

Tackling swine flu

College prepares for the start of session  **CENTRE PAGES**



**NEW WEST
LONDON SITE**
Imperial
acquires
seven acres
PAGE 3



COLIN CARO
On overcoming
scientific
boundaries
PAGE 10



**SCIENCE FROM
SCRATCH**
CAT scanning
explained
PAGE 11



EDITOR'S CORNER

Autumn breeze

There's a bite in the air, crispy leaves and conkers pattern the pavement and the days of not wearing a coat are numbered – the beginning of **autumn has officially arrived**. For many, rather than lamenting summer, autumn is a time to celebrate with friends and family, from **the end of Ramadan** – Eid – to the **Jewish new year**, the Chinese mid autumn festival and the Christian harvest festival. For the College, the autumn term will see the arrival of new students bringing with them an influx of new ideas and a chance to see major new buildings such as **Eastside halls of residence** and the revamped Main Dining Hall being used for the first time. Over the summer, while the *Reporter* team took a break from publishing, we were out and about, interviewing and planning a list of exciting stories for the new term. As always **we are keen to hear from you** – why not tell us what landmarks are coming up in your culture or religion, what innovative research you are involved in or what charity events you've got in the pipeline.

EMILY ROSS, EDITOR

Reporter is published every three weeks during term time in print and online at www.imperial.ac.uk/reporter. The next publication day is 15 October. Contact Emily Ross: reporter@imperial.ac.uk ☎ +44 (0)20 7594 6715

Senior staff changes in Commercial Development



Following the restructuring of the Commercial Development Division, two new project directors responsible for delivering major income generating opportunities for the College have been appointed.

Dr Neil Varey (pictured top left), currently Programme Director (Development and Corporate Affairs), will join the Commercial Development Division with immediate effect. He will continue to lead on exploring opportunities to develop a Proton Beam Cancer Treatment Therapy Centre. He will also direct other major international projects and explore further commercial opportunities. Prior to joining the College in 2004, Dr Varey occupied a number of senior positions within the waste and environmental services industries.



Mr Charles Mallo (pictured bottom left) joins the College in October. Mr Mallo will be supporting engineering, medical and other commercial opportunities. Mr Mallo has previously held roles in industry, healthcare, project management and business development. He acquired extensive commercial experience working for BOC Linde for 14 years in both South Africa and the UK and, more recently, has held senior positions in the UK healthcare sector.

Both appointments will report to Mr Edward Astle, Pro Rector (Commercial Development).

Dr Colin Wyatt, Director of Business Development will be leaving the College to take early retirement. He has been with the College since 2004 and led the business development team during this period.

Cross-faculty research funding from BBSRC

A new cross-faculty research programme to investigate how dangerous bacterial pathogens manage to survive in the stressful environment of the human body has been launched at Imperial, thanks to a £3 million grant from the Biotechnology and Biological Sciences Research Council (BBSRC).

The four-year programme will focus on *E. coli*, a common bacterium that is usually harmless but can cause severe vomiting and diarrhoea, and *Mycobacterium tuberculosis*, the bacterial pathogen that causes tuberculosis in humans.

The researchers' aim is to gain a better understanding of how these and other bacterial pathogens adapt to the environmental stresses they encounter – such as changes in temperature, acidity and the level of different nutrients – when they infect a human host.

“bacterial pathogens are very good at adapting to multiple potentially harmful changes in their environment at the same time”

Principal Investigator of the new project, Professor Martin Buck, joint Head of Imperial's Division of Biology, explains: “One of the reasons these and other bacterial pathogens are so good at making us sick is that they are very good at adapting to multiple potentially harmful changes in their environment at the same time. This means they can survive for a long time in the testing environment of our lungs or our gut, causing often severe sickness and even death.

We're hoping to uncover the detailed networks of molecular chain reactions that happen inside each bacterial cell when it responds to stress, with the long-term aim of finding ways to undermine these survival skills and therefore treat the diseases they cause.”

– DANIELLE REEVES, COMMUNICATIONS



E. coli is usually harmless but can cause sickness and diarrhoea

Imperial College
London

**Join the
fellowship!**

All early-career researchers are invited to apply to the second round of the College's Junior Research Fellowships scheme, which offers an opportunity to establish your own scientific path, free from teaching and administration duties. Places to be taken up in autumn 2010.

Visit: www.imperial.ac.uk/juniorresearchfellowships

The deadline for applications is 30 October. Places are open to applicants from the UK or abroad.



Imperial acquires new west London site



On 1 September, the College completed the £28 million freehold purchase of a seven-acre site, previously owned by the BBC, situated just to the north of the A40 on Wood Lane.

Located 500 metres from the Hammersmith Campus, the new site will allow the College to create new teaching, research and administration facilities. It will also offer space to build quality, tailored accommodation for students, particularly to meet the

“The chance to acquire over seven acres of freehold land in such a location was a rare opportunity too promising to miss.”

significant rising need among postgraduate students.

In a message sent to all staff, Chief Operating Officer Martin Knight explained the opportunities the site offers Imperial: “Thanks to the College’s continu-

ing success, our activities have expanded and demand for teaching, research and administration space has grown to the point where our existing campuses in west London have become increasingly congested. Further development of our academic activities means we require room to expand, and the chance to acquire over seven acres of freehold land and 25,000 square metres of buildings in such a location in west London, close to our existing campuses, was a rare opportunity that was too promising to miss.” The College will also explore the potential for collaboration with the BBC, particularly its R&D group which concentrates on emerging technologies.

The new site’s existing facilities include a large sports centre, a crèche, substantial catering facilities and office accommodation. A project board is being set up, which will be responsible for all planning and other matters associated with the future use of the site. Staff will be invited to roadshows in the autumn to hear more about the site and help develop the vision for its future use.

For FAQs about the new site visit: www.imperial.ac.uk/staff/announcements/new_site

Imperial as One: BME groups merge

On 8 September a meeting was held at the Hammersmith Campus to celebrate the merger of the black and minority ethnic (BME) networks at Imperial College London and Imperial College Healthcare NHS Trust. The new group has taken on the name of the College’s existing organisation – Imperial as One (IAO).

The IAO merger builds on the race equality progress made over the years, recognising that members are crucial to influencing and sustaining this progress.

Both Lord Tugendhat, Chairman of the Trust, and Professor Stephen Smith, Chief Executive of the Trust and Principal of the Faculty of Medicine, spoke at the event and expressed determination to address the issues of BME under-representation at senior levels within Imperial.

Professor Smith said: “Imperial as One is a great example of things we can do – it is about empowering everyone to be the best you can possibly be. We take equality extremely seriously at the College and with your help we will be able to get it right and help get the best people to the top of the organisation.”

Members of IAO also spoke at the event and described a number of the organisation’s initiatives including mentoring, management development and innovations such as Creative Futures, which is aimed at inspiring school children from disadvantaged areas to pursue higher education.



The newly merged Imperial as One group

www.imperial.ac.uk/imperialasone

in brief

Rector’s keynote in India

Over the summer the Rector visited India and gave a keynote speech at the twenty-fifth anniversary celebrations of the Foreign and Commonwealth Office’s Chevening scholarships programme. Chevening scholarships were set up to give talented students with leadership potential from around the world the opportunity to study in the UK. Commenting on the scholarships, Sir Roy said: “Students gain enormously from access to a world class education, and hopefully that benefit is passed on to their family, community and country. Universities, meanwhile, gain by attracting motivated and highly qualified young people to their campuses.”



Success for BME development opportunities

The College has led a successful bid for funding from HEFCE to roll out nationally its pilot Future Leaders Development programme for black and minority ethnic (BME) staff. Set up by the Equalities Unit, the programme is designed to develop leadership strategies that reflect the unique challenges and experiences of BME academic and professional staff across the HE sector.

Imperial’s SWANs

Imperial’s Departments of Physics, Chemistry, NHLI and Chemical Engineering have all been awarded 2009 Silver SWAN awards. The Athena SWAN Charter recognises and celebrates good employment practice for women working in science, engineering and technology in higher education and research. The Charter is jointly funded by the Equality Challenge Unit and the UK Resource Centre for Women in Science, Engineering and Technology. The awards will be presented at a celebratory lunch at Birmingham Botanical Gardens on 29 September.

Success for student green initiative

Last term, Imperial students donated 6.281 tonnes of waste for recycling and reuse as part of the College’s first coordinated reuse and recycling scheme run in partnership with community organisation, CRISP (see *Reporter* 207). Items that could be reused represented 89.7 per cent of the waste, which is 13.1 per cent more than the average of the 10 universities that CRISP assisted this year. A further 7.2 per cent was recycled leaving a mere 3.1 per cent to go to landfill.



Imperial College Healthcare NHS Trust

Handy service for Saturdays

Patients with a common hand condition will receive diagnosis and surgery on the same day at a new Saturday clinic at Charing Cross Hospital.

The one-stop carpal tunnel service offers patients clinical results in a convenient weekend clinic. Carpal tunnel syndrome (CTS) is caused by pressure on the nerve in the carpal tunnel in the palm side of the wrist.

