



Reaching further

Bold new outreach projects inspiring a generation of future scientists

 **CENTRE PAGES**



OLYMPIC SHOWDOWN

Historic Varsity basketball game at Copper Box Arena

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GALAXY QUEST

Researchers find distant galaxy cluster 10 billion light years away

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NEED FOR SPEED

Imperial racing engineers past and present unite

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EDITOR'S CORNER

Doing our bit

No institution, however large, can be an island. Imperial has always sought to benefit society through its research and education – and in recent years [outreach and community initiatives](#) have played an increasingly prominent role in supporting the College's mission. In this issue we look at how Imperial's Outreach Department along with staff and students across the College are forging [lasting links with local schools](#), in an effort to inspire and prepare the next generation of scientists (centre pages). The Student's Union is also very active in promoting volunteering and fundraising, which we hope students continue as they forge their future careers in STEM (page 10). As the third Imperial Festival fast approaches on 9 and 10 May we all have the chance to get involved in the big effort to share what the College does with society at large. Plus, as pointed out by many of the people I've talked to about outreach over the last weeks, it's [just good fun](#) too.

ANDREW CZYZEWSKI, EDITOR

Reporter is published every three weeks during term time in print and online.

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Postgrad energy research scholarship fund renewed

The Scottish Power Foundation has announced a new round of scholarships for Imperial postgraduates pursuing energy and environment related studies.

The scholarships, delivered in partnership with the ScottishPower Foundation's Spanish equivalent – Fundacion Iberdrola – aim to develop and educate the next generation of leaders in the energy industry.

The grants, which form part of a £1.65 million investment in research and education across the UK and Spain, are available at five UK universities – including Imperial.

Students can choose courses in areas such as renewable energy, sustainable energy systems, environment and biodiversity, clean coal technologies, emissions management, energy efficiency and storage, electric vehicles and smart grids.

Marina Montero Carerro was awarded a grant in 2010 for an MSc in Sustainable Energy Futures and has recently taken up a PhD place at Vrije Universiteit Brussel, working in an area closely related to her Imperial studies.

"I knew that if I really wanted to make a contribution to the energy world through my work, I had to better understand the links between energy technology, economics and policy.

"My time at Imperial was an amazing experience – the multidisciplinary aspect of the programme and the diverse and international student community at the College made me realize how important it is to think outside the box and consider different perspectives when approaching the complex challenges faced by the energy industry."

Scholarship applications for the forthcoming academic year opened on Monday 3 February and close on Thursday 3 April.
bit.ly/1higCvd

–DEBORAH EVANSON, COMMUNICATIONS AND PUBLIC AFFAIRS



Tracey Batten to lead Imperial NHS Trust

Imperial College Healthcare NHS Trust has appointed Dr Tracey Batten, a leading Australian healthcare expert, as its new chief executive.

Dr Batten has had a distinguished career as a clinician and clinical leader and until recently was the chief executive of St Vincent's Health, Australia's largest charitable hospital group. She will take up her new post with Imperial College's partner NHS Trust in early April.

Announcing the appointment, Sir Richard Sykes, Chairman of Imperial College Healthcare NHS Trust, said: "We conducted an exhaustive, global search for our new chief executive and in Tracey I am certain we have found the kind of aspirational and inspirational leader we were looking for."

Dr Batten said: "The prospect of leading one of England's largest and most prestigious NHS trusts is both an honour and an exciting challenge. I am deeply committed to ensuring not only the very best clinical outcomes for patients but that their wider experience of the healthcare system is the very best too. I look forward to meeting my new colleagues and our many patients in the near future."

To find out more about Dr Batten visit: bit.ly/1fxNsrx

–ANDREW SCHEUBER, COMMUNICATIONS AND PUBLIC AFFAIRS

New PhDs to boost sustainable food production

Thirteen PhD students will join Imperial in October to devise ways of making food production sustainable, in a new training initiative with industry.

With the world's population estimated to grow to nine billion by 2050, demand for food is expected to rise by 50 per cent, putting pressure on farming and food production.

Students on the NexGenAgriChem doctoral training programme will work on a collection of complementary research projects, which together will seek new ways of increasing crop yields.

The training programme is being offered in partnership with Syngenta, a world-leading agrochemical company, and has been made possible through a €3.8 million European grant.

Dr Laura Barter (Chemistry), Director of NexGenAgriChem, said: "By directly partnering with industry, our students will get the exciting opportunity to learn about the agrochemical innovation pipeline, turn their research into practical tools and bring plant potential to life, which could make a significant impact upon society."

The new studentships are now open for application for EU and overseas students, with the programme beginning in October 2014. For details visit:
bit.ly/1c4pOE9

–GAIL WILSON, COMMUNICATIONS AND PUBLIC AFFAIRS



Imperial centre will 'drive healthcare agenda in Europe'

Imperial College Academic Health Science Centre (AHSC) held a special event last month to mark its recent award of AHSC status.

At the event, AHSC leaders launched their vision for 2014–19, which aims to improve the quality and length of lives of patients and populations by translating pioneering discoveries into medical advances, new therapies and techniques.

The prestigious designation from the Department of Health recognises Imperial College AHSC – a partnership between Imperial College London and Imperial College Healthcare NHS Trust – as a centre of excellence in healthcare, research, education and value creation.

The special event also showcased outstanding innovations in healthcare within the Centres for Translational Medicine (CTMs) through a number of interactive displays and posters

presented by staff from the College and the Trust. CTMs are AHSC delivery groups that bring together College and Trust staff to accelerate the translation of science into health discoveries.

Exhibition highlights included Professor Roger Kneebone's research group's live surgery simulation using a pop-up operating theatre to recreate an angioplasty, where a balloon catheter is inserted into an artery narrowed by coronary heart disease (pictured above).

Speaking at the event, Sir Gordon Duff, Chairman of Imperial College AHSC, said: "We're creating an AHSC that will drive – not follow – the healthcare agenda in the UK and Europe."

Professor Dermot Kelleher, Vice President (Health) and Chairman of the Joint Executive Group of Imperial College AHSC, said: "Our strategy puts the patient at the centre of everything that we do. All of our research is designed to support patient care. This will transform quality of life in our community."

—SAM HIEW, FACULTY OF MEDICINE CENTRE



Research centre will get to grips with market risk

Imperial has launched a new research partnership to model risk in financial markets in collaboration with a European hedge-fund.

The global financial crisis has underlined the need for a better understanding of market failures and risks.

Capital Fund Management and the Department of Mathematics at Imperial have joined forces to create the CFM-Imperial Institute of Quantitative Finance which will develop new approaches for modelling and managing risk.

The institute will fund a postdoctoral fellowship, PhD studentships and a programme for visiting international scholars, as well as a series of seminars and conferences.

Professor Rama Cont (Mathematics), Director of the CFM-Imperial Institute of Quantitative Finance, said: "As markets continue to rebound from the recent global financial crisis, we are glad to seize this opportunity to explore new directions in financial modelling. We see the CFM-Imperial Institute as a platform for interdisciplinary research and exchange of ideas, open to academics from all departments as well as our industry partners."

Jean-Philippe Bouchaud, chairman of CFM, added: "CFM has a long history of research excellence in the field of finance. We have a lot of common research interests with Imperial so we make an excellent fit for each other."

