



EASTERN medicine

Imperial's vision
for the **Singapore**
medical school

 **CENTRE
PAGES**



JAPANESE OLYMPIC TEAM

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IMPERIAL SWANS

Working
towards a level
playing field
for all

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EDITOR'S CORNER

First impressions

Starting university is an important landmark. I'll never forget my first day at Southampton University when my nerves were quickly replaced by excitement after spotting someone wearing the **same band T-shirt as me** across the room in a welcome talk – 11 years on and he remains one of my best friends. This weekend I witnessed a familiar scene on the South Kensington Campus of apprehensive students arriving with their parents in cars packed to the brim with boxes ready to begin their life at Imperial. Directed by a dedicated army of smiling green-t-shirted helpers, the new students and their multipacks of crisps, juice and washing powder found their way to their halls which were framed by brightly coloured balloons. Despite the rain the **Medics BBQ blazed bravely** on the Queen's Lawn while back in the dry of the Sherfield Building **towers of sandwiches** were eagerly snatched up by students keen to line their stomachs for the term ahead. The *Reporter* team wishes all new starters the very best while they find their feet at the College.

EMILY ROSS, EDITOR

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Imperial and Laing O'Rourke partnership

On 27 September Imperial and Laing O'Rourke announced the creation of a new multi-disciplinary academic centre of excellence to advance the systems engineering profession and leverage innovative thinking to benefit the construction industry.

The UK's largest privately-owned engineering enterprise, Laing O'Rourke, will fund the Laing O'Rourke Centre in Systems Engineering and Innovation at Imperial as part of

their multi-million pound collaboration with the College.

The Rector Sir Keith O'Nions, and Laing O'Rourke Chairman and Chief Executive Ray O'Rourke formally launched the new centre last month, which is set to play a leading role in shaping the future of the construction industry by responding to the commercial and environmental challenges facing it.

Professor Stephen Richardson, Deputy Rector and Principal of the Faculty of Engineering, said: "This new partnership will help to develop



The Centre will be led by the new Laing O'Rourke Professor in Systems Engineering at Imperial, David Fisk (left), pictured with Laing O'Rourke's Jonathan Abbott in the Maurice Hancock Smart Energy Lab on the South Kensington Campus.

the professional skills of engineers from around the world to make the complex systems that run our cities more robust, energy efficient and cost effective."

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

Lord Darzi to lead institute taking innovative approach to global health



The pioneer of robotic surgery and former health minister Professor Lord Ara Darzi is taking the helm of an institute at Imperial that aims to develop innovative approaches to global health challenges. The Institute of Global Health Innovation (IGHI),

which was launched on 4 October, will bring together world-leading academics in medical science, engineering, business and health policy to improve people's health and reduce health inequalities in developed and developing countries.

The IGHl will build upon Imperial's expertise in global health and incorporate the College's world-renowned strengths in technological innovation and multidisciplinary working. It will work closely with governments, NGOs and business to ensure that innovations in health-care and health policy have a significant impact across the world.

Professor Darzi has consistently been at the forefront of surgical innovation. He and his colleagues are credited with pioneering the use of minimally invasive and robot-assisted surgery in the UK. Professor Darzi has also helped develop new training methods that involve the use of virtual reality to allow surgeons to practise their skills. In addition, he has been heavily involved in World Health Organisation initiatives to improve the safety of surgical patients across the world. In 2007–09 he was Parliamentary Under Secretary in the UK Department of Health.

The IGHl's Deputy Chairman, Professor Guang-Zhong Yang, brings to the global health arena a wealth of expertise in engineering, having spent his career developing new medical and sensor technologies. One of his current projects is to develop miniature wireless sensors that can be worn on the body to monitor a patient's health remotely. Such devices, he points out, will be useful for developed countries with burgeoning elderly populations as well as in deprived countries where healthcare services are limited.

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

To read a full interview about the IGHl with Professor Lord Ara Darzi see page 10.

Imperial College London

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Imperial to play host to Japanese Olympians

At a meeting on 21 September, senior College staff and delegates from the Japanese Olympic Committee (JOC) agreed that the College will provide training space and accommodation for the Japanese Olympic team and some of their supporters. The signing ceremony was also attended by delegates from Japan's Ministry of Education, the Japan Institute of Sport Sciences and the London office of Japan's National Agency for the Advancement of Sports and Health.

Rector Sir Keith O'Nions (pictured left with Mr Uemura, Senior Executive Board Member of the JOC), said: "I'm delighted that the Japanese Olympic Committee wishes to use our facilities for the Games. It seems particularly fitting given our great international mix of staff and students, and our position here in the cultural heartland of London. I wish the Japanese Olympic team the very best of luck in the Games."

The College will be providing the team with accommodation in Prince's Gardens, in addition to general access to training sports facilities and sports injury treatments in

Ethos. Japanese athletes competing in judo and wrestling will be able to use the sports hall as their practice venue and opportunities for others to train in Imperial's facilities are now being explored with the JOC.

Imperial's association with the Japanese Olympic Committee was brought about through partnership with Loughborough University, where the Japanese Olympic team will be holding their pre-Games training camp, before coming to Imperial shortly before the start of the Games.

The College's involvement with the 2012 Olympics has been growing steadily. Most recently Imperial has been selected by the London Olympic Organising Committee of the Olympic and Paralympic Games (LOCOG) to provide 75 volunteers to assist with two Olympic sports – handball and wrestling – and one Paralympic sport, boccia. A team from Sport Imperial and the Volunteer Centre have shortlisted candidates to help with the Games, and final selections will be made in the next couple of weeks.

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

Structures research gets a boost with new laboratories

New world class facilities were unveiled at a launch event held in the Structures Laboratories of the Department of Civil and Environmental Engineering on 29 September.

A £2 million investment by the College has provided new equipment for the labs, allowing researchers in the field of structural testing to work more productively, and with greater precision, than ever before.

The launch was attended by representatives from industry, reflecting the various links between the Structural Engineering Section and the sector, including a number of industrial projects around the world which have been informed by the Section's research.

Welcoming guests, Professor David Nethercot, Head of the Department of Civil and Environmental Engineering, said: "One of the strengths of structural engineering here at Imperial is the value we have always placed on laboratory testing facilities as a crucial part of the research programme. These upgrades to our facilities will provide better functionality, greater research capabilities and better data capture."

"The Department is globally renowned... and facilities like this are a crucial part of maintaining this excellent position."
— Professor David Nethercot

The research of the Structural Engineering Section includes examining how a wide range of structures and materials respond to different loads and conditions, from construction elements designed to withstand earthquakes and fire, to concrete which deteriorates due to a range of factors.

The refurbishment is part of a larger investment in renovating infrastructure and equipment ensuring the Department's facilities remain world class.

—JOHN-PAUL JONES, COMMUNICATIONS AND DEVELOPMENT

in brief

Imperial ranked ninth in the world

Imperial has been ranked ninth in the world in the *THE World University Rankings* published on 16 September. The 2010 rankings have employed a different, more rigorous method developed with Thompson Reuters, which uses 13 separate indicators to assess institutions' teaching, research and knowledge transfer activities. Rector, Sir Keith O'Nions, said: "I'm delighted to see that the excellence and quality of Imperial's staff and students have been acknowledged on the world stage again. I hope that our alumni and everyone at Imperial will take pride in the well-deserved recognition of our world class university."

Senior management changes

Professor Julia Buckingham has taken on responsibility for Library Services, Careers and the Outreach Office, which is reflected in her new job title, Pro Rector (Education and Academic Services). Professor David Begg, Principal of the Business School, has accepted appointment as Acting Pro Rector (Research). Professor Peter Knight, Deputy Rector (Research), has retired after 31 years of service. Professor Mary Ritter, Pro Rector (International), has retired from her full-time role but will take on a 0.6 FTE position for the College continuing to focus on the College's international strategy and relations. She will retain responsibility for the International Office.