Corrective surgery involves cutting a wrist ligament to make more space for the nerve. Other less successful treatments include wearing wrist splints and steroid injection.

Patients attending the Saturday clinic are seen by a consultant and a senior hand therapist. Appropriate treatment is given on the day, thereby eliminating repeated trips to hospital.

Professor Jagdeep Nanchahal, Chair in Hand,

Plastic and Reconstructive Surgery at Imperial's Kennedy Institute and the Trust's Chief of Musculoskeletal Services, leads the Saturday clinic with Mr Michael Pearse, Consultant Orthopaedic Surgeon. He said: "We are the only trust in the country to be offering this type of one-stop carpal tunnel service,

which has been designed to be convenient for the patient while delivering excellent clinical results.

"All of the patients are invited to participate in studies, so the service is an excellent example of clinical research being seamlessly translated into improved patient care within an Academic Health Science Centre."

Every week the service treats up to 25 new patients with CTS. More than half of these patients need surgery, which is performed under local anaesthetic and patients return home within hours of their operation.

—IMPERIAL COLLEGE HEALTHCARE NHS TRUST PRESS OFFICE



Carpal tunnel syndrome

Symptoms of CTS include numbness and tingling in the fingers, especially at night.

International office changes

To support the development of the College's international activities the International Office has restructured over the last few months into teams that focus on three key areas: student support, strategy and partnerships, and international student recruitment.

Reporter met with staff from the International Office to find out what the new teams provide for students and departments.



Sharon Bolton, Head of International Student Support

"My main role is to manage the delivery of immigration advice to international students at Imperial, with a particular focus on UK student visas and the post study work visa. I liaise with the UK Border Agency regarding specific cases and lobby policy makers on the development of tier four of the points based immigration system. I also organise the annual College welcome for international students."



Joanna Shearer, Head of International Student Recruitment

"My team and I work together to coordinate international student recruitment events at schools and university fairs in the EU and overseas so that Imperial continues to attract the most able candidates from all parts of the world. We also host lectures and tours on campus for prospective students, schools and counsellors. Additionally, I oversee the coordination of the International Student Barometer – the student satisfaction survey. This autumn I am hoping to visit every academic department in order to share best practices for recruiting talented students worldwide."



Ulrike Hillemann-Delaney, Head of International Strategy and Partnerships

"I coordinate the development of Imperial's international strategy and international partnerships. This involves keeping on top of current developments in higher education globally and various aspects of EU policy. The partnership side of my role means that I work on special partnership projects, including our membership of consortia such as the IDEA League, and support the development of new partnerships. The goal is to develop Imperial's international reputation by creating successful relationships with staff, students and other organisations in other countries."

—EMILY GOVAN (INTERNATIONAL OFFICE)

For more information: www.imperial.ac.uk/international/office

Student satisfaction remains high, NSS shows

Students are largely happy with their experience at Imperial according to the latest National Student Survey, with overall satisfaction levels remaining at 85 per cent, slightly above the sector average of 82 per cent. The survey, published in August, shows particularly positive feedback for the College's learning resources, with a satisfaction rate of 90 per cent, up from 85 per cent in the previous year. This leaps to 94 per cent for library services, which receive the third highest rating in the country.

The College has improved its satisfaction rates in four other categories: personal development, up to 79 per cent from 75 per cent;

academic support, up to 70 per cent from 68 per cent; teaching, up to 82 per cent from 80 per cent; and assessment and feedback, at 52 per cent from 49 per cent.

Welcoming the general upward trend, Professor Julia Buckingham, Pro Rector (Education) said: "Though the NSS is in many ways a blunt instrument, we cannot afford to ignore the trends that it highlights, not least because the results are increasingly influencing the choices of potential students. I am delighted that our overall

satisfaction rating indicates we are succeeding in providing an excellent all-round experience for students, and especially that our superb library services have received the recognition they deserve. "Once again, the issue of how we give feedback to students has been raised as something we must get much better at. We are now looking at steps we can take to improve in this area and I hope future surveys will see further improvements."

"Our overall satisfaction rating indicates we are succeeding in providing an excellent all-round experience for students."

Find out more at: www.unistats.com

media mentions

—ABIGAIL SMITH, COMMUNICATIONS



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www.imperial.ac.uk/media/jointsignup

THE DAILY TELEGRAPH ▶ 5.9.2009

UK heading for new dark age?

The UK may be heading for 1970s-style blackouts due to a predicted 3,000 megawatt hour shortage of energy supply by 2017, reports the *Telegraph*. The UK has left it late to start approving new nuclear stations, and an over-reliance on gas-fired stations makes it vulnerable to the whims of regions such as Russia and the Middle East that



are subject to political instability, explains Dr Jon Gibbins (Mechanical Engineering),

who comments: “Policies at the moment just look like somebody in a government office making up numbers.” He adds: “There’s a distinct possibility that we won’t be able to get enough gas. We have been lulled into a false sense of security by low gas prices during the recession, but the trend is that it will get more expensive.”

THE INDEPENDENT ON SUNDAY

▶ 6.9.2009

Surgery set to get less cutting edge

The line between science fiction and science fact has become a little more blurred thanks to an exhibition by the Royal College of Surgeons on robots in medicine. The *Independent on Sunday* reports on the Sci Fi Surgery exhibition, which showcases some of the latest advances including prototypes for tiny remote control devices that could go to work inside patients. Commenting that robotics “will completely change everything we do,” Professor Lord Darzi (SORA) says: “I think the most exciting thing in the future is how do we move from surgery to ‘incisionless’ surgery, in other words doing procedures without any incisions.”

DAILY MAIL ▶ 1.9.2009

Scientists make no bones about wood substitute

Italian scientists announced in September that they are developing artificial bones from bits of old wood. The researchers said



certain types of wood, such as red oak, provide a perfect ‘scaffolding’ for cells and blood vessels to latch onto as they grow into new bone. Dr Julian Jones (Materials) told the *Daily Mail* that wood might prove to be a better substitute than ceramics or metal, saying: “It has a more porous structure. Ceramics are very strong when it comes to compression; but if you pull on them they just break.”

REUTERS ▶ 13.8.2009

Shrimp’ll fix it

An ingredient found in prawns could help to improve the efficiency of biodiesel production by converting oils into biodiesel as quickly as traditional catalysts but with less waste, according to *Reuters*. Chinese scientists experimented with chitin, the main component in prawn shells, and found that it helped to convert organic oils into biodiesel at a rate of 89 per cent in three hours. At the same time, effects on the environment were reduced because, while traditional catalysts must be washed after a reaction, creating large amounts of waste water, prawn shells can be reused up to 10 times and are biodegradable. Professor Richard Templer (Chemistry) said: “It looks like a serious bit of science. Chitin is cheap, available and the conversion rate is good.”



awards and honours

BUSINESS SCHOOL British Academy fellow to join Imperial

Dr Adriana Cornea has received a British Academy postdoctoral fellowship for 2009 and will start at the College in October under the mentorship of Professor Karim Abadir (Business School). Her research project will



involve constructing statistical models for forecasting turbulence in financial markets.

ENGINEERING Toumazou honoured at world technology summit

Professor Christofer Toumazou, Head of the Institute of Biomedical Engineering, was presented with the 2009 World Technology Award in the health and medicine category at a gala event held in New York on 23 July. He was recognised for his work in adapting semiconductor technology, which is used in electronic devices such

as computers, to improve people’s health.

MEDICINE Professor Durham receives award from Polish President



Professor Stephen Durham, Head of the Department of Allergy and Clinical Immunology, was awarded the Clement Von Pirquet Award at the opening ceremony of European Academy of Allergy, Asthma and Clinical Immunology (EAAACI) congress in Warsaw, Poland, for his excellent achievements in

clinical and translational research, putting allergen immunotherapy onto the international agenda.

ALSO...
Alumnus named CEO of the year • Meher Pudumjee, a chemical engineering alumnus, and Chairperson of Thermax Limited, a global energy and environment engineering company, has been named CEO of the year 2007–08 by *Business Standard*, India’s leading business paper.

Honorary Doctorate for Sir Peter Knight • Professor Sir Peter Knight, Senior Principal, has been awarded an Honorary Doc-

torate of Science by the University of Sussex. The award will be officially conferred at the university’s graduation ceremony in January 2010.

UK stars win US space competition • Riddlesdown High School, selected by Imperial to represent the UK, achieved second place at the annual International Space Settlement Design Competition event held at the NASA Johnson Space Centre in Houston, Texas on 4 August. The contest saw schools from around the world designing a fictional space settlement to orbit the Earth.

Research reveals how broccoli boosts arteries

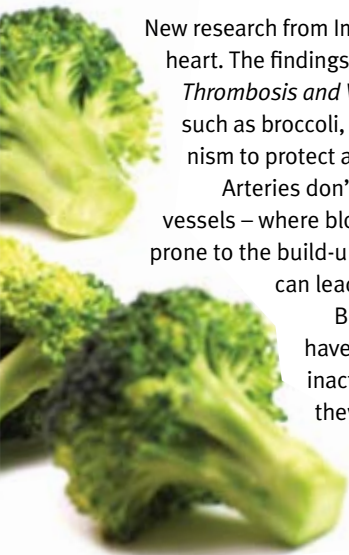
New research from Imperial may have revealed why vegetables are good for the heart. The findings published on 4 September in the journal *Arteriosclerosis, Thrombosis and Vascular Biology* suggests that a chemical found in vegetables such as broccoli, cabbage and cauliflower, can boost a natural defence mechanism to protect arteries from disease.