—GAIL WILSON, COMMUNICATIONS AND PUBLIC AFFAIRS

in brief

Korean connections

The International Office is collating information about Imperial's academic engagement with South Korea as it explores opportunities to strengthen links following the visit of the President of South Korea in November 2013, and in advance of an upcoming Imperial visit to the country. All academic staff with professional collaborations or interests in South Korea are invited to contact Felicity Scott, International Relations Officer (East Asia): f.scott@imperial.ac.uk



The Korean president visits Imperial in November

“We have a problem in trying to maintain our lifestyles further down the road in say 50 years’ time. Optimists would put off that day... ‘someone will fix it’! But wind turbines provide a sustainable source of energy now.”

READER RAJ SHAH COMMENTS ON AN IMPERIAL WEB STORY ABOUT RESEARCH INTO WIND FARM ECONOMICS (PAGE 6)

Top tweet

Debra Humphris @debrahumphris

You just get better and better, well done, especially Kath on hattrick @WomensRugbyLC: 52-7 win over Royal Holloway @SportImperial @icunion





Olympic Varsity showdown

A small slice of Imperial history was made on Friday 28 February as the annual Varsity basketball game was contested for the first time at an Olympic venue.

An intrepid crew of supporters made their way across London to the Copper Box Arena at the Queen Elizabeth Olympic Park in Stratford to see Imperial College School of Medicine team take on Imperial at basketball.

With the Imperial team being a division above the Medics, they went in as clear favourites; but this being Varsity at such a prestigious venue, who would feel the pressure most?

With tip-off at 16:00, Imperial quickly got the advantage opening the scoring in what was an ominous sign. The medics hit back with a perfect long range jump shot, but Imperial found their rhythm pretty quickly to go 8-2 up. The first quarter finished 22-6 to Imperial.

That was to be a theme of the game as Imperial were always several steps ahead. The Medics staged a brave fightback in the third quarter to close it down to 52 vs 30. But it was only truly going one way and IC once again found their ruthless pace from the first quarter, finishing the game at 62 vs 36.

Congratulating the winning Imperial team, Neil Mosley (Head of Sport Imperial), said: "It was a real thrill for players from both teams to play at such a top class venue and hopefully it's just the start of bigger things to come with basketball at Imperial."

Receiving the winning trophy from Imperial's former Pro Rector Professor Rees Rawlings, Imperial Captain Wouter Thijssen said: "It was simply amazing. The atmosphere, the arena, the crowd; it all made for an unforgettable experience.

The Most Valuable Player (MVP) award for the game though, went to Medic Ranjodh Sanghera, who was credited with his never-say-die attitude in the face of relentless pressure from Imperial (see back page).

Call to ban smoking in cars with children

Last month over 700 respiratory healthcare professionals urged MPs to legislate against smoking in cars with children.

In a letter to the BMJ, organised by Dr Nick Hopkinson (National Heart and Lung Institute), they say there is "a strong consensus that children need to be protected from unnecessary hazards, that exposing children to tobacco smoke is unacceptable, and that removing this exposure is effective."

Smoke inhalation damages the developing lung, and the Royal College of Physicians estimates that each year in the UK second-hand smoke by children is responsible for 300,000 primary care contacts, 9,500 hospital admissions, at least 200 cases of bacterial meningitis, and 40



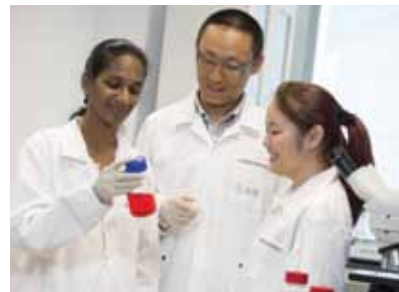
sudden infant deaths (cot death).

Most of this additional burden of disease falls on the more disadvantaged children in society.

The authors point out that there are precedents for legislation to determine behaviour while driving, such as the wearing of seatbelts, the use of child car seats and the ban on mobile phone use while driving.

"Smoking in cars where children are present has been banned in other countries," they write. "We urge MPs to support this important public health measure, which will protect the wellbeing of children now and in the future."

—SAM WONG, COMMUNICATIONS AND PUBLIC AFFAIRS



Singapore medical school launches research strategy

The Lee Kong Chian School of Medicine, Imperial's joint medical school with Nanyang Technological University, has unveiled a new research strategy.

The new strategy, which aims to address Singapore's key health challenges, is published six months since the School welcomed its first intake of 54 students. In August 2013 the students began working towards their Medicine and Bachelor of Surgery degree, pursuing an innovative curriculum developed by a team in Imperial's Faculty of Medicine since 2010.

The medical school has now identified the areas in which it could best achieve research excellence and support the healthcare needs of Singapore's ageing population. The four themes of the new strategy are: Infectious Disease, Metabolic Disease, Neuroscience and Mental Health, and Dermatology and Skin Biology.

LKC Medicine Dean Professor Dermot Kelleher, who is also Dean of Imperial's Faculty of Medicine, said, "If you look at the areas that we've chosen, they are areas that are going to be of critical importance for the people of Singapore. We're hoping that we'll find increasing solutions for diabetes and neuro-degeneration over the next five to 10 years, but it may take longer."

Professor Philip Ingham, Vice Dean for Research LKC Medicine said: "Strengthening the research partnerships that we have with Imperial, NTU and the School's hospital partners is one of the many areas that I am keen to explore and expand further so as to promote impactful fundamental and translational research."

—CAROLINE DAVIS, COMMUNICATIONS AND PUBLIC AFFAIRS

media mentions

—BY GAIL WILSON, COMMUNICATIONS AND PUBLIC AFFAIRS



Where are all the gay scientists?

THE GUARDIAN ▶ 14.02.2014

As the world celebrated Lesbian, Gay, Bisexual and Transgender (LGBT) History Month, Professor Tom Welton (Chemistry) asked why scientists remain almost completely invisible in the LGBT community. *The Independent on Sunday's* Pink List and *The Guardian's* World Pride Power List honoured influential LGBT people who make a real difference in their profession and community. But very few scientists made the lists. Writing in *The Guardian*, Professor Welton asks “what reasons are there for the apparent absence of LGBT scientists?” He suggests that among LGBT friends they either don't get the opportunity, or simply don't bother, to talk about the positive contributions they make every day to society.

My child is not obese, it is just ‘puppy fat’

THE TIMES ▶ 14.02.2014

Parents of obese children are in denial about their child's weight problem, reported *The Times*. In a study carried out by Imperial, parents believed their child's weight to be normal. They felt they were simply still carrying their ‘puppy fat’ or genes were the main cause of the problem. Doctors are concerned that parents are ignoring health risks which could create a public health ‘disaster’. Dr Sonia Saxena (Public Health), one of the study's authors, said: “There was disbelief that these measurements were accurate. There was a rejection of the fact that this is a valid way of defining a weight problem.”

Shingles relief

THE DAILY MAIL ▶ 05.02.2014

Shingles sufferers have reported a 30 per cent reduction in pain following a new treatment, says *The Daily Mail*. After just four weeks of taking the experimental drug EMA401 more than half of patients felt significant pain relief. The drug works in a different way to conventional



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painkillers, so researchers hope that it may also be useful in treating other types of chronic pain including nerve injury and chemotherapy. Professor Andrew Rice (Surgery) said: “Conventional painkillers don't tend to help people with severe chronic neuropathic pain... we hope that the new drug will ultimately offer hope for patients who aren't helped by current treatments.”