Alumni and Development

Following a review of the College's alumni and development activities, the Office of Alumni and Development merged with the Communications Division to form the Communications and Development Division on 1 August 2010. Mr Tom Miller leads the Division and continues to report to the Rector. To provide a higher profile for the College's fundraising and development activities, the Development Advisory Board will be reconstituted as a Committee of the Council during autumn 2010.

IBME operation and management changes

- The operational management of the Institute of Biomedical Engineering (IBME) will now be conducted by the Department of Bioengineering under the direction of Professor Ross Ethier, Head of the Department of Bioengineering.
- Professor Chris Toumazou, founding Director of IBME, will continue in his role as Chief Scientist of IBME and will direct the Winston Wong Centre for Bio-Inspired Technology.
- The new IBME strategy committee will comprise all permanent academic staff who are members of IBME, the Head of the Department of Bioengineering and the Principal of the Faculty of Engineering.

Imperial shortlisted for two *Times Higher Education* awards

Imperial has been shortlisted in two categories in this year's *Times Higher Education* awards – for Entrepreneurial University of the Year and Outstanding



Support for Early Career Researchers. The winners will be announced on 25 November at a ceremony in London.

Entrepreneurial University of the Year

Imperial's enterprise culture has been recognised for delivering internationally excellent entrepreneurship research and developing award-winning new venture.

Commenting on the nomination, Edward Astle, Pro Rector (Enterprise), said: "Innovation has been at the heart of Imperial's mission since its founding in 1907. Entrepreneurship is the key to innovation and I am delighted that the College's activities in this area have been recognised. The College strives to stimulate an enterprise culture at every level and in each faculty."

Outstanding Support for Early Career Researchers

Imperial's second nomination is for Outstanding Support for Early Career Researchers. This recognises the College's activities in supporting postdoc researchers from across the College, and in particular Imperial's Postdoc Development Centre.

"Postdoctoral researchers at Imperial make an enormous contribution to the research, teaching and diverse academic life of the College," said Professor Julia Buckingham, Pro Rector (Education and Academic Services). "Our Postdoc Development Centre provides support to postdocs at a crucial stage in their careers and the College is committed to providing development opportunities to propel them to further successes."

—SIMON WATTS, COMMUNICATIONS AND DEVELOPMENT

Racing ahead

Undergraduates win a place on the podium at international racetrack competition



Imperial students from the Faculty of Engineering who built two Formula 1 style vehicles from scratch won third and fourth place in an international competition at the home of British racing over the summer.

The team of Imperial undergraduates were taking part in the Class 2 design section of the Institution of Mechanical Engineering's 13th Annual Formula Student competition. Their all-electric single seat Imperial Racing Green vehicle, which won third place, consists of a light weight steel frame with two electric motors that are powered by batteries, positioned on either side of the driver.

Their ICo6 combustion engine vehicle just missed out on a podium place, coming fourth. This vehicle also consists of a light weight frame, like the all-electric car, but it is powered by a 550cc Aprilia motorcycle engine.

The Imperial undergraduates who took part in the event are involved in the *EnVision* initiative, which brings together the expertise of more than 100 students from across eight different departments in Imperial's Faculty of Engineering.

Dr John Sheldrake, Project Manager of the Imperial racing team (Mechanical Engineering), said: "The Formula Student competition gave our students the chance to swap notes with students from other universities and see what exciting innovations they're coming up with in vehicle design. It was really great experience for our students to have to give presentations about all the work that they have been doing in front of industry professionals. We are really pleased that the teams did so well in the contest. They were up against some stiff international competition and they managed to hold their own – well done to all involved!"

—COLIN SMITH, COMMUNICATIONS AND DEVELOPMENT

Recycle your unwanted clothes

Two new textile recycling banks have been installed on the South Kensington Campus, to encourage students and staff at Imperial to recycle their unwanted clothes and shoes. Operated by the charity TR Aid (Textile Recycling for Aid and International Development), clothes and shoes recycled at the banks will not only reduce landfill waste, but will also raise funds to help some of the world's poorest

communities once they have been sorted and then resold in TR Aid shops.

The bins are located in the Blakett Building loading bay area and at the side of Weeks Hall in Prince's Gardens. The unwanted items need to be bagged and shoes should be in pairs. For more information contact Helen Swanton, Recycling Officer, Facilities Management: h.swanton@imperial.ac.uk.



media mentions

—ED SYKES, ON SECONDMENT FROM THE SCIENCE MEDIA CENTRE



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www.imperial.ac.uk/media/jointsignup

THE INDEPENDENT ▶ 13.9.2010

Bulging waists risk bowel cancer



Excess fat on the waist raises the risk of bowel cancer even if the rest of the body is slim, says a review led by Dr Teresa Norat (Public Health). The research, reported in *The Independent*, links a three per cent increase in risk with every extra inch on the waist. Dr Norat said: "Being overweight increases the risk of [bowel] cancer. People should pay attention to abdominal fatness even if they are in the normal range of weight". A healthy waist is defined as less than 31.5in (80cm) for women, less than 37in (94cm) for white and black men and less than 35in (90cm) for Asian men. Over 38,000 cases of bowel cancer are diagnosed in Britain each year.

THE GUARDIAN ▶ 14.9.2010

Cannabis on sale at the supermarket

Cannabis should be legalised and sold in shops in a similar way to alcohol and tobacco, said a scientist speaking at the British Science Festival. Imperial's Professor David Nutt (Medicine) agreed and thinks rationality needs to be brought back into the debate on drugs, saying: "As cannabis is clearly less harmful than alcohol, criminalisation of people who prefer this drug is illogical and unjust". He added: "The Dutch coffee shop model is one that has been proven to work," but that ideas such as selling to over-21s and with a doctor's approval "may well have extra benefits and should be actively debated".

THE INDEPENDENT ▶ 18.9.2010

Improve your business, sack the boss!

For many companies the best way to get out of financial trouble may



be to sack the person at the top, says Markus Perkmann (Business School). Quoted in *The Independent*, Perkmann says that for a company doing badly changing the Chief Operating Officer can help. "There has been a lot of research recently on [this] and it seems that the effect is usually either neutral or positive. When a new CEO comes in to these situations it is easier for them to do things. They have the legitimacy to make changes." However, he adds: "they are more likely to be successful, if they don't try to do too much at once".

THE TIMES ▶ 20.9.2010

The world needs insect experts

Forty per cent of the world's crops are lost to insects and the diseases they carry, but the problem may well get worse as we are running out of experts who can solve the problem, according to Dr Simon Leather (Life Sciences). In a letter to *The Times* last month, he said: "The lack of entomologists and pest managers is not a sustainable state of affairs. Without teaching in this area, there will be no future generations of British entomologists, pest managers and insect taxonomists. Instead, we will have to rely on imported expertise".



awards and honours

MEDICINE

Rice recognised for nerve damage research

Professor Andrew Rice (Surgery and Cancer) was presented with the Dawn Ind Memorial Chalice by the Neuropathy Trust on 9 September. The award acknowledges Professor Rice's work in understanding mechanisms of pain in conditions involving nerve damage, such as shingles and HIV, as well as his clinical work with neuropathy patients at Chelsea and Westminster Hospital. The Neuropathy Trust is a charity set up to help people affected by peripheral neuropathy or neuropathic pain.

MEDICINE

Prizes for postdoc medics

Postdoctoral researchers from the Department of Medicine were recognised at the first Biomedical Research Centre experimental medicine summer school in June 2010. Delegates at the summer school, run by the National Institute for Health Research, were nominated to attend by Biomedical Research Centres. Of the oral or poster presentations submitted by the 70 postdocs from across the UK who attended, Dr Radha Ramachandran's was judged best oral presentation and Ms Charlotte Moss's poster received a highly commended award. Both postdocs were presented with their awards by Professor Dame Sally Davies, Director General, Research and Development, Department of Health.

