



Leading the charge

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EDITOR'S CORNER

Extra-curricular

Last week, the Queen's Lawn, Dalby Court and Beit **sprang back to life** again after the summer for the annual Freshers' Fair, where new students were introduced to most of Imperial's clubs and societies. From the **human daffodil** proudly promoting the Welsh Society to the human pyramid created by the amazingly enthusiastic Cheerleading Society; club presidents became salespeople for the day, **energetically pitching the benefits of their societies** and showing new students that there is more to Imperial than studying. I was out and about capturing students' impressions of the Fair for the College website. I met one new undergraduate who had signed up to over 20 clubs, and I chatted to a couple of postdocs, who had been wowed by **tales of the skies** by members of the Pilot Club. Good luck to staff and students for the autumn term and please **keep sending me your stories** about activities you've been involved in, whether they are inside or outside the office. To see Freshers' Fair in action visit <http://bit.ly/p4MWIV>

EMILY ROSS-JOANNOU, EDITOR

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

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Major grant awarded for HIV prevention study in Africa

An international research partnership involving Imperial and London School of Hygiene and Tropical Medicine (LSHTM) has been awarded \$37 million to test an innovative combination of strategies to prevent HIV in African countries.

The project, called PopART (Population Effects of AntiRetroviral Therapy), will test the impact of a combination prevention strategy that combines community-wide

house-to-house voluntary testing for HIV, the offer of medical circumcision to men who test HIV negative, and the offer of immediate initiation of antiretroviral therapy for all those testing HIV positive.

Researchers at Imperial and partners, including LSHTM, the Zambia AIDS Related Tuberculosis Project and the Desmond Tutu TB Centre at Stellenbosch University, South Africa, will work closely on this trial with colleagues from the HIV Prevention Trials Network.

Commenting on the trial, Dr Sarah Fidler, Senior Clinical Lecturer in HIV at Imperial, said: "The PopART trial is the first international study to test the feasibility and impact

of delivering a combination HIV prevention approach, proposed by mathematical models to have the capacity to significantly reduce HIV incidence. This study will not only enhance the provision of life-saving treatment for all those infected with HIV, but also incorporates additional strategies to limit risks of viral acquisition, potentially conferring both individual and population level benefit."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT



Students sweep ahead of iGEM competition

A team of Imperial students will be making its way to the final of the 2011 International Genetically Engineered Machine (iGEM) Competition at MIT next month, after winning the European final last Sunday.



The nine undergraduates from the Departments of Bioengineering and Life Sciences came first out of 50 teams with a project using genetically engineered *E. coli* bacteria to solve the dual problems of desertification and poor crop growth in arid climates around the world. They also received an additional major prize in the Best Wiki category, for the online research diary that they developed to explain and support their project.

Soil erosion is caused by wind and rain sweeping away fertile topsoil, and it is accelerated by climate change and unsustainable farming practices. Across the world, these problems prevent crops and other plants from growing on land areas equivalent to

half the size of the UK each year.

Professor Richard Kitney (Bioengineering) and Professor Paul Freemont (Life Sciences) co-led the team and congratulated them on their success. Professor Freemont said: "Imperial undergraduate students never cease to amaze me in their commitment to tackle serious world problems and their abilities to come up with innovative solutions."

Imperial's iGEM team is one of 18 teams from the European heat of the competition, who will go on to compete in the World Championship Jamboree on 5–7 November 2011 at MIT in Cambridge, Massachusetts, USA. Their projects will be pitted against those of 60 teams from the Americas region and Asia region in the final competition to be crowned Grand Winner.

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

See Reporter online for the results of the final.

Imperial College
London

GET IN STEP

and join Imperial's green team

The College is striving for a 20% reduction of its carbon footprint by 2014, and you can play an active role in making Imperial more environmentally sustainable.

Find out how College is going green, and what you can do to make a difference, by joining Brian Hoskins, Director of the Grantham Institute for Climate Change, and Nick Roalfe, Director of Facilities Management and Property Management, at the **StepChange ambassadors reception** at 17.00 on **1 November** in the Queen's Tower Rooms.

RSVP by Monday 24 October 2011 to sustainability@imperial.ac.uk

STEPCHANGE » Stamp down our carbon footprint
www.imperial.ac.uk/sustainability

Celebrating five years of big nano-achievements

Earlier this month researchers celebrated the work of the London Centre for Nanotechnology (LCN) at a seminar held in honour of the fifth anniversary of its opening.

The Centre brings together scientists from UCL and Imperial College London to probe the natural world and develop new technologies at scales measured in billionths of a metre. The researchers are particularly focused on using nanotechnology to improve healthcare, information technology, energy and the environment.

At the event on 27 September, a line-up of VIPs from academia, government and industry praised the Centre's ongoing success in a variety of disciplines. Its researchers have found new ways to manipulate

light using nanoparticles and have developed new ways to screen for antibiotic resistance in bacteria. They hope to build on these and other successes with commercial products in the coming years. They have won significant investment for their work from research councils and private sources.

“The LCN is exceptionally well positioned to lead this work”

“Our society continues to face enormous challenges like the clean provision and efficient use of energy; in water supply, in the efficient processing, retrieval and communication of information, and in the provision of effective healthcare for our populations,” said Milo Shaffer, Professor of Materials Chemistry and co-director of Imperial's side of the Centre.

“Over the last five years, it has become ever clearer that nanoscience



LCN co-directors Professor Gabriel Aepelli and Milo Shaffer celebrate with a mega-sized cake

can make a major contribution to solving these problems and we believe that the LCN is exceptionally well positioned to lead this work in the future. We look forward to more great science over the next five years, and we are confident that nanotechnology can make a real difference to the world around us.”

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

To watch a video about the celebrations and to read more about the research being conducted in the LCN, visit <http://bit.ly/lcn5year>

Postgrad accommodation opens its doors



The first residents of the brand new postgraduate accommodation complex for Imperial students began moving in last week.

Griffon Studios is a development of 566 studios in Battersea, which was developed by the College together with Berkeley First. Its aim is to expand the limited provision of accommodation available to postgraduates in London, with priority given to Imperial students.

Postgraduate Henry Addison (Computing), an occupant of one of the new studio flats, said: “I’m looking forward to living in London and Clapham in particular and being well connected to the rest of London. And I’m especially looking forward to living and making friends with lots of other Imperial graduates.”

The accommodation, which is close to Clapham Junction station, also includes a gym, common room and gardens. Its rooms are being released in two phases. The first phase has seen 452 studio apartments made available for postgraduates this year, with the remaining 114 scheduled to be ready for the beginning for the 2012–13 academic year.

Jane Neary, Director of Commercial Services, said: “There is a shortage of high quality postgraduate accommodation in the capital in general, so we hope the studios will be a great new addition for Imperial's postgraduate population and postgraduates across London. We're looking forward to seeing how they settle in.”

The College's other efforts to improve London's postgraduate accommodation provision include plans for postgraduate halls at its new campus in west London.

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

in brief



Director of ICT

Dr John Shemilt became the new Director of ICT on 1 October, succeeding Mr Arthur Spirling, MBE, who retired from the College last month. Dr Shemilt gained his undergraduate degree in physics, as

well as his MSc and PhD degrees, at Imperial, before becoming a research assistant in the Department of Metallurgy and Materials Science in 1978. Dr Shemilt was appointed Microcomputer Centre Supervisor in the Imperial College Computer Centre in 1980 and held posts of increasing responsibility before promotion to his previous position as Head of Technology Operations and Deputy Director of ICT in February 2009.