Let the robot do the chores

BBC NEWS ▶ 9.02.2014

Have you ever needed to vacuum, but wished a robot could just do it for you? Soon this science fiction of the future could become a reality. Up until now robots have not been able to respond to the real world environment, but Dyson have invested £5million in a new robotics lab at Imperial to develop vision systems that can help robots see and think in the same way as humans do. Speaking to *BBC News*, Professor Andrew Davison (Computing) said: “A truly intelligent domestic robot needs to complete complex everyday tasks while adapting to a constantly changing environment. We will research and develop systems that allow machines to both understand and perceive their surroundings – using vision to achieve it.”

awards and honours

ENGINEERING

Chip maker commends computing research

NVIDIA, the world largest producer of graphics processing units (GPUs), has designated the College a ‘2014 CUDA Research Centre’. The status recognises the work of several Imperial departments in using CUDA (Compute Unified Device Architecture) – a form parallel computing which employs thousands of GPUs. It opens up new possibilities in fluid dynamics in aeronautics research, molecular modelling in chemistry and quantum prediction in physics amongst other areas. The College will receive state of the art equipment from NVIDIA, special training and the opportunity for further collaboration.



NATURAL SCIENCES

Citizen science project scoops government award

An Imperial led collaborative project that aims to get the public more involved with conservation has been recognised by the Department for Environment, Food and Rural Affairs (Defra). The Open Air Laboratories (OPAL) Tree Health Survey engaged the public to act as extra eyes for pests and diseases which are threatening our trees. Officials are alerted immediately of any suspect sightings of pests and disease which pose the greatest threat to the country. For this the team won the Civil Service Reform Award at the Defra Team Awards 2013.

GRANTHAM INSITUTE

US meteorological honour for Hoskins

Professor Sir Brian Hoskins has been made an Honorary Member of the American Meteorological Society. The Director of the Grantham Institute was one of a group of three selected by the Council of the American Meteorological Society (AMS), in recognition of his “outstanding achievements in the atmospheric and related sciences.”

PUBLIC HEALTH

Euro grant for HIV work

Professor Christophe Fraser (Public Health) has been awarded an ERC Advanced Grant for the project BEEHIVE (Bridging the Evolution and Epidemiology of HIV in Europe). The €2.5m project will start in Feb 2014 and run for 5 years. During the project, viral RNA sequences will be generated and analysed from over 3,000 infected individuals with known date of infection and well characterised clinical follow up.

New galaxy clusters take researchers further back in time

Four unknown galaxy clusters, each potentially containing thousands of individual galaxies, have been discovered some 10 billion light years from Earth.

An international team of astronomers, led by Imperial used a new way of combining data from the two European Space Agency satellites, Planck and Herschel, to identify more distant galaxy clusters than has previously been possible. The researchers believe up to 2000 further clusters could be identified using this technique, helping to build a more detailed timeline of how clusters are formed.

Lead researcher Dr David Clements (Physics) explains: "Although we're able to see individual galaxies that go further back in time, up to now, the most distant clusters found by astronomers date back to when the universe was 4.5 billion years old. Our new approach has already found a cluster in existence much earlier than that, and we believe it has the potential to go even further.

"What we believe we are seeing in these distant clusters are giant elliptical galaxies in the process of being formed," says Dr Clements.

The researchers used Planck data to find sources of far-infrared emission in areas covered by the



Galaxy clusters are the most massive objects in the universe

Herschel satellite, then cross referenced with Herschel data to look at these sources more closely.

The team then used additional existing data and new observations to estimate the distance of these clusters from Earth and to determine which of the galaxies within them were forming stars. The researchers are now looking to identify more galaxy clusters using this technique, with the aim of looking further back in time to the earliest stage of cluster formation.

—GAIL WILSON, COMMUNICATIONS AND PUBLIC AFFAIRS



Cosmic evolution

Galaxies are divided into two types: spiral galaxies like our own, the Milky Way, which contain lots of dust and gas, and elliptical galaxies that have many stars, but little dust and gas. Spiral galaxies are generally considered to be in an early stage of galactic evolution and can potentially form into more 'mature' elliptical galaxies (sometimes by merging with other spirals).

Galaxies can also form into clusters, which are the most massive objects in the universe, containing hundreds to thousands of galaxies, bound together by gravity. Most clusters in the universe today are dominated by giant elliptical galaxies in which the dust and gas has already been formed into stars. While astronomers have identified many nearby clusters, they need to go further back in time to understand how these structures are formed. This means finding clusters at greater distances from the Earth. The light from the most distant of the four new clusters identified in this study has taken over 10 billion years to reach us. This means the researchers are seeing what the cluster looked like when the universe was just three billion years old.

Turbines get second wind

Wind turbines can remain productive for up to 25 years, making wind farms a good long-term choice for energy investors, according to new research.

There has been some debate about whether wind turbines have a more limited shelf-life than other energy technologies. A previous study used a statistical model to estimate that electricity output from wind turbines declines by a third after only ten years of operation, making it an unattractive option in economic terms.

In a new study, researchers from Imperial College Business School carried out a comprehensive nationwide analysis of the UK fleet of wind turbines. They used data from NASA, collected over a twenty year period, to measure the wind speed at the exact site of each onshore wind farm in the UK. This was compared with actual recorded output data from each

farm and used to develop a formula that enabled them to calculate how wear and tear of the machinery affects the performance of the turbines. This is in contrast to the previous study, which only used the average estimates of nationwide wind speeds.

The finding showed that the turbines will last their full life of about 25 years before they need to be upgraded.

The UK's earliest turbines, built in the 1990s, are still producing three-quarters of their original output after 19 years of operation, nearly twice the amount previously claimed, and will operate effectively for up to 25 years. This is comparable to the performance of gas turbines used in power stations. The study also found that more recent turbines are performing even better than the earliest models, suggesting they could have a longer lifespan.

Study co-author Dr Iain Staffell (Business School) said: "Wind farms are an important source of renewable energy. In contrast, our dwindling

supply of fossil fuels leaves the UK vulnerable to price fluctuations and with a costly import bill. However, in the past it has been difficult for investors to work out whether wind farms are an attractive investment.

"Our study provides some certainty, helping investors to see that wind farms are an effective long-term investment and a viable way to help the UK tackle future energy challenges."

—MAXINE MYERS, COMMUNICATIONS AND PUBLIC AFFAIRS

“Our study provides some certainty, helping investors to see that wind farms are an effective long-term investment.”



There are 4,246 wind turbines in the UK (in 531 wind farms) generating 7.5% of our total electricity. The UK is committed to generating 15% from renewables, including wind, by 2020



Smoking has long been linked to circulatory disease

Smoking impairs blood vessel repair...

Smokers are less able to repair damage to blood vessels because stem cells in their blood age more quickly, according to new research.

The findings shed light on why tobacco use is linked to a higher risk of heart and circulatory disease, which is the leading cause of death worldwide, killing over 7 million people in 2011 alone.

The study, funded by the Wellcome Trust, looked at stem cells called endothelial progenitor cells (EPCs), which circulate in the blood. These cells can develop into endothelial cells, which line our blood vessels. The role of EPCs is to repair damage to the vessels, which can otherwise lead to cardiovascular disease.

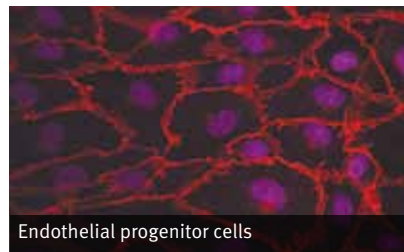
The study found that EPCs were dysfunctional in both smokers and in patients with a smoking-linked inflammatory lung disorder called chronic obstructive pulmonary disease (COPD). Their EPCs had aged prematurely and showed damage in their DNA.

