahidah Sahrom lend a hand planting in the chalk downland area of the Natural History Museum Wildlife Garden.

VIPs will go to the ball

Imperial's Summer Ball to be held on Saturday 21 June, promises to be the biggest and most lavish yet. Across the South Kensington Campus over 3,000 revellers will enjoy fairground rides, fireworks, a casino and much more. Acts and performers will be announced at the beginning of the summer term.



The South Kensington Campus is transformed for the annual Summer Ball

Alumni and staff are encouraged to join in the fun with access to a VIP lounge and bar where decadence will be the reigning theme. VIPs will be treated to a free cocktail bar, canapés throughout the night and entertainment by a classic big band.

VIP tickets are currently available online for £65 including a four-course dinner and £50 for access to the entertainments only. Prices will go up on 16 May. Groups of 10 wishing to attend the dinner can buy tickets individually then arrange to be allocated a table.

—CAROLINE DAVIS, COMMUNICATIONS

► For full details of the Summer Ball and to buy your tickets visit: www.imperialcollegeunion.org/summerball

Making a grand entrance

A Steinway grand lauded as one of the best concert pianos in London was unveiled at Imperial in March.

Its inaugural performance was given on 12 March by renowned Japanese pianist Noriko Ogawa (pictured). She commented: "This is a wonderful piano to play, and is sure to bring a great deal of pleasure to many people."

The five-year-old Steinway was purchased through the Imperial College Trust from a private home where it had been treated with "huge care and attention", according to Richard Dickins, Imperial's Director of Music.

It was then completely reworked and brought up to concert standard by technicians Clive Ackroyd from

"Music has always been a vital part of life at Imperial."

the Royal College of Music, and Dietmar Assimis-Kohls from The Purcell School of Music, in time for Ms Ogawa's recital, which included Chopin's Three Mazurkas and Beethoven's Sonata in F minor.



"Even Clive and Dietmar were surprised at how good this piano was," Richard Dickins commented. "Music has always been a vital part of life at Imperial. It's terrific that we now have this beautiful instrument to offer high calibre visiting pianists, and which is also available for staff and students."

The new piano is located in the Great Hall on the South Kensington Campus and is available to the Imperial community for performances. The piano previously positioned there will be sold and funds used to buy a new piano for the Wolfson Building on the Hammersmith Campus.

—ABIGAIL SMITH, COMMUNICATIONS



A major new music competition has named Imperial College Symphony Orchestra (ICSO) as the UK's best university orchestra.

Despite representing the only university that does not teach a music degree in the competition's final, ICSO beat off competition from Cambridge, Manchester and Southampton

Universities to win Symphuni, a university orchestra competition sponsored by the Royal Philharmonic Orchestra.

"The other orchestras had quite a high number of music students," comments Isobel Blake, principal second violinist and Chair of ICSO, who is also studying for a PhD in Imperial's Faculty of Medicine. "But music has always been an important part of life at Imperial – when you have to study so hard you need something to take your mind off it all sometimes."

Symphuni's final took place in London's Cadogan Hall on 29 March, before an audience that included a judging panel made up of cellist Julian Lloyd Webber, leader of the Royal Philharmonic Clio Gould, composer Debbie Wiseman and *Classic FM* magazine editor John Evans.

"the standard displayed – especially by the winning Imperial College orchestra under their excellent conductor Richard Dickins – was quite exceptional."

Symphuni win for College orchestra

With each university orchestra allotted 30 minutes to demonstrate their talent, ICSO decided on a programme of compositions by Benjamin Britten and Sergei Rachmaninov.

Commenting on the event in a *Daily Telegraph* column, Julian Lloyd Webber wrote: "The vast majority of players in the four orchestras we

