LEARNING AT WORK
Staff take time out to try something new
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DESIGN-LONDON
Science meets art with new RCA collaboration
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Helping hands
Get involved with Imperial’s Volunteer Centre
Kazakhstan gets a reaction

The Imperial College Reactor Centre (ICRC) hosted a three-day training session for staff from the Institute of Nuclear Physics (INP) at Almatau in Kazakhstan last month. Kazakhstan gained independence from the Soviet Union in 1991 but has relied extensively on Russia for regulatory standards. ICRC Director Simon Franklin said: “The course was designed to help a facility in a part of the world where radioisotopes are needed to help develop industry and medicine. The INP is about to take its first steps in supplying customers on a commercial basis, so we designed a course to include role-playing commercial situations as well as covering quality and regulatory issues.”

AHSC news

• Mark Davies (pictured) has been appointed as interim Joint Chief Executive for St Mary’s and Hammersmith Hospitals NHS Trusts as they move closer to becoming part of the UK’s first Academic Health Science Centre (AHSC) in partnership with Imperial.

Derek Smith, currently Chief Executive at Hammersmith, will leave on 30 June to become a healthcare consultant, and will be replaced in the interim by Mr Davies. Julian Nettel, currently Chief Executive at St Mary’s, will move on 1 September to take up the top position at Bart’s and the London NHS Trust, and Mark will then become interim Joint Chief Executive of the two trusts. He will lead both prior to the appointment of a chief executive for the AHSC, due to be established from 1 October subject to the Secretary of State’s approval.

Mark Davies has an extensive background in NHS management, having worked as a chief executive for four acute Trusts throughout England and Wales. He described the AHSC vision as compelling, and said: “My job will be to lead and support staff in their pursuit of excellence, moving quickly to deliver the agreed objectives.”

• All staff and students are encouraged to attend one of nine AHSC consultation meetings at Charing Cross, Hammersmith, St Mary’s and South Kensington between 7 June and 11 July. Further details are available at www.imperial.ac.uk/medicine/about/ahsc.

Tip top tales

100 years. 100 stories.

We’re celebrating 100 years of living science with 100 stories. We’ve collected some of them already, and invite you to share your own stories and memories. Throughout our Centenary year we will be adding new stories and want to hear yours.

To be in the running for selection of your story, please email your memories and any photographs to Centenary@imperial.ac.uk

www.imperial.ac.uk/Centenary
Jolly good Royal Society Fellows

Four Imperial researchers were among 40 distinguished scientists elected to the Fellowship of the Royal Society on 18 May. Professors Peter Barnes and Sir Ravinder Maini (Medicine), Professor Dave Wark (Natural Sciences) and Professor Anthony Kinloch (Engineering) have been recognised for their contributions to science. This brings the number of Royal Society Fellows at Imperial to 65.

The Rector congratulated the new Fellows, saying: “I’m delighted that our researchers have been elected to these prestigious fellowships. This is a great year for the College—for four of the Royal Society’s new Fellows to be from Imperial is a real coup, and testament to the world-leading research being carried out by our scientists.”

—DANIELLE REEVES, COMMUNICATIONS

Visit www.imperial.ac.uk/aboutimperial/news for the full story.

Professor Sir Ravinder Maini

Professor Sir Ravinder Maini is a leading biomedical researcher in the Kennedy Institute of Rheumatology, who, together with fellow Imperial medic Professor Marc Feldman, discovered that cell communication molecules known as cytokines are the key to why arthritis causes the immune system to fight itself.

This enabled them to develop a treatment which has helped millions of rheumatoid arthritis sufferers around the world.

Professor Dave Wark

Earlier this year Professor Dave Wark was appointed to the prestigious role of international spokesperson for the ‘From Tokai to Kamioka’ (T2K) experiment in Japan. This experiment consists of a ‘superbeam’ of muon-type neutrinos which will be fired along a 295 kilometer path, one kilometer below the ground in Japan. He is an international authority on neutrino physics and a member of the High Energy Physics group in the Department of Physics.

Professor Anthony Kinloch

Leading the way in the science and technology of adhesion, Professor Anthony Kinloch’s areas of expertise include the use of fracture mechanics to characterise the toughness of adhesives and rubber toughening of thermosetting adhesives. Prior to joining Imperial, Professor Kinloch worked for the Ministry of Defence, leading a group on advanced materials and energetic materials.

Professor Peter Barnes

Last year Professor Peter Barnes was named a ‘Doctor of the Decade’ by Science Watch, an international newsletter that tracks performance in science research. He is a renowned academic clinician and Professor of Thoracic Medicine at Imperial’s National Heart and Lung Institute, and is the 13th most cited author in clinical medicine in the world, having been cited 16,148 times by other researchers and authors between 1995 and 2005.

Orchestrating success

Maths student wins Waterstone’s London Student of the Year Award

In the last two years, Imperial maths student Douglas Murdoch has transformed the University of London Symphony Orchestra into an extremely successful society.

His hard work has earned him the Waterstone’s London Student of the Year Award, worth £2,000. He received it on 9 May at the University of London Laurels Awards 2007 (incorporating the Society Shields), which celebrate the achievements and commitment of University of London Union members.

Douglas was nominated by 35 of his fellow students for his outstanding commitment to the orchestra.

The orchestra, which has 90 members, has been completely turned around under his management. He explained: “We held auditions for new people to join the orchestra and I arranged our first big tour to Lake Garda, involving three performances across the region over five nights, playing to audiences each about 400 strong. I also managed to secure an annual sponsorship deal of £6,000.”

Douglas has helped raise over £20,000 for the orchestra through various trusts and personal contacts. Of this, over £4,000 has been invested in equipment and infrastructure.