Arteries don't clog up in a uniform way. Bends and branches of blood vessels – where blood flow is disrupted and can be sluggish – are much more prone to the build-up of fatty plaques known as atherosclerosis. Atherosclerosis can lead to angina, heart attack and stroke.

British-Heart-Foundation-funded researchers from Imperial have discovered that a normally-protective protein called Nrf2 is inactive in areas of arteries that are susceptible to disease. But, they also found that treatment with a chemical found in certain vegetables – known to gardeners as 'brassicas' – can activate Nrf2 in these disease-prone regions.

Dr Paul Evans (NHLI), who led the research team, said: "We found that the innermost layer of cells at branches and bends of arteries lacks the active form of Nrf2, which may explain why they are prone to inflammation and disease. Treatment with the natural compound sulforaphane reduced inflammation at the high-risk areas by 'switching on' Nrf2. Sulforaphane is found naturally in broccoli, so our next steps include testing whether simply eating broccoli, or other vegetables in their 'family', has the same protective effect."

— BRITISH HEART FOUNDATION PRESS OFFICE



New genetic variation contributes to diabetes, scientists discover

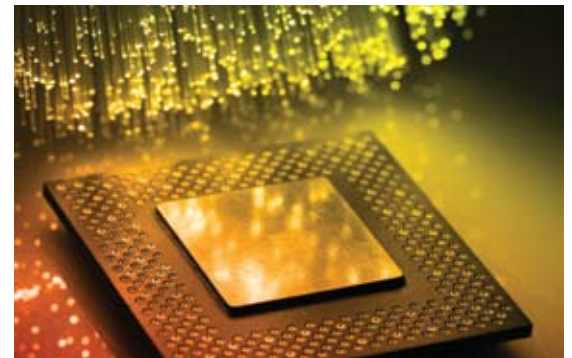
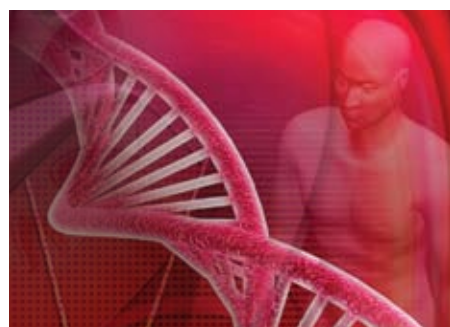
Scientists have identified a genetic variation in people with type 2 diabetes that affects how the body's muscle cells respond to the hormone insulin, in a new study published in *Nature Genetics* on 7 September. The researchers, from Imperial and other international institutions, say the findings highlight a new target for scientists developing treatments for diabetes.

Previous studies have identified several genetic variations in people with type 2 diabetes that affect how insulin is produced in the pancreas. The new study shows for the first time a genetic variation that seems to impair the ability of the body's muscle cells to use insulin to help them make energy.

Professor Philippe Froguel (Genomic Medicine) said: "We are very excited about these results – this is the first genetic evidence that a defect in the way insulin works in muscles can contribute to diabetes."

People with type 2 diabetes can have problems with the body not producing enough insulin and with cells in the muscles, liver and fat becoming resistant to it. Without sufficient insulin, or if cells cannot use insulin properly, cells are unable to take glucose from the blood and turn it into energy. Until now, scientists had not been able to identify the genetic factors contributing to insulin resistance in type 2 diabetes.

— LUCY GOODCHILD, COMMUNICATIONS



Super-fast computers receive new funding

Computers which use light to process large amounts of data faster than ever before are just one of many groundbreaking potential applications of a new £6 million research programme at Imperial and Queen's University Belfast, which was launched on 1 September 2009.

The Engineering and Physical Sciences Research Council (EPSRC) is providing funds to the two universities to establish a world-leading research programme on the fundamental science of so-called 'nanoplasmonic devices'.

Nanoplasmonic devices' key components are tiny nanoscale metal structures – more than 100 times smaller than the width of a human hair – that guide and direct light.

The structures have been tailor-made to interact with light in an unusual and highly controlled way. This means they could one day be used to build new kinds of super-high-speed 'optical computers' – so named because they would process information using light signals, instead of the electric currents used by today's computers.

“In the future these optical computers will provide us with more processing power and higher speed.”

At present, the speed with which computers process information is limited by the time it takes for the information to be transferred between electronic components. Currently this information is transferred using nanoscale metallic wires that transmit the signals as an electric current.

Professor Stefan Maier (Physics), who leads the research team at Imperial commented: "This is an exciting step towards developing computers that use light waves, not electrical current, to handle data and process information. In the future these optical computers will provide us with more processing power and higher speed. This will also open the door to a world of possibilities in scientific fields at the interface with the biosciences."

— DANIELLE REEVES, COMMUNICATIONS

Budgeting climate change

Cost of adapting to climate change significantly underestimated, says new research



Imperial scientists and collaborators have warned that the UN negotiations aimed at tackling climate change are based on substantial underestimates of what it will cost to adapt to its impacts.

The real costs of adaptation are

likely to be two to three times greater than estimates made by the UN Framework Convention on Climate Change (UNFCCC), say Professor Martin Parry (a visiting research fellow at the Grantham Institute)

and colleagues in a reviewed study published on 27 August by the International Institute for Environment and Development (IIED) and the Grantham Institute for Climate Change at Imperial.

The study adds that costs will be even greater when the full range of

climate impacts on human activities is considered.

Professor Parry and colleagues warn that this underestimate of the cost of adaptation threatens to weaken the outcome of UNFCCC negotiations, which are due to culminate in Copenhagen in December with a global deal aimed at tackling climate change.

“The amount of money on the table at Copenhagen is one of the key factors that will determine whether we achieve a climate change agreement,” says Professor Parry, “but previous estimates of adaptation costs have substantially misjudged the scale of funds needed.”

The UNFCCC has estimated annual global costs of adapting to climate change to be US\$40–170 billion, or the cost of about three Olympic games per year.

But the report’s authors warn that these estimates were produced too quickly and did not include key sectors such as energy, manufacturing, retailing, mining, tourism and ecosystems.

—MIKE SHANAHAN, INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT

“Previous estimates have substantially misjudged the scale of funds needed”

Immune cells invite fly parasites in to dinner

The parasites that cause Leishmaniasis use a quirky trick to convince the immune system to effectively invite them into cells for dinner, according to a new study published in *PLoS Pathogens* on 20 August. Researchers from Imperial say their findings improve understanding of the way *Leishmania* parasites establish an infection and could aid the search for a vaccine against this neglected tropical disease.

“The new research shows that the [parasite’s] gel persuades immune cells to feed the parasites, rather than kill them”

Leishmaniasis is an infection caused by *Leishmania* parasites that affects around 12 million people per year, mainly in tropical and sub-tropical countries. Symptoms include disfiguring and painful skin ulcers and in severe cases the infection can also spread to the internal organs. There is currently no vaccine to protect against infection and treatments are not always effective.

Leishmania parasites are transmitted by sand flies. After the parasites infect a sand fly, they make a sticky gel so that when the fly bites a human, it regurgitates this gel into the body. The new research, which was funded by

the Wellcome Trust, shows that the gel persuades immune cells known as macrophages to feed the parasites, rather than kill them.

Dr Matthew Rogers (Investigative Science), lead author of the study, said: “Leishmaniasis is a very debilitating disease, yet we know comparatively little about the way the parasites are transmitted by sand flies. This is because when scientists study the disease they usually inject the parasite into tissues without including the gel or the sand fly’s saliva.

Our new research shows that we must consider the way the parasites enter the body – along with the gel and saliva – if we are to recreate infection and get an accurate picture of what is going on.”

—LUCY GOODCHILD, COMMUNICATIONS



Scary ancient spiders revealed

Imperial scientists have created detailed three-dimensional computer models of two fossilised specimens of ancient creatures called



Eophrynus prestivicii (pictured). For videos about *Cryptomartus hindi* and *Eophrynus prestivicii*, visit: www3.imperial.ac.uk/news/spiders

Cryptomartus hindi and *Eophrynus prestivicii*, closely related to modern-day spiders. The study, published in the journal *Biology Letters*, on 5 August, revealed some of the physical traits that helped them to hunt for prey and evade predators.