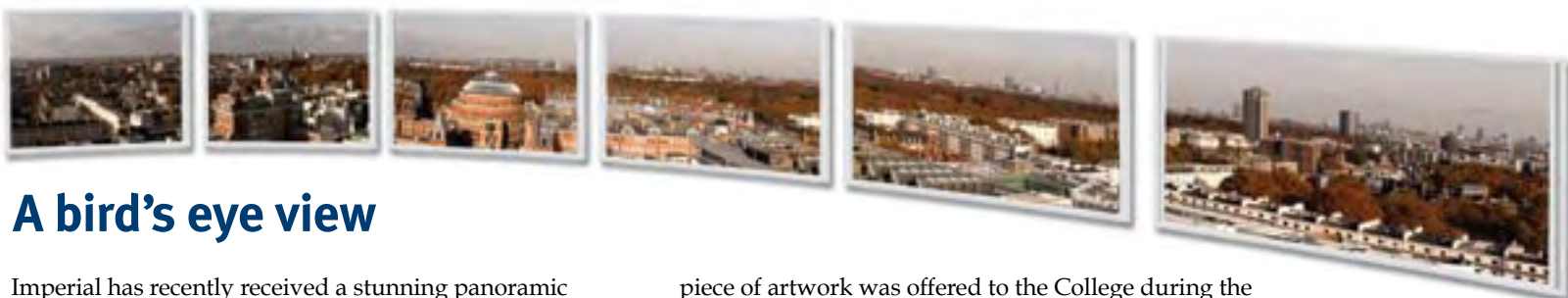
heard have not chosen music as their career. More's the pity as the standard displayed – especially by the winning Imperial College orchestra under their excellent conductor Richard Dickins – was quite exceptional."

Imperial College Symphony orchestra performs one major concert each term, and also plays at special events such as royal visits and the annual Exhibition Road Music Day. Their next concert will be on Friday 30 May in the Great Hall.

—ABIGAIL SMITH, COMMUNICATIONS

► More information is available at: www.union.ic.ac.uk/arts/orchestra

► To watch an interview with Richard Dickins, Director of Music, and Isobel Blake, orchestra lead, visit: www3.imperial.ac.uk/news/symphunio8



A bird's eye view

Imperial has recently received a stunning panoramic photograph capturing the 360 degree cityscape as seen from the top of the Queen's Tower. This voluntary

piece of artwork was offered to the College during the Centenary celebrations and Imperial would like to thank the artist, Phil Ladmore, and Cameron McKenna LLP.



Obituaries



Professor Richard Burkin • Richard Burkin, a leading academic hydrometallurgist, died in February aged 84, a few weeks after an operation following a fall. His career with Imperial began when he joined the staff of the Royal School of Mines in 1952 to teach chemistry in mineral technology. He was responsible for introducing hydrometallurgy as an academic subject in the UK and published the first academic textbook on

the subject, *The Chemistry of Hydrometallurgical Processes*, in 1966. Through Richard's leadership, his vigorous hydrometallurgy research group became world famous. Richard's expertise was sought by metallurgical and chemical companies in Europe and North America and he was the inventor of many patents. He retired from Imperial in 1988, but continued writing and published an updated and much expanded second textbook on hydrometallurgy in 2001. Richard will be remembered with great affection and respect by RSM students all round the world.

Emeritus Professor Ted Broadbent FEng FRS

• Professor Edward Broadbent, who had been a Visiting Professor in the Department of Mathematics since 1983, died on 9 March 2008, aged 84. He began his career in the Royal Aircraft Establishment (RAE) after graduating from St Catharine's College at Cambridge University in 1943 with a degree in engineering. He was soon recognised as a distinguished aerodynamicist and his expertise covered many branches of the subject. His early work made him a world expert on the important subject of flutter and, after that, he turned to the emerging areas of hypersonic flow and magneto-hydrodynamics. Professor Broadbent also made many contributions to basic phenomena related to both jet noise and internal helicopter noise. After his retirement from the RAE in 1983, he was appointed as a Visiting Professor at Imperial and worked on problems of acoustics and vortex dynamics in collaboration with other colleagues in the department as well as scientists at the RAE. Professor Broadbent was a Fellow of the Royal Academy of Engineering and a Fellow of the Royal Society.



Hello from the Editor

"As the new *Reporter* Editor, I look forward to meeting the people who have helped to develop Imperial's sterling reputation and am keen to hear your stories.

I've been a journalist for four years and in the past two have written for the environmental news website, letsrecycle.com, as well as writing and editing a magazine for the Environmental Services Association. I have a longstanding interest in education

and research and have written for a range of education publications including supplements for *The Independent* and *Hotcourses*."

—EMILY ROSS, COMMUNICATIONS

celebrating long service



20 years

Kay Hancox • Undergraduate and Postgraduate Admissions (Electrical and Electronic Engineering)



Diana Adams, Laboratory Manager (Medicine)

Diana Adams trained as a biomedical scientist in the 1960s before working in laboratories around the world. After taking 10 years off to raise her family, she returned to work at the Royal Postgraduate Medical School in April 1988, when she joined Professor Vivette Glover's team. She utilised her people skills to pursue a career in the recruitment of research volunteers, in addition to teaching laboratory techniques to students. Diana is

especially proud of the team's research into the effect of antenatal anxiety on fetal and child development.