Business School programme leaps in rankings

The Business School's MSc in Management has been ranked first in the UK and 13th in the world in the *Financial Times's* 2011 Master's in Management ranking, jumping more than 10 places from last year. Programme Director Dr Marco Mongiello (Business School) welcomed the news: “This is a fantastic achievement that reflects the success of our graduates. It also serves as recognition of the dedication and professionalism of staff at the Business School involved in the programme”.

New deputy principals appointed

The Faculties of Natural Sciences and Engineering have announced new senior appointments. Professor Steven Rose, Head of Plasma Physics and Director of the Institute of Shock Physics, became Deputy Principal of the Faculty of Natural Sciences on 1 October 2011, succeeding Professor Donal Bradley on his appointment as Pro Rector (Research). Professor Neil Alford and Professor Peter Cheung have been appointed Deputy Principals of the Faculty of Engineering, reporting to Professor Jeff Magee, Principal of the Faculty of Engineering.

Latest league tables

Imperial has been ranked in eighth place in the *THE World University Rankings 2011–12*. Rising from ninth position in last year's table, Imperial has maintained its rank of third in the UK, behind Oxford and Cambridge (fourth and sixth in the world respectively). Caltech has replaced Harvard at the head of the rankings, while 32 UK institutions made it into the top 200.



Singapore Medical School health check

The curriculum for the MBBS course due to be delivered by the Lee Kong Chian School of Medicine, the joint medical school established by Imperial and Nanyang Technological University in Singapore, has passed a milestone in its development.

The first external review of the curriculum, a standard requirement in the development of any Imperial course, saw five world experts (pictured above with Imperial and NTU staff) in the field appraise the proposed curriculum during a three day visit to NTU.

Among their findings the reviewers noted that the course was on track to meet the requirements of the School's first intake in 2013 and well ahead in some areas, and also praised the team behind the curriculum for their commitment and experience, and the excellent facilities and resources that the School will offer.

Following feedback from the review team Imperial will consider further innovations for the course, in particular how teaching in bio-medical engineering and other areas could enrich the curriculum, and how to communicate the school's vision more clearly.

The Senior Vice Dean of the School, Professor Martyn Partridge, said: "We were delighted that the external review panel felt the school was well on track. There will be no slackening of pace over the next 12 months."

Reports from the review, together with the curriculum, will now be submitted to the College's Medical Studies Committee and Senate, alongside appropriate bodies at NTU.

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

Business School's Strategic Marketing MSc incorporates new technologies



Digital and social media is at the heart of a new Master's programme that welcomed its first students at Imperial College Business School last week. The MSc in Strategic Marketing is doing away with traditional paper-based teaching and learning and instead the Business School is providing the students with an iPad2 with which to conduct their studies.

"We want our students to understand everything about these new and rapidly changing technologies"

The programme leaders are asking students to communicate and carry out much of their research and coursework using sites such as Posterous, Facebook and Twitter. The Business School has also created an online 'communication hub' for the course, where students can ask questions and have discussions with each other and their lecturers.

At their induction, the students will be presented with a single A5 leaflet representing the amount of paperwork they

should receive for the whole year of their programme. QR (quick response) codes will be used at the start of each lecture, allowing students to download the slides directly to their iPads, while apps such as GoodReader, iAnnotate and Evernote will be used to facilitate note taking.

Programme Director Colin Love said: "We want our students to understand everything about these new and rapidly changing technologies and how to make

the best use of them, and a large part of that is immersing the students in that world from day one. Our course will equip students with the marketing skills that are immediately relevant for companies, business leaders and entrepreneurs around the world."

—TANYA GUBBAY, COMMUNICATIONS AND DEVELOPMENT

Seedcamp Week 2011

Last month, 400 investors and marketing gurus from high profile companies, such as Microsoft, Google, Facebook, eBay and Twitter, came to Imperial to take part in Seedcamp Week. Hosted by Imperial College Business School and the Department of Computing, the event linked up new entrepreneurs with industry experts from across Europe.

As part of the week, 20 start-up companies from across the world were invited to come and seek advice from experts on how to take their business to the next level.

Among the participants was Fractal, a web-based service which converts the computer language, HTML into templates which work across

all email systems. The team of two brothers was only selected last month at a mini Seedcamp in London and includes Imperial undergraduate Kahin Farah. Mr Farah, who is studying Maths and Computing, explains why this programme is so important to their business: "We have already received €50,000 from winning the mini Seedcamp in August and Seedcamp Week provided a great opportunity to get everyone as excited about Fractal as we are.

"It is extremely useful to have the opportunity to meet successful entrepreneurs who can share their experiences with us. Getting any start-up business off the ground is very tough, and these valuable insights will hopefully help us avoid making big mistakes."



This is the first time that Seedcamp Week has been hosted by Imperial and, as Dr Itxaso del Palacio Aguirre, teacher and coach at the Entrepreneurship Hub in the Business School explained, it was a great opportunity: "This type of event brings in many top investors, professionals and entrepreneurs from across the world. Holding it here allows our students to network personally with these influential people and learn from real entrepreneurial experiences."

—TANYA GUBBAY, COMMUNICATIONS AND DEVELOPMENT

www.seedcamp.com/our-process

media mentions

—TANYA GUBBAY, COMMUNICATIONS AND DEVELOPMENT



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WALL STREET JOURNAL ▶ 8.9.2011

Green light for GM crops



Global attitudes could shift if China supports genetically modified crops

such as pest resistant rice and wheat, according to the *Wall Street Journal*. While European courts have ruled that foods containing pollen derived from a genetically modified source must be specifically authorised before they can be sold, China is expected to approve genetically modified crops for mainstream cultivation within the next year. Professor Sir Gordon Conway (Environmental Policy) said: “I think next year, or the year after, they will release a rice that is GM and that will change everything. They’ve got 30–40 [GM crop tests] underway right now. We’re very close.”

CHEMISTRY WORLD ▶ 8.9.2011

Battery power

A natural product made from seaweed could one day be used to improve the rechargeable batteries that power our laptops and phones, reports *Chemistry World*. When mixed with a silicon nano-powder, scientists say a sugar extracted from brown algae (seaweed) can help to improve the storage capacity and the life-cycle of Lithium-ion batteries. Given the portable nature of the batteries, it is also important to maintain or improve a battery’s capacity without increasing its weight or volume. Emeritus Professor Mino Green (Electrical and Electronic Engineering) said: “Improving the anode capacity alone only gives a limited battery capacity improvement, because there is still the unimproved cathode that is heavy and bulky.”

DAILY MAIL ▶ 19.9.2011

Berry good news

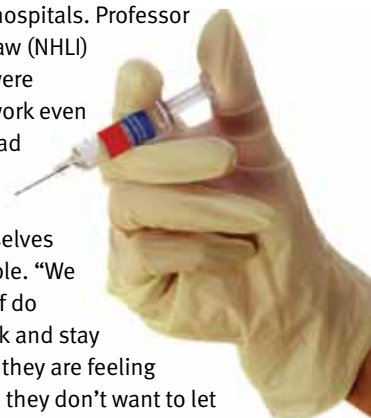


Berries have overtaken apples at the top of the league of most popular fruits reported the *Daily Mail*. Sales now make up 18.4 per cent of Britain’s £4,160 million fruit market. Emeritus Professor David Hughes, former Professor of Food Marketing at Wye College, said: “Even in recessionary times berries are an affordable treat for most families and unlike many other fruits are easy to handle. Add to this the context of consumers, increased understanding of the benefits of berries in a healthy diet and the excellent in-store position that retailers offer and this has established over time a very strong market presence for berries which is shown in the excellent sales growth over the past few years.”