One highlight for the orchestra this year was the performance of Mahler’s Symphony No. 3 in March, which was their most high profile amateur production and involved over 200 musicians. The concert took place at the Royal Academy of Music and featured Catherine Wyn-Rogers who sings regularly at the Royal Opera House, Covent Garden.

In addition, the orchestra, which meets weekly at St Stephen’s Church on Gloucester Road, were proclaimed society of the year at the Laurels Awards.

Douglas, a trombone player in the orchestra, plans to buy a new instrument with his prize money. He has played the trombone since he was 16 and loves the versatility of the instrument. “It is hard to learn but I love the fact that I can play anything from Monteverdi to jazz on it,” he says. After he graduates from Imperial this year, Douglas plans to study trombone performance at the Guildhall School of Music and Drama, while on a scholarship to further his orchestral management skills.

—NAOMI WESTON, COMMUNICATIONS

Visit www.ulso.co.uk for more information.
media mentions

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**Daily Mail > 29 May**

**A glass a day will keep the doctor away**

Drinking a glass of apple juice each day could dramatically reduce the risk of developing asthma, says a new study, reported in the Daily Mail. The latest study, published in the European Respiratory Journal, looked at almost 2,700 primary school children and found that those drinking apple juice at least once a day were 50 per cent less likely to develop asthma symptoms. The research team, led by Imperial’s Professor Peter Burney (Medicine), found, perhaps surprisingly, that apple juice had a greater protective effect than apples themselves. Professor Burney told the Daily Mail: “It’s probably dose-related, and the children drink more of the content from apples through juice than by eating the fruit.”

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**Financial Times > 6 June**

**Nuclear plants could be unattractive to investors**

A group of energy experts has warned that new investment in nuclear power and renewable energy may not be forthcoming because the government has failed to understand the needs of investors, the Financial Times reported. A new report from the UK Energy Research Centre argues that ministers show signs of continuing to believe that there is a Central Electricity Generating Board that can be directed to follow policy objectives. Robert Gross (Natural Sciences) told the Financial Times: “The government has set very ambitious goals for reducing carbon dioxide emissions, but at the moment it is impossible to see how those goals will be met. Somehow you have to get the private sector to invest in building nuclear power stations and more renewable generation, and get away from what the market would like to build, which is essentially more gas fired power stations.”

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**BBC News Online > 22 May**

**A bad reaction to UK allergy services**

BBC News Online reported that even though the UK has one of the highest allergy rates in the world, with the number of cases trebling in the last 30 years, there are not enough specially trained doctors in the country to treat them. What’s more, the BBC highlights reports from the Royal College of Physicians and the Department of Health itself that show there is serious concern amongst medical professionals about this lack of provision, with only six specialist allergy treatment centres currently up and running in the UK. Professor John Warner (Medicine) told the BBC that studies designed to prevent allergies had been incredibly disappointing. “They have been either totally negative or have occasionally shown an increased risk of becoming allergic by having a low exposure,” he said.

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**The Independent > 14 May**

**Engineering a difference in the developing world**

A case study feature in The Independent’s Future magazine focused on David Dalgado, a final year civil and environmental engineering student at Imperial. David spent his last summer vacation with other Imperial students helping to build low cost earthquake-proof homes in El Salvador, to replace those lost in a massive earthquake in 2005. The group built 13 homes in total and were involved in the design process, as well as in practical building work. David told The Independent: “I decided to pursue a career in civil engineering to try to make a difference in developing countries. One of the major problems facing them is sanitation and water supply problems—through civil engineering you can really help to change things in this area.” Following his graduation, David will be working with a company to build reservoirs.

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**Testing time for new website**

Key users have recently tested the navigation of Imperial’s new website, which is due to go live in October 2007. A wide range of staff, students and prospective students offered comments which have been used to evolve the structure.

Beth Parry, Management Trainee (pictured), was one of the testers let loose on the wireframes for the new site (these are diagrams showing key page elements and their location, such as header, footer, navigation and content areas, but devoid of any design). She was asked to navigate through the wireframes to find particular pieces of information, such as College term dates, while staff from New City Media, the design agency employed as part of the project, examined the route she took.

Beth said of the project: “They clearly want to provide a site which does not just rely on a sensitive search function—my usual route to find the appropriate pages—but one which categorises and visualises its information in a way that matches the user’s own instincts.”

The approaches used by Beth and the other testers will result in adjustments being made to the proposed site structure. For example, where users failed to notice key page links, the language or visual contrast will be altered to make them clearer.

Design concepts for the new website, including details of the feedback from 50 staff that helped develop them, have recently been posted to the Web Redesign Project web pages (www.imperial.ac.uk/webredesign). Given a preview of these, Beth said: “I was particularly pleased with the look of the website—not just in that it captured my attention and had a modern impact, but that the colour and shape had been used to present information accessibly.”

Updates of progress on the Web Redesign Project will be posted regularly to the project web pages, and you are encouraged to offer your views by emailing webredesign@imperial.ac.uk.

—Caroline Davis, Communications
Live long and prosper with learning at work

‘Live long and prosper’ was the theme for Learning at Work Day 2007. The national event saw Imperial join thousands of organisations for the fifth year running in offering staff the chance to learn something new.

Judy Barnett, manager of the Staff Development Unit (SDU), which organised the event, said: “The purpose of the day is to offer people the opportunity to develop a new skill at work that is completely different from their normal job.”

This year there was more on offer than ever before. In line with the theme of health, the SDU ran a packed schedule that specifically included activities that got people’s pulses racing, such as a Soca class, a type of dance that originated in the Caribbean. Caron Amor, Programme Coordinator, Respiratory Epidemiology and Public Health at the NHLI, took part in the class. She said: “Learning at Work Day is a great idea. It is a good opportunity to meet new staff members and try something new. Soca was energetic and a good laugh, and I would certainly recommend it to others.”