COLLEGE

Client of the year

Imperial was named Client of the Year in the 2010 London and South East Constructing Excellence



(L-R) Don Ward, Chief Executive of Constructing Excellence, with Steve Howe (Building Projects).

Awards. Steve Howe, Angus Stephen and Dan Curtis (all Building Projects) were presented with the award over a lunch reception at Greig's Grill in Mayfair on 16 July. The team was recognised for its collaborative approach to procurement and delivery of projects.

ALSO...

Lancet's most downloaded paper

A research paper about a 16-year study led by Professor Wendy Atkin (Surgery and Cancer) was ranked the most downloaded on *The Lancet* website in August 2010. The study showed how a five-minute screening test could cut the risk of developing bowel cancer by a third, and save thousands of lives from what is the UK's second biggest cancer killer.

Oliver Lodge Medal for Gelenbe

Professor Erol Gelenbe (Electrical and Electronic Engineering) has been awarded the Oliver Lodge Medal for Achievement in Information Technology by the Institution of Engineering and Technology (IET). He will collect his medal on 24 November.



Testing the ‘untestable’ string theory

Imperial researchers have described how to carry out the first experimental test of string theory, in a paper published on 1 September in *Physical Review Letters*.

String theory was originally developed to describe the fundamental particles and forces that make up our universe. The new research, led by Professor Michael Duff (Physics), describes the unexpected discovery that string theory also seems to predict the behaviour of entangled quantum particles. As this prediction can be tested in the laboratory, researchers can now test string theory.

Over the last 25 years, string theory has become physicists’ favourite contender for the ‘theory of everything’, reconciling what we know about the incredibly small, from particle physics, with our understanding of the very large, from our studies of cosmology. Using the theory to predict how entangled quantum particles behave provides the first opportunity to test string theory by experiment.

The discovery that string theory seems to make

predictions about quantum entanglement is completely unexpected but, because quantum entanglement can be measured in the lab, researchers can test predictions based on string theory.

There is no obvious connection to explain why a theory that is being developed to describe the fundamental workings of our universe is useful for predicting the behaviour of entangled quantum systems.

“This will not be proof that string theory is the right ‘theory of everything’ that is being sought by cosmologists and particle physicists. However, it will be very important to theoreticians because it will demonstrate whether or not string theory works, even if its application is in an unexpected and unrelated area of physics,” said Professor Duff.

—RAY MATHIAS, COMMUNICATIONS AND DEVELOPMENT

“It will demonstrate whether or not string theory works, even if its application is in an unexpected and unrelated area of physics”

Study uncovers origins of rare kidney disease

A rare form of kidney disease linked to a genetic mutation in the innate immune system has been identified by Imperial and UCL researchers in a study published on 26 August in *The Lancet*.

So far, the disease, which the researchers have named CFHR5 nephropathy, has been identified in over 100 people of Cypriot descent, including some living in the UK. Symptoms include blood in the urine and progressive kidney malfunction.

Under current guidelines, the presence of blood in the urine, when not accompanied by traces

of protein, urinary tract abnormalities or impairment to the kidneys, is considered benign and is not investigated further. However,

this study shows that in rare cases it can be symptomatic of this progressive, chronic kidney disease.

The researchers, working with colleagues in Cyprus, identified an inher-

ited kidney disorder caused by a variation in the number of copies of the CFHR5 gene, which is involved in the production of proteins used by the body’s innate immune response.

The mutation was found in

“It is a potentially serious disease, but easily detectable from a simple DNA or blood test”



26 individuals from 11 families, all of whom were of Cypriot ancestry. The researchers believe the mutation dates back to a single common ancestor over 16 generations ago.

“We believe this mutation accounts for a significant proportion of kidney disease in the Cypriot population, both on the island itself and worldwide,” says Dr Matthew Pickering, a Wellcome Trust Senior Fellow at Imperial. “It is a potentially serious disease, but easily detectable from a simple DNA or blood test.”

—ADAPTED FROM A MEDIA RELEASE ISSUED BY THE WELLCOME TRUST



Largest genetic study of asthma points towards better treatments

An international study coordinated by Imperial researchers has identified several genetic variants that substantially increase susceptibility to asthma in the population. The findings, published in the *New England Journal of Medicine* on 22 September, will help scientists to focus their efforts to develop better therapies for the illness.

The study analysed DNA samples from 10,000 children and adults with asthma and 16,000 non-asthmatics. The researchers performed more than half a million genetic tests on each subject, covering all the genes in the human genome. The study pinpointed seven locations on the genome, where differences in the genetic code were associated with asthma.

The research suggests that allergies are probably a consequence of asthma, rather than a cause of the disease. It also suggests that genetic testing would not help predict who is likely to develop the disease.

The new variants linked to asthma were found in more than a third of children with asthma in the study. The gene with the strongest effect on children did not affect adults, and adult-onset asthma was more weakly linked to other genetic differences, suggesting that it may differ biologically from childhood-onset asthma.

Professor William Cookson (NHLI), who coordinated the study, said: “One of the problems with asthma research has been choosing where to intervene in the disease pathways. Our study now highlights targets for effective asthma therapies, and suggests that therapies against these targets will be of use to large numbers of asthmatics in the population.”

—SAM WONG, COMMUNICATIONS AND DEVELOPMENT

Key genetic players in diabetes identified

Scientists have discovered a network of genes for type 1 diabetes (T1D) and identified a key player that controls the network. This development will help researchers focus their efforts to improve drug treatments for T1D and could have an impact on other diseases where inflammation plays an important role.

In recent years, genome-wide association studies have identified a number of individual genes that increase a person's chance of developing diabetes. This study, which was published on 8 September in *Nature*, is the first time that researchers have been able to identify an entire network of genes, single out the key players that control the network, and determine a person's chance of developing T1D. By using a variety of techniques to

analyse human and rat genes, the researchers found that the 'gene networks' that are active in our immune systems could have an important role in T1D.

Dr Stuart Cook (Molecular Sciences), who led the study, said: "If we think about our genes as being similar to a football team – it is one thing to know that the team you're playing against has 11 players, but another to know who their main match winners are. What we find exciting about these results is that, for the first time, we have been able to identify the most important genes – who the strikers are, as well as who the team captain, who coordinates the other players, might be. Applying this knowledge, to find out more about the key players that cause disease, will

help researchers find better ways to develop more targeted treatments in the fight against diabetes."

—ADAPTED FROM A MEDIA RELEASE ISSUED BY THE MEDICAL RESEARCH COUNCIL



Protecting the lungs against 'collateral damage' from the immune system

A study published on 2 September in *Science* shows how our bodies try to minimise potential 'collateral damage' caused by our immune system when fighting infection. The research may also provide new clues to why cigarette smoke is a significant risk factor for developing diseases of the lung, such as chronic bronchitis and emphysema.

One of the key 'soldiers' working for the immune system is a particular type of cell known as a neutrophil, which releases toxic enzymes to kill invading organisms, such as bacteria and viruses. However, these enzymes can cause collateral damage to surrounding tissue, so the neutrophils need to act swiftly and leave the

site of infection as quickly as possible.

Dr Robert Snelgrove (Medicine), a Sir Henry Wellcome Postdoctoral Fellow, who carried out the study together with colleagues from the University of Alabama at Birmingham, USA, said: "Neutrophils are powerful at fighting infection but, if left unchecked, they can cause damage to our own bodies. We know that their persistence contributes to the development and severity of many chronic lung diseases, such as chronic obstructive pulmonary disease and cystic fibrosis."

The enzymes released by neutrophils can cause particular damage in the lung, where they can attack the collagen which makes up the lung's architecture, selectively cutting out a molecular fragment known as PGP. This fragment in turn recruits more neutrophils, potentially leading to a vicious

circle of damage.