DAILY MAIL ▶ 29.9.2011

Flu jabs essential for doctors

Health officials are warning that doctors and nurses are putting lives at risk by not having their flu jabs, reported the *Daily Mail*. Only a third of frontline workers get the vaccine according to figures published by the Department of Health. A study by Imperial has found that at least 30 patients caught swine flu in hospital during the 2009 pandemic. The researchers looked at 1,520 patients being treated for swine flu at 75 NHS hospitals. Professor Peter Openshaw (NHLL) said doctors were coming in to work even though they had flu because they liked to think of themselves as indispensable. “We know that staff do come into work and stay on even when they are feeling lousy because they don’t want to let their colleagues down,” he said.



awards and honours



ENGINEERING

Monhemius wins gold

Emeritus Professor John Monhemius (Earth Science and Engineering), pictured right, former Dean of the Royal School of Mines, was awarded the Futers Gold Medal for outstanding services to the international miner-

als industry at a ceremony at the Institute of Materials, Minerals and Mining in July.

NATURAL SCIENCES

Wolfson Research Merit Award

Professor David van Dyk (Mathematics) has been awarded the Royal Society’s Wolfson Research Merit Award. A statistician, Professor van Dyk develops new statistical methods and models that help to bridge the gap between newly available high quality data and the scientific questions astronomers are asking about the formation, evolution, and structure of the universe. The award scheme provides up to five years’ funding for winners.



BUSINESS SCHOOL

Recognition for online learning courses

The Educational Technology Unit at Imperial College Business School recently won the 2011 Sloan-C Effective Practice Award for the second year in succession. The team, headed by David Lefevre (pictured middle) and including Marc Wells and Karlie Etim, won the award in recognition of their work in providing online courses for students that deliver the skills and knowledge required for face-to-face classes.

The approach has been refined steadily over five years to the point where student satisfaction for the School’s online teaching is comparable to face-to-face classes.

MEDICINE

Smith elected to German academy

Professor Geoffrey Smith (Medicine) has been elected to membership of the Leopoldina, the German national academy of sciences. The Leopoldina, the world’s oldest academy of natural sciences, has around 1,400 members who are chosen on the basis of academic excellence. Professor Smith’s research focuses on the interactions between viruses and the host cell and immune system.



Aboriginal Australians are descendants of first humans to leave Africa

A major international collaboration involving scientists from the School of Public Health has for the first time sequenced the genome of a man who was an Aboriginal Australian. They have shown that modern day Aboriginal Australians are the direct descendants of the first people who arrived on the continent some 50,000 years ago, and that those ancestors left Africa earlier than their European and Asian counterparts. The work was published on 22 September in the journal *Science*.

Although there is good archaeological evidence that shows humans in Australia around 50,000 years ago, this genome study rewrites the story of their journey there. The study provides a good indication that Aboriginal Australians are descendants of the earliest explorers, leaving Africa around 24,000 years before their Asian and European counterparts. This is contrary to the previous, and most widely accepted, theory that all modern humans derive from a single out-of-Africa migration wave into Europe, Asia and Australia.

The study derived from a lock of hair donated to a British anthropologist by an Aboriginal man from the Goldfields region of Western Australia in the early twentieth century.

Dr Francois Balloux (Public Health), who led the UK team, said: “Thanks to tremendous progress in sequencing technologies, it is much easier to compare genomes of individual people, including those from geographically distinct populations. And by doing this you can learn a lot about when, and via what route, they came to be where they are today. In this way, the science of genomics makes a unique contribution to our understanding of when and how humans colonised the world.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

UK homes need to warm to new sustainable heating technologies

UK homeowners need to be encouraged to replace gas boilers and adopt new low-carbon sustainable heating systems in the future, if the country is to meet its CO₂ reduction targets, according to a briefing paper released in late September by the Grantham Institute for Climate Change.

The paper explores the options already on the market for reducing carbon emissions to almost zero in homes. It argues that wholesale adoption of these technologies, such as heat pumps (effectively refrigerators working in reverse), is vital if the government is to meet its long-term commitment of reducing carbon emissions in the UK by 80 per cent by 2050.

Gas boilers have a significant impact on our climate and account for 12.4 per cent of total

UK greenhouse gas emissions. A number of different types of low-carbon residential heating systems are available and would reduce the impact on the environment if ways to integrate them more effectively into our infrastructure were found. However, as the paper argues, further government support is necessary to help households make this transition a reality.

Professor Sir Brian Hoskins, Director of the Grantham Institute, said: “By issuing these briefing papers, we hope to inform policy and policy debate. One of the clear messages from this work is that we already have the technology available to make home heating more sustainable. Looking ahead, we need to come up with a clear strategy for the full scale implementation of these technologies in homes, so that we



can make a real dent in our CO₂ emissions.”

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

Listen to the Imperial audio interview on sustainable home heating systems: <http://bit.ly/qcmVky>

Blood pressure genes could prevent heart disease



A total of 23 gene regions associated with measures of blood pressure have been identified in two major studies published in early September in *Nature* and *Nature Genetics*, which were co-authored by Imperial scientists.

The findings represent a major advance in our understanding of

the inherited influences on blood pressure and offer new potential therapeutic targets for prevention of heart disease and stroke – the biggest cause of death worldwide.

Around a billion people worldwide have hypertension, defined as a systolic blood pressure above 140 millimetres of mercury (mmHg) or a diastolic blood pressure above 90 mmHg.

So far, genetic studies have looked for variants associated with these measures of blood pressure, but

other measures are also predictive of hypertension and heart disease. Pulse pressure is the difference between systolic and diastolic pressure, and mean arterial pressure is a weighted average of the two.

Four gene regions associated with pulse pressure were identified in the study published in *Nature Genetics*, two linked with mean arterial pressure and one with both traits. The analysis was based on data from over 120,000 people of European ancestry in 35 previous studies.

The study published in *Nature*, which involved over 270,000 people, identified 16 gene regions associated with systolic and diastolic blood pressure. The combined effect of these variations on blood pressure

is similar to the effect of a standard medicine to lower blood pressure.

Professor Paul Elliott (Public Health) said: “Pulse pressure is a marker of the stiffness of the arteries that carry blood from the heart round the body. Our results could help understanding about the genetic mechanisms underlying relationships of

pulse pressure with risk of heart disease and stroke.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

“Pulse pressure is a marker of the stiffness of the arteries that carry blood from the heart round the body”

Foam injections for varicose veins better than lasers

Foam injections to treat varicose veins cause less pain for patients and could save NHS money compared with a popular alternative treatment, according to research presented by Imperial academics in late September at the annual meeting of the European Society for Vascular Surgery.

Varicose veins develop when the valves in veins stop working properly, causing the veins to swell. About one in three people has varicose veins when they reach retirement age, with women affected more than men. They do not present a serious health problem for most, but in severe cases they can cause aching, itching, swelling or leg ulcers.

Patients requiring treatment often undergo surgery to strip out the affected vein. However, in the last decade new non-surgical treatments, called endovenous laser ablation (EVLA) and foam sclerotherapy, have become more popular.

The study found the two treatments were equally successful at closing off varicose veins. However, foam therapy procedures were more than twice as quick and cost over four times less than laser treatment on average. Patients who had foam therapy experienced less pain in the week following treatment and could return to normal activity in three days, compared with eight days for patients who had laser therapy.

Mr Christopher Lattimer (Surgery and Cancer) said: "This is the first time that anyone in the NHS has compared foam and laser treatments to see which is better value for money. We found that the cost of foam was just one quarter the cost of laser, taking into account their effectiveness, and was also quicker, less painful, and had people back to normal activity sooner."

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT



“This is the first time that anyone in the NHS has compared foam and laser treatments to see which is better value for money”

Cancer-killing cells caught on film

Scientists have revealed in more detail than ever before how white blood cells kill diseased tissue using deadly granules, in research published on September 14 in the journal *PLoS Biology*.