"Working with such a fantastic small team is what keeps me coming back," she says. "I have particularly enjoyed working with Professor Glover over the years and it has been great to see so many students pass through and get their PhDs. The College appears to be going from strength to strength."



Professor Peter Tyrer, Professor of Community Psychiatry (Neurosciences and Mental Health)

Peter Tyrer was working as a senior lecturer in Community Psychiatry at St Mary's when it merged with Imperial in 1988. St Mary's was under threat at the time and Professor Tyrer remembers it was a "great comfort to be under the mantle of Imperial as a powerful protector of the traditions of the medical school."

In 1991 he was promoted to Professor of Psychiatry, then to Head of the Department of Public Mental Health in 1996, and subsequently to Head of the Department of Psychological Medicine. Although he left full-time employment in April this year, he continues both clinical and academic work part-time and is also Editor of the *British Journal of Psychiatry*.

Professor Tyrer has worked hard to aid the destigmatisation of people with severe mental illness, with the help of medical students at Imperial College, in joint theatrical productions with patients and staff.



Dr Alan Purohit, Reader in Steroid Endocrinology (Medicine)

In 1988 Dr Purohit joined the then Department of Chemical Pathology, St Mary's, as a Postdoctoral Research Assistant, and was promoted to Reader last year. Over the last 20 years his research has focused on hormone-dependent cancers and the development of steroid sulphatase inhibitors for cancer therapy.

He has been particularly proud of completing the first ever clinical trial of a steroid sulphatase inhibitor in postmenopausal women with advanced breast cancer. This success in drug discovery led to an Imperial start-up company called Sterix Ltd.

Speaking of Imperial's development he says: "Imperial is a much bigger place today and much more businesslike. It has been a roller coaster experience for me. Professor Mike Reed has been immensely supportive, and the research fellows are all very bright and creative. Together, we make an excellent team and I am confident we will make rapid progress in discovering novel therapies to treat cancer."

Staff featured celebrate anniversaries during the period of 7–27 April. Data is supplied by HR and is correct at the time of going to press.