The researchers showed how another enzyme released by the lungs – LTA₄H – degrades PGP, breaking the cycle and preventing damage. Research showed that chemicals found in ciga-

“Neutrophils are powerful at fighting infection but, if left unchecked, they can cause damage to our own bodies.”

rette smoke can modify PGP in a way that increases its ability to recruit more neutrophils and protecting it from degradation, and inhibiting the performance of LTA₄H.

—ADAPTED FROM A MEDIA RELEASE ISSUED BY THE WELLCOME TRUST



Sex differences determined not simply by gender

Researchers at Imperial have uncovered an inherent difference in the way the genes of males or females can be 'switched off' in the body's developing immune system. This finding will have a significant impact on the way researchers approach diseases that have a disproportionate

effect on one sex over the other, such as lupus, rheumatoid arthritis or multiple sclerosis, which all occur more frequently in women than men.

The study, published on 13 September in *Developmental Cell*, showed that sex chromosomes have a highly significant influence on how hundreds of genes behave in males and females. Distinguishing characteristics between males and females,

such as face shape or body outline, have often been put down to either differences in development or hormones.

“Sex chromosomes have a highly significant influence on how hundreds of genes behave in males and females”

in females. These differences could explain how the body's immune system can cause, rather than prevent, diseases and could help tailor future

treatments for autoimmune diseases.

Professor Richard Festenstein (Medicine), who led the study, said: "These findings could help researchers find explanations for the subtle differences in the way males and females physically respond when the body is under attack from disease. It will also help us identify if disease-causing genes are dependent on female or male chromosomes in order to work, allowing us to move towards developing drugs that will stop them in their tracks."

—ADAPTED FROM A MEDIA RELEASE ISSUED BY THE MEDICAL RESEARCH COUNCIL



HEALTH HORIZONS >>>

Singapore medical school

After 18 months of detailed discussions, a momentous agreement was signed by Imperial and Nanyang Technological University (NTU) at the end of August 2010, to establish a new undergraduate medical school issuing joint Imperial-NTU degrees based in Singapore by 2013.

Reporter finds out about Imperial's hopes for the collaboration, the next steps to make the vision a reality and the opportunities the project offers to staff and students here in London.

Professor Jenny Higham, Director of Education for the Faculty of Medicine and Chair of the project board for the Singapore medical school, was first introduced to the project in 2008, when she was asked to give a presentation about Imperial's medical degree to representatives of the Singaporean ministries of health and education. After the initial meeting, she was amongst the delegation invited to Singapore to discuss how the collaboration would work.

"In my role I'm often approached by other universities and healthcare providers looking to collaborate with Imperial," Jenny explains. "But from my first trip to Singapore, I quickly

realised the partnership wasn't just about us providing medical expertise – London could learn just as much from Singapore healthcare deliverers, as they could from us. The staff were full of enthusiasm, the facilities were immaculate and they had lots of ideas about providing quality healthcare. The NTU campus was equally impressive."

On her return to London, Jenny approached Martyn Partridge, Chair in Respiratory Medicine (NHLI), to take on the role of Senior Vice Dean of the Singapore medical school. In addition to his extensive experience of teaching on Imperial's undergraduate medical course, Martyn has

worked with many international agencies in the past. His research while based on the Charing Cross Campus also focused on evaluating the delivery of healthcare. He has reviewed methods including patient-centred care, communication, organisation of services, telephone consultations and workforce training, all of which have given him valuable insight into the training needs of doctors.

Martyn is looking forward to continuing to work with his Singaporean colleagues on the medical school project. "NTU is a leading science and technology university – not unlike Imperial before it had a faculty of medicine in the 1980s," he explains. "The aim is to make the medical school run by Imperial and NTU one of the best in the world and, with the help and expertise of my clinical colleagues in Singapore, I think we are in a good position to meet this challenge."

Next steps

Imperial will be responsible for developing the curriculum for the five-year undergraduate course delivered by the new school – incorporating the best from the medical course Imperial offers and adapting it for the Singaporean health system. A key part of this phase of work will be to come up with innovative teaching models.

As a westernised country, Singapore shares many of the health issues affecting the UK, including an ageing population. Specialised care is needed for the increasing number of elderly people living with long-term health conditions, such as diabetes and high blood pressure, and finding appropriate models that support this delivery is a challenge facing the Singapore health system.

At the same time, Singapore has additional health challenges, such as infectious diseases, and a different way of delivering primary healthcare from the UK. These are areas which will need to be built into the curriculum and Martyn is working closely with the team in Singapore to ensure it will be appropriate for their needs.

Ethos

Martyn has identified a number of features which he is keen to embed into the new medical school curriculum. These include putting the patient's individual needs at the centre of all care and maintaining the importance of the scientific basis of medicine, in addition to generous use of e-learning.

In his previous role, as head of year six of the Medicine course at Imperial, Martyn produced an extensive portfolio of e-modules on lung medicine but only after carefully researching their potential and effectiveness. As a result, he is very positive about the use of e-learning in the right context. "The advantages of e-learning are that it is self paced, it permits students to revise easily and go back over information. It nearly always has generous facilities for self-assessment, and it uses video and animation to show things that are not always possible to recreate in lecture theatres," he explains.

By embedding e-learning approaches in the curriculum of the new medical school, Martyn hopes they will become valuable tools to support teaching in Singapore and also that any new methods developed could be used as part of Imperial's undergraduate Medicine course in London.

Using technology to enhance medical practice is becoming increasingly common and Martyn hopes that the new students learn to appreciate the role of computerised decision-support systems. He was impressed with the use of the technology he saw on a visit to Tan Tock Seng Hospital in central Singapore,



At full capacity, there will be over **750** students studying on the five-year undergraduate Medicine course.

which will be one of the main clinical sites for the new medical school. "The ward rounds are conducted by consultants and junior doctors pushing computers on wheels, known as COWs, around with them," he explains. "By having their computer at their sides, they are able to access the patient's electronic records and gain online access to lab results and X-rays, in a manner we hope to one day emulate in the UK."

New opportunities for staff and students

Martyn explains that there will be considerable opportunities for Imperial staff to get involved in the Singapore medical school, from full-time teaching positions to short-term secondments. Most of the teaching at the new medical school will be done by employees of the school in Singapore and by clinicians in the associated hospitals and polyclinics. However, some modules or short courses may also be shared between Singapore and London, either electronically or by Imperial staff going to teach a module in Singapore.

In the long term, both NTU and Imperial hope that the partnership will encourage even more research collaborations between Imperial and Singaporean institutions and provide opportunities for student exchange.

While the project is undoubtedly going to be a challenge, Martyn is confident the team from Imperial and NTU can make it a reality. "If in 10 years' time we can say that the school has produced a generation of doctors in Singapore, who can couple an understanding of the scientific basis of medicine with a genuinely patient-centred approach to care, then we will have succeeded," he says.

—EMILY ROSS, COMMUNICATIONS AND DEVELOPMENT

If you would like to be kept informed about the development of the new medical school or to register your interest in getting involved in the project, please contact: singaporemedschool@imperial.ac.uk



Reporter speaks to the Director of the Singapore medical school project for NTU, Professor Jan Carlstedt-Duke, to find out about his involvement, vision and what the project means to NTU.

Why did NTU want to set up a medical school?

NTU is already strong in arts, science and business but the medical school will help it become a fully comprehensive technological university.

Why did NTU approach Imperial?

Imperial is one of the top medical schools in Europe and has an international reputation for quality degrees, so it was an obvious choice. In addition, NTU already has long-standing collaborations with the College and around 20 per cent of the staff at NTU are Imperial alumni, so it made sense to build on these links.

What impact will the medical school have on other faculties at NTU?

We hope it will enhance the academic activities of other faculties; in particular, by leading to more multidisciplinary research and new specialities being developed, such as health economics and bioengineering.

What does the medical school mean for Singapore?