The researchers from the Department of Earth Science and Engineer-

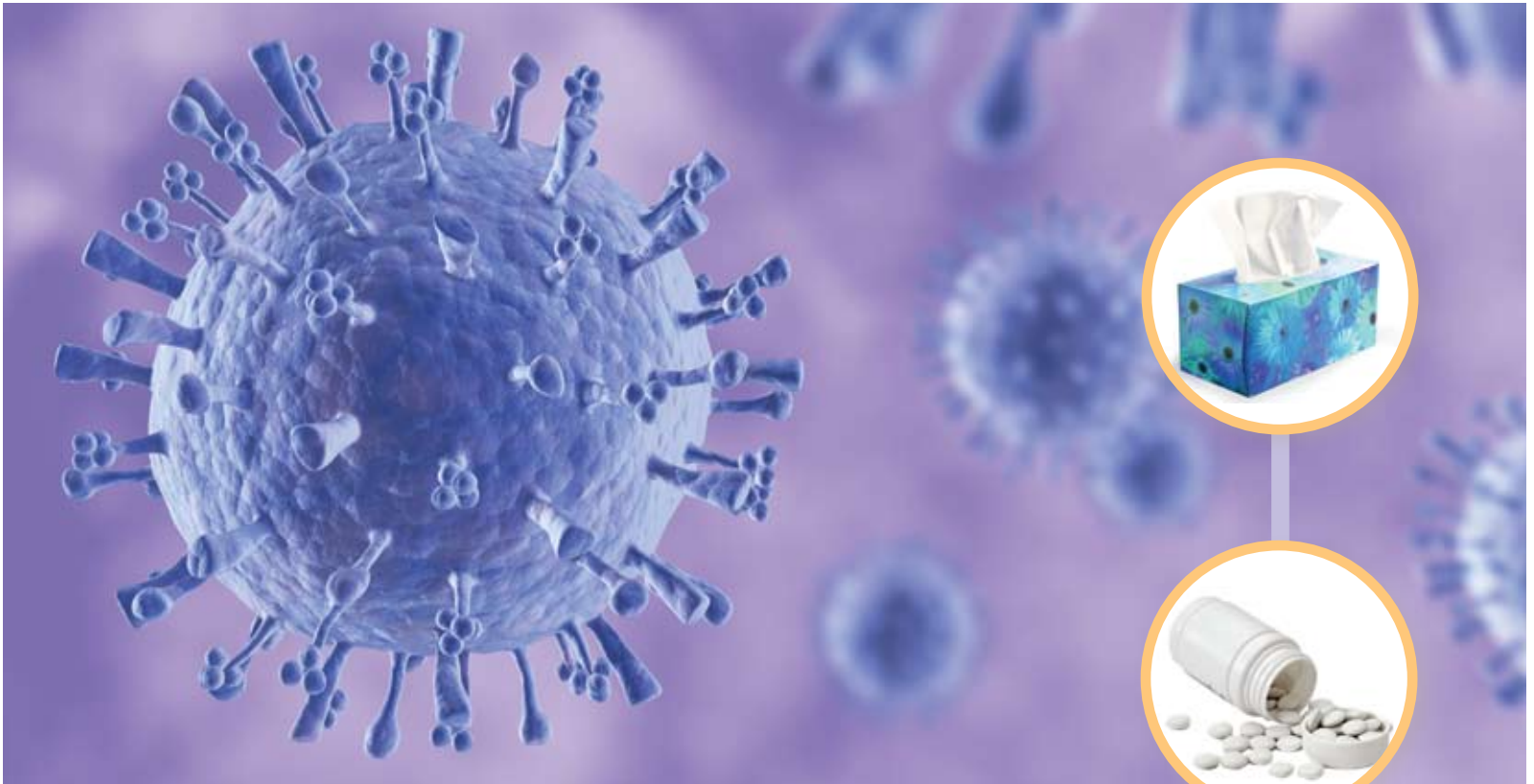
ing created their images by using a CT scanning device, which enabled them to take 3,000 X-rays of each fossil. These X-rays were then compiled into precise three-dimensional models, using custom-designed software.

Both *Cryptomartus hindi* and *Eophrynus prestivicii* were around the size of a 10 pence piece and roamed the Earth during the Carboniferous period, 359–299 million years ago. This was a time before the dinosaurs, when life was emerging from the oceans to live on land.

The study’s lead author, PhD student

Russell Garwood (Earth Science and Engineering), said: “Our models almost bring these ancient creatures back to life – it’s really exciting to be able to look at them in such detail. Our study helps build a picture of what was happening during this period early in the history of life on land. We think one creature could have responded to increasing predation from the amphibians by growing spikes, while the other responded by becoming an ambush predator, hiding away and only exposing itself when it had to come out to eat.”

—COLIN SMITH, COMMUNICATIONS



Preparing for swine flu

Although swine flu has not so far proved to be ‘a greater threat to humanity than nuclear warfare’ as one excitable headline writer claimed, autumn is likely to see an increase in the number of cases. *Reporter* finds out what measures the College has in place for the coming term to help Imperial to operate as normal.

Since May, Imperial has been preparing for the possibility of a widespread outbreak among staff and students. Although current reports suggest the virus is mild, with over 6,000 students arriving in October and large gatherings planned throughout freshers’ week, contingency plans have been drawn up to reduce the opportunities for the virus to spread.

Following a threat of avian flu four years ago, the College already had a framework in place which identified areas in the College which needed to have contingency plans as well as a list of measures which needed to be taken.

This May, a group including staff from Occupational Health, Risk Management, Human Resources, the Health Centre, Communications and Imperial College Union, as well as the Dean of students, was pulled together to tackle immediate swine flu concerns. The team’s focus was on communicating hygiene messages, preventing the spread of the virus and identifying areas of

the College that would struggle to function if large numbers of staff were absent at the same time.

Prevention

Wardens were identified by the flu planning group as having a key role to play in managing cases and helping prevent the spread of the virus in halls of residence. Wardens live in halls and are in charge of the welfare of the students. That means that, together with his or her team of sub wardens and assistant wardens, they are responsible for pastoral and disciplinary matters, as well as for social events.

Dr Dominik Weiss, Senior Lecturer (Earth Science and Engineering) is the Warden at Tizard Hall. He describes how he has tackled swine flu so far: “We already had one confirmed case of swine flu in our hall in the last week of last term. As we would with any student who fell ill, we recommended that the student stayed in his room,



identified a buddy to visit him regularly, and bring food and anything else he needed – including, in this case, an anti-viral prescription from the doctor.”

This term all the wardens have been given a stock of flu packs to deliver to students in their room if they are diagnosed as having suspected swine flu. These contain advice on how to cope with the flu and some masks to wear to protect friends when they visit. The wardens will also be undertaking some new responsibilities, as Dominik explains: “We may have to arrange temporary accommodation for room-mates and, while students will be advised to keep in regular touch with parents, we can still expect to receive some calls from worried parents. Whilst a student is unwell, we will keep in daily touch with the student to check their support is working and they are coping.”

To protect themselves, the wardens have also been given a warden’s flu pack containing high-efficiency facemasks to wear when they need to visit an unwell student, and some hand disinfectant for hand cleaning afterwards. Dominik comments: “Our pack even contains instructions on how to put on a facemask correctly. I guess academics need that!”

All the wardens are kept up to date with healthcare issues and swine flu developments through regular updates from Occupational Health and the Imperial College Health Centre. The wardens are then responsible for disseminating this information to their sub wardens.

Dominik explains that new and existing students are being sent an email this month with key messages about swine flu, such as: register or re-register with a GP once back in London, allocate a flu buddy, delay coming to College if unwell with swine flu at the start of term, follow the ‘catch it, bin it, kill it’ advice, stay away from College if they catch flu and tell their warden if they live in halls. Wardens will reinforce this message at their hall welcome events.

Outlook for this term

The flu planning group has kept a keen eye on the development of the virus over the summer. Dr Alan Swann, Director of Occupational Health, comments on the latest situation: “The good news is that it is less of a problem than we thought it would be. We were prepared for a flu as strong as the avian H5N1 which causes widespread mortality in humans. With swine flu, only 1-2 per cent of cases have been severe. The progression of the virus also hasn’t been as rapid as expected – in the College we have counted

109 cases of swine flu since May; 37 of those have been students. We have also been watching to see how the virus has spread throughout the winter in the southern hemisphere. Recent reports have shown that the virus has been mild and doesn’t seem to have mutated.”

Alan says another good sign is that most people are recovering after three to four days of contracting the virus. And the most recent medical advice says people are no longer contagious once the fever and other symptoms have subsided. He says: “The pandemic is unlikely to hit until November and the worst case scenario will see up to 25 per cent of the

College community contracting swine flu over the next four months. Absence rates during the peak weeks could be between 10-15 per cent. With a bit of planning we can help staff and students to keep on top of things and it shouldn’t be too disruptive to the College.”

“We all just need to behave responsibly and together we can reduce risks.”

—Dr Alan Swann

Contingency plans

The flu planning group has asked every department to consider how they might deliver teaching if a large number of students are unwell or if lecturers are too ill to teach themselves. The group has also identified areas of the College which need to keep operating even if 30 per cent of staff are absent. Security staff have been identified as a particular source of concern as they will need to keep all College buildings secure even with a high level of absence. A plan has been drawn up to ensure that normal operations are not disrupted.

Alan says: “We have a dedicated workforce at Imperial but if you do contract the virus I’d urge you not to push yourself and take a few days off. This will reduce the risk of passing it onto colleagues. We all just need to behave responsibly and together we can reduce risks.”