The study looked at a type of white blood cell called a natural killer (NK) cell that protects the body by identifying and killing diseased tissue. The researchers immobilised a NK cell and its target using a pair of 'optical' laser tweezers so that a super-resolution microscope could capture all the action at the interface between the two cells. They then watched inside the NK cell as actin filaments parted to create a tiny portal and enzyme-filled granules moved towards the portal, ready to pass out onto the target to kill it.

The scientists hope that learning more about how NK cells identify which tissues to kill and initiate the killing process, could lead to better healthcare for some patients. Professor Daniel Davis (Life Sciences) said: "In the future, drugs that influence where and when NK cells kill could be included in medical treatments, such as the targeted killing of tumours. They may also prove useful in preventing the unwanted destruction by NK cells that may occur in transplant rejection or some auto-immune diseases."

Dr Alice Brown (Life Sciences) said: "These previously undetectable events inside cells have never been seen in such high resolution. It is truly exciting to observe what happens when a NK cell springs into action."

—SIMON LEVEY, COMMUNICATIONS AND DEVELOPMENT

Scientists 'disarm' HIV in step towards vaccine



Research led by scientists at Imperial has found a way to prevent HIV from damaging the immune system, according to a new lab-based study published in the journal *Blood* in September. The study could have important implications for the development of HIV vaccines.

The research shows that HIV is unable to damage the immune system if cholesterol is removed from the virus's membrane. Usually, when a person becomes infected, the body's innate immune response provides an immediate defence. However, some researchers believe that HIV causes the innate immune system to overreact and that this weakens the immune system's next line of defence, known as the adaptive immune response.

“This may be one reason why developing a vaccine has proven so difficult”

In the new study, cholesterol was removed from the membrane surrounding the virus and this stopped HIV from triggering the innate immune response. This led to a stronger adaptive response, orchestrated by immune cells called T cells. These results support the idea that HIV overstimulates the innate response and that this weakens the immune system.

Dr Adriano Boasso (Medicine) said: "HIV is very sneaky. It evades the host's defences by triggering overblown responses that damage the

immune system. It's like revving your car in first gear for too long. Eventually the engine blows out.

"This may be one reason why developing a vaccine has proven so difficult. Most vaccines prime the adaptive response to recognise the invader, but it's hard for this to work if the virus triggers other mechanisms that weaken the adaptive response."

The team are now looking to investigate whether this inactivated virus could be developed into a vaccine.

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT



Imperial gets set

Next July, as you tuck into your morning muesli in the SCR or work up a sweat in *Ethos*, the track-suited person eating or powering the treadmill alongside you might just be an Olympian. With events for the London 2012 games happening on the College's doorstep in Hyde Park and Earl's Court, Imperial will be hosting a number of Olympic teams on the South Kensington Campus. *Reporter* finds out how the College is gearing up for the challenge.

A number of Olympic teams are choosing to stay outside the Olympic Village and are, instead, basing themselves at UK universities either before or during the games. This arrangement will allow athletes to maintain their focus away from the spotlight of the Games and give them exclusive access to training facilities, rather than sharing them with other nations.

So far, it has been confirmed that Imperial will be hosting the Japanese Olympic triathlon, fencing, volleyball and badminton teams, alongside the Swiss open

water swimming and triathlon teams. They will be staying at the Southside halls of residence – the Japanese Olympic Committee has booked 290 rooms and the Swiss Olympic team has booked 22. In addition to this, the Great Britain triathlon and open water teams will be using Imperial's swimming pool and gym facilities.

Since the beginning of the year, Commercial Services has been working with the respective Olympic committees to ensure that the athletes and their entourage of coaches, nutritionists, chefs, psychologists, masseurs and sports physiotherapists will have everything they need when they arrive.

The £300,000 refit of the College's Energia gym over the summer means the athletes will be using state-of-the-art, interactive facilities. "We have lots of new resistance and cardiovascular

machines that are great for training. The new functional zone is full of multipurpose strength machines, which are perfect for last-minute honing and stretching, and ensuring no form is lost – an important consideration for athletes," explains Neil Mosley, Assistant Director of Commercial Services.

Neil says that the team is particularly confident about hosting the Japanese fencing team, as fencing is one of Imperial's strongest sports

and the Great Britain men's foil team already trains at Imperial on a regular basis. "Our facilities are more than fit for purpose – we currently have four fencing pistes [defined playing strips] and elec-

tronic scoring equipment, plus the staff at *Ethos* understand the particular needs of fencers. The athletes will need to do lots of speed work, foot work and reaction work and we are providing space for them to concentrate on these skills."

“We want to support the Olympic teams as best we can and see them succeed in the games”

Gian Gilli, who heads up the Swiss Olympic team, visited Imperial in August to look at the accommodation and facilities that the team will be using next year. He was accompanied by a group of Swiss athletes who were competing in the Dextro Energy triathlon in Hyde Park. The event allowed the athletes to test themselves on the proposed 2012 Olympic triathlon course and gave them the opportunity to review the distances and check the logistics.

"With the open water teams swimming in the Serpentine and the triathletes competing in Hyde Park, Imperial's location in South Kensington is ideal for us," he said. Gian noted that the swimming pool and upgraded weightlifting facilities will be particularly useful for the Swiss athletes.

To keep track of the competition, one of the things that the Imperial visitors have asked for is access to a special Olympic television service, which will simultaneously broadcast coverage of each event covering all the venues on separate channels.



(L-R): Japanese athletes compete in the 2011 women's world fencing cup in March; Nicola Spirig at a training camp in Gran Canaria.

Below: Staff from the Department of Humanities demonstrate traditional Japanese dancing.

Food power

As an athlete's diet is key to their performance, getting the catering right for the Olympic teams is a major consideration.

Over the next 10 months the Swiss athletes will be working with nutritionists to create the right diet for them, so that their performance will peak at competition time. Gian Gilli explains

that the Swiss athletes eat very simple but nutritious meals, for example, for breakfast they are likely to have bread, muesli and fruit. After training they'll have a lunch, perhaps chicken with rice, vegetables and salad, and they tend to have a high carbohydrate dinner, such as pasta, rice and potatoes. "They try to avoid eating heavy fatty meals with a lot of red meat, as this can affect the quality of their sleep," he says.

For the Japanese team, it will be particularly important for the athletes to be eating known ingredients as they can't risk their performance being affected by a change of diet. Both the Swiss and Japanese chefs



and nutritionists will have access to the kitchen facilities in Southside, so that they can prepare meals. For the Japanese, these are likely to include of a lot of fish, rice and Japanese vegetables sourced from specialist suppliers with whom the College already works.

Culture

As part of the preparations at Imperial, the Commercial Services management team has been taking Japanese language lessons from the Department of Humanities in order to provide the best service to the teams when they arrive. They are learning basic greetings, food and sports vocabulary and directions to the Olympic village.

In addition, to raise awareness of Imperial's role in the games and to celebrate the international dimension it offers, Commercial Services last month invited children from local schools to get a taste of Japanese culture on campus at a Sanka Day—'Sanka' being Japanese for participation. The participation ranged from learning Japanese words to making sushi, as well as experiencing a little

Judo and Japanese dancing.

Neil admits that next July is going to be a challenging time: "Not only do we want to support the Olympic teams as best we can and see them succeed in the Games but, at the same time, we want to ensure the

disruption to Imperial staff and students, and the service we provide to them, is as small as possible," he says.

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT

This is the first in a series of Reporter features on the London 2012 Olympics as we begin the countdown to the start of the Games. Over the coming months Reporter will speak to Imperial's own student Olympic hopefuls, hear from College academics about Olympics-related research and welcome the arrival of the athletes and delegations next July.