For the first time Catering ran cookery demonstrations, and the programme also included popular activities from previous years, with staff trying a wide variety of activities, including jewellery making, learning a new language and climbing the Queen’s Tower.

—ALEXANDRA PLATT, COMMUNICATIONS

Awards and honours

Medical student wins Goldman Sachs leadership prize

Medicine undergraduate Charlotte Askew has been rewarded for her ‘outstanding achievements and abilities’ with a place on the Goldman Sachs Global Leaders programme, which identifies the academic excellence and leadership potential of 150 accomplished second year students from across the world. Charlotte was competing with students of all disciplines at over 90 top ranked international universities. She won a $5,000 prize and she has also been selected, along with 74 other student leaders, to represent the whole group at the annual Goldman Sachs Global Leadership Institute in New York City in July.

RAEng awards for exceptional engineers

Two mechanical engineering students are among just 20 in the UK to receive one of this year’s Royal Academy of Engineering Leadership Awards, which aim to support and encourage Britain’s most exceptional engineering undergraduates. James Tozer and Siobhan Kohli-Lynch will have access to up to £5,500 each for training and experience that would otherwise not be available to them. Winners are chosen by the RAEng for their intellectual and technical strengths, excellent communication skills and leadership potential.

Environmental Policy research papers are best

Two papers by researchers from the Centre for Environmental Policy have been named as the best of 2006. Seven centuries of energy services: the price and use of light in the United Kingdom (1300-2000) by Peter Pearson and Roger Fouquet was chosen by The Energy Journal as its most outstanding of 2006. Meanwhile Nick Voulvoulis, with Pan Jilang, has won the Chartered Institution of Waste Management’s 2006 best research paper for work on methods to reduce methane emissions from municipal solid waste landfills.

Centenary has the website of the week

The prestigious Communication Arts magazine is profiling Imperial’s Centenary website as an example of an outstanding website. This honour is awarded in recognition of a combination of exceptional design, usability and technical expertise. Previous sites featured include Elizabeth Arden, Levi Strauss and Audi TT. Imperial’s Art Director, Beth Elzer, who has worked closely with the Centenary team on the site, says “It’s fantastic to be selected as website of the week. To be recognised as an exceptional site by the international design community is an enormous honour.”

Founded in 1959, Communication Arts is the leading US trade journal for visual communications and graphic design. It’s the largest design magazine in the world and showcases the top work in graphic design, advertising, illustration, photography and interactive design.

—CAROL MARSH, COMMUNICATIONS

Visit www.designinteract.com/sow to see the Centenary website profiled in the week beginning 11 June. Visit www.imperial.ac.uk/centenary to find out what all the fuss is about!
Pressure’s on with new tourniquet design

Tournistrip, a disposable tourniquet designed by two entrepreneurial medical graduates while studying at the College, could soon help to reduce the spread of hospital-acquired infections such as MRSA.

Tourniquets are essential in helping medical staff find a vein when they are taking blood samples or inserting a drip. They are wrapped around limbs and tightened, restricting blood flow so that the veins swell and become more visible.

Most tourniquets pose a risk of infection because they are reusable and can carry infective organisms from patient to patient. Because Tournistrip is disposable, its designers believe that it will pose no infection risk and provide a cheap, comfortable alternative to tourniquets currently in use. The inventors, Ryan Kerstein and Christian Fellows, who both recently qualified as doctors from Imperial, estimate that their tourniquet will cost the same to manufacture as a rubber glove, something frequently used as a make-shift tourniquet, but which can cause latex allergies or trauma to the skin.

Dr Kerstein explained: “Throughout our training there was always a lot of emphasis on infection control and good clinical technique. Watching some of our colleagues in the hospital environment it struck us that, even though their technique was stringent, they were limited by the reusable equipment available.”

Co-inventor Dr Fellows added: “We saw tourniquets being transferred from patient to patient, which we felt was unacceptable. The only available alternative was a rubber glove, which seemed unprofessional and uncomfortable. Looking into the problem, we realised there were no financially viable alternatives that had the benefits of reusable tourniquets, without the drawbacks of the available disposable ones.”

The new tourniquet is a long band made of a form of plasticised paper with similar dimensions to a watch strap. It is fastened using a quick seal, quick release sticking mechanism.

The graduates developed their idea after carrying out a small study on the infective organisms present in reusable tourniquets, with the help of Dr Berge Azadian from the Division of Investigative Sciences. In an examination of 52 reusable tourniquets, they found that 30 grew methicillin-sensitive Staphylococcus aureus and three grew methicillin-resistant Staphylococcus aureus.

The team have a patent pending on their design, and prototypes of the tourniquet have been successfully tested in various London teaching hospitals. Imperial Innovations is assisting the team in bringing their product to market.

—LAURA GALLAGHER, COMMUNICATIONS

‘Humanised’ mice aid gut microbe research

Researchers from Imperial and Nestlé Research Center, Lausanne, Switzerland have found that gut microbes affect the way fats are absorbed by the body by transplantaing bugs found in the gut of humans into mice.

Gut microbes play an important part in a human’s metabolic makeup, and transplanting them into mice furthers understanding of this and the animal metabolic system, reveals a new study published in the journal *Molecular Systems Biology* on 22 May.

The researchers found that microbes affect the way fats are absorbed and metabolised, by affecting bile acids which are made by the liver to allow emulsification of fats in the upper gut.

The scientists also explored how microbes break down fibre in the lower gut. Certain microbes allow dietary fibre to be digested, and the more effective these microbes are, the more calories are absorbed from the diet.