—EMILY ROSS, COMMUNICATIONS

☎ The National Pandemic Flu Service 0800 151 3100

📍 Imperial advice on swine flu: www.imperial.ac.uk/alerts/swineflu



IN THE MEDIA

Imperial researchers in the limelight

Since the outbreak of swine flu in Mexico in February 2009, the international media has been seeking Imperial’s expertise in epidemiology, virology and infection modelling. From Rector Sir Roy Anderson speaking on BBC Radio 4’s *Today* programme about how the UK is well prepared for a major outbreak of swine flu, and Professor Peter Openshaw, Director of the Centre for Respiratory Infection (NHLI), talking to *The Guardian* about the effectiveness of anti-viral treatments to Professor Wendy Barclay, Chair in Influenza Virology (Investigative Science), talking to *Newsround* on Children’s BBC about what research is being done – the College’s researchers have been invited to interviews, TV and radio appearances all over the world.

For a selection of recent media clips about swine flu visit: www.imperial.ac.uk/media/influenza

If you are an Imperial researcher who is willing to be contacted by the media for your expert opinion on stories in the news, please sign up to join our Media Guide: www.imperial.ac.uk/mediaguide





Unifying the disciplines

Reporter speaks to Colin Caro, Senior Research Investigator and Emeritus Professor of Physiological Mechanics (Bioengineering), about his 43-year career at the College which has led to three honorary doctorates from Imperial, Paris XII and, most recently, from the University of the Witwatersrand in South Africa – his *alma mater*.

Can you describe how you started along your career path?

In 1942 I began studying physiology and medicine at the University of the Witwatersrand. There were early signs that medicine wasn't going to be my career path – in my second year my distinguished professor of anatomy, Raymond Dart, said to me in a very kindly way: "Why don't you think about physics? You are better suited to it than anatomy."

How did you move into the field of fluid mechanics?

Contrary to his advice, I pursued a career in medicine but, reflecting his insight, did so with a particular interest in physiological mechanics – working in hospitals in South Africa, at Hammersmith Hospital and then the University of Pennsylvania, before returning to England to St Thomas' Hospital Medical School. It was at St Thomas' that I realised just how inadequate my knowledge of fluid mechanics was for my chosen area of research.

What did you do to further your knowledge?

As a brash young man I decided to write directly to the now late Sir Geoffrey Taylor, doyen of fluid mechanics, at Cambridge. Amazingly he invited me to lunch, expressed interest in my research and asked me to meet some of his researchers – one of whom was James (later Sir James) Lighthill.

How important was Sir James to your career?

James was, by any estimation, a genius. He was a brilliant and perceptive mathematical physicist who gave me insight into the behaviour of fluids. We collaborated on a problem in physiological flow and in 1966 he, then Royal Society Research Professor at Imperial, persuaded the College to set up, as a one-year experiment, a physiological flow studies unit (PFSU) with me as director.

What was your first scientific breakthrough?

We published a paper in the journal *Nature* in 1969 on the role of fluid mechanics in the occurrence of atherosclerosis (the disease of arteries which can lead to heart attack and stroke). The paper went against the century-old idea that atherosclerosis resulted from damage to the arterial wall by the flowing blood, proposing instead that low wall shear (effectively stagnation of flow near the wall) caused the local occurrence of the disease.

Were people receptive to your idea?

There was scepticism for eight to 10 years, as it went against an accepted view, but then scientists began working on the problem and they were rapidly persuaded. The *Nature* paper went on to be cited over 800 times and stimulated a vast number of studies.

How unique was your research?

In the 1960s it was extremely uncommon for medics, physiologists, biologists and physical scientists/engineers to work together. I believe we were among the pioneers of multidisciplinary work in physiological mechanics. We, in the PFSU, attracted scientists from many parts of the world and excited them to move from physical science/engineering into physiological mechanics.

What was your next discovery?

I recognised from some simple experiments that flow in three-dimensional networks was profoundly different from that in two-dimensional networks and, something we had all tended to overlook, that the geometry of normal arteries was generally three-dimensional, causing blood flow to swirl and cross-mix. Unlike the low wall shear theory, a paper we wrote on that topic gained acceptance in weeks!

What were the medical applications of this discovery?

I pursued, with colleagues (and continue to do so), the implications of three-dimensional vascular geometry. And in 2003 I set up an Imperial Innovations spin-out company, Veryan Medical Limited, which addresses major problems with vascular grafts and stents, used to keep blood flowing along arteries, such as the coronaries of the heart, blocked by atherosclerosis. We have developed helical grafts and helical stents, both of which cause blood flow to swirl and mix in a manner resembling that in normal vessels and shown them to suppress a disease, intimal hyperplasia, that causes conventional such devices to block and fail.

“I believe we were among the pioneers of multidisciplinary work in physiological mechanics”

Are there any non-medical applications for your discovery?

I had a hunch that the three-dimensional ideas could help solve industrial flow problems, in terms of transporting fluids more effectively. I set up another spin-out company called HeliSwirl Technologies in 2006 to pursue these ideas. The company has recently sold one application to industry to help produce certain chemicals more efficiently. The concept also has potential in other areas, including in the oil industry, where it could help prevent massive, potentially dangerous, airlocks in pipes.

What lessons have you learnt throughout your career?

Respect for colleagues and that science commonly requires multidisciplinary collaboration.

— EMILY ROSS, COMMUNICATIONS

inside

story

mini profile



Yas Heidari

Dr Yas Heidari, Genetic Modification Safety Officer (Safety Department) on preventing infectious outbreaks, GM myths and fluorescent monsters.

What is GM and what is the aim of your role?

GM means alteration of the genetic material of an organism in a way that does not occur naturally. I'm here to provide advice to researchers working with GM organisms to help ensure that all the College's work with such agents are carried out safely and in compliance with the GM regulations.

What do you do on a day-to-day basis?

My core activities are reviewing and making suggestions for research proposals, and visiting laboratories but I'm also here to give advice. For example, I was recently approached by a researcher who was worried about exposure to GM hazards in the laboratory and wanted to discuss this aspect of her research and any additional safety precautions she could take when working with chemicals, or other biological agents.

What do people wrongly assume about GM research?

People tend to associate it with things from sci-fi films like mutant flies, fluorescent monsters or, more recently, bioterrorism! But what they don't realise is the majority of GM work is harmless and researchers don't alter genetic material to make it more hazardous. As a matter of fact the majority of GM results in an organism less hazardous than its original.

What's the biggest risk with GM?

The risk associated with GM work is extremely low for the majority of cases. However, when planning any GM work it is important to try to ensure that all modifications performed are not going to unintentionally alter the properties of the organism in such a way that they would present an increased risk to humans, animals or plants. Where the modification does increase the harm an organism could cause then this work is carried out under the appropriate levels of containment.

How do you ensure accidents don't happen?

We work with the researchers to ensure that the labs are suitable for the research, and that they are well trained in their work practices.

www.imperial.ac.uk/safety/guidanceandadvice/biosafety/gm

inventor's corner

The future is morphed

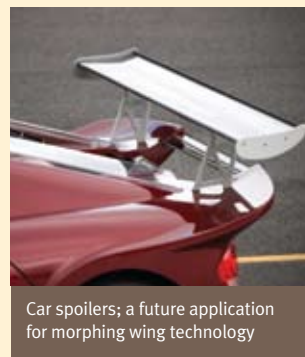
Dr Lorenzo Iannucci is a Reader in Advanced Structural Design and has been in the Department of Aeronautics for 11 years. His studies in aeronautics began back in the 1970s and, later, he was awarded a PhD based on work he undertook for the Ministry of Defence.



With the help of Ross Manning at Imperial Innovations, Lorenzo has filed a patent application on his 'morphing wing' invention which can be used in applications such as aeroplanes, watercraft, and unmanned aviation vehicles (UAVs) that are used for defence purposes.

In UAV's Lorenzo's morphing wing technology equips them with simpler and lighter control systems, allowing them to fly for longer and have a reduced radar signature.

The morphing wing is made up of a flexible outer skin supported by a core of smart material elements that support the skin and can change shape when temperature change or voltage is applied. These elements can be made of a piezo-electric material (material which has the ability to generate electricity in response to mechanical stress) in addition to shape memory alloys and polymers.



Car spoilers; a future application for morphing wing technology

In the future, Imperial Innovations is looking to apply the morphing wing to car spoilers, following a successful pilot of the technology undertaken with the Business School.

As well as a commercial venture, the shape memory alloys have become a bit of a party piece for Lorenzo when he first meets people. He explains: "Often, when I have visitors to my office,

I place a piece of shape memory alloy in a warm cup of tea and, halfway through the meeting, the heat will trigger its shape change and it shoots out of the cup!"