welcome new starters

Ms Gemma Adcock, Medicine
Mr Darren Alleyne, ICT
Dr Saba Alzabin, Kennedy Institute
Mrs Kirsty Anderson, Faculty of Medicine
Dr Morteza Aslaninejad, Physics
Dr Carlos Avendano Jimenez, Chemical Engineering and Chemical Technology
Dr Shakil Awan, Bioengineering
Dr Abdelmalik Bachir, EEE
Miss Rebecca Bath, Library Services
Ms Andrea Bell, Research Services
Dr Mairi Black, Chemistry
Ms Susan Brace, EEE
Mrs Maria Brucoli, EEE
Dr Dan Brudzevsky, Investigative Science
Dr Rey Carabeo, Cell and Molecular Biology
Mr Nelson Cerqueira, ICT
Mr Karim Chine, Computing
Dr Karen Chu, Investigative Science
Mr Luca Ciciani, Civil and Environmental Engineering
Dr John Connor, Physics
Mr Domenico Corapi, Computing
Mr Andrew Cox, Chemistry
Mr David Crane, Imperial College Union
Dr Ruth Curry, SORA
Ms Wei Dai, SORA
Dr Charles Edwards, Biology
Dr Allyson Egan, Medicine
Mr Ibrahim Fahdah, Civil and Environmental Engineering
Miss Lesley Fisher, Registry
Mr Guy Foley, Estates
Dr Ian Gabriel, Investigative Science
Dr Francis Girard, Cell and Molecular Biology
Professor Andrey Goltvlin, Physics
Mr Brijesh Gor, Registry
Miss Delia Gray, Investigative Science
Ms Alexandra Haighton, EPHPC
Dr Sally Hamour, Medicine
Mr Daryl Horn, Registry
Dr Richard Hull, Clinical Sciences
Mr Michael Igiebor, Medicine
Ms Charlotte Iles, Finance
Mr Piers Ingram, Mathematics
Dr David Inwald, Medicine
Ms Rebecca Jacobson, Faculty of Medicine
Dr David James, SORA
Miss Amanda James, Registry
Miss Gemma Jennings, Biology
Dr Ella Johnson, NHLI
Mr Stefanos Karapanagiotidis, Chemistry
Mrs Samira Kashefi, NMH
Mr Steven Kealey, Chemistry
Ms Lisa Kearey, NHLI
Miss Saleha Khanom, Registry
Dr Angela Kingman, Research Services
Dr Fiona Kyle, SORA
Mr Chun Lai, SORA
Dr Renaud Lambiotte, Mathematics
Ms Kayoung Lee, EPHPC
Mr Kalpesh Limani, Faculty of Natural Sciences
Professor Jianguo Lin, Mechanical Engineering
Mr Federico Lorenzoni, Mechanical Engineering
Miss Giorgia Marchioro, IC Student Union
Mr Srdan Marinovic, Computing
Miss Aoife McCarthy, Educational Quality Office
Mr Darren McGuinness, Library Services
Dr Gargi Meur, Medicine
Mr Michele Miragoli, NHLI
Miss Sabrina Mosaheb, Molecular Biosciences
Ms Sriparna Mukherjee, Medicine
Mrs Maria Murgasova, Computing
Mr Wayne Murrell, Research Services
Dr Mihaela Negru, Chemistry
Mr David Noonan, SORA
Ms Mirabell Nsofor, Research Services
Mr Jose Ortega Calderon, EEE
Dr Scot Ouellette, Cell and Molecular Biology
Dr Salvatore Papa, Investigative Science
Dr Thomas Parker, SORA
Miss Daniela Pizzi, Faculty of Natural Sciences
Dr Jonathan Radcliffe, Faculty of Engineering
Dr Rekha Rao, Tanaka Business School
Ms Joscelyne Reekie, Finance
Ms Emily Ross, Communications
Dr Gloria Rudenko, Biological Sciences
Miss Rajdeep Sandhu, Estates
Dr Helmut Schaschl, Medicine
Mr David Searl, Health and Safety Services
Professor Sridhar Seetharaman, Materials
Mr Reenit Shah, Faculty of Medicine
Dr Dongmin Shao, SORA
Dr Kamal Sharma, Investigative Science
Mr German Sibay, Computing
Miss Joanna Skrypak, ESE
Mr Peter Spencer, Physics
Ms Olga Stapountzi, Mechanical Engineering
Ms Julia Steele, NMH
Mr Gary Surridge, Development and Corporate Affairs
Dr Roger Tatoud, Medicine
Mr Jeffrey Temblay, Medicine

Miss Paula Thompson, Development and Corporate Affairs
Mrs Joelle Tollinsky Yavin, Development and Corporate Affairs
Dr Silvana Vallerger, ESE
Mr Michel Valstar, Computing
Dr Joshua Vecht, SORA
Ms Regina Vontell, NMH
Dr Robin Walters, Medicine
Miss Lei Wang, Biology
Ms Wing-Sze Wong, Computing
Mr Mark Woodbridge, Molecular Biosciences
Miss Bishan Wu, Medicine
Dr Zhongxuan Yang, Civil and Environmental Engineering
Dr Wei Yao, SORA
Mr Jose Zambrano Navarro, Faculty of Medicine
Ms Irina Zalivina, NHLI