Singapore needs more doctors – it has a population which is growing by around five per cent per year and it is undergoing rapid changes, both economically and socially. As a result, Singapore is seeing more westernised diseases emerging, such as diabetes, obesity and cardiovascular conditions. We need to develop new expertise to tackle these problems effectively.

What have you enjoyed about the collaboration so far?

I've worked with Imperial researchers in the past but, over the last two years, it's been great to get to know Imperial as a teaching university and I've also become aware of the tremendous amount of innovation which goes on there. I've been really impressed with the way the team at Imperial have got to grips with the project and I look forward to continuing to work with them, as the project develops.



A new approach to global health



Reporter speaks to Professor Lord Ara Darzi, Chair of the Institute of Global Health Innovation (IGHI), about the aims of the Institute launched on 4 October, and why a new approach is needed to find solutions to some of the world's biggest problems.

Why is tackling global health so important for Imperial?

The world has reached a critical crossroad for healthcare and the way we have provided healthcare in the past is going to need to change to meet the unprecedented demands of the future.

What kind of demands is the world facing?

Life expectancy has increased dramatically in the last couple of decades, lifestyle diseases such as obesity are becoming widespread in developed countries and malnutrition continues to be a serious issue for developing countries. Also diseases like diabetes, which we always thought were problems just facing the western world, are becoming massive challenges for the developing world.

What are the challenges in dealing with these issues?

The way in which we deal with these demands can't be the old historical method of building more hospitals or buying more beds because the demand is affecting the whole healthcare delivery mechanism.

How can Imperial help?

Imperial could have a tremendous role in addressing some of these new challenges because it's a world leader when it comes to innovation and innovative solutions to challenging global problems.

Is innovative technology the answer?

The world is crying out for low cost, high impact technologies such as pervasive sensing technologies which use miniaturised wireless, low power wearable biosensors for monitoring physiological indices such as heart rate. One advantage of this type of technology is that it will allow more elderly people with chronic conditions to be monitored in their own home.

How will these technologies work in developing countries?

I'm of course aware that some parts of the developing world aren't going to have hospitals that could embrace new devices for delivering healthcare. But innovation isn't just about technology. I'm very keen to start working with the Business School to come up with innovative business models for delivering healthcare – we need new business models which will make it viable to deliver high quality sustainable care.

What type of healthcare systems do you envisage?

Many of these countries may not have the numbers of qualified medical people necessary to provide adequate healthcare to the population. I can imagine an innovative business model where someone who is not qualified in healthcare is delivering medical treatment using infrastructure that already exists but with the aid of new technology.

What attracted you to this new role?

Policy was the key thing which drew me to the new institute. Like many academic scientists I discovered that when you are on the path to a major discovery – whether it's biological or technological – you need changes in policy in order to make an impact. I also had the great privilege to serve in government as a health minister and as a result I feel I have a clear understanding of the challenges facing us in health and healthcare.

Could you give me an example of policy making an impact?

There has recently been a significant drop in the newly reported infection rate of HIV in sub-Saharan Africa. This is a result of a well-being policy which focuses on heightened awareness of the impact of HIV, and giving individuals the knowledge and empowerment they need to protect themselves from the virus. We could use the same techniques to help change human behaviour in relation to diet and obesity in the developed world. It's a matter of finding a way to get the right information to the right people in the community.

How would you like the Institute to be regarded by the College?

The Institute of Global Health Innovation is a broad church representing all faculties and academics who have an interest in health.

What will IGHl mean for Imperial in the long term?

It will prove that Imperial can come up with the necessary innovative solutions to support healthcare provision in both the developed and developing world. It will also show that in addition to creating innovative technology we also excel at having impact.

—EMILY ROSS, COMMUNICATIONS AND DEVELOPMENT

inside

story

mini profile

Jan Brosens

Professor Jan Brosens, Chair in Reproductive Medicine and Sciences, on the problem with superfertility and why miscarriages may be an evolutionary adaptation.

Are miscarriages common?

It depends how you define it. If you look at clinical miscarriages, strictly defined as losses after six weeks of pregnancy, then about one in six of all women will be affected. However, if you look at early pregnancy losses, often before a woman anticipates her period, then about 50 per cent of all pregnancies will end up in miscarriage.

Your latest research suggests superfertility might be a cause?

There are many chromosomal abnormalities in the majority of human embryos, so mothers' cells have mechanisms for detecting this and stopping the embryo from implanting. However, approximately 40 per cent of patients with frequent miscarriages don't have the ability to detect problems, so, instead, they conceive when another female wouldn't; they are superfertile.

Is this a huge change in the way that we're viewing the cause of miscarriages?

It's a total shift. Miscarriage was thought to be a disease of the embryo or a result of the environment but none of the suggested factors showed



a strong correlation with persistent pregnancy loss. This is the first mechanism that pinpoints the cause of miscarriage. I hope that by developing treatments to tackle superfertility, in five to 10 years' time we won't see any more patients with three, four, five or more consecutive pregnancy losses. I also hope that we can improve the outcomes in older patients.

Are miscarriages common in other animals?

No, humans are remarkable in that we have these gross chromosomal abnormalities and because we menstruate – very few species do. The abnormalities may be a result of rapid evolution in genes selected to give embryos greater chance of implanting in the womb, and it's conceivable that menstruation is an evolutionary adaptation to allow miscarriages as the mother's defence against this.

—ED SYKES, SCIENCE MEDIA CENTRE

Enhancing cultural exchange

Every year hundreds of people from across the world come to study or work at Imperial and for many, English is a second language. The English Language Support Programme, run by the Department of Humanities, has been developed to provide remedial English assistance, both before international staff and students arrive at the College and once their employment or studies have begun.



Conversation practice is an essential part of the programme, thanks to a new volunteering project launched by the Imperial Volunteer Centre and staff, who are native English speakers, getting involved in the scheme. Adam Baxter, a graduate intern who volunteered on the programme, describes his experiences.

“Having spent a year abroad as part of my degree, I was aware of the challenges that students face when they arrive in a new country. Not only is there a language barrier but being dropped into a completely different culture takes some time to get used to. This was the reason I volunteered to take part in the conversation

“Being dropped into a completely different culture takes some time to get used to”

project – there is, after all, nothing better than helping out someone in need and seeing first-hand that you are making a positive difference to somebody's time in the UK. However, the benefits are not just one way. For one hour a week you get to meet some interesting new people and hear some fascinating stories. And with the transferable skills you acquire through volunteering – communication, initiative, flexibility – there really should be nothing stopping you from getting involved.”

The Volunteer Centre is looking for new recruits to help international staff and students with conversation practice. If you work at Imperial and English is your first language, and you are interested in helping out, please contact: volunteering@imperial.ac.uk

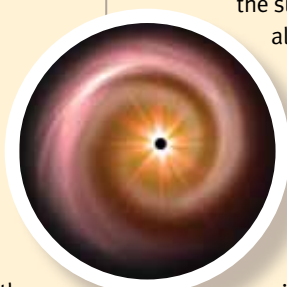
▶ SCIENCE FROM SCRATCH

As explained by Sarah Barker, MSc Science Communication



Corona

Not just a cool refreshing beer to solar astronomers, the corona is better known as the super-heated outer layer of the Sun's atmosphere. Made of plasma almost 200 times hotter than the surface (or photosphere) of the Sun, the corona is so sparse in comparison, that it only produces one-millionth of the light. What makes the corona so scorching is still under debate, but it is most likely to be related to the Sun's magnetic field. Solar magnetism is certainly the cause of coronal loops – beautiful arches of magnetised material that can be seen using powerful telescopes. These loops are often the precursors to coronal mass ejections – massive bursts of solar wind that extend millions of kilometres into space. The best time to see the corona is during a total solar eclipse, when its ghostly form can be seen without the use of a telescope. Many other stars also have coronae, some even more luminous than the Sun's.



figuring it out

£3.6
MILLION:

The revenue generated by Commercial Services over the summer ▶ The College's vacation business has had a bumper summer with 114,000 overnight stays sold to Imperial students, bed and breakfast guests and groups. The profit from this income is used to subsidise student accommodation ensuring that Imperial halls remain affordable for students. This year's income is a marked increase from £2.3 million in 2009, which is due to a number of factors. Firstly, the introduction of an online booking system in early 2010 made it easier for customers to find information about the properties, search for availability and rates, and make a booking. Secondly, the opening of Eastside introduced more rooms and the provision of double beds, offering guests a broader range of accommodation options.