Professor Jeremy Nicholson of the Department of Biomolecular Medicine was one of the lead authors of the paper. He said: “Humans carry around 1.5 kg of bacteria inside of us—that’s the same sort of weight as your liver, so they have a big metabolic effect on our bodies. By transplanting human gut microbes into mice, scientists from Nestlé Research Center were able to make them partially human from a metabolic point of view, because we made their biochemistry more like ours. This makes studies on mice much more relevant to human problems.”

Different people have different types of gut microbes living inside them and abnormalities in some of these have recently been linked to diseases such as diabetes and obesity. The scientists believe that transplanting the bugs found in humans into mice will enable better understanding of gut microbes’ effects, good and bad, and help them to develop better treatments (including probiotics and functional foods) for a wide range of conditions.

—LAURA GALLAGHER, COMMUNICATIONS

Visit www.imperial.ac.uk/aboutimperial/pressoffice/podcasts to hear Christian Fellows talk about Tournistrip.

This makes studies on mice much more relevant to human problems
HIV puzzle one step closer to being solved

Mathematical modelling used to refute established HIV theory

Imperial scientists have refuted a long-standing theory of how HIV slowly depletes the body's capacity to fight infection, in new research published in PLoS Medicine on 22 May.

The researchers were looking at T helper cells, a class of white blood cells which recognise infection and coordinate the body's immune defences. They are attacked by HIV, and their numbers gradually decline in HIV-positive patients. It has long been a major puzzle why this process of depletion is so slow, often taking 10 years or more.

One popular theory has been the 'runaway' hypothesis, which says that T cells infected by HIV produce more HIV virus particles, which activate more T cells, which in turn become infected, leading to an uncontrolled cycle of T cell activation, infection, HIV production and cell destruction.

However, the new study shows that this theory cannot explain the very slow pace of depletion that occurs in HIV infection. The research team used a mathematical model of the processes by which T cells are produced and eliminated to show that if the runaway theory was correct, T helper cell numbers would fall to very low levels in a matter of months, not years.

One of the paper’s authors is Jaroslav Stark, Professor of Mathematics and Director of the Centre for Integrative Systems Biology. He said: “Scientists have never had a full understanding of the processes by which T helper cells are depleted in HIV, and therefore they’ve been unable to fully explain why HIV destroys the body’s supply of these cells at such a slow rate. Our new interdisciplinary research has thrown serious doubt on one popular theory of how HIV affects these cells, and means that further studies are required to understand the mechanism behind HIV’s distinctive slow process of cellular destruction.”

The research team think that one possible explanation could be that the virus slowly adapts itself over the course of the infection, but they stress that further analysis is needed to verify this alternative theory.

Professor Stark adds: “If the specific process by which HIV depletes this kind of white blood cells can be identified, it could pave the way for potential new approaches to treatment.”

— Danielle Reeves, Communications

Visit www.imperial.ac.uk/news for the full versions of all of these stories.
In recognition of Volunteers’ Week (1–7 June), the UK’s annual celebration of volunteering, Communications’ Alexandra Platt went to visit the Imperial Volunteer Centre (IVC) to find out how staff and students can give something back to their local community, learn a new skill and make new friends.

The Imperial Volunteer Centre (IVC) was founded in 2002 with funding from the Higher Education Active Community Fund and the appointment of Minna Ruohonen as Centre Manager. Her brief was to coordinate and develop opportunities for staff and students to interact with the wider community by volunteering. Today, with almost 200 exciting projects to get involved in, ranging from ship renovation to hosting tea parties for the elderly, and almost 400 current volunteers, it is safe to say the IVC is achieving its objectives.

Minna explained: “My role is about promoting community interaction and engagement, and ensuring that volunteers are placed in a safe environment. We also want staff to develop their skills through the experience—having a go at something new can be really rewarding. With the IVC being part of the Imperial Outreach programme, we have excellent opportunities to link with our local community.”

She is keen to stress that volunteering isn’t just about charity and giving: “Volunteering is about working together for mutual benefit, and learning new skills from which you and your organisation will both gain.”

With this in mind, the IVC offers all of its volunteers an opportunity to participate in the Award Scheme Development and Accreditation Network. This programme offers nationally recognised qualifications, acknowledging the transferable skills and good practice that an individual needs to participate effectively in voluntary activities.

Potential volunteers can be sure that they will be fully supported by the IVC. Minna regularly meets with all the partner organisations that offer volunteer opportunities to ensure that both they and the volunteers are benefitting from the collaboration. Volunteers are fully briefed before taking on a project and can contact the IVC team with any questions or problems they may have.

Teena Ollington is the Centre Coordinator and the main point of contact for all volunteers. She runs induction sessions and matches volunteers to suitable projects. She said: “Everyone has their own reasons for volunteering and I enjoy helping people to find the right opportunity. Whether individuals want to find a scheme that will help them succeed in their chosen career, challenge themselves or just meet new people, we can find something to suit them even if it means searching out a new organisation to work with.”

The variety of opportunities offered by the IVC means there should be something to suit everyone’s timetable. There are schemes available during weekends and evenings, as well as one-off opportunities and those requiring regular commitment. There are also opportunities to volunteer during work hours. Minna explained: “Staff aren’t always aware that they are entitled to time off work to volunteer. It is an indication of just how seriously volunteering is taken by the College.”

—Alexandra Platt, Communications

If you would like to get involved with volunteering, or just find out more about what the centre does, visit www.imperial.ac.uk/volunteering or subscribe to their weekly newsletter by emailing volunteering@imperial.ac.uk. Visit www.imperial.ac.uk/outreach and www.volunteersweek.org.uk for more information.