farewell moving on

Dr Virginia Acha, Tanaka Business School
Mr Andy Allan, ICT
Dr Toby Andrew, EPHPC
Dr Arthur Bartels, Mathematics
Miss Charlotte Beattie, Student Residences
Mr Farid Benyahia, SORA
Mr Chaene Bibiano, Catering Services
Mr Ken Brown, Clinical Sciences
Mr Ryan Burrows, Physics (7 years)
Mrs Wendy Byrne, Biology (14 years)
Ms Wendy Cannon, Biology (12 years)
Mr Darren Chambers, Medicine
Miss Emma Chan, Kennedy Institute
Dr Biqiong Chen, Chemistry
Dr I-Ming Chung, Chemical Engineering and Chemical Technology
Dr Antony Cleave, Materials
Dr Demetra Constantinidou, SORA
Dr Cateljine Coopmans, Tanaka Business School
Miss Alison Cranage, Investigative Science
Dr Fernando Cruz, Chemical Engineering and Chemical Technology
Mr Jacek Desecki, Faculty of Medicine
Dr Daniel Doktor, Biology
Dr Jenny Emerson, Cell and Molecular Biology
Ms Fahema Ettoubi, Registry (8 years)
Dr David Eustace, Materials
Dr Brian Falzon, Aeronautics (11 years)
Dr Lucy Feng, Medicine (10 years)
Dr Michael Figl, Computing
Dr Katherine French, EPHPC (5 years)
Ms Michelle Gallagher, Centre for Professional Development
Dr Kanagasabai Ganesaguru, Medicine
Dr Antonis Georgakakis, Physics
Dr Dimitrios Gerogiorgis, Chemical Engineering and Chemical Technology
Dr Ramon Grima, Institute for Mathematical Sciences
Dr Zdenek Grof, Chemical Engineering and Chemical Technology
Dr Magnus Hallberg, SORA
Ms Linda Hatano, Faculty of Engineering
Mrs Sharon Heslop, Finance (19 years)
Mr Neil Hilton, Security Services (8 years)
Dr Virginie Jacquemin, SORA
Dr Ajay Jasra, Mathematics
Dr Michael Jenkin, Centre for Environmental Policy (6 years)
Mr Jaewoo Joo, Physics
Dr Amir Kadiric, Mechanical Engineering
Mr John Kaylor, Estates (10 years)
Ms Louise Keogh, Human Resources
Ms Jihee Kim, Medicine
Dr Dave Kimber, Materials
Dr Maria Kinali, Medicine
Ms Poppy Lambertson, EPHPC
Dr John Lancashire, Medicine
Mrs Louisa Lawrence, Communications
Dr Bertrand Lefebvre, Physics
Mr Daniel Leff, SORA
Dr Zhuoqun Li, EEE
Dr Mark Lindsay, NHLI
Dr Lilia Marinova, NMH
Miss Elizabeth McCormick, Library Services
Dr Suman Mukhopadhyay, NMH
Mr Philip Munro, Faculty of Medicine
Dr Kirsty Newman, Investigative Science
Dr Sevasti-Melissa Nolas, Tanaka Business School
Dr Eivor Oborn, SORA
Dr Feride Oeztuerk-Winder, SORA
Mr David O'Rorke, Biology
Mr Michael Orosco, Imperial College Union
Ms Magdalena Pacholska, Library Services
Dr David Parker, SORA
Mr Bhimji Patel, Estates (23 years)
Dr Cecile Peltekian, Investigative Science
Dr Christina Petsoulas, Tanaka Business School
Dr Marilyn Plant, EPHPC (5 years)
Dr Nagaraju Pogaku, EEE
Ms Karen Pomeranz, SORA

Dr Stephanie Ramboarina, Molecular Biosciences
Dr Sheila Raynor, NHLI
Miss Christiane Relf, Student Residences
Dr Maurice Riordan, Humanities
Ms Nicola Roberts, Tanaka Business School
Dr Joseph Robinson, Physics
Miss Carla Rocha, Catering Services
Dr Michael Rogers, Civil and Environmental Engineering
Miss Nicola Rogers, Computing (8 years)
Mr David Sammons, Estates
Mr Alberto Sanquingo Rodriguez, Aeronautics
Dr Loredana Santoro, Cell and Molecular Biology
Miss Akiko Sato, Centre for Environmental Policy
Dr Subo Shanmuganathan, Human Resources
Dr Rohini Sharma, Investigative Science
Dr Warren Sherliker, Development and Corporate Affairs
Dr Paul Shrimpton, Molecular Biosciences
Miss Deepa Shukla, Medicine
Mr Christopher Shuttle, Chemistry
Mr Neil Smallwood, EEE
Ms Wanda Stow, Investigative Science (10 years)
Mr Lawrence Tse, Mechanical Engineering
Miss Carly Turnbull, Clinical Sciences
Mr David Walker, Humanities (15 years)
Dr Lei Wang, Computing
Dr Silene Wavre, NHLI
Dr Kim Wells, NMH (12 years)
Ms Rachel West, Occupational Health Service
Miss Laura Wilkinson, EYEC
Dr Ben Wood, Physics
Miss Boon Yap, Physics
Dr Uri Zarfaty, Computing

retirements

Mr Jack McDowall, Finance (12 years)
Professor Robin Sharp, EEE (5 years)
Professor Peter Tyrer, NMH (19 years)

This data is supplied by HR and covers the period 6 March–5 April. It was correct at the time of going to press. Years of service are given where an individual has been a member of College staff for over five years. Asterisk (*) indicates where an individual will continue to play an active role in College life.