Profile: Nicola Spirig

Swiss triathlete Nicola, 29, currently ranks 19th in the world and is one to watch in the London 2012 Olympics. Reporter spoke to her about what keeps her motivated and what she's looking forward to doing in London.

How did you get into sport?

Both my parents are PE teachers so I've always been surrounded by it.

You have been competing since 1992, what has kept you motivated?

I'm fascinated by the three different disciplines of triathlon and how they combine in one sport. I like to see how far training can get me, how fast I can be and where my limits are.

Have you had to make any sacrifices to get to your level?

To be a professional athlete means lots and lots of training but as well as that, it's also important to eat, sleep and recover like a professional athlete. You need to give up a lot for your sport every day but for me, triathlon is the best profession

in the world, so it never feels like I'm making any sacrifices. I feel lucky to be able to live this life.

What does competing in the Olympics mean to you?

For me the Olympics are the ultimate dream. It's the biggest race you can imagine, but it's also a very, very special event, with all the sports and different athletes coming together in one place. I feel very honoured to compete in the Olympics.

Can you describe your training regime?

I train 25–30 hours a week. There is no typical day but I tend to train three times a day.

How will you be spending your free time in London?

After my race, my free time at the Olympics will be spent by visiting other Olympic sports events, enjoying the Olympic village, spending time with friends and family, and hopefully getting the chance to look at the city from the top of the London Eye.



Graphic visualisation of a typical write-up area in the Institute.

A bold biomedical venture

On 11 October, Imperial celebrated officially joining **The Francis Crick Institute** at an event in King's Cross. The Institute – a £650 million world class interdisciplinary biomedical research institute set to open in 2015 – was founded by the Medical Research



Council, Cancer Research UK, the Wellcome Trust and UCL. *Reporter* speaks to Professor Maggie Dallman, Principal of the Faculty of Natural Sciences, about her involvement in the project and what it means to Imperial.

When did you first become involved with the Institute?

When Sir Keith O'Nions became Rector in 2010, we considered whether it might be appropriate to start discussions with the partners and he was really keen to do so. I talked to the CEOs of all the partner organisations as well as Sir Paul Nurse, who is now the Institute's first director, and they were excited for both Imperial and King's College London to be engaged. Since that time, members of all the faculties

and the Business School have been working towards our accession.

Why were you so keen to be involved with the project?

This is one of the most exciting developments in research relating to healthcare that I've seen in the UK in my lifetime. The opportunities for collaboration in the physical sciences, engineering and biomedical sciences will deliver amazing new knowledge, as well as practical benefits for patients – it is

an extraordinary opportunity. We've also never seen a collaborative effort on this scale between major funding agencies and HEIs.

“Those who [...] have specialist knowledge of technologies should be well placed to get involved”

How much has Imperial invested?

All the HEIs involved have invested £40 million into the project – it is a major investment so we have taken time to ensure that academics and scientists across the College are engaged with the Crick mission.

What are the research aims of the Institute?

The Institute aims to understand the human body, determine what happens when normal processes – physiological, homeostatic mechanisms – go wrong and cause diseases such as cancer, heart disease and stroke, infections and neurodegenerative diseases. They then aim to use this knowledge to prevent and help to treat the conditions.

What can Imperial bring to the Institute?

Imperial's strengths in physical sciences and engineering sciences will be applied to issues of global healthcare. The AHSC will act as one of the translational outlets for the basic sciences that will be developed at the Institute.

How will Imperial benefit from the collaboration?

The idea is for Imperial staff to be seconded to the institute for periods of time and then return to the College, bringing new research knowledge with them. What is of increasing excitement is the idea of Crick

employees being seconded to Imperial, so there will be a dynamic interaction between the two organisations.

What kind of facilities will there be?

It's going to be a spectacular state-of-the-art building full of stunning equipment for activities such as microscopy, imaging and protein structure analysis. The labs are open plan and one of the key design briefs was to ensure the plan provided enough social and mingling space to encourage maximum interaction between different groups.

Who will work at Crick?

Academics from every faculty at Imperial will have a chance to get involved with the Institute. In total it will employ 1,500 staff, including 1,250 scientists, but we can't say exactly how many will be from Imperial at this stage. I envisage there will be around 10-15 Principal Investigators, along with their students and postdocs.

Sir Paul Nurse is particularly keen on having early career scientists working there for a few years to allow them the opportunity to develop their research portfolios. Only the most outstanding researchers will be considered. So, those who have written novel papers, employ novel approaches or have specialist knowledge of technologies should be well placed to get involved.

What's your advice for those wanting to get involved?

We are beginning to map out activities and facilities with all the partner organisations and are planning to hold workshops and other engagement activities for staff to find out about what is happening. Keep an eye out for adverts in *Reporter* and Staff Briefing.

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT

inside*

story

mini profile

Walter Distaso

Walter Distaso, Professor of Financial Econometrics (Business School), on preventing economic instability and how he is using his research on risk management to make climate change predictions more accurate.



by the time they realise there is instability in the system it is too late. Our project is about devising a way to provide regulators with early indicators of systemic risk.

How are you working with the Grantham Institute for Climate Change?

One of the Institute's research programmes is on risk and extreme events and I'm leading a programme which combines statistical analysis, meteorological statistics and mathematics. The aim of the project is to bring risk onto the agenda of policy makers so that when, for example, the Intergovernmental Panel on Climate Change says that the global temperature is likely to rise by two degrees in 10 years, the uncertainty around the final number, which is normally achieved by combining a number of models, is considered in the scenario. Having an understanding of such uncertainties will help policy makers to make more informed decisions and better plans to combat climate change.

—EMILY ROSS-JOANNOU, COMMUNICATIONS AND DEVELOPMENT

What is econometrics?

Econometrics is somewhere in-between economics and statistics. Since the beginning of the nineteenth century the analysis of economic data has become more and more quantitative and there has also been a huge increase in the availability of both financial and economic data. Econometrics is the application of mathematics and statistical methods to that data.

Are you doing any work on the current economic climate?

We have been working on better ways of estimating and forecasting market activity which has huge implications for risk management. We are also finalising a project on systemic risk – this is the idea that all things are related to one another, so that a shock hitting one institution (like a bank or an economy), is very likely to hit another.

How can your research into systemic risk help countries to prevent economic crises?

Traditionally regulators rely a lot on historic information and

Promoting mathematics in Ghana

Dr Lorenzo Pellis, who works on mathematical models for infectious disease epidemiology in the School of Public Health, went to Ghana over the summer to teach mathematics to school children, with the help of funding from the Postdoc Development Centre. Lorenzo describes his experience.



“My friend Franca Hoffmann, who studies mathematics at Imperial, was contacted via Facebook by Joel Dogoe, an electrical engineer currently working in quality assurance management at Vodafone Ghana. Joel started the MISE Foundation, a registered non-profit science education foundation dedicated to promoting mathematical and scientific education in

Ghana in order to tackle its declining performance in maths. Franca recruited me, Outi Supponen (Aeronautics) and Leonard Williams (Chemical Engineering and Chemical Technology) to come and teach with her at the Lincoln Community School in Accra for a couple of weeks.

Working with the children in Ghana was a pleasure – the children and their parents were incredibly enthusiastic and I was surprised how the children were

able to grasp many of the fundamental concepts of the field of mathematical epidemiology, despite the lack of mathematical tools. For the majority of

the time, there were 15 pupils aged 10–16. My aim was to teach them about combinatorics; a branch of mathematics that concerns counting, and probability.

“Working with the children in Ghana was a pleasure – the children and their parents were incredibly enthusiastic”

I found teaching such a wide age range really difficult as the students worked at different speeds. Naturally, it was very satisfying to teach the fastest group, but it was even more rewarding seeing the youngest showing the same enthusiasm, even though they were learning only the basic concepts.