Data is correct at the time of going to press. If your department has some statistics you'd like to share with the rest of the College, please forward them to: reporter@imperial.ac.uk

Beyond entropy

In August, four members of the Department of Physics – Dr Dave Clements, Professor Andrew Jaffe, Dr Roberto Trotta and Dr Amanda Chatten – exhibited at the Venice Architectural Biennale. Dave reports on the unique experience:

“Extragalactic astronomers aren't expected to mix much with artists and architects but four other Imperial physicists and I have just broken down the perceived barriers by participating in the Venice Architectural Biennale, one of the largest and most prestigious gatherings of architects in the world.

Our trip to Venice began when a call came for scientists to become involved in a project organised by the Architecture Association (AA) to bring artists, architects and scientists together. The project, *Beyond Entropy*, aims to examine energy from the different perspectives of art, architecture and science.



My own project was devoted to thermal energy and, with the assistance of artist Wilfredo Prieto and architect Ines Weizman, we explored a wide range of possibilities for artistic concepts that might link with my field of research, with sugar cubes and black holes featuring in our discussions. Eventually a common thread emerged: 3D copying and how entropy creeps into the process, degrading the copies with each iteration.

Work trips meant I wasn't involved in the final construction of our exhibit, so I wasn't sure what I'd find when I arrived at the Venetian island of San Giorgio for our exhibition. Inside I found everything from wooden gyro-wheels to videos of buildings suspended between construction and collapse. Our own exhibit, demonstrating the possibilities and limitations of 3D copying, looked great, expertly realised by our helpers from the AA.”

Insight into the
Disability Advisory Service

Studying at a fast-paced institution like Imperial is a huge challenge for anyone, and even more so for students who have disabilities. The College currently has around 800 students coping with a range of disabilities from physical, visual or hearing impairments to dyslexia. Reporter speaks to Mary Bown, Senior Disability Advisor in the Disability Advisory Service, about the importance of assisting disabled students at the College to help them achieve their potential.

“We assist students with disabilities in a variety of ways, from providing a dictaphone or a note taker, to larger physical adjustments to the study environment.”

“Our job is to provide good quality advice for disabled students so they can access the necessary support to complete their studies. When I started here it was just me, now

there's also a part-time advisor and we are interviewing for a full-time administrator. We will also be employing a dyslexia tutor, so it's a growing team. We have a network of disability liaison officers, one in every academic department, as well as one in all other departments that deal with students. I also sit on committees, such as the Exhibition Road Access Group, as an Imperial representative.

We assist students with disabilities in a variety of ways, from providing a dictaphone, smartphone or a note taker, to making larger physical adjustments to the study environment or where a student lives. In each case we work with students and their departments to put the necessary support structures in place.



Mary Bown promoting the Disability Advisory Service at Open Day in June

The best part of my role is working with students. It's a varied role so I get the opportunity to work with every single department, which means my day is never predictable.

It's a challenging role but it's really rewarding when a student comes to you and says: “I got a first,” as you know they had to work so much harder to get there.”

—EMILY GOVAN, INTERNATIONAL OFFICE

To find out more go to www3.imperial.ac.uk/disabilityadvisoryservice



Dr Patrick Degenaar (Biomedical Engineering) on developing tools to make blind people see again.

How long have you been at Imperial?

Eight years. I completed two postdocs, was granted my lectureship in 2005 and made Senior Lecturer in 2009. All the posts I've held have been interdisciplinary – my lectureship is held jointly with the Institute of Biomedical Engineering and the Department of Medicine.

What's the basis of your research?

There are two main aspects: the development of retinal prosthesis to return sight to people who are fully blind, and the development of augmented vision systems to enhance the sight of people who are partially blind.

INVENTOR'S CORNER Helping the blind see

What have you developed?

My team and I have developed an optogenetic approach to improve visual impairments, which is very different to previous attempts in this field. Essentially we can genetically re-engineer nerve cells to be photosensitive, which means we can stimulate electrical activity in the nerve cells with light rather than electricity. The optogenetic approach to retinal prosthesis aims to use patterns of light to stimulate the communication neurons in the eye to send a visual scene to the brain.

What is the potential of the technology you're developing?

We've received a £2 million grant from the EU to allow for work with other key players in the field. In the long term our aim is to develop retinal prosthesis, in the short term the technology

we're producing will also allow for interesting experiments in basic neuroscience.

Why does the world need your invention?

The ultimate goal is to return sight to the blind, but the technology has other applications in neuroprosthetics and neuroscience. In particular our tools can be used to develop our understanding of how the brain works.

What challenges have you encountered?

Many! Any interdisciplinary project faces the problem of understanding what is needed by each project partner, and trying to align those goals to create an end solution. Fortunately, this project's end goals align with the goals of each of the individual partners which means it has been a really positive collaboration.

—GAVIN REED, IMPERIAL INNOVATIONS

Strange happenings on the Queen's Lawn



Professor Peter Tyrer from the Centre for Mental Health in the Department of Medicine writes about a unique way to raise funds for worthy projects, which saw the Queen's Lawn host a range of spectacles on 7 August.

"The Queen's Lawn at Imperial is a versatile piece of turf but on 7 August it had a new challenge – to adapt to the visit of belly dancer Katie Holland, who was one of the star attractions at a Bollywood style jamboree. The event, attended by members of Imperial staff and their families and a number of well-wishers, was held to raise funds for the Mahatma Gandhi Community Mental Health Project in Guntur, Andhra Pradesh, India, which is a new initiative to improve basic mental health care directed by Dr Ibrahim Khaleel, who has published papers with Imperial in the past. This is one of the projects supported by the Hamlet/Global Initiative on Psychiatry (GIP). Hamlet/GIP is based at the Centre for Mental Health at Imperial and it is also linked to the Institute of Global Health Innovation at Imperial, of which I am Chair.

It was a unique opportunity to be able to use the Queen's Lawn to support this cause and, as well as acting as a dance stage, it was hard at work sporting a croquet lawn, tai chi training and a bouncy castle, as well as hosting a fashion show and a sitar musical group. The event was a great success, and the lawn was returned to its quiet formal respectability by the end of the day, with over £4,000 raised for the Guntur project."

Who killed Ronald McDonald?



Imperial's Outreach Postgraduate Ambassadors scheme, launched in 2009, aims to encourage enthusiastic postgrads to communicate their research or studies to a school-based audience. PhD student Margherita Miele (Chemical Biology), describes her experience of working at Uxbridge College earlier this year, as part of the scheme.

"When I first volunteered for Imperial's Outreach Postgraduate Ambassadors scheme, I discovered that Uxbridge College was starting a brand new course in forensic science, and I thought this would be a great project for me to get involved with, as I'd studied Forensic

Science at King's College, when I first came to London. Together with Diane Read and Manoj Thakrar from Uxbridge College, and with the support from the Outreach Office, we organised a one-day workshop for the students based on the mystery of "who killed Ronald McDonald?", in which the students got to analyse a 'real' crime scene staged in the classroom. For example, we showed them how to perform a test to identify the location of bloodstains and distinguish them from red ink or tomato ketchup.

The killer was eventually tracked down, and a number of other suspects eliminated, by fibres from his T-shirt, which had transferred to the victim.

I had two main aims for the project.

Firstly, I wanted the students to learn more about investigative techniques and, secondly, I wanted them to understand how crucial it is, not only to have a good level of scientific knowledge but also to develop critical skills, such as logic and thinking through facts under pressure, which is particularly important in a criminal investigation.