Lead author Dr Koralia Paschalaki (National Heart and Lung Institute) said: "We found that the stem cells that repair blood vessels are effectively older in people who smoke than in non-smokers, and they don't work as well. This is important because damage to blood vessels can lead to heart disease."

Both were found to have low levels of SIRT1, an enzyme that protects against damage in the blood vessels and inhibits ageing in cells. Most importantly, the researchers observed that the ageing process is reversible.

For example, if the cells are treated with resveratrol, a compound found in red wine and known for its anti-ageing properties, the levels of the SIRT1 enzyme are restored, opening up possibilities for new therapies.

"Ageing of cells causes dysfunction, but on the other hand it's a very important tumour-suppressing mechanism," Dr Paschalaki said. "It is our body's way of eliminating defective cells. So we still need to understand more about the molecular mechanisms involved."



Endothelial progenitor cells

... and impairs responses to asthma treatment

Children exposed to cigarette smoke at home have lower levels of an enzyme that helps them respond to asthma treatment, a study has found.

Passive smoking is known to worsen asthma symptoms in children and impair their response to inhaled steroid treatment, but how this effect occurs was not known.

Researchers at Imperial found that children with severe asthma with a parent who smokes at home have lower levels of the enzyme HDAC2 compared with those whose parents don't smoke. HDAC2 is required for steroids to exert their beneficial anti-inflammatory effects in asthma.

—NICOLE SKINNER FOR COMMUNICATIONS AND PUBLIC AFFAIRS

Vaccinating mothers-to-be could protect their babies from infection

Researchers from Imperial are developing a new maternal immunisation programme to protect pregnant women and their babies.

Small babies are particularly vulnerable to infections, because their immune system is immature and has not yet produced the necessary antibodies to fight off diseases.

Vaccinating women during pregnancy can protect their babies from infections when they are very young. Influenza and pertussis vaccines are already recommended for pregnant women in the UK.

However, concerns have been raised that for some infections, high levels of certain antibodies present at birth could reduce babies' own antibody responses when they receive their first jabs from the age of two months onwards.

"We really need to get a better grasp of which vaccines can safely be given to mothers in pregnancy," says Professor Beate Kampmann (Medicine).

Kampmann and team investigated this question for three infections that remain dangerous in the UK: pertussis, pneumococcus and haemophilus B. They took blood samples from 61 mothers and babies at birth, then asked them to come back after the infants had received the three doses of their recommended baby vaccines at two, three and four months of age.

The mothers had not received vaccines in pregnancy, but had antibodies due to natural infection earlier in their lives or following their own vaccinations in childhood.

The team measured the level of antibodies each baby had received naturally from his or her mother, and whether there were differences in the infants' response to their own vaccines later on.

They found that all the vaccinated babies had the right level of protection from their vaccines, regardless of the level of antibodies provided by the mother. But it also showed that some women had very low antibody to pass on to their babies.

"These are very promising results," Professor Kampmann adds. "We are excited to continue further trials with women who have received vaccines now recommended during pregnancy and assess the effect of maternal vaccination on the responses in their babies."

Listen to an interview with Professor Kampmann on the Imperial College podcast: bit.ly/1cVa9gd

—MARION FERRAT FOR COMMUNICATIONS AND PUBLIC AFFAIRS



Babies have immature immune systems vulnerable to infection

Reaching further

Outreach initiatives at Imperial are helping to inspire and prepare a generation of future scientists.



Matthew Speight, Exscitec demonstrator (and Imperial Biology alumnus) helps a pupil with a DNA fingerprinting practical

A serious crime has been committed. Swabs have been taken from the scene and scientists are now busy cross referencing the DNA profile against those of five potential suspects.

It could be a description of a police forensics lab or the start of a CSI episode, but this is in fact a mock experiment being carried out by sixth form pupils at the WOHL Reach Out Lab on the South Kensington Campus.

The scenario might be fictional but the methodology and DNA are very much real. The activity is part of the Imperial STEM Enrichment Programme (ISEP), launched in 2011 and run in partnership with outreach specialists Exscitec. It encourages high achieving students from under-represented groups to apply to the College and other leading universities.

The scheme involves Imperial staff and student volunteers working with

16–18 year old school pupils over a two year period. During this time they receive support to develop their skills and abilities.

The DNA fingerprinting task was just one of several ISEP workshops which ran for sixth formers last month during February half term. The kind of biotechnology equipment required to do this sort of work is rarely, if ever, available at schools and sixth form colleges.

“The only DNA I’ve ever seen is in a text book,” said one of the pupils taking part. “So to be able to work with it for real – the stuff of life – is pretty cool.”

In the case of this pupil, inexperience was no barrier, as she ran a near perfect DNA electrophoresis gel and solved the ‘crime’.

Another workshop running that week was ‘spectroscopy in a suitcase’ where pupils analyse the molecular

composition of aspirin. There was also a drop-in physics clinic to help with tricky syllabus topics such as magnetism.

The success of the ISEP programme, now in its third year, has seen over 300 pupils selected to take part. Many of the students who completed the programme have since entered Higher Education with 11 pupils gaining places here at the College this academic year.

Expanding networks

ISEP is one of a number of long-term, overarching outreach activities now running at the College that aim to forge lasting links between Imperial and schools around London.

Perhaps the most ambitious of these schemes is Reaching Further, which aims to introduce current ‘hot

“It’s nice to see students really excited by what you do and it reinvigorates your own opinions that what you do is genuinely exciting.”

topics' in scientific research into secondary (and potentially primary) school classrooms, while also providing transferable skills training for early career researchers.

It was originally conceived by Professor Sara Rankin, Lead for Outreach at the National Heart and Lung Institute and Alan West, Director of the WOHL Reach Out Lab.

"In my case, I decided to do science at university because I had the opportunity to visit a professional laboratory whilst I was at school," says Sara. "Neither of my parents went to university, so that was quite an eye opener for me. For that reason alone I would always want to do some sort of outreach, but now I'm in a position to do things with greater impact.

"I think the problem with a lot of outreach activities is that they are a one off thing – what schools want is something in place they can come back to. That's what this is about."

What makes Reaching Further special is the commitment and creativity of early career researchers (ECRs) who devise hands-on experiences for pupils at various key stages that can also be used by teachers as a learning resource. ECRs can also partner with newly qualified and early career teachers to increase their confidence in delivering research-led practicals and topics.

Dr Jennie Hutton (Chemistry) is a postdoc who decided to get involved in Reaching Further and designed a workshop about drug discovery. In the workshop she talks about the different ways to combat malaria and how drug resistance means scientists must develop new therapeutics. She goes on to discuss her own research looking at ways of blocking an enzyme in the malarial parasite. The pupils then do an enzymatic jigsaw puzzle and practical lab experiment using enzyme reagents.

"I try to get across to them that this is work that no one else outside of our group is doing," says Jennie. "It's nice to see students really excited by what you do and it reinvigorates your own opinions that what you do is genuinely exciting."

Reaching Further is now run by Exscitec working with Imperial Outreach and supported by grants from RCUK and the Mayors London Schools for excellence funds – both led by Lord Winston, Professor of Science and Society.

Initially the Reaching Further programme will form links with five secondary satellite 'hub' schools. The idea is that those hub schools can then cascade STEM activities to their wider group of affiliated primary and secondary schools.

This model forms a central element of the London Schools Excellence Fund programme of which Imperial is a beneficiary. Ultimately it aims to bring STEM experiences and knowledge to around 250 schools and teachers and approximately 33,000 students across London Boroughs.