I enjoyed the opportunity to work with the organisers as, despite our cultural differences, we shared the same goals and passion for education and mathematics.”

► SCIENCE FROM SCRATCH

As explained by Thea Cunningham, MSc Science Communication

Ribosome

The protein factories of our cells, ribosomes, translate our genetic code into proteins needed for our survival. The term ‘ribosome’ is derived from the Greek word *soma*, meaning ‘body’. Each ribosome comprises a large and a small subunit. To synthesise a new protein, the small subunit attaches itself to a strand of messenger RNA (mRNA), that encodes the genetic information needed to create a protein. The large subunit subsequently attaches amino acids, the building blocks of proteins, to the mRNA by creating a peptide bond. The ribosome moves along the strand of mRNA, assembling amino acids in the sequence determined by the mRNA thus creating a protein chain. Once the chain is complete, the ribosome releases the chain and unbinds itself from the mRNA. The amino acid chain is then made into a functional protein. Impaired ribosome function has been associated with the onset of Alzheimer's, where proteins accumulate in the brain, killing brain cells.



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

Student blogger David on getting lost in his dissertation:

“About an hour ago, I thought it was Wednesday. In fact, I only just realised it was Tuesday. In the past two days I’ve written 4,300 words of



my dissertation, as well as processed a bunch of results and read more literature than I probably should have. It’s good that I’m getting it done, but I’m also wondering why I didn’t do this much earlier! My dissertation, by the way, is studying the response of online communities sceptical about evidence of global warming. It’s interesting, and no-one has looked at it before, but gee, it’s been bringing me into close contact with people whose views are quite extreme. Mentally exhausting!”

www.imperial.ac.uk/campus_life/studentblogs

blog SPOT

The ultimate field trip



A lone road winds into the Ugandan rainforest towards the Makerere University field station, through dense jungle packed with chimpanzees, baboons, rainbow-hued tropical birds and even the occasional leopard.

For two weeks in September, this setting was home to 30 Imperial biology and ecology undergraduates, together with staff from the Department of Life Sciences.

It was the Department’s third visit to Kibale National Park in western Uganda since establishing its tropical biology field course. As part of the course, the undergraduates had the opportunity to experience the life of

a tropical biologist firsthand, working on their own research projects, from examining the relationship between a baboon’s place in its group’s hierarchy and its health, to investigating which colours generally were most attractive to the rainforest’s varied insect life.

Dominic Andradi-Brown described his most memorable moment from the trip:

“I was out in the forest collecting tree leaf samples for my project and a mother chimp with a baby climbed into a nearby tree. She sat up there for about half an hour eating fruit – remarkably chilled out as we

“I was out in the forest collecting tree leaf samples for my project and a mother chimp with a baby climbed into a nearby tree”

watched her. Every now and then the baby would poke his head out from behind her body and reach out his tiny arms – an amazing experience!”

One of the academics who run the course, Professor Vincent Savolainen, said:

“This course gives the students a unique introduction

to the excitement, challenges and opportunities for biological research and conservation in tropical habitats.”

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

cross culture



Canada

Gillian Forsyth, Programme Coordinator (Business School)

I was born and raised in Canada. Since moving to London three and a half years ago I’ve worked at the Business School. One of my favourite things to do in Canada is watch ice hockey – it’s a fast-paced game and similar to football in terms of the passion it elicits from spectators. Ice hockey is the national sport and the main competition is called the National Hockey League (NHL), which is played in the US and Canada, and incorporates players from those and many other countries. The winner of the NHL gets the prestigious Stanley Cup. Despite the time difference, I still follow the progress of my favourite ice hockey team in Canada – the Toronto Maple Leafs. I’m still loyal to them even though they haven’t won the cup for over 40 years!

What does ice hockey mean to Canada and why is it different to other sports?

Identity • Ice hockey is a key part of our national identity. A lot of people immigrate to Canada from all over the world, and of all my friends from home I’d say only two or three have parents who were born in Canada. It’s really important to have an activity like ice hockey, which everyone can get behind and support regardless of their background. Ice hockey brings people together in a way other things can’t.

A fairer game? • Unlike the professional football leagues, the NHL has a cap on salaries and a selection method for new players called a ‘draft pick’. Both of these mean that talent is more evenly spread across the teams.

Favourite game • One of the most memorable games I’ve watched was Game 6 of the 2002 Stanley Cup playoffs between Toronto and our most despised enemy, the Ottawa Senators. I was watching the game in the pub, eating chicken wings and drinking pitchers of beer, as is customary in Canada. It was a very intense match, with Toronto trailing 2-0 at the end of the first period, however they made an amazing comeback and ended up winning 4-3 – the mood in the pub was unreal!



About cross culture

Cross culture is a scrapbook for staff and students to fill with their local recipes, cultural traditions and experiences of moving from another part of the world to work or study at Imperial.

✉ To contribute to cross culture please send your ideas to reporter@imperial.ac.uk



INVENTOR'S CORNER

Mixing it up

Mark Sephton, Professor of Organic Geochemistry and Meteoritics (Earth Sciences and Engineering), is currently working on the ExoMars joint ESA/NASA mission to deliver rovers to the surface of Mars, where they will search for evidence of past or present life on the planet.

What have you invented?

As part of the ExoMars mission, we were asked to develop a method for extracting organic compounds from rock, which could then be analysed by the ExoMars rover's Life Marker Chip for evidence of life such as hydrocarbons. Usually, we'd use organic solvents to get at the organic compounds, but the Life Marker Chip uses antibodies to identify specific molecules, and they would be destroyed by the organic solvents. So we were tasked with developing a new solvent based on water, because antibodies have no problems in water. Essentially, we had to dissolve oil in water but they don't mix. So we looked at a range of different surfactants that would help them mix, and found one that does this extremely well – it is almost as efficient as an organic solvent.

And now you've discovered another application for the oil industry?

Two thirds of the world's oil supply is in so-called 'unconventional hydrocarbons' such as oil sands. By



2020, around 10 per cent of the oil we use will come from these sources. At the moment, the processes used to extract the oil are environmentally damaging and either inefficient (hot water flotation) or very expensive (using organic solvents). The process we've developed is around 10 times more efficient than using hot water flotation, it's inexpensive and all its components are environmentally benign.

How are you commercialising the work?

We've filed a patent and are currently working with industrial partners under a knowledge exchange grant from the UK Space Agency.

—GAVIN REED, IMPERIAL INNOVATIONS



Talking it out

On 29 September, Jessica Adams (Communications and Development) joined a lecture theatre full of new international students for Brett Harmony's (Humanities) orientation workshop on the fundamentals of English pronunciation. She reports on her experience and what she learnt about the quirks of English language.

"One of the central tenets of the presentation was amusingly framed as 'English's overall system of meaning is stress'. It was fascinating to learn that where words like 'conflict' or 'progress' are concerned, where the stress is placed when the word is spoken in most cases defines whether it's being used as a verb or a noun.

Another interesting lesson was the tendency for native English speakers to dramatically shorten the non-stressed sounds when speaking informally or quickly. Marina Sideri, a new student from Greece starting an MSc in civil engineering, said that this point explained a few of the confusing conversations she'd had since arriving in London!

Clearly the most important part of the presentation was the litmus test of laughter. Brett's examples of the dangers of mispronunciation included a risky take on the word 'sheet', and judging by the laughter in the lecture theatre, the students definitely got the point."