 Please send your images and/or brief comments about new starters, leavers and retirees to the Editor, e.ross@imperial.ac.uk who reserves the right to edit or amend these as necessary.

moving in. moving on.

what's on

18 APRIL 13.00–14.00

Selenium and chronic disease

Dr Saverio Stranges, Senior Clinical Lecturer in Cardiovascular Epidemiology, University of Warwick

Roger Banister Lecture Theatre, St Mary's Campus

First come, first served

21 APRIL 12.55 – 17.00



Imperial College London RNA Interest Group Conference

Lecture Theatre 220, Mechanical Engineering Building

Registration in advance: email amy.thompson@imperial.ac.uk

21 APRIL 17.30

Return to the RNAi world: rethinking gene expression, evolution and medicine

Dr Craig C. Mello, Nobel laureate, Howard Hughes Medical School Medical Investigator, Blais University Chair in Molecular Medicine

Lecture Theatre 220, Mechanical Engineering Building,

Ticket is required: email amy.thompson@imperial.ac.uk

22 APRIL 17.30 – 18.30

Counter-intuitive problems in dynamics and vibration

Dr Hugh Hunt, Cambridge University

Department of Mechanical Engineering Research Showcase 2008

Lecture Theatre 220, Mechanical Engineering Building

First come, first served



► All events are at the South Kensington Campus unless otherwise stated.

23 APRIL 17.30 – 18.30

Photons in, electrons out: nanostructured and molecular materials for solar cells

Professor Jenny Nelson, Professor of Physics

Inaugural Lecture

Blackett lecture theatre, Blackett Building

Registration in advance: email amy.thompson@imperial.ac.uk

30 APRIL 17.30–18.30

Infectious diseases in China

Professor Sir Roy Anderson, Professor of Infectious Diseases Epidemiology and Rector-elect

Imperial College London China NOW lecture series: part one

Lecture Theatre, G16, Sir Alexander Fleming Building

Ticket is required: events@imperial.ac.uk

6 MAY 17.00 – 18.00

How to make wall-less bacteria: new insights into how cell proliferation may have evolved

Professor Jeff Errington FRS, University of Newcastle

Anthony de Rothschild Lecture Theatre, Second Floor, St Mary's Campus

First come, first served

8 MAY 17.30–18.30

The cerebral signature for pain perception in health and disease: can neuroimaging tell us anything new?

Professor Irene Tracey, Nuffield Professor of Anaesthetic Science and Director of the Oxford Centre for Magnetic Resonance Imaging for the Brain

Athena Lecture

Lecture Theatre G16, Sir Alexander Fleming Building

Registration in advance: events@imperial.ac.uk



Take note

An events toolkit is now available for staff who want to organise departmental events at Imperial. The guide outlines a number of steps which event organisers should follow in the lead up to an event.



For high profile events or VIP visits, staff should contact the events team for further advice: events@imperial.ac.uk

To find out more visit: www.imperial.ac.uk/events/managinganevent

volunteering

Making conversation

Project: Group Conversation Facilitator
 Project ID: 2019
 Organisation: Imperial College London, Department of Humanities
 Date(s): From 7 May
 Time(s): Wednesdays (16.30-18.30)
 Location: South Kensington Campus, SW7

Volunteers are needed to facilitate English conversation group sessions for overseas students and research associates, many of whom have difficulty conversing in English and are adapting to UK culture. The purpose of these group sessions is to improve the verbal English skills of those who speak English as their second language and to provide an opportunity for cultural interaction between people from different backgrounds. On average six to 10 people attend these sessions. You would need to speak English as your first language and be able to volunteer for at least five weeks. All sessions take place on the South Kensington Campus, but there is also an opportunity to take the group to any of the local museums.



For more information

To take part in a scheme or to hear more about volunteering in general, contact Lucy Mitchell

- 020 7594 8141
- volunteering@imperial.ac.uk

For full details of over 250 volunteering opportunities visit: www.imperial.ac.uk/volunteering

Subscribe to the weekly newsletter by emailing: volunteering@imperial.ac.uk

Reporter is published every three weeks during term time in print and online at www.imperial.ac.uk/reporter.



The copy deadline for issue 191 is Friday 25 April. Publication date is 10 May. Contributions are welcome (no more than 300 words). Please note the editor reserves the right to cut or amend articles as necessary. Information correct at time of going to press.

Editor

Emily Ross
 Tel +44 (0)20 7594 6715
 email e.ross@imperial.ac.uk

Photography

Godfrey Argent Studio •
 Michele Panzeri