A real taste of research

While Reaching Further is providing strong STEM foundations across different age groups and diverse backgrounds, another new initiative will challenge those pupils who want to take science and engineering to the next level. The CREST awards are run by the British Science Association and encourage pupils to plan and execute long-term science projects with guidance from a professional scientist. There are bronze, silver and gold awards up for grabs – and Sara Rankin likens them to the Duke of Edinburgh's Awards where pupils plan their own expeditions.

Sara and Dr Leo Carlin (NHLI) have now established an Imperial CREST academy and enlisted a group of early career postdoctoral researchers at the College to help pupils with potential projects. In January this year, 15 postdocs who showed an interest in the scheme were brought together with 35 pupils, aged 16 and 17 years, from two schools. The postdocs gave 5 minute presentations about themselves and their work. They then mingled with pupils, who were encouraged to brainstorm and discuss possible project ideas.

Among the group of postdocs was Ali Salehi-Reyhani (Chemistry) – a physicist by training who has now switched to investigating cancer.

"There were some boys who came up to me at the end and told me that they wanted to build a particle accelerator. I said, 'well ok then, you need to get down to a scrap yard because you'll need magnets and if your parents have got an old washing machine lying around that will be useful too'. Their enthusiasm was just brilliant."



As part of the Reaching Further scheme, PhD student Shamim Quadir (Medicine) devised a robotics demo about advances in prosthetic limbs, based on his own research, which was trialled at a London school



“They are more creative than we are. I really believe that.”



Pupils are now in the process of putting together a formal project brief and will be matched with Imperial postdoc mentors who will meet with pupils over the next six months to make their project a reality. They will then hopefully be able to claim a silver CREST award and be eligible for an attempt at gold the following year, with the possibility of applying for £3000 worth of funding for each project from the Royal Society.

"That would be a huge boost. There's a lot you can do with 3K," says Ali. "And most importantly they get a feel of what it's like to be a real scientist – you apply for money, collaborate, and learn something new. That will help them down the line."

It's not all a one way street in terms of benefit either – Sara is very keen to emphasise how important such schemes can be for scientists' careers.

"These are absolutely critical transferable skills. Once you've mastered how to communicate to GCSE and A-level pupils, you can communicate to anyone – be it policy makers in parliament, charities, grant holders and VIPs."

Ali takes this further and suggests his own research might conceivably benefit from the blue skies thinking of the younger generation.

"They are more creative than we are. I really believe that. They're certainly less encumbered; all they have is their enthusiasm to guide them. And I'm hoping that will be infectious."

Please contact Professor Sara Rankin or Dr Leo Carlin if you are a postdoc or PhD interested in getting involved in any of these schemes. s.rankin@imperial.ac.uk; l.carlin@imperial.ac.uk

CAMPUS HIGH LIFE

Last month the South Kensington Campus witnessed a rare and exciting coming together, as Arts Fest, RAG week and Student Volunteering Week coincided to show that Imperial is about much more than just science and studying.

Arts Fest highlighted the diverse range of creative activities on offer to staff and students through a series of free events, music concerts, dance performances and an art exhibition in the Blyth Gallery. Meanwhile, the fundraising efforts of RAG week included bungee jumping next to the Queen's Tower and a 'jailbreak' contest, where student teams were given 36 hours to get as far away from the College as possible without spending any money. Then as part of Student Volunteering week, Imperial students took part in a range of activities across the city, from volunteering with the elderly, running a number of Hammersmith's charity shops and supporting the homeless through Imperial's Soup Run project. Imperial Hub's Local Action Committee who organised the week, were on hand at the Queen's Lawn to provide information and help get more people involved.

Student Volunteering Week

“It's so important that people from poorer backgrounds have the same access to quality education and get the chance to push themselves to succeed.”

Charlotte Mykura (below, right), PhD student and Schools Plus volunteer



RAG Week



200 feet

The height of this year's charity bungee jump.

£6,000

Amount raised by RAG for charities, Breakthrough Breast Cancer and Caritas Anchor House.



Arts Fest

The Imperial Fringe brought art and science together on 20 Feb, showcasing collaborations between student societies and Imperial's researchers. Among them was the Juggling Society and Professor Kevin Buzzard (Mathematics) unveiling the maths behind juggling.



Blyth Gallery exhibition



The 'physics of pole dancing' at Imperial Fringe

“Imperial is well known for its world-class scientific research, but it's easy to forget that there is also a lot of artistic talent at the College.”

Luke Salter, Chair of ArtsFest 2014

inside*

story

mini profile

Chris John

Dr Chris John started at the College in 1996 as a PhD student in what was then the Department of Pharmacology, under the supervision of Professor Julia Buckingham (former Pro Rector for Education). He is now a Senior Lecturer in the Department of Medicine and recently completed a Master's degree in University Learning and Teaching (MED).



How did you come to focus on teaching?

Back when I started, the Department was very much pro-teaching and Julia was always incredibly supportive of my own teaching. I basically continued teaching as a postdoc because I enjoyed it. The people I knew best (Julia, Sue Smith, John Laycock) were all involved in teaching and often asked me to help out. So I developed a heavy teaching load with organisational involvement from an early stage in my career.

Did that put a strain on your research?

It's difficult generating research when you have to split your focus. But research can be a hard slog; you can put in tremendous effort for little gain. Whatever you put into teaching, you always get that back.

What do you most enjoy about teaching?

I especially enjoy small group

teaching. You can see what individual students know and their interpretation of what you taught them. This helps because often what you thought you were explaining did not come over that well.

What did you gain from the MED?

I wanted to know whether what I'm doing relates to how students actually learn. I used concept maps to look at student understanding pre- and post-course to think about course improvements so that students retain concepts.

Is formal training in teaching the new norm?

Not yet. The people heavily involved with teaching are still in small pockets around College, although the Educational Development Unit's courses build networks for knowledge-sharing within and across faculties.

—TAMARA SZUCS, COMMUNICATIONS AND PUBLIC AFFAIRS



Over 70 Imperial race engineers past and present gathered at the College

Racing reunion

Last month the College hosted a unique and unprecedented gathering of students, staff and alumni all with one thing in common: a love for speed.

The group of over 70 from across the generations had all built or raced vehicles and bikes in Imperial's racing teams.

Since 2000, Imperial has formed interdisciplinary teams of undergraduate students who design, make, test and race racing cars and bikes. Since 2011 the focus has been on low and zero emission vehicles under the Imperial Racing Green (IRG) banner.

Among guests at the event were alumni working at Mercedes, Rolls Royce and Jaguar who met to network, celebrate their achievements and catch up on the latest news from today's student engineers.

David Zong, an alumnus veteran of IRG, worked in the suspension and brakes team, designing, testing and manufacturing them for the IRGo4 vehicle. These are skills he now puts to good use working in Nissan's suspension design group.

"My fondest memory of the IRG project was taking the car for a drive around a test track in Dunsfold following an all-nighter in the garage to get it ready. It felt extremely rewarding and exciting driving it, following two years of hard work by everybody to make it track worthy."

A major spin-off from Imperial Racing Green was the Racing Green Endurance (RGE) project, where alumni and undergraduates got together to build an all-electric



“My fondest memory was taking the car for a drive around the test track after an all-nighter in the garage.”

supercar. In 2010, they drove the car 26,000 kilometres down the Pan American Highway, passing through 14 countries in 140 days.

Toby Schulz is a veteran of both IRG and the RGE projects. "I have so many fond memories of the RGE trip," he says. "In particular reaching Ushuaia in Argentina and realising how far we had driven and how many challenges we had overcome to make it to the end. Sometimes I still wonder how we did it!"