“Brett's examples of the dangers of mispronunciation included a risky take on the word 'sheet'”

How to succeed in science



On 27 September, Imperial's Centre for Integrative Mammalian Physiology and Pharmacology (CIMPP) put on an event for around 150 life science students called *How to Succeed in Science*. It focused on how to get research funded and published, and where a career in science might lead. PhD student David Carr (Life Sciences) went along to find out more:

"Over the course of the day, I heard Philip Campbell, Editor-in-Chief of *Nature*, give

an insight into the peer review process and how publishing is rapidly changing with increasing online activity. I learnt about funding opportunities from the National Centre for the Replacement, Refinement and Reduction of Animals in Research, Cancer Research UK and the Wellcome Trust. The main message was that competition is hot but if you plan ahead, find a good group and follow your passions, then you might secure that longed for postdoctoral fellowship.

In another session I heard just how

flexible research careers can be from Mark Christie, who'd spent 20 years in the pharmaceutical industry before becoming director of a pre-clinical consultancy. I also heard from Sarah Joseph, from the MRC in London, who spent many years doing clinical trials in remote parts of Africa.

I found the event very stimulating and was left with a really positive message to do what you love, because then you'll have succeeded no matter what."

Running to prevent malaria

On 11 September, Professor Azra Ghani, Professor Christl Donnelly, Dr Emily Lyons, Dr Lucy Okell, Dr Deirdre Hollingsworth and Dr Bhargavi Rao (all Public Health) took on the Adidas Women's 5k Challenge in Hyde Park, to raise money for the charity, Malaria No More. Emily shares her experience of the day:



(L - R) Azra, Emily and Christl competing in Hyde Park

"The majority of the team currently or historically work on malaria, and we all have a huge interest in supporting infectious disease research and charitable activity. As the primary PI for malaria research in the MRC Outbreak Centre, Azra keeps up with the work of the Malaria No More charity that we supported, and many of our team are postdocs and students in her group. We didn't train together *per se* but what we lacked in preparation, we made up for in creativity! Lucy, Bhargavi and Deirdre dressed up as mosquitoes and walked the route, while Azra, Christl and I ran in a bid to earn supporter contributions with sweat. It was an excellent day out, complete with sunshine and torrential rain, and a huge success. To date, we've raised £1,250 towards malaria prevention and treatment."

To support Malaria No More and the team, visit: www.justgiving.com/RCOutbreakCentre

long
service

Staff featured in this column have given many years of service to the College. Staff listed below celebrate anniversaries during the period 12 August–30 September. The data is supplied by HR and is correct at the time of going to press.

20 years

- Ms Alison Ahearn, Principal Research Fellow (Civil and Environmental Engineering)
- Dr Thomas Clarke, Teaching Associate (Electrical and Electronic Engineering)
- Professor Lesley Cohen, Professor of Solid State Physics (Physics)
- Mrs Carolyn Dale, Senior Group Administrator (Physics)
- Mrs Wendy Gould, Deputy Faculty Operating Officer (Faculty of Medicine)
- Robert Harvey-Wells, Corgi Plumber (Support Services)
- Professor Jonathan Morrison, Professor of Experimental Fluid Mechanics (Aeronautics)
- Professor Stratos Pistikopoulos, Professor (Chemical Engineering and Chemical Technology)
- Ms Susan Ponter, Head of Management Accounting (Finance)
- Mr Ian Phillips, Forward Delivery Assistant (Faculty of Medicine)
- Miss Janette Shiel, Student Services Manager (Faculty of Medicine)
- Dr Sumangali Wijetunge, Research Lecturer (NHLI)

30 years

- Mr Tony Meredith, Mechanical Workshop Manager (Chemical Engineering and Chemical Technology)
- Professor Peter Cawley, Professor (Mechanical Engineering)
- Dr Duncan Rogers, Reader (NHLI)

Taking time to think about equality



This month Imperial hosted an event to share its equality practices and innovations. The Imperial as One symposium, organised by the Equalities and Diversity Unit, brought together participants from the College's black and minority ethnic (BME) network, Imperial as

One, as well as other College staff, visitors from Imperial College Healthcare NHS Trust, other universities and beyond.

The day-long programme of events included speakers from Imperial and from within and outside the higher education sector. During the day, the Equality Challenge Unit also launched its study on the experiences of BME staff in higher education. Closing remarks came from the equalities champion Lord Ouseley, the former Chief Executive of the Commission for Racial Equality. He said:

"Imperial's Equality and Diversity Unit is leading the way in showing what can be done even with limited resources. Events such as this give hope to all those who believe that education should be the arena where people of all backgrounds can realise their full potential."

One of the participants, Okan Kibaroglu, IT Production Services Manager (ICT), said: "It was a day full of new learning – from Lord Darzi's vision for the future of patient care, to Lord Winston's passionate speech about the benefits of the Reach Out Lab."

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT



Homespun mythologies

Artist Sarah Gillham is currently exhibiting her work in the Blyth Gallery in the Sheffield Building. Her installation features quilted wall hangings which display stylised, mirrored female figures inspired by mythological and archetypal women.

Head First, pictured left, is made of lampshades, fabric and mirrors while Open Wide Blanket, pictured right, is constructed of velvet, patchwork quilt and hand embroidery, and reminds us that material and fibre are forms of matter that abound in references to the body.

The exhibition will be in the Blyth Gallery until 4 November.

Welcome new starters

Professor Ron Allan, EEE
Miss Paola Armengol Barriga, Chemistry
Mr Alan Bane, Catering Services
Dr Filiberto Braglia, Physics
Mr Daniel Brown, Medicine
Ms Abigail Brown, Surgery and Cancer
Professor Peter Buckle, Surgery and Cancer
Dr Dharmyanthi Burt, Medicine
Dr Chiara Candelise, Environmental Policy
Dr Richard Carmichael, Business School
Dr Gaelle Carrat, Medicine
Dr Thomas Cass, Mathematics
Miss Sajidah Chowdhury, NHLI
Dr Bruno Clerckx, EEE
Ms Aida Di Gregorio, NHLI
Dr Andrew Edwards, Medicine
Mrs Eva Farkasne Keller, Catering Services
Miss Maria Fuentes Gari, Chemical Engineering and Chemical Technology
Miss Maria Healy, Business School
Ms Laura Hopkins, Catering Services
Miss Jo Horsburgh, Faculty of Medicine
Miss Delaram Jarchi, Computing

Mr Murtaza Kaderbhai, Surgery and Cancer
Miss Soni Kaur, Life Sciences
Mrs Patricia Keener, Business School
Dr Caroline Knapp, Chemistry
Dr Igor Krasovskiy, Mathematics
Dr Daniel Langer, Medicine
Miss Elizabeth Lemm, NHLI
Mrs Kathy Lewis, Surgery and Cancer
Dr Korina Li, Medicine
Dr Karen Logan, Medicine
Miss Martina Lundberg, NHLI
Dr Marcus Martineau, Surgery and Cancer
Dr Stephen Matthews, Computing
Miss Rachel Mckinlay, Communications and Development
Dr Sean McMitchell, Materials
Dr Pratap Neelakantan, Medicine
Miss Tayo Nong, Aeronautics
Dr Niamh Nowlan, Bioengineering
Miss Sandra Nwokeoha, Mechanical Engineering
Ms Neha Okhandiar, Global Health Innovation
Mr Alan O'Neill, Medicine
Dr Cora O'Reilly, Faculty of Engineering
Ms Alexis Palfreyman, Public Health
Miss Rebecca Parkin, NHLI
Dr David Payne, Materials
Dr Simon Peake, Medicine

Mrs Yvonne Phillips, Physics
Dr Amandine Prelat, ESE
Dr Anil Rao, Computing
Dr Tristan Rodriguez, NHLI
Dr Maxime Rotival, Clinical Science
Dr Sushmita Roy Nawathe, Surgery and Cancer
Mr Christopher Rubery, Medicine
Dr Iulia Salaoru, EEE
Dr Emma Sharp, Faculty of Natural Sciences
Dr John Soong, Medicine
Mr Lindsay Taylor, Medicine
Dr Claire Thorne, Business School
Ms Argyro Tsipa, Chemical Engineering and Chemical Technology
Dr Geva Vashitz, Public Health
Mr Nuno Vieira Da Silva, ESE
Dr Alexander White, Mathematics
Dr Oliver Worsfold, Corporate Partnerships