Imperial Public Engagement 2006–07—an exhibition

A new exhibition focusing on the work of the College Outreach Office officially opened on Monday 4 June. The photos illustrate the wide range of activities that have been organised by the office for current students and school children.

To see the exhibition, which runs until the end of June, visit the Blyth Art Gallery, Level 5, Sherfield Building, South Kensington Campus.

Helping hands

Volunteering at Imperial

IVC vital statistics

- Projects available: 190
- Current number of volunteers: 380 (so per cent of whom are staff)
- Volunteers since the IVC opened: 1,172
- Total projects since the IVC opened: 412

Football match day volunteer • appeal collector • recycling assistant • tea party host • shopping escort • driver • farm assistant • event steward
Volunteers from the Faculty of Engineering have been helping to restore the world’s oldest complete steam ship. SS Robin, originally built in 1890, is in desperate need of restoration and relies on the help it receives from volunteers.

Students from the Department of Materials have been busy repainting the gunwales and the deck of the ship, and wood staining and varnishing the floor.

One of the volunteers is Diana Iza, a second year Materials student from Venezuela. She said: “I am really enjoying being outdoors and doing something practical.” First year PhD Materials student Soumaya Mauthoor added: “I love taking part in these volunteering projects, as they always involve doing something different and are a great opportunity to meet like-minded people.”

The Managing Director of the SS Robin Trust, Nishani Kampfner, loves seeing young people interacting with history and taking a hands-on approach to restoration. She explained: “We need to restore the long-term future of this ship, and partnerships like this with Imperial are very exciting and vital to the project. The students are working alongside professionals and retired merchant seamen, and even in one day they are making a visible difference to the ship.”

Steven Sumner, Assistant Contracts and Procurement Manager at the College, has regularly volunteered his time as a leader in the Scout Association, an organisation that provides adventurous activities and personal development opportunities in the UK for 400,000 young people aged 6–25.

In his time at the Association he has developed skills in team building, communication skills and planning, and has learnt to be more flexible. His experience has culminated in the award of an Adult Leader Training qualification which has enabled Steven to teach and instruct scouts.

He said: “My best experience of volunteering was helping a young man who is a wheelchair user with cerebral palsy to climb a climbing tower. If nothing else, this one experience has taught me to never give up and that a challenge is good!”

Steven would definitely encourage people to give volunteering a go. He explained: “It allows people to grow and constantly change and develop their understanding of the diversity of the community around us.”

Staff and students share their volunteering experiences...

All aboard the SS Robin!

Scout’s honour

Staff and students share their volunteering experiences...
Insight into embryonic insulin production

Findings could help fight against diabetes

Hope for new therapies to fight diabetes, a chronic health condition where the body is unable to produce insulin and properly break down glucose in the blood, has arrived with a study published on 18 May in the Journal of Biological Chemistry.

Undertaken by scientists from Imperial and an INSERM unit at Necker Hospital, Paris, the study revealed that glucose plays a key role in enabling healthy beta cells, which secrete insulin, to develop in the pancreas of an embryo. Insulin is the principal hormone that regulates the uptake of glucose, and if beta cells are unable to produce sufficient insulin, this can cause diabetes.

The Division of Medicine’s Professor Guy Rutter was one of the authors of the paper. He said: “We hope that, by demonstrating that an ‘extrinsic’ factor like glucose can regulate the way in which insulin-secreting cells develop, we may eventually be able to reverse defects in the growth of these cells in patients with diabetes. Research like ours is opening up whole new sets of targets for drug treatments.”

The group hope that understanding how to switch on the gene that produces beta cells could eventually enable researchers to create these cells from stem cells. They could then transplant beta cells into patients with type-1 diabetes, where the immune system attacks patients’ beta cells. At the moment few patients with the condition are able to have beta cell transplants because the cells have to be taken from deceased donors.

The researchers also hope that scientists will be able to develop drug therapies that enhance the action of glucose in the womb and hence encourage the growth of healthy beta cells.

—Laura Gallagher, communications
More vitamin D to avoid TB

Taking a vitamin D supplement could be the way to avoid TB, says research published online in the American Journal of Respiratory and Critical Care Medicine on 14 May.

Imperial scientists have shown that a single 2.5 mg dose of vitamin D may be enough to boost the immune system to fight against tuberculosis (TB) and similar bacteria for at least six weeks. Their findings came from a study that identified an extraordinarily high incidence of vitamin D deficiency amongst those communities in London most at risk from the disease, which kills around two million people each year.

A single large dose of vitamin D was sufficient to enhance a person’s immunity to the bacteria

While a diet of oily fish can provide some vitamin D, the main source of the body’s vitamin D comes from exposing the skin to sunlight. In the UK, however, the amount of sunlight is usually insufficient to make vitamin D in the skin between October and April, and much of the population becomes deficient during the winter and spring.

Dr Adrian Martineau, Honorary Clinical Research Fellow in the Division of Medicine, coordinated the study. He said: “We found that a single large dose of vitamin D was sufficient to enhance a person’s immunity to the bacteria. This is very significant given the high levels of vitamin D deficiency in people at the highest risk of TB infection, and shows that a simple, cheap supplement could make a significant impact on the health of people most at risk from the disease.”

Researchers from Queen Mary’s School of Medicine and Dentistry, London, and the Wellcome Trust Centre for Research in Clinical Tropical Medicine at Imperial studied patients at Newham University Hospital and Northwick Park Hospital in London who had been exposed to TB. They found that over 90 per cent of such patients had a vitamin D deficiency.