Dr Gregory Offer is the Academic Project Manager of IRG, and was the driving force behind the reunion. He said: "It was fantastic to bring together everyone who has been involved in the racing teams over the past 14 years. The room had a palpable buzz and I'm looking forward to building on the many connections that were made on the day. Hopefully it will translate into opportunities for current undergraduates, and ultimately future racing wins!"

—JESSICA ADAMS AND COLIN SMITH FOR COMMUNICATIONS AND PUBLIC AFFAIRS

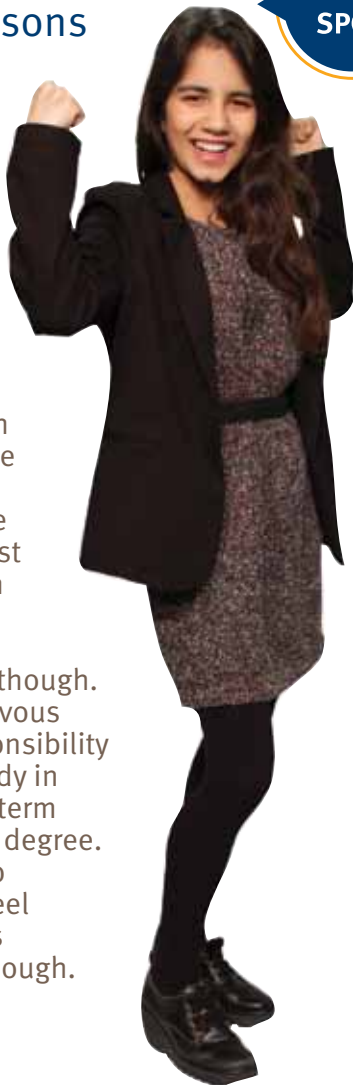
Student blogger Mala

Anatomy lessons

A few days ago I began anatomy of the thorax and took a trip up to the 14th floor to meet the body my group would be working with for the next few weeks.

I have so much respect for people that donate their bodies to science and even after just one session I can see how useful it really is.

I was terrified though. Genuinely so nervous to have the responsibility of someone's body in my hands only a term and a bit into my degree. Just being able to touch a lung or feel the muscle fibres was incredible though.



blog
SPOT

Make a difference

The Faculty of Natural Sciences has launched its Make-a-Difference Competition, searching for innovative student ideas to contribute to society.

The competition, running for the first time this year, challenges all undergraduates in the Faculty of Natural Sciences to harness their creativity to develop solutions that could bring real benefits, under the theme 'healthcare and well-being'.

The top three teams decided by the judges will be given access to facilities to develop their project to a proof-of-concept stage over eight weeks this summer, with each student receiving a bursary of £1,500 to cover their costs.

Competition organiser Professor Ramón Vilar (Chemistry) said: "We want to encourage students to use their creativity, ingenuity and imagination to tackle challenging problems.

"What's important in this competition is that it's not just about providing ideas and suggesting possible ways to solve them, but through the period of the competition



we want to go from the initial idea to seeing its implementation." The competition will be judged by a panel of experts comprising of Professor Lord Winston, Professor Sir John Pendry (Physics) and Professor Lesley Yellowlees, President of the Royal College of Chemistry and Vice-Principal and Head of the College of Science and Engineering at the University of Edinburgh.

For more information visit: bit.ly/1hK8Av0

—JON NARCROSS, COMMUNICATIONS AND PUBLIC AFFAIRS

Digging for dinos

School children love dinosaurs. A fact that all of us who work at South Kensington will know from battling half terms crowds coming to or from the Natural History Museum. And so a school project to unearth dino fossils from within their grounds seems like the stuff of fantasy.

But that is what pupils from Ardingly College in West Sussex have been doing with the help of Dr Susannah Maidment (Earth Science and Engineering).

While builders were excavating rubble from under a new boarding house, Godwin Hall, which was completed last year, they came across fossilised dinosaur bones, fish teeth, scales, plants and shells. These

remains are from creatures that lived on Earth and in the sea approximately 140 million years ago.

The school is now working with Susannah, a Junior Research Fellow, to find more fossilised creatures from our ancient past.

She says: "We know that Ardingly College sits on a rocky treasure trove of ancient fossils. The problem is we do not usually get access to them because this area of England is so heavily urbanised. The discovery of these fossils is rare. The pupils are going to be further examining this fossil rich layer to figure out what sort of animals were living in West Sussex 140 million years ago. We expect to find ancient fish, crocodiles, and more dinosaur bones.

In the coming weeks, Ardingly villagers are to be invited to join a 'Dig for Dinosaurs' event at the school as part of a Citizen Science Project.



Dr Susannah Maidment

The aim is to collect, catalogue and curate as many items as possible, so that a new national fossil bank can be established as a resource for learning more about the early Cretaceous period, the heyday of the dinosaur.

—COLIN SMITH, COMMUNICATIONS AND PUBLIC AFFAIRS

“We know that Ardingly College sits on a rocky treasure trove of ancient fossils.”

Rising to the challenge

As the UK tries to plot a course back to economic growth it is more important than ever that we work hard as a nation to foster a culture of enterprise. Key to that is supporting and encouraging the creative minds of our students.

The Venture Catalyst Challenge (VCC) is the UK's largest university innovation contest. It is organised annually by the Imperial Create Lab – an initiative run by Imperial students and Imperial Innovations.

Running for six weeks through February to 20 March, the VCC invites Imperial students and recent graduates to set up a business in an accelerated programme that gives them access to one-to-one mentoring on key business skills, such as marketing, product development and customer acquisition.

Ultimately, teams get the chance to pitch their ideas to some of London's top investors with a share of £20,000 grant funding and working space to develop their businesses. Last year's participants were able to collectively raise over £1.25 million in the first 3 months after the challenge. Among them was Business School

alumnus Dana Zingher and Levi Young, co-founders of Encloued – a men's fashion retailer that offers personal styling services, now successfully trading online. "You can discuss your idea with everybody without feeling like you have to have all the answers," Levi says about the VCC.

Ben Miles, now a PhD student in Chemistry, was part of the team behind Flow Microfluidics, a company set up to design bespoke microfluidic chips used in scientific research.

"Whilst I am not pursuing the project that I entered into the VCC with, all of that experience makes me a stronger candidate for any career that I wish to pursue," says Ben.

This year's 28-strong cohort (selected from 152 applications) covers a variety of areas, such as home automation, image recognition and wearable technology.

With workshops and networking still going on, participants are already reaping the benefits. "The VCC has completely changed the way we were thinking about the business," says PhD student Renato Salas-Moreno (Computing), co-creator of SLAM++, a system that constructs virtual worlds in videogames. With the VCC, he believes, they have gained the skills and motivation to approach clients. Fledgling company Wees applied to