Farewell moving on

Dr Adrien Angeli, Computing
Dr William Astle, Public Health
Mr Amr Aswad, Life Sciences
Mr Kenneth Baker, Life Sciences (8 years)
Miss Caroline Ballard, Civil and Environmental Engineering
Mr David Beales, Library
Mr Anthony Benn, Security Services (6 years)
Ms Sharleen Bowes, NHLI
Ms Michelle Brophy, Medicine
Dr Altannar Chinchuluun, Chemical Engineering and Chemical Technology
Mr Oliver Coen, Library
Ms Justyna Czyzewska-Khan, Medicine
Mr Rikki Dean, Business School
Miss Sarah Dodman, Physics
Miss Rachel Evered, Medicine
Mr Raymond Farley, NHLI (16 years)
Ms Marilyn Garraway, Educational Quality
Dr Edward Hendriks, Life Sciences (7 years)
Dr David Howey, Mechanical Engineering
Ms Melanie Ikeh, Medicine
Dr Emanuele Instuli, Chemistry
Mr Sylvain Jacques, Chemistry
Dr Nicholas Jones, Materials
Miss Katharine Langford, Public Health
Dr Yue Ma, Clinical Science
Dr Clare Monk, Surgery and Cancer
Dr Florine Morrison, Faculty of Medicine (5 years)
Miss Yasmin Mowat, Surgery and Cancer
Mr Harshil Palan, Accommodation
Dr Nikolaos Papadakos, Computing
Miss Reeya Patel, Accommodation

Ms Laura Penny, Faculty of Medicine
Mr Thomas Reynolds, Careers Advisory Service
Dr Anthony Rowe, Computing
Dr Holly Shelton, Medicine
Dr Sibdas Singha Mahapatra, Chemical Engineering and Chemical Technology
Miss Lucy Smeaton, Medicine (5 years)
Mr Daniel Taffard, Sport and Leisure
Mrs Victoria Thomas, Professional Development (8 years)
Miss Hannah Thornton, NHLI
Mr Darren Tomkins, Imperial College Union
Mrs Beata Traczykiewicz, EYEC
Dr Anju Verma, Public Health
Miss Carol Weyman, Faculty of Medicine (6 years)
Ms Lex Young, Faculty of Engineering (6 years)
Dr Yingru Zhao, Chemical Engineering and Chemical Technology

This data is supplied by HR and covers the period 5 September –25 September. This data was correct at the time of going to press.

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

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

PHOTO EXPO

Thousands of new students moved into Imperial halls on 1 October at the start of Welcome Week 2011. After settling in over the weekend, they got the chance to sample some of Imperial's 300 clubs and societies at Freshers' Fair, including the daffodil-wearing Welsh society, and take part in sports trials at Imperial's Harlington sports ground, near Heathrow.

Welcome Week videos and tweets: <http://bit.ly/welcomewk>



Speak out

Story ideas?

We welcome contributions from across the College. The next publication day is 3 November. Reporter is published every three weeks during term time in print and online at www.imperial.ac.uk/reporter

Contact Emily Ross-Joannou:
✉ reporter@imperial.ac.uk
☎ +44 (0)20 7594 6715



2 NOVEMBER ▶ PUBLIC LECTURE

How we perceive and live with risk and uncertainty

The Fukushima incident has shown how quickly the perception of risk and its communication, even by experts, can change dramatically. Our societies are built on accepting technological

risks that often no-one is able to fully grasp. In the 2011 Imperial College London / The Lloyd's Register Educational Trust lecture, Professor Gudela Grote, ETH Zürich, introduces some of the fundamental features of risk perception and decision-making under uncertainty, and discusses how we can communicate risk to the public without frightening or belittling people.



3 NOVEMBER ▶ PUBLIC LECTURE

Living with limits: growth, resources and climate change

The affluent economy, enjoyed until recently by just a small proportion of the world's human population, is now becoming global. Billions of

hitherto poor people not only aspire to the standards of living of more advanced countries, but expect to achieve them within their lifetimes. But such a leap will impose vastly greater demands on the planet's resources and threaten profound changes in the global environment. Martin Wolf, Chief Economics Commentator at the *Financial Times*, asks whether humanity has any hope of addressing these challenges successfully.

take note

Loyalty scheme for internal bookings

Imperial's Conference and Events team has launched a new loyalty scheme for staff using internal hospitality and event services. Each time you make a booking worth £600 or more, you will earn a reward stamp. Once you have collected 10 stamps, up to £150 will be deducted from the cost of a future event booking.

For more information visit: www.imperial.ac.uk/conferenceandevents/rewards



13–14 OCTOBER ▶ CONFERENCE

Prostate Cancer Charity national conference

Various speakers



13 OCTOBER ▶ MUSIC

Lunchtime concert

Florian Uhlig (piano)

18 OCTOBER ▶ PUBLIC LECTURE

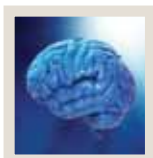
The wealth of universities: implications for management research

Professor Maryann Feldmann, University of North Carolina

18 OCTOBER ▶ PUBLIC LECTURE

The extended mind: recent experimental evidence

Dr Rupert Sheldrake, Fellow of the Institute of Noetic Sciences



19 OCTOBER ▶ PUBLIC LECTURE

Adapting institutions to climate change

Sir John Lawton FRS

20 OCTOBER ▶ MUSIC

Lunchtime concert

Andrew Lucas (organ)

20 OCTOBER ▶ SEMINAR

Using switchable genetics to identify effective therapeutic cancer targets

Professor Gerard Evan FRS, University of Cambridge



25 OCTOBER ▶ PUBLIC LECTURE

Your days are numbered: the maths of death

Comedians Timandra Harkness and Matt Parker

26 OCTOBER ▶ PUBLIC LECTURE

The nuclear fuel cycle – its vital role in the nuclear renaissance

Dr Noël Camarcat, EDF Generation

26 OCTOBER ▶ SEMINAR

Communicating climate just got harder

Sanjay Khanna, journalist and founder of the Resilient People initiative

27 OCTOBER ▶ MUSIC

Lunchtime concert

London Mozart Trio



27 OCTOBER ▶ PUBLIC LECTURE

A business and its ideas: shaping a company and a century

Sam Palmisano, CEO of IBM

2 NOVEMBER ▶ CONFERENCE

Institute of Shock Physics showcase

Talks and tours of the Institute

3 NOVEMBER ▶ SEMINAR

Innate immune responses in acute HIV-1 infection: protective or pathogenic?

Dr Persephone Borrow, University of Oxford

3 NOVEMBER ▶ MUSIC

Lunchtime concert

Andrew Zolinsky (piano)



MEET THE READER



Sara Muir, Head of Energy and Environment (Facilities Management)

What are you doing in the picture?

I'm standing in front of the sustainability stand at Freshers' Fair – we were there to recruit students to help cut the College's carbon footprint by 20 per cent by 2014. Over 300 students signed up – it was very heartening to see how engaged they are.

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

I would devote an issue to encouraging staff and students to calculate their personal carbon footprint.

Who would be your cover star?

I would like to see Kevin Cope, Head of Building Operations, on the cover. He is currently leading a project to develop an on-site system that uses pyrolysis (the process of heating up a material in the absence of oxygen), to destroy clinical waste, producing heat which will be used in the Sir Alexander Fleming Building.

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

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