According to the Health Protection Agency, the incidence of TB in the UK is increasing, with around 8,000 new cases a year. TB is also a major global problem: an estimated one-third of the world’s population – nearly two billion people – are infected. Nine million people a year develop the active disease worldwide, and two million people a year die from it.

— LAURA GALLAGHER, COMMUNICATIONS

Susceptibility to disease is in your genes

Genes might not only define your hair colour, they could also dictate your susceptibility to autoimmune diseases like lupus, according to new findings by Imperial researchers published in Nature Genetics on 21 May.

The researchers, led by Professor Tim Aitman of the Medical Research Council Clinical Sciences Centre, part of the Division of Clinical Sciences, identified a link between the number of copies of a specific gene an individual has and their susceptibility. Research using DNA has revealed that people who have a below average number of copies of a gene known as FCGR3B have an increased risk of developing diseases caused when the body’s immune system attacks its own tissue.

Professor Aitman explained: “The variations in DNA that people carry contribute to observable characteristics like height, weight and skin colour. Genetic variations have similar effects on individual susceptibility to disease. In this research our team focused on structural differences in the genome and set out to determine whether the number of copies of a particular gene a person has influences their chances of developing an autoimmune disease. We discovered that not only does the number of copies of a gene you have influence your chances of disease but that this kind of structural variation in the genome could be driving evolution of human weaknesses for infection and inflammation.”

Human genome research increasingly provides evidence that individuals vary in the number of copies of genes present in each of their genomes. Professor Aitman concludes: “Our discovery highlights the importance of gene copy number variation—that is, differences in the number of copies of a specific gene a person carries—in genetic predisposition to common human diseases. The next step is to find out whether genes that are closely related to this susceptibility gene, FCGR3B, also vary in copy number and predispose to similar diseases.”

— LAURA GALLAGHER, COMMUNICATIONS
archive corner

Imperial labs through the ages

For many of Imperial’s researchers and students their laboratory is a home from home. This edition of Archive Corner gives you a whistle stop tour of Imperial’s labs through the ages, from those built on a grand scale during the late nineteenth and early twentieth centuries to the high-tech labs we know today.

1890s Metallurgical Lab in the former Royal School of Mines, now the Henry Cole wing of the Victoria and Albert Museum.

1966 Crystal Growth Lab, Electrical Engineering.

1974 Civil Engineering Lab, home to highways and concrete structures work.

1984 Department of Computing Student Lab; visitors and students shown here participating in Women in Science Day.

— Anne Barrett, Archives and Corporate Records

Contact the College Archives team at cru@imperial.ac.uk if you’d like to know more about what students thought of life at Imperial at the start of our 100 years of living science.

Imperial and RCA Design-London

£5.8 million centre of excellence in design, engineering, technology and business to be created

The Royal College of Art (RCA) and Imperial announced a major strategic partnership on 30 May with the creation of a world class £5.8 million multidisciplinary centre called Design-London at RCA-Imperial.

Its purpose will be to bring together the disciplines of design, engineering, technology and business to address the challenges of future innovation. This initiative, which will be based at Imperial, is being developed as part of the core strategic aims of both institutions and in response to the recommendations for higher education described in the Cox Review of Creativity in Business (November 2005), carried out by Sir George Cox, Chairman of the Design Council, and commissioned by the Chancellor, Gordon Brown.

The Rector said:

“Innovation is an important part of what we do at Imperial and we are constantly exploring new ways of turning exciting ideas into reality, encouraged greatly by the presence of an integrated business school. Our previous collaborations with the RCA have sparked some imaginative problem solving, so I’m delighted that this partnership provides further opportunities for us all to work together to tackle design challenges in a creative and dynamic multidisciplinary environment.”

Innovation triangle

Bringing together the expertise of the neighbouring South Kensington institutions, Design-London will create an ‘innovation triangle’ between design, represented by the RCA, engineering and technology, represented by Imperial’s Faculty of Engineering, and the business of innovation, represented by Tanaka Business School.

Within this ‘innovation triangle’, teaching will promote knowledge interchange between MA, MEng and MBA students from both organisations. Research will explore how design can be more effectively integrated with business and technology to create world-leading products and services. Entrepreneurial graduates will be given the opportunity to develop new ideas in the ‘incubator’, a dynamic multidisciplinary environment for business development which will support unique or unexpected collaborations between different disciplines, organisations and places.

The total project cost of Design-London is £5.8 million, of which £3.8 million (65 per cent of the total) has been provided as seed funding from the Higher Education Funding Council for England (HEFCE) over three years (2007–10).

— Naomi Weston, Communications

Look out for an article about collaboration between Imperial and the RCA over the years in a future edition of Reporter.
Top honour from US scientific community for Imperial immunologist

As announced in the last issue of Reporter, Brigitte Askonas, Visiting Professor in the College’s Division of Cell and Molecular Biology, has been elected a foreign associate of the National Academy of Sciences of the USA – the American equivalent of the Royal Society. She is one of only 387 foreign associates of the National Academy of Sciences from around the world.

Professor Askonas, who has been based at Imperial since she retired from her role as Head of Immunology at the National Institute for Medical Research in 1989, was elected in recognition of her long and illustrious career researching the immunology of influenza and respiratory viruses. “My role at Imperial is wonderful because I get to help young researchers with papers, projects and grant applications, as well as mentoring PhD students and giving advice to people embarking on careers in science,” she said.

She was elected a Fellow of the Royal Society in 1973, and held the post of Vice-President of the Royal Society from 1989 to 1990. Her first degree was from McGill University in Canada, and her PhD was from Cambridge.

On hearing of her election to the National Academy of Sciences, Professor Askonas said: “It’s a real honour to be elected a foreign associate of the most prestigious American scientific institution—it was a total surprise, I wasn’t expecting it at all! I want to say thank you to Imperial College for its continued hospitality to me as a Visiting Professor, and for enabling me to continue to work with such brilliant young scientists and students.”