— ANOUSHKA WARDEN, IMPERIAL INNOVATIONS

Q www.imperialinnovations.co.uk

▶ SCIENCE FROM SCRATCH

As explained by Elizabeth Hauke, MSc Science Communication

CT/CAT scan



Computed axial tomography (CAT) is essentially a complex and more detailed form of the traditional X-ray. Tomography means 'picture slices' (from the Greek *tomos* meaning 'slice' and *graphein* meaning 'to write'). In the CT or CAT scanner, horizontal (or axial) 'picture slices' are taken of the body. The CT scanning machine looks like a giant polo mint with a bed passing through the central hole. The large white ring structure houses the X-ray beam and the detecting device on the opposite side. These both rotate around the patient on the bed, allowing full

'slice' images to be taken of the body. The data recorded is quite complex and hence requires computational analysis to make the scan images that doctors use to diagnose diseases. In addition to producing a series of two-dimensional images, computer manipulation can add the images together to produce three-dimensional representations of the body and internal organs.

Is there a phrase you would like us to explain? ✉ Email the editor: reporter@imperial.ac.uk

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

Student blogger Annabel on her documentary project:

“Not just early August already but the 12th of August. How swiftly time seems to be trotting on now... it felt like July was quite a long stretch of fairly sunny days, with the comforting cushion of two more months of justified studentdom between then and the end. My docu-partner and I are still trying to get hold of interviewees for our documentary. Currently he’s also in France and *sans* internet – though really, what person wouldn’t want to spend their vacation worrying and researching about roads, traffic, shared space, accidents, and driving psychology? A sane one, possibly.”



www.imperial.ac.uk/campus_life/studentblogs

blog
SPOT

Commercial services race for life

On 17 July, 21 staff members from Commercial Services took part in the five-kilometre Race for Life event at Hyde Park which aims to raise money for cancer research. Maria Grigsby (Catering Services) reports on her experience:

“On the day of the race, a sea of pink t-shirts covered Hyde Park and, as predicted, the heavens opened but the rain fell upon a huge crowd of smiling participants with a common goal – many of whom had personal reasons for taking part. The rain was brief and the run was tough, yet the sense of achievement came when we reflected upon the afternoon back at 58 Prince’s Gate at a lunch sponsored by suppliers to the College. Between us we managed to raise £2,205.”



To sponsor the Commercial Services team visit: www.raceforlifesporsome.org/imperialcollege

Picnic time at St Mary’s



Deena Blumenkrantz (Investigative Science) reports on the annual St Mary’s picnic, held on 3 July.

“About 70 staff and students gathered in the sun by the Lancaster Gate fountains in Hyde Park for the annual picnic. Food was simple yet satisfying. Drinks were on ice and flowed until dusk. The chocolate cake may have melted but that didn’t stop it from being devoured. I think we discovered some new cricket stars and the football pitch was expanded around the trees to make room for all the people who wanted to join in.”

Changing Identities in Higher Education



Reporter speaks to Roberto Di Napoli, Senior Lecturer in Educational Development (Centre for Educational Development) about his experience of editing *Changing Identities in Higher Education*

– a book that aims to open up the debate on the future of higher education.

What is the book about?

The book tries to answer the following question: what does it mean, personally and professionally, to be an academic, a student, an educational developer, an administrator or a manager in higher education today?

How did you get involved with editing it?

My co-editor, Professor Ronald Barnett at the Institute of Education, and I have been interested for a long time in making some sense of higher education today in the light of important (and, at times, not always welcome) changes, like its commercialisation, its audit-driven nature, etc. We decided to bring together a number of scholars around this debate in an edited book published by Routledge.

How many of the authors are from Imperial?

Apart from myself and Alison Ahearn (Civil and Environmental Engineering), the book allows three civil engineering students to describe and reflect on their experience as students at Imperial. They did an excellent job and that chapter should be read by people at Imperial who are interested in getting a glimpse of how students live and what they think about their experiences.

Why is it important to explore the changing identities in HE?

Higher education in the UK and in many other parts of the world has been undergoing substantial changes over the last 30 years or so. The UK HE sector has especially been impacted by a great number of reforms that have changed the traditional image of universities as elite, powerful institutions based firstly on the pursuit of knowledge and, secondly, on the formation of professional cadres, into places for the production of ‘usable’ knowledge, and a much more direct link and dependence on the needs of contemporary society. Universities have definitely become more directly responsible to governments and public funding (hence the ever-growing audit system) to an extent that has generated a friction between ‘old’ and ‘new’ ways of thinking about the very concept of the university.

Roberto Di Napoli will be leaving Imperial in October to become head of the learning and teaching centre at Goldsmiths, University of London

Raising money for cancer research at Hammersmith Hospital



Kelly Gleason (right) also manned a fairy cake stall to raise money on the day

On 19 July Kelly Gleason, Cancer Research UK Senior Research Nurse (SORA), took part in the London Pride 10km walk and fun run along the Thames to help raise money for cancer research at Hammersmith Hospital. She reports:

“We had over 30 members of staff turn out for the event, some with their families. We also had some very special patients walk the full route. It was a pleasure to see scientists and healthcare professionals walking alongside cancer survivors, families and their local community to help beat a disease that touches the lives of so many. Our current total raised for Hammersmith hospital is £20,000 and still counting.”

To support the London Pride event visit: <http://justgiving.co.uk/laurahennellyz>



Imperial's ironman

On 2 August Dr Ben Ryall, a research fellow in Biology, realised a long-term dream to become an 'ironman' by completing Ironman UK – a 2.4 mile swim, a 112 mile cycle and then a marathon – in 10 hours 36 minutes. He reports on the final laps of the Ironman:

“I was high-fiving kids behind the barriers on both sides and receiving a fantastic cheer from the crowd. I saw my girlfriend, brother and dad in the crowd who looked as excited and happy as

I felt! With the adrenaline, I managed to put on a respectable sprint finish, watching myself grow larger in the large overhead video screen until I finally heard on the PA, “Ben Ryall, you are an ironman”, which was my cue to stop running and receive my finisher's medal and cap, and revel in the proudest moment of my life! All the hard effort and training was well worth it, and was rewarded with 51st position out of 1,500.”

www.youtube.com/watch?v=_kFTCh21Mg

course review



By course attendee Dr Jennifer Timoshanko (Kennedy Institute of Rheumatology)

Career development for researchers

Why did you attend the course?

To get away from the lab for three days! Seriously, the question ‘What next?’ is an important one that constantly plays on my mind. So I jumped at the chance when I saw this course advertised, and attended with high hopes that finally I was going to get my answer.

What did you learn from it?

I realised that you need to be proactive in your career – and that the loyalty that you feel to the bench, your research, your supervisor, can be a distraction from where you want to be in five years' time. The time away allowed me to assess who, what and where I am currently and where I want to go. We assessed our careers to date, practised effective presentation skills, and learned how to tailor a cover letter and CV for a specific job, how to gain experience and build a CV, and did some interview practice.

What did you enjoy about it?

It was a mix of fun and games with difficult, at times, introspection. I left feeling much more positive about where I was heading.

For more information on this course visit: www.imperial.ac.uk/staffdevelopment/postdocs1

Tales from the fourth plinth

Lucy Goodchild, Press Officer for Medicine in the Communications Division, took part in sculptor Anthony Gormley's *One and Other* project on Sunday 2 August. The project has seen people around the UK occupying the empty fourth plinth in Trafalgar Square in London, a space normally reserved for statues of kings and generals. Commenting on her experience, she says: “I was so excited when I got chosen. It's a fascinating project – I got to dress up like a bee and talk about bees for an hour, with spectacular views!”

www.oneandother.co.uk/participants/Lucy_Googlechild



obituaries



PROFESSOR KEN HERON

Professor Ken Heron FEng, an acoustician who had been a Visiting Professor in the Department of Mathematics for 15 years, died on 3 June 2009 after a courageous battle with cancer. Frank Leppington, who worked

closely with him for many years, writes:

“Ken Heron made many advances in his work on the noise in aircraft cockpits and cabins. He was a world expert in a powerful method called statistical energy analysis, which deals with averaged energy flows between subsystems of complicated structures that are used to model the noise produced by aircraft. He became much in demand for his capability to predict and reduce aircraft cabin noise.

An interesting by-product of his analysis was the invention of flat-panel loudspeakers.

Ken’s success in dealing with complex problems required a subtle combination of physics, engineering and mathematics. The most striking thing about his approach was his outstanding creativity – he always had a wealth of ideas for simplifying complex problems and devising relatively simple models that cut through complicated technicalities. All those who worked with him enjoyed his lively personality.”



EDWINA “TED” FINLAYSON

Ted Finlayson, who worked at the College until 1989, died on 19 July 2009. Loretto O’Callaghan, a friend and former colleague of Ted’s, pays tribute: “Ted started working at the College in 1967 for Professor Barres. In 1969 she

began working for Mickey Davies, College Secretary, until his retirement in 1979. She moved to Personnel, Administration and Maintenance Services, producing College directories, allocating car parking, advising on the refurbishments of College flats, managing them, and organising special functions before retiring to Cheltenham in 1989.

In 1947, she travelled to Kenya with the Overseas Food Corporation, returning to marry Fynn, her husband for 30 years, and rearing two stepsons (the youngest tragically killed in a climbing accident).