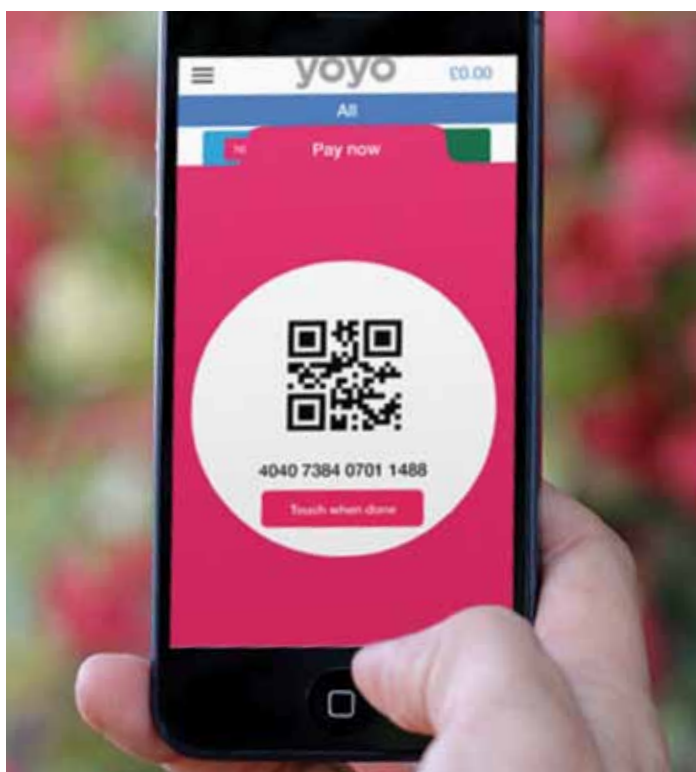
the VCC after approaching Imperial Innovations with technology they wanted to unleash. They are currently developing a 'smart bracelet' for gesture control of various devices. "We had the technology, but not a product. The VCC taught us how to build the product," says student Alfredo Belfiori (Bioengineering).

—DAVID BARRETO IAN, IMPERIAL INNOVATIONS

“We had the technology, but not a product. The VCC taught us how to build the product.”



The Imperial Incubator hosts a VCC gathering



Smartphone payment app takes Imperial by storm

An innovative app which allows users to pay for items with their smartphones is being pioneered at Imperial.

Yoyo is a new cashless payment platform that allows students, staff and visitors to purchase food and drink on campus without the need for cash or cards.

Co-founded by Imperial Innovations and launched last month, the app can be used across all Taste Imperial outlets at South Kensington Campus and, from 26 February, at the Imperial Students' Union bar. Since then the app, available free for both iPhone and Android users,

has attracted more than 2,400 staff and student users.

Jemma Morris, Head of Catering Operations at Imperial, says: "The cafes and restaurants on campus can get really busy during lunchtime and we are always looking for ways to speed up transactions and improve the service we offer to staff and students."

Michael Rolph, Co-Founder of Yoyo, said: "Imperial, being a unique community of exceptionally bright minds with high expectations of mobile technology, represented a tough audience for Yoyo – making it an ideal launch-pad for our product."

The app can also be used to collect loyalty points from participating outlets on campus, automatically generating vouchers when these points can be redeemed for a reward.

—DEBORAH EVANSON, COMMUNICATIONS AND PUBLIC AFFAIRS



Stranger than fiction

By any standards Imperial is a unique place to work and study – with a mind-boggling diverse array of cutting-edge research, innovative teaching and excellent support services underpinning it all. Now a new initiative is aiming to capture a glimpse of those work experiences in the form of prose.

The Albertopolis Writing Circle is a project – based mainly in the Centre for Co-Curricular Studies – seeking out staff, students and alumni of the College and the other institutions in South Kensington to tell factual or fictional stories based on their working lives. Nick Russell, Emeritus Reader in Science Communication, who is co-ordinating, explains.

Why do this?

The Circle will have a public engagement function and will also help to foster informal collaborations across the South Kensington institutions. A lot of current public engagement initiatives tend to focus on outcomes – new science, new technology, new art, or new displays – which is of course important. But our feeling is that this is not enough; knowing about the people involved

is as important as knowing about what they produce. Who are they? Why they are doing the work? How do they achieve their objectives? A good way to describe these working lives is to tell interesting stories about (actual or fictional) characters and how they go about their business.

How will it work?

We hope to encourage people who may or may not already have literary aspirations to write about their work or study experience. Like most writing circles the core activity will be regular workshops where writers present work-in-progress for peer comment by fellow-authors. Writers help each other to write better. We also want to put them in touch with professional writers looking for fresh ideas and subject matter themselves.

What do you aim to achieve?

We would like to produce material of genuine literary merit with a view to wide publication. We also intend to build networks with creative writing programmes in other colleges and universities. The plan is based on a couple of previous initiatives, notably the engagement initiative in Manchester which led to the recent story collection *Litmus*.

For more details contact Nick at: nick.russell@imperial.ac.uk



Climate facts and fiction

For those of us who aren't climate scientists, it can be difficult to separate fact from fiction when it comes the great debate about the magnitude of climate change.

Fortunately the U.S. National Academy of Sciences and the Royal Society have released a joint publication which lays out those aspects of climate change that are well-understood, and where there is still uncertainty and a need for more research.

One of the authors, Professor Sir Brian Hoskins, Director of the Grantham Institute for Climate Change, said: "We hope that people in the USA, UK and wider will find it useful to have a short document that gives clear responses to the sort of questions on climate change that they may have, put together by top climate scientists from both sides of the Atlantic."

It is hoped that the report will help inform policy debates about the choices available to nations and the global community for reducing the magnitude of climate change and adapting to its impacts.

A copy of the paper can be found here: bit.ly/1ftbgsE

long
service

Staff featured in this column have given many years of service to the College. Staff listed below celebrate anniversaries during the period 01 February–31 March. The data is supplied by HR and is correct at the time of going to press.

20 years

- Geoff Fowler, Research Fellow, Civil and Environmental Engineering
- Gillian Parker, Laboratory Manager, Medicine
- Squirrel Manning, Payroll Officer, Finance
- Louise O'Neill, Library Assistant for Faculty Support Services, Library
- Mark Curtis, Site Manager, ICT

30 years

- Tom Tate, Lab Facilities Manager, Electrical and Electronic Engineering
- Joanna Haigh, Head of Department, Physics
- Paul Docx, Chief Executive, Imperial Consultants
- Linda Jones, Operations Manager, Physics

Welcome

new starters

Dr Marieke Aarts, Clinical Sciences
 Miss Dolapo Aina, Public Health
 Ms Daphne Babalis, Public Health
 Dr Yan Bao, Aeronautics
 Mr Arafat Bhallizada, Chemical Engineering
 Mrs Jennifer Brown, Estates Division
 Dr Sophie Campen, Mechanical Engineering
 Ms Chanelle Candy, Business School
 Ms Karyn Chappell, Surgery and Cancer
 Dr Adam Coleman, Medicine
 Mr Jose Cortell Fores, Mechanical Engineering
 Miss Franca Davenport, Communications and Public Affairs
 Mr Christopher De La Force, Public Health
 Miss Anne Delaporte, Public Health
 Ms Rama Desai, Life Sciences
 Dr Philippe Donatien, Medicine
 Miss Pippa Douglas, Public Health
 Miss Stephanie Dutton, Estates Division
 Mr Ian Evans, Estates Division
 Mr Kieran Fahy, Chemistry
 Dr Agnieszka Falinska, Medicine
 Mr Celio Fernandes, Catering
 Mr Robert Floyd, Faculty of Medicine
 Dr Irina Glotova, Public Health
 Mr Gordon Haggart, Surgery and Cancer