Professor Maggie Dallman, Deputy Principal of the Faculty of Natural Sciences, added: “We were absolutely delighted to hear of Ita’s election to the US National Academy of Sciences. Election as a foreign associate is a rare honour—in Ita’s case it recognises her important contributions to immunology over the years. Ita is still very active at Imperial College and she works particularly with our younger scientists, advising them both on their science and their careers. She is a great mentor; we are honoured and privileged that that she continues enthusiastically to support our science.”

—Danielle Reeves, Communications
College goes smoke free

Smoking will be prohibited in the few remaining College bars and catering outlets where it is currently still allowed, following the implementation of a revised no smoking policy. Smoking will also be banned inside College vehicles and some semi-enclosed areas.

The changes to the policy are necessary for the College to comply with the Smoke Free Regulations that come into force on 1 July, and will mainly affect South Kensington, Silwood and Wye Campuses. Medical campuses have been smoke-free since January 2006, and offices and other work areas throughout the College have been effectively so for many years.

Research shows that non-smokers regularly exposed to second hand smoke have a 25 per cent increased risk of lung cancer and heart disease. To eliminate this health risk, smoking will also be banned in the vicinity of offices and other work areas throughout the College have been effectively so for many years.

To register and for more info including transport information and FAQs: www.imperial.ac.uk/centenary/staffparty

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Corrections and clarifications

In media mentions on page four of Reporter issue 177, the piece entitled ‘Brightest supernova ever seen captured on telescope’ incorrectly referred to Janet Drew from Natural Sciences as Jane Drew.
moving in. moving on.

Dr Marcello Niceta, NHLI
Dr Alexey Moshkov, NHLI
Miss Laura McMinn, SORA
Ms Emma Massie, NHLI
Dr Zita Martins, ESE
Miss Emma Marfleet, Human Resources
Miss Katie Macdonald, SORA
Ms Jennie Lavin, Development and Corporate Affairs
Dr Cleo Kontoravdi, Chemical Engineering
Ms Jennie Lavin, Development and Corporate Affairs
Miss Katie Macdonald, SORA
Miss Emma Marfleet, Human Resources
Dr Zita Martins, ESE
Ms Emma Massie, NHLI
Miss Laura McMinn, SORA
Dr Alexey Moshkov, NHLI
Dr Marcello Niceta, NHLI

moving on

Dr Zita Martins is a Research Associate in the Department of Earth Science and Engineering. She arrived at the College last month after completing her PhD on the chemical analysis of organic molecules in carbonaceous meteorites, which she studied for at the University of Leiden in the Netherlands. She explains her new role: “I will be working on the organic compounds extraction and detection methods for the Urey instrument which is shortlisted to fly to Mars on European Space Agency’s ExoMars mission in 2013. I will also continue to analyse the soluble organic content of carbonaceous meteorites.” Zita is not completely new to the College, having spent a working visit here during her PhD.

Biosciences
Dr Enrico Faggi, Chemistry
Dr Shamini Gnani, EPHPC
Dr Goran Gregorovic, Investigative Science
Miss Joanne Hardy, NMH
Mr Carl Hassett, Medicine
Dr Daniel Henk, EPHPC
Dr Kazunari Hisadome, SORA
Miss Charlene John, Sport and Leisure Services
Dr Natalia Karpukhina, Materials
Dr Cleo Kontoravdi, Chemical Engineering
Ms Jennie Lavin, Development and Corporate Affairs
Miss Katie Macdonald, SORA
Miss Emma Marfleet, Human Resources
Dr Zita Martins, ESE
Ms Emma Massie, NHLI
Miss Laura McMinn, SORA
Dr Alexey Moshkov, NHLI
Dr Marcello Niceta, NHLI

moving on

Mr Samuel Armstrong, Faculty of Medicine
Dr Samuel Benson, Molecular Biosciences
Ms Lisa Broadhead, Investigative Science (6 years)
Mr Stephen Clark, Medicine
Mr Benjamin Condry, Civil and Environmental Engineering
Mr Eduardo Cordero, Investigative Science
Mrs Siobhan Pigott, Medicine
Mr Jerome Powederly, Registry
Mrs Jelena Rebić, EEE
Mrs Lucy Rollinson, NHLI
Dr Sarvesh Saini, EPHPC
Miss Karen Scorey, Faculty of Medicine
Mr Dan Solanki, NHLI
Dr Muhunthan Thillai, NHLI
Ms Nina Torcelino-Iszatt, EPHPC
Dr Julia Toschke, SORA
Dr Maximilian Vanleene, Bioengineering
Dr Pierre-Frédéric Villard, SORA
Dr Phuong Vo, Medicine
Miss Wendy Wang, SORA
Ms Tammy Wong, Educational Quality Office
Mr Robert Young, ICT
Dr Bin Zhao, Biology
Dr Hongwei Zhou, Civil and Environmental Engineering

This data is supplied by HR and covers the period 6–26 May. 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.