From 1957, Ted worked for senior academic and medical staff at King’s College Durham and Newcastle General. From 1960–67 she was secretary to Professor Lord Wynne-Jones, Vice Chancellor of the University of Newcastle upon Tyne.

Ted’s interests were family, friends, her cat Sam, jazz, reading, crosswords and dressmaking. She also had a passion for interior design and colours, she loved gardening and was a good cook.

In later life, Ted suffered severe injuries as a result of an accident abroad. She bore multiple operations and immense pain with great fortitude – she was indomitable.”

long
service

Reporter shares the stories of staff who have given many years of service to the College. Staff featured celebrate anniversaries during the period of 21 August–1 September. Data is supplied by HR and is correct at the time of going to press.

— POSTGRADUATE STUDENT TOBY WOODS
(BIOMEDICAL ENGINEERING)



SPOTLIGHT

Dr Patrick Naylor (Electrical and Electronic Engineering) 20 years

- Nigel Buck, Director of Property Management (Estates)
- Ros Jones Senior Technician (Biology)
- Emeritus Professor David Phillips, Senior Research Investigator (Chemistry)
- Simon Tagg (Computing)

30 years

- Professor Alan Boobis, Professor (Investigative Science)
- Professor Charmian Brinson, Professor of German Studies (Humanities)
- Professor Mick Crawley, Campus Dean, Silwood Park (Biology)
- Professor John Mumford, Professor of Natural Resource Management (Centre for Environmental Policy)
- David Robb, Senior Lecturer (Mechanical Engineering)
- Professor Timothy Sumner, Professor of Experimental Astrophysics (Physics)

After completing his undergraduate studies at Sheffield, Patrick Naylor began a doctorate at Imperial in 1986. When he finished, he decided to apply for a lectureship to gain some interview experience and unexpectedly got offered the job. Patrick decided to take the role while waiting to get a ‘proper job’ and 30 years later, he jokes that he is “still waiting!” Patrick’s research is primarily focused on audio, in particular speech processing. This has been prompted by a lifelong love of music. He plays the keyboard, bass guitar, and enjoys singing in choirs when time permits. At the weekends he helps in a local theatre group providing voice coaching. Alongside research, Patrick has taken on several administrative roles in the Department of Electrical and Electronic Engineering and is currently Director of Postgraduate Studies. He also supervises eight doctoral students and three postdocs. He says that the excellent support he receives from the department has kept him at Imperial over the years.



Silwood staff victorious over students

Postgraduate Mark Lee (Biology) reports on the staff versus student cricket match held on 12 August at Silwood. “A record crowd (five and a pigeon) witnessed one of the most exciting games in the modern era. This was the sort of game that affirms cricket and, I would not be exaggerating in saying, affirms life. Ali – Frazier; Schwarzenegger – Predator. Now Staff – Student. The staff batted first and scored 122 runs for seven wickets, with notable contributions from Dr Richard Grenyer and Jacques Deere. The students batted second, scoring 119 all out, leaving club captain (me!) stranded not out on nine. The staff team won by three runs.”

Welcome new starters

Dr Carlos Abellan, EPHPC
 Dr Mahoub Abou Zeid, Physics
 Mr Emmanuel Agoye, Catering Services
 Mr Ernesto Alto Jr, Catering Services
 Dr Hemmel Amrania, Physics
 Dr Rasmus Andreasen, ESE
 Mr Ivan Andrew, Clinical Sciences
 Ms Catarina Ramos Do Carmo, SORA
 Miss Elizabeth Atkin, Graduate Internship Programme
 Ms Vivian Atubra, Kennedy Institute
 Dr Alexandra Bazeos, Investigative Science
 Ms Delphine Berdah, History of Science, Technology and Medicine Centre
 Miss Tanushree Bhalla, Graduate Internship Programme
 Mr Anand Bhundia, Catering Services
 Mr Peter Bodi, Catering Services
 Dr Robert Boyle, Medicine
 Dr Bernadette Brent, Medicine
 Miss Amy Butler, Clinical Sciences
 Dr Valentina Caputo, Investigative Science
 Dr HJ Chang, EEE
 Mr Themistoklis Charalambous, Bioengineering
 Ms Sandrine Claus, SORA
 Miss Anna Codrea-Rado, Graduate Internship Programme
 Mr James Collins, Cell and Molecular Biology
 Mr Colin Copeland, Mechanical Engineering
 Mr Alistair Couse, Security Services
 Mr Felix Daniel, Graduate Internship Programme
 Mr Nicholas Dent, Estates Division
 Mr Martin Diedrich, Business School
 Dr Gokl Eda, Materials
 Dr Solveig Felton, Materials
 Mr Ioannis Filippis, Molecular Biosciences
 Dr Christopher Gale, Medicine
 Ms Ann Gavriel, Humanities
 Dr Louis Grandjean, Medicine
 Ms Ramyani Gupta, NHLI
 Mr Richard Hayden, Computing
 Dr Rosalind Herbert, EPHPC
 Mr Sydney Heyne, Humanities
 Mr Raimundo Ho, Chemical Engineering
 Mr Marc Ingram, Mechanical Engineering
 Dr Kelsey Jones, NHLI
 Mr Alisson Jorge, Catering Services
 Dr Maria Kapsali, Business School
 Dr Zafeira Kastrinaki, Business School
 Dr Anja Kern, Business School
 Miss Sarah Knox, Accommodation
 Miss Aiva Kukulite, Catering Services
 Ms Mabel Lahlou, Humanities
 Dr Cher Li, Business School
 Miss Jia Li, SORA
 Mrs Elizabeth Limb, NHLI
 Mrs Jenny Lloyd, Catering Services
 Dr Esther Lorente, Chemical Engineering
 Dr Jason Lotay, Mathematics
 Dr Iain Macdonald, Chemical Engineering
 Mr Aswad Manzoor, Mechanical Engineering
 Mr Peter Marks, Catering Services
 Dr Aida Martinez-Sanchez, Kennedy Institute
 Dr Enrique Martinez-Perez, Clinical Sciences
 Dr Cecilia Mattevi, Materials
 Dr Jarlath McKenna, Physics
 Miss Ece Menguturk, Graduate Internship Programme
 Mr Robert Menzel, Chemistry

Dr Brian Mitchell, Humanities
 Mr Anthony Mpofu, Catering Services
 Dr Murugesan Muthu, NHLI
 Dr Johannes Nordstrom, Mathematics
 Dr Matthew Oldfield, Mechanical Engineering
 Miss Bernadette Pedersen, Investigative Science
 Mr Francis Peel, EPHPC
 Dr Ruth Pepper, Medicine
 Dr Sarah Perkins, Medicine
 Dr Christoph Poverlein, Chemistry
 Dr Natalie Prevatt, Medicine
 Miss Justyna Przystal, Medicine
 Ms Catarina Ramos Do Carmo, SORA
 Mr Gavin Reed, Graduate Internship Programme
 Mr Asim Rehman, EEE
 Dr Mark Richards, Physics
 Dr Luis Rojo Del Olmo, Materials
 Dr Stefano Rossi, Business School
 Miss Aman Sahota, Graduate Internship Programme
 Dr Isabelle Salles, Investigative Science
 Mr Daniel Sardenberg De Souza Kohler, Catering Services
 Miss Agnieszka Scibor, Catering Services
 Mr Gerald Selous, Humanities
 Miss Ana Serra Da Costa Franca, Clinical Sciences
 Mr Joseph Serrano, Graduate Internship Programme
 Dr Isabel Shaw, Business School
 Dr Kristy Shipman, SORA
 Dr Debra Smith, Investigative Science
 Miss Monpichar Srisa-Art, Chemistry
 Dr Kate Stringaris, Investigative Science
 Dr Clare Thornton, NHLI
 Miss Maria Timponi De Moura, Catering Services
 Mr Andrew Tonner, Investigative Science
 Mr Kong Too, Catering Services
 Mr Emile Touber, Aeronautics
 Dr Robin Tyacke, Neurosciences and Mental Health
 Dr Vijay Tymms, Physics
 Dr Caroline Van Breukelen, Physics
 Dr Anju Verma, EPHPC
 Mr Kirill Veselkov, SORA
 Dr Ruddy Vincent, Mechanical Engineering
 Dr Fiona Watt, Kennedy Institute
 Miss Janet Willy, Health and Safety
 Dr Sue Wilson, Neurosciences and Mental Health
 Mr Tobias Witting, Physics
 Dr Beata Wojciak-Stothard, Investigative Science

Farewell moving on

Mr Joel Abrahams, Investigative Science
 Dr Emily Adams, NHLI
 Miss Afolasade Adewumi, Life Sciences (9 years)
 Dr Anokhi Ali Khan, EPHPC
 Dr Ata Amini, Molecular Biosciences
 Dr Bruce Anderson, The Grantham Institute for Climate Change
 Dr Mansoor Ansari, Chemical Engineering
 Mrs Lesley Appleton, ESE (19 years)
 Dr Ashok Argent-Katwala, Computing
 Mr Richard Baker, ESE
 Miss Selina Bannoo, NHLI
 Ms Leticia Barcena Del Riego, SORA
 Ms Jacqueline Basquil, Business School
 Dr Jesse Berent, EEE
 Dr Magda Bictash, EPHPC
 Mr Kristopher Blucher, Kennedy Institute
 Mrs Elisa Bosque-Oliva, EPHPC