Ms Raunaque Hasnat, Public Health
 Miss Simone Henderson, Estates Division
 Ms Despo Ierodiakonou, Medicine
 Dr Huseini Kagdi, Medicine
 Dr Debora Keller, NHLI
 Dr Combiz Khozoie, Medicine
 Dr Oleksiy Klymenko, Chemical Engineering
 Ms Emilie Kottenmeier, Public Health
 Miss Marina Krouski, NHLI
 Mrs Ellie Lange, Public Health
 Dr Michael Mace, Bioengineering
 Ms Jessica McGillen, Public Health
 Mr Justin Miller, Educational Quality
 Miss Nazma Mojid, Estates Division
 Miss Lindsey Morse, Civil and Environmental Engineering
 Mr Filippo Mortari, Life Sciences
 Miss Ashley Moyes, Surgery and Cancer
 Dr Salomon Narodden, Clinical Sciences
 Dr Cher Ooi, Life Sciences
 Mr Alvaro Perdones-Montero, Surgery and Cancer
 Mrs Esther Perea, EEE
 Miss Monique Pereboom, Public Health
 Miss Nisha Rana, Surgery and Cancer
 Mr Francesco Reale, Materials
 Dr Stuart Rison, Medicine
 Ms Marianna Sanna, Public Health
 Miss Gabrielle Selcoe, Public Health
 Mr Roddy Slorach, Educational Quality
 Ms Charlene Smith, Business School
 Miss Anastasia Sylaidi, Bioengineering

Dr Antonios Tsitos, Civil and Environmental Engineering
 Miss Veronika Valovicova, Public Health
 Dr Venanzio Vella, Medicine
 Mr Chen Wang, EEE
 Dr Barbara Wild, Medicine

Farewell

moving on

Dr Elihu Aranday Cortes, NHLI
 Mr Alan Ashton-Smith, Chemical Engineering
 Dr Laura-Lina Benzonana, Medicine
 Ms Merrilee Briggs, Surgery and Cancer
 Dr Sally Burtles, Surgery and Cancer
 Ms Lucy Chapman, Educational Quality
 Ms Michelle Coupland (17 years), Strategic Planning
 Mr Joao De Sousa Valente, Surgery and Cancer
 Mr James Docker, Surgery and Cancer
 Miss Elisa Dominguez Huttinger, Bioengineering
 Dr Jenny Donaghey, Chemistry
 Miss Catherine England, Public Health
 Mr Mark Fisher, Surgery and Cancer
 Mr Michael Igiebor (5 years), Medicine
 Dr Clifford Jones, Medicine
 Dr Remi Joubaud, Mathematics
 Dr Beril Kavukcuoglu, Materials
 Miss Swarna Khare, Public Health

Mr Christopher Kwan, EEE
 Dr Ismael Lopez Duarte, Chemistry
 Dr Natalie McLymont, Surgery and Cancer
 Mrs Eve-Marie Musulanov, Public Health
 Dr Venkata Naranammalpuram Sundaram, Chemistry
 Mr Karthick Parashar, EEE
 Dr Sudhakar Selvaraj, Clinical Sciences
 Miss Helen Sigoura (13 years), Faculty of Medicine
 Miss Jelena Skulic, EEE
 Dr Marko Storch, Life Sciences
 Dr Blake Suttle, Life Sciences
 Dr Chris Thompson (5 years), Physics
 Ms Dora Tomor, Catering
 Ms Annette Wilson (6 years), NHLI
 Dr Hilary Wong, Medicine

This data is supplied by HR and covers staff leaving the College during the period 6 February–24 February. This data was correct at the time of going to press.

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

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

moving in. moving on.





20 MARCH ▶ FRINGE

Species

Species come in all shapes and sizes: feathers and fur, flowers and leaves, molecules and ions. From the huge to the microscopic, find out how their diversity and adaptability affect so many biological and chemical aspects of our lives.

Join your colleagues for a drink in the College Main Entrance after work and explore how species are interconnected, adaptable and unique, shaping our lives in astounding ways.

Imperial Fringe events are family friendly and open to all. Interact online with #impfringe and @ImperialSpark



26 MARCH ▶ PUBLIC TALK

Bright, flexible, stretchable: electronics of the future

Plastic electronics are set to revolutionise the ways we learn, communicate, shop and entertain ourselves. Silicon-based transistors were the building blocks of the

modern electronics revolution that has transformed our daily lives. Now unconventional semiconducting materials offer numerous advantages. Professor Thomas Anthopoulos (Physics) gives his inaugural lecture about this new branch of electronics, and how we are developing these new materials using innovative technologies and large-scale manufacturing techniques.

6 MARCH ▶ ARTS

Artifact speedmeeting

Networking with staff and students from Imperial and Royal College of Art

11 MARCH ▶ SEMINAR

Presenting the future

Presentation of UKERC report on electricity cost estimates, with Dr Rob Gross (Environmental Policy)

12 MARCH ▶ SEMINAR

Technology push versus market pull

Entrepreneurship hub event



12 MARCH ▶ SPORT IMPERIAL
Varsity 2014

Annual sports competition between Imperial Medics and Imperial College students, including rugby rivalry for the JPR Williams Cup

14 MARCH ▶ PUBLIC EVENT

Ig Nobel Awards 2014

Show featuring science from the Annals of Improbable Research, presented by editor Marc Abrahams

14 MARCH ▶ WELLBEING

London by cycle

Free stuff, advice and training on campus from London Cycle Campaign

18 MARCH ▶ SEMINAR

Understanding open access

Library services session for journal editors in Faculty of Natural Sciences

19 MARCH ▶ CHAPLAINCY

Imperial College Chamber Choir

Choral evensong in Holy Trinity Church

21 MARCH ▶ SEMINAR

The role of digital technologies in future transport systems

Transport Futures event with Professor John Polak (Civil and Environmental Engineering)

26 MARCH ▶ SEMINAR

Privacy and the digital city

Debate about the impact of technology on privacy, and talk from electronic business expert David Birch

26 MARCH ▶ SEMINAR

6th annual welfare seminar

Discussion with student reps and staff including Professors Denis Wright and Debra Humphris

26 MARCH ▶ EXTERNAL

Science on a sphere

Imperial researchers predict future climate, food resources and energy supply at Science Museum Lates



27 MARCH ▶ PUBLIC TALK
A stroke of bad luck

Professor Dame Nancy Rothwell, University of Manchester, talks about how stroke causes massive disability, yet there are few effective treatments

27 MARCH ▶ CONFERENCE

Education day 2014

Various speakers and discussion about academic transitions at Imperial

31 MARCH ▶ SEMINAR

Faculty of Medicine fellowships

Guest lectures and ceremony for fellowship awardees including Professor Sir Malcolm Green (NHLI)

2 APRIL ▶ SEMINAR

IC3D

Meeting about 3D imaging research at Imperial

3 APRIL ▶ CONFERENCE

8th UK and Ireland occupational & environmental epidemiology meeting

Subjects include shale gas, shift work and nanotechnology

3 APRIL ▶ PUBLIC TALK

Wheeze and breathlessness; but is it really asthma?

Café Scientifique event with Dr James Hull (NHLI)

take note

Stub it out

On 12 March charity Quit will be giving expert advice to staff wishing to stop smoking, as part of national No Smoking Day. The charity will be on hand at the level 1 concourse area of the Sheffield Building between 10.00 and 16.00. Further information about quitting smoking can be found at Imperial's Occupational Health website: bit.ly/NzBluz



MEET THE READER



Ranjodh Sanghera, third year medical student

What are you doing in picture?

Catching my breath after finishing playing the Varsity basketball game at the Copper Box Arena at the Olympic Park in Stratford. Unfortunately for us, the College team got the better of the Medics, but we fought hard and I managed to get the most valuable player (MVP) award (hence the gold basketball!)

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

I'd like to take a look at some of medical school sports teams. They play an important role in instilling team work and giving a release for training doctors.

Who would be your cover star?

I would go for my peers Shaan Rashid and Rustam Karanjia who recently won the annual clinical quality improvement project for third years with a new mobile application for the West Middlesex Hospital. They've now progressed and are actually developing the app commercially.

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

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