The day went really well. I was feeling really nervous at the beginning, as I didn't want to sound pedantic, but at the same time I wanted the students to learn something valuable for their future. Reading the feedback forms they handed to me afterwards, I think we achieved our aims."

For more on the scheme visit: www3.imperial.ac.uk/outreach/postgraduateambassadors

obituaries



DR BRYON WILSON

Bryon Wilson was a lecturer in bacteriology at St Mary's for the majority of his working life. He died on 23 June 2010. Bryon's daughter, Natalie, pays tribute to her father's scientific career.

"Before becoming a scientist, Bryon worked as a lab technician, first at East London Polytechnic (now part of City University) and then at Birkbeck College under Rosalind Franklin. It was at Birkbeck that Bryon decided to further his education and left to study for a BSc in Biochemistry at Chelsea Polytechnic. He took up a position at St Mary's in 1962, after completing his PhD, and continued to work there in the Bacteriology Department, as a lecturer and researcher in the field of microbiology, until his retirement in 1998. Alongside his scientific career, he was also the medical school's Association of University Teachers (now the University and College Union) representative for 10 years.

Bryon was an independent spirit and seeker of equality and justice for all. He was a talented ceramicist throughout most of his adult life and often exhibited his work in galleries and group exhibitions. He was very social, as well as a socialist, a lover of food and wine and a devoted family man. He will be remembered for his dry wit, his deep interest in politics and a twinkle in his eye. His wife, Professor Catherine Wilson, passed away in September and they leave two daughters – myself and Joanna."

Imperial's SWANs

On 16 September representatives from the departments of Computing, Earth Science and Engineering, Public Health and Materials at Imperial along with staff from 29 other universities attended the 2010 Athena SWAN awards ceremony at the Royal Society. The SWAN awards celebrate good employment practice for women working in science, engineering and technology in higher education and research. Dr Ann Muggeridge, Reader in Reservoir Physics from the Department of Earth Science and Engineering (pictured second from the right), reports:

"I thoroughly enjoyed the opportunity to meet and network with other academic women from both Imperial and beyond, over champagne and canapés followed by a delicious lunch. Before lunch we were welcomed by Julia Higgins



from the Department of Chemical Engineering and Chemical Technology who was involved in developing the SWAN awards scheme and afterwards we enjoyed an entertaining speech from Paul Walton, from the Department of Chemistry at York (the only department to hold a SWAN gold award in the country) before the awards were handed out by Dame Julia. I received a bronze award on behalf of Earth Science and Engineering recognising the many steps we have taken to level the playing field for our female academics, staff and students. I feel confident that the Department has the commitment and ambition to ensure our work practices and support are worthy of a Silver award in due course."

long
service

Reporter features staff who have given many years of service to the College. Staff listed below celebrate anniversaries in the period 27 September–1 October. Data is supplied by HR and is correct at the time of going to press.

—AMNA SIDDIQ, COMMUNICATIONS AND DEVELOPMENT

20 years

- Dr Jeremy Chittenden, Reader in Plasma Physics (Physics)
- Dr Peter Clark, Senior Lecturer (NHLI)
- Professor Charles Coombes, Clinical Professor (Surgery and Cancer)
- Dr Benita Cox, Senior Teaching Fellow (Business School)
- Dr Tim Evans, Senior Lecturer (Physics)
- Professor Matthew Foulkes, Professor of Physics (Physics)
- Dr Christine Franey, Taught Course Coordinator/Organiser (Public Health)
- Mr John Hughes, English Language Support Programme Coordinator (Humanities)
- Professor Bassam Izzuddin, Professor of Computational Structural Mechanics (Civil and Environmental Engineering)
- Professor Geoffrey Pasvol, Clinical Professor (Medicine)
- Professor John Pepper, Professor in the section of Cardiothoracic Surgery (NHLI)
- Professor Richard Templer, Director of UK Co-Location Centre for Climate KIC (Chemistry)
- Professor David Wood, Garfield Weston Chair (NHLI)

30 years

- Professor Peter Sugden, Clinical Research Fellow (NHLI)
- Professor Terry Tetley, Professor of Lung Cell Biology (NHLI)
- Professor Patrick Venables, Principal Investigator (Kennedy Institute)

40 years

- Dr Frank Berkshire, Senior Lecturer/Director of Undergraduate Studies (Mathematics)
- Dr Paul Hirom, Institute Manager (NHLI)
- Emeritus Professor Ray Rivers, Senior Research Investigator (Physics)

SPOTLIGHT



Phillip Wilson (Mechanical Engineering) 40 years

Phillip Wilson began his career at Imperial in September 1970, as a trainee in the Department of Mechanical Engineering. After completing his training in 1975, he accepted a technician post in the Metrology Section in the Department of Materials, later moving to Botany. By 1979, Phillip was back in Mechanical Engineering and in 1987, he was appointed Technical Head of Section

and, a year later, Technical Head of both the Energy Systems and Computer-Aided Engineering sections. With the merging of sections in 2004, Phillip became Technical Head of all the groups within Applied Mechanics, which he combined with his appointment as Research Divisional Workshop (RDW) Manager a year later. As RDW Manager, Phillip oversees the day-to-day running of the workshop, as well as providing technical expertise to the Applied Mechanics group. He says he enjoys working at Imperial as every day is different. "One day we could be working on gas turbines and the next, on surgical robots." In his spare time, Phillip works as a volunteer in the locomotive department of the Bluebell Railway in Sussex.

Spray-on fashion

More than 300 key figures from industry, academia, fashion and the media came to the College on 20 September to see Dr Manel Torres, Spanish fashion designer and academic visitor at Imperial, unveil his 2011 spring/summer collection (pictured) showcasing the prototype spray-on fabric featured in *Reporter 223*.

For the full story of Manel's collaboration with Professor Paul Luckham (*Chemical Engineering and Chemical Technology*), visit: www.imperial.ac.uk/reporter



Welcome new starters

Mr Victor Abah, Medicine
 Dr Richard Abel, Surgery and Cancer
 Mr Abdullah Alsuliman, Medicine
 Dr Ashiq Anjum, Computing
 Miss Aisha Anjum, Surgery and Cancer
 Mrs Shermin Arkut, EYEC
 Ms Ruthie Birger, Public Health
 Miss Tina Chan, NHLI
 Dr Nikolaos Charlaftis, Medicine
 Mrs Tracy Connelly, Medicine
 Dr Elena Dalpiaz, Business School
 Dr Eric Davidson, Life Sciences
 Dr Maria Dominguez Barrera, Medicine
 Dr Alison Evans, Public Health
 Dr Anna Finmore, Clinical Science
 Miss Sarah Foster, Medicine
 Dr Sofia Gueorgieva, Business School
 Dr Maximilian Habibi, NHLI
 Ms Lisa Hau, EYEC
 Dr Katharina Hauck, Business School
 Dr Kai Ishihara, Mathematics
 Dr Johanna Jackson, Clinical Science
 Dr Jonathan Jeffers, Mechanical Engineering
 Dr Kersti Karu, Life Sciences
 Mr Anthony Khaseria, Public Health
 Dr Anton Kichev, Surgery and Cancer
 Mr Jeong Ko, Medicine
 Miss Angela Kwok, NHLI
 Dr Patricia Leoni-Garcia, NHLI
 Dr Luciene Lopes, Medicine
 Miss Anna MacLeod, Medicine
 Mr Stuart Marchant, Mechanical Engineering
 Miss Jessica Martin, Surgery and Cancer
 Dr Angels Mayordomo Aranda, Medicine
 Mr Donald McLachlan, Sport and Leisure Services
 Miss Kay McNamee, Kennedy Institute
 Mr Thomas Mercer, NHLI
 Miss Samantha Mirczuk, Surgery and Cancer
 Ms Ciara Mulholland, Physics
 Mrs Deborah Papadopoulou, Medicine
 Dr Fabio Patrizi, Computing
 Dr Monica Pirani, Public Health
 Dr Anne Quirke, Kennedy Institute
 Miss Alima Rahman, NHLI
 Mrs Archana Santosh, ICT
 Mr Takuya Sekine, Medicine