Biosciences
Mr Christopher Denham, Biology (5 years)
Ms Farrah Fatih, Biology
Dr Joanna Franklin, Medicine
Dr Anuj Goel, Clinical Sciences
Mr Andrij Goroshko, Catering Services
Miss Camilla Griffiths, EPHPC
Dr Caroline Gubser, Investigative Science (5 years)
Mr Kris Illic, Estates
Miss Magdalena Iwaniuk, Faculty of Medicine
Dr Bojana Jankovic-Nisic, Civil and Environmental Engineering
Dr Siv Jansson, Humanities Programme (11 years)
Mr Jack Kerr, SORA
Ms Angela Kubacki, SORA
Mrs Osnat Lipson, Molecular Biosciences

Science
Mr Irfan Zakiuddin, Computing (28 years)
Dr Alex Lomas, ICT
Dr Benjamin Lopman, EPHPC
Dr Lira Mamanova, Medicine
Dr Thomais Markou, NHLI
Miss Lesley Mayers, Conference Office (28 years)
Ms Sara Melloy, Human Resources
Mrs Sally Morris, Neurosciences and Mental Health
Miss Tayo Nong, Aeronautics
Ms Heather Skevington, ICT
Miss Jacqui Smith, Investigative Science
Mr David Smith, Estates
Mr Gijs Duinen, Molecular Biosciences
Ms Emma Veale, Cell and Molecular Biology (11 years)
Ms Saskia Wilming, Faculty of Medicine
Mr Irfan Zakiuddin, Computing
Imagine: inside hearts and minds

Family Party Day
IDEA League Sports Event

16 June
• imperial.ac.uk
Registration in advance: amy.thompson@imperial.ac.uk

13–15 June
IDEA League Sports Event
Five university teams battle to win

17 June
Family Party Day
An action packed day of animal themed family events and celebrations for the birthdays of Imperial, the V&A, the Royal College of Art and the Royal College of Music

18 June
Rules for important science
Dr James Watson, Chancellor of the Cold Spring Harbour Laboratory, and Dr Matt Ridley, author of Genes

21 June
Lies, damned lies, and statistics?
Professor Karim Maher Abadir, Tanaka Business School

What’s on

Take note

Childcare Voucher update
All employees with children under the age of 16 can save up to £1,196 a year on the cost of their childcare, subject to individual circumstances, by joining the Busy Bees Childcare Voucher scheme. By signing up to the scheme, which is supported by Her Majesty’s Revenue and Customs, working parents can request vouchers worth up to £2,430 per month to spend on any form of registered or approved childcare, including nurseries, nannies, childminders, au pairs, out of school clubs and holiday schemes. Vouchers are exempt from tax and National Insurance contributions and are given to parents in exchange for part of their salary.

For more information contact Busy Bees Childcare Vouchers on Freephone 08000 430 860, email enquiries@busybeesvouchers.com, or visit www.busybeesvouchers.com.

Planning permission granted for Linstead Hall redevelopment
Revised planning permission to redevelop Linstead Hall has recently been granted, with the hall of residence due to close on Saturday 23 June. Furniture, including desks and mini fridges, will need to be disposed of before work begins, and staff and students will have the opportunity to buy these through a sealed bid system. Full details will be available at www.imperial.ac.uk/residences from 11 June 2007.

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

The copy deadline for this issue is Friday 15 June. Publication date is 28 June. Contributions are welcome (no more than 300 words). Please note the editor reserves the right to cut or amend articles as necessary. Information correct at time of going to press.

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Matt Ald
Cheryl Aps
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Volunteering
The Volunteer Centre, part of Imperial Outreach, currently has over 250 active projects and all are listed on www.imperial.ac.uk/volunteering. You can also subscribe to the weekly newsletter by sending an email to volunteering@imperial.ac.uk.

Help make Exhibition Road Music Day run smoothly
Urgent project: Event Stewards
Project ID: 1618
Organisation: Exhibition Road Music Day
Date(s): 21 June
Time(s): 3-hour shifts throughout the day—morning, midday, afternoon, evening
Location: SW7 (nearest tube South Kensington)

Volunteers are needed to act as stewards to ensure the smooth running of a unique musical event taking place on Thursday 21 June. Duties include distributing programmes and providing general information about the nearest first aid points, toilets, cafes, etc. This year, Exhibition Road Music Day will bring the event to London for the third time, creating a unique addition to London’s cultural quarter. With participating institutions presenting over 100 musicians from all around the world, it will feature an eclectic mix of amateur and professional acts, as well as music workshops. Volunteers will be provided with a T-shirt and packed lunch. Please note that you must attend a compulsory training session which will take place a week prior to the event.

To take part in this scheme or to hear more about volunteering in general, contact Minna Ruohonen on 020 7594 8133 or email m.ruohonen@imperial.ac.uk.

Visit www.imperial.ac.uk/volunteering for full details of over 250 volunteering opportunities. You can also subscribe to the weekly newsletter by emailing volunteering@imperial.ac.uk.

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Beautiful Parisian apartment to rent
Lovely one bed apartment situated in the heart of Paris on the very chic left bank. A quiet location close to all the main attractions. The newly renovated and 'très parisien' apartment has one bedroom, a bathroom and a living room with kitchen. Centrally located with the charm of a real Paris ‘quartier’, the apartment is close to wonderful French markets, lovely bars and a wealth of fantastic restaurants. Available from €95 per night or €500 per week. For further information call Emma or James on +33 156 582 309 or email us on jmatt33@hotmail.com.

Grab a bargain
Due to a move to the US, everything must go before 20 June. Items sold as a set or separately. Items include: media set €15, includes 21” TV/stand, DVD/video/CD/receiver/5-speaker surround sound. Entire home fitness set €60, includes total trainer multi-gym, Reebok yoga set, 2 x Reebok resistance tubes and jump rope set. Iron €30. Space heater €25. Call Deanna on 07584 255556 or email deanna.ibab@gmail.com. See www.flickr.com/photos/addicted2traveling/sets/72157600276341881/ for photos.

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Reporter now includes a regular classifieds section. Please submit no more than 50 words to the Editor, Alexandra Platt, by email at a.platt@imperial.ac.uk for a chance for your advertisement to appear. The Editor reserves the right to edit advertisements as necessary.