Dr Delia Brauer, Department of Materials
 Dr Maria Brucoli, EEE
 Mr Michael Butler, Medicine
 Ms Ines Cabrita, NHLI
 Dr Jason Camp, Chemistry
 Miss Lucy Clark, NHLI
 Mr Simon Coffey, Computing
 Miss Valentina Covarelli, Investigative Science
 Miss Emma Coxhill, Student Union
 Mr Stephen Cramer, Computing
 Mrs Cheryl Curtis, Catering Services (21 years)
 Dr Carine Davoisne, Materials
 Miss Luisa De Jesus Saraiva, Investigative Science
 Dr Anne Doolan, Medicine



Michael Hill-King, Head of Engineering and Technology Business Development (Business Development)

Michael has left Imperial after six years to become Director of Partnerships and Consultancy at King's College London. He says: "My role at the College was to bring together teams of academics and people from industry, and help them to win big research funding. It's been fantastic working with new academics and seeing them get their first step on the ladder and a head start in their careers. He says: "One thing I'll really miss about the College is working with academics who really are at the top of their tree. I've also made some great friends here."

Dr Andrzej Dragan, Physics
 Dr Paul Eastham, Physics
 Ms Katie Ellis, Life Sciences (10 years)
 Mrs Jackie Gadd, Human Resources
 Dr Gianluigi Galizia, Neurosciences and Mental Health
 Dr Edwin Garcia Castano, NHLI
 Ms Susanne Gifford, Library Services
 Miss Justyna Glegola, Medicine
 Miss Nikki Gould, Library Services
 Miss Delia Gray, Investigative Science
 Dr Kevin Gregory-Evans, Neurosciences and Mental Health (11 years)
 Dr Dipti Gupta, Physics
 Dr Yas Heidari, Health and Safety Services (5 years)
 Mr David Hele, NHLI (9 years)
 Mr Michael Hill-King, Development and Corporate Affairs (5 years)
 Mr Adil Hussain, Computing
 Dr Beckie Ingram, Investigative Science (7 years)
 Dr Gavin Jell, Materials (6 years)
 Ms Diane Job, Library Services
 Dr Seok Kim, Physics
 Mr Aryn Laljee, Neurosciences and Mental Health
 Dr Yuet Lam, Computing
 Miss Yan Leung, Investigative Science (5 years)
 Dr Yunfei Liu, Mechanical Engineering
 Mr Andrew Lobb, Mathematics
 Miss Esme Longbottom, Medicine
 Dr Ruey Loo, EPHPC
 Dr Sergio Lukic, Mathematics
 Mr Ross Marley, Estates Division
 Mr Lee Marsh, Catering Services (12 years)
 Professor Mervyn Maze, SORA (10 years)
 Miss Carol McDonald, Investigative Science
 Dr Ursula McGovern, SORA

Mr Stuart McRobert, Computing (23 years)
 Dr Kian Mehravaran, Mechanical Engineering
 Mr Iurii Michitiuc, NHLI
 Mr Sanjay Modgil, Computing
 Dr Laura Moreno, NHLI
 Dr Hema Narayanaswamy, Neurosciences and Mental Health
 Ms Beibhinn O'Connor, Estates Division
 Mr Aris Papadopoulos, Computing
 Ms Linda Parker, Research Services (7 years)
 Mrs Joanne Pearson, Commercial Services (11 years)
 Dr Antonio Pereira, Chemical Engineering (4 years)
 Ms Anne Perkins, EPHPC
 Mrs Melanie Phillips, Occupational Health Service
 Mrs Wendy Raeside, Communications (10 years)
 Dr Monica Ramirez, Neurosciences and Mental Health
 Dr Rekha Rao, Business School
 Dr Anshul Rastogi, Kennedy Institute
 Miss Kerry Relton, Catering Services
 Dr Sofia Rodriguez, Neurosciences and Mental Health
 Dr Clive Sabel, EPHPC
 Dr Kirti Sahu, Chemical Engineering
 Miss Maria Sampson, Neurosciences and Mental Health
 Miss Rachel Scott, Medicine
 Dr Matthew Seymour, Kennedy Institute
 Miss Keira Skolimowska, Medicine
 Professor Stuart Solin, Physics
 Mrs Milena Stevanovic-Walker, Cell and Molecular Biology
 Dr Alexander Summers, Computing
 Ms Caroline Sutcliffe, SORA
 Mr Simon Tagg, Computing (19 years)
 Dr Elisa Thebault, Biology
 Dr Berangere Tissot, Molecular Biosciences
 Mr Juan Vaccari, Computing
 Dr Frank Van Veen, Biology (9 years)
 Miss Beatrix Vegh, Business School
 Dr Fabrizio Vianello, Investigative Science
 Ms Annie Weatherill, Commercial Services (18 years)
 Miss Shoko Yashiro, Molecular Biosciences
 Dr Nada Yousif, Neurosciences and Mental Health

This data is supplied by HR and covers the period 23 August–12 September. 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 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.



14 OCTOBER ▶ LECTURE

Ignore people at your peril: practical lessons from aviation safety

The Lloyds Register Educational Trust Annual Lecture 2009 will be presented by Gretchen Burrett, Director of Safety at NATS which provides

air traffic control services to aircraft flying in UK airspace. The day-to-day decisions and actions of people keep aviation as one of the safest forms of transport. However, traditional approaches to safety were designed to optimise the reliability of the equipment and not total system performance. The talk will focus on this theme and highlight techniques for delivering tangible business outcomes for the people aspects of the system.



4 NOVEMBER ▶ LECTURE

The world's nuclear future: built on material success

In our energy-hungry world, the future of electricity generation must meet the twin challenges of security of supply and reduced carbon emissions. The expectations for nuclear

power programmes to play a part in delivering success on both counts grow ever higher. This year's Schrödinger lecture will be given by Dr Sue Ion FEng, Visiting Professor, Department of Materials and will focus on how the science and engineering of materials will be key to the successful deployment and operation of a new generation of reactor systems and their associated fuel cycles.

30 SEPTEMBER ▶ MUSIC AND ART

Stained glass and the work of Ervin Bossanyi

Jo Bossanyi, son of the late Hungarian artist Ervin Bossanyi

7 OCTOBER 2009 ▶ LECTURE

Institute of Biomedical Engineering Neuroscience Technology Network

The second Symposium of the Neuroscience Technology Network including various speakers and a poster competition for PhD students working in the field

7 OCTOBER–6 NOVEMBER ▶ MUSIC AND ART

Missing

An exhibition of work by artists Charlotte Bracegirdle, Nina Gehl and Sarah Scarsbrook.

14 OCTOBER ▶ LECTURE

Ignore people at your peril: practical lessons from aviation safety

Gretchen Burrett, Director of Safety at NATS

4 NOVEMBER 2009 ▶ LECTURE

22nd Schrödinger Lecture – The world's nuclear future: built on material success

Dr Sue Ion FEng, Visiting Professor, Department of Materials

UNTIL 23 DECEMBER ▶ EXHIBITION

Sci Fi Surgery: Inside the world of medical robots

Show at the Hunterian Museum featuring exhibits by Imperial researchers

take note

Humanities evening classes



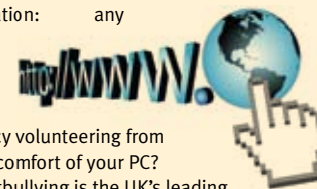
If you want to learn a new language, develop your creative skills or explore the world of film and opera, then how about taking one of the College's evening classes run by the Department of Humanities. With a wide range of courses on offer from Arabic to Spanish, and a number of arts subjects available including Music, Creative Writing and Film Studies, the courses offer excellent value comprising 20 weekly sessions commencing in the first week of October.

For more information and to enrol visit:
www.imperial.ac.uk/humanities/evening

VOLUNTEERING

Beat cyberbullying

Project ID: 2159
Organisation: Beatbullying
Date(s): Ongoing
Time: anytime
Location: any



Fancy volunteering from the comfort of your PC? Beatbullying is the UK's leading bullying prevention charity. Beatbullying has already worked with Imperial to recruit student volunteers to help with its CyberMentors programme, which tackles the growing problem of cyberbullying and helps protect millions of young people that use social networking sites and text messaging services. Now Beatbullying is extending the range of volunteering opportunities to Imperial staff. If you are aged 20–25 and could spend up to just two hours of your time online each week, then please contact us.

For more information

To take part in a scheme or to hear more about volunteering in general, contact Petronela Sasurova

☎ 020 7594 8141
✉ volunteering@imperial.ac.uk

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

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

PHOTO EXPO

This summer over 4,000 school pupils aged 10–17 got to try their hands at practical science and engineering projects as part of the annual summer schools programme, hosted by the Outreach department.

☞ www3.imperial.ac.uk/news/schoolscool



Stay in the loop

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