Dr Matthew Seymour, Kennedy Institute
 Miss Aliah Shaheen, Bioengineering
 Dr Anna Tommasi, Surgery and Cancer
 Mr Paul Ward, Bioengineering
 Miss Michelle Watson-Dotchin, NHLI
 Dr John Williams, Global Health Innovation
 Dr Massoud Zolgharni, NHLI

Farewell moving on

Miss Veronika Afanasjeva, Catering
 Mr Ernesto Alto Jnr, Catering
 Mr Fabio Amaral, NHLI
 Mr Mohamed Amsaad, Catering
 Dr Quentin Anstee, Medicine
 Mr Omar Aziz, ICT
 Miss Paula Bach, Catering
 Mr Adam Baxter, Human Resources
 Dr Sofia Bayona, Surgery and Cancer
 Dr Christian Beckmann, Medicine
 Miss Angela Bhattacharya, Human Resources
 Mr Tapan Bhattacharyya, Kennedy Institute
 Dr Simon Butt, Medicine
 Mrs Heather Campbell, Communications and Development
 Mr Gaetano Caserta, Aeronautics
 Miss Catherine Childs, Medicine
 Mr Christopher Collister, Medicine
 Dr Frances Davies, Medicine
 Mr Steven Davison, Clinical Science
 Ms Sara Delaney, Environmental Policy
 Dr Celine Devaux, Biology
 Mr Grant Dolkens-Warrell, Biomedical Engineering
 Dr Christin Down, Medicine
 Dr Jingyun Fan, Mechanical Engineering
 Ms Ciara FitzGerald, Communications and Development (6 years)
 Mrs Georgina Going, Library (24 years)
 Dr Janet Graham, Surgery and Cancer
 Mrs Helen Harrington, Library (12 years)
 Professor Ken Haynes, Medicine (26 years)
 Mr David Henckert, NHLI
 Dr Andrew Homer, Registry
 Mr Amir Horowitz, Life Sciences
 Mr Russell Ireland, ICT
 Dr Min Jen, Public Health

Dr Rositsa Karamanska, Life Sciences
 Mrs Rohini Karingi, Health and Safety (7 years)
 Mr Firuz Kasimov, Catering
 Miss Mary Keeling, Medicine
 Dr Rachel King, Computing
 Dr Oksana Koltsova, Mathematics
 Mr Kofi Kramo, Medicine (5 years)
 Dr Sylvain Lardeau, Aeronautics
 Dr Karen Logan, Medicine
 Mrs Deirdre Long, Physics
 Ms Elizabeth Lozovoy, Accommodation Services
 Dr Kunal Masania, Mechanical Engineering
 Miss Gena Mellett, Kennedy Institute (8 years)
 Mr Matthew Merker, Accommodation Services
 Mr Daniel Moore, NHLI (8 years)
 Dr Peter Mowlds, Medicine
 Ms Sandra Peak, NHLI
 Mr Sajith Perera, Surgery and Cancer
 Mr Ashley Perris, Materials (11 years)
 Dr Natalie Prevatt, Medicine
 Ms Susanne Raum, Human Resources
 Dr Jesus Rogel-Salazar, Physics
 Dr Florian Sahr, Chemistry
 Dr Savvas Saouros, Life Sciences
 Dr Amanda Shepherd, Surgery and Cancer
 Miss Rachel Shipton, Library Services (29 years)
 Mrs Shahnaz Sohail, Medicine
 Dr Dimitrios Tasoulis, Mathematics
 Ms Ally Tesoriero, Business School
 Miss Debbie Tilley, Environmental Policy
 Dr Dmitry Ushakov, NHLI (5 years)
 Miss Katie Vowles, Accommodation Services
 Dr Richard Walker, Physics (7 years)
 Dr Krzysztof Wargan, Physics
 Dr Ying Weng, EEE
 Dr Paul White, Business School
 Mr Ben Wilkins, Medicine
 Miss Louise Young, Catering
 Mr Guidong Zheng, Humanities

retirements

Miss Sally Hockley, NHLI (29 years)

This data is supplied by HR and covers the period 4–24 September. It was correct at the time of going to press. Years of service are given where an individual has been a member of College staff for over five years. Asterisk (*) indicates where an individual will continue to play an active role in College life.



12–21 OCTOBER ► VIRTUAL LECTURE SERIES
The future of low carbon energy

Imperial will be hosting five virtual talks in Second Life in collaboration with Nature Publishing Group, which will be available online after the event. The lectures will involve experts sharing information and opinions about

the future of energy, in particular the global future energy outlook and low-carbon energy options. The series kick-starts on 12 October with a keynote lecture, "Building a Low-Carbon Economy" by Sir Professor Brian Hoskins, Director of Grantham Institute for Climate Change. Other lectures featured in the series include RCUK Research Fellow Dr Paul Fennel (Chemical Engineering) on carbon capture.



25 OCTOBER ► VINCENT BRISCOE ANNUAL SECURITY SCIENCE LECTURE
Science, technology and secret intelligence

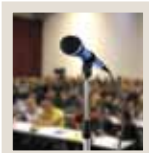
Join MI5's first official historian, Professor Christopher Andrew, as he explores the

interaction between science, technology and secret intelligence over the last century, from the world wars to the era of transnational terrorism. To mark the centenary of the founding of the British Security Service (MI5) in 1909, Professor Andrew was given exclusive access to files and archives in order to produce an authorised history of the intelligence agency, *The Defence of the Realm*.

11 OCTOBER ► CONFERENCE

The First Annual Junior Research Fellows' conference

The first cohort of Imperial Junior Research Fellows (JRFs) reflect on their work at this one-day programme of talks and posters.



12 OCTOBER ► WELCOME TALK

Postgraduate Research Students Welcome Event 2010

A talk for new postgraduates research students

12-15 OCTOBER ► EXHIBITION

Junior Research Fellows' Poster Exhibition

College Main Entrance, South Kensington Campus



12 OCTOBER ► LECTURE

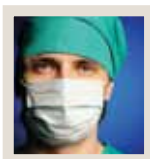
Some Aspects of Protein Adsorption and Stability in Hydrophobic Chromatography

Professor John P. O'Connell, Department of Chemical Engineering, University of Virginia

13 OCTOBER ► LECTURE

Antibodies and lectins that inhibit viral entry: new tools for the prevention of AIDS

Dr Alex Wlodawer, National Cancer Institute



13 OCTOBER ► SEMINAR

Launch of Healthcare Special Interest Group (SIG)

Featuring talks from Dr Andrew Vallance-Owen, Bupa Group Medical Director and Sir Muir Gray, NHS Chief Knowledge Officer

14 OCTOBER ► SEMINAR

Developing a 'clean first' design of market incentives for the power sector

Meg Gottstein, Principal of the Regulatory Assistance Project

25 OCTOBER ► VINCENT BRISCOE ANNUAL SECURITY SCIENCE LECTURE

Science, technology and secret intelligence

Professor Christopher Andrew, Professor of Modern and Contemporary History and President of Corpus Christi College Cambridge.

26–28 OCTOBER ► TRAINING COURSE

Graduate Schools Tutoring Training Course

The Research Skills Development course is highly interactive, three-day event designed to get new PhD students off to a flying start.

3 NOVEMBER ► SEMINAR

Robotics in Surgery – State of the Art

Featuring Professor Brian Davies and Dr Ferdinando Rodriguez y Baena (both Mechanical Engineering)

10 NOVEMBER ► SEMINAR

Abusive head trauma in infancy and early childhood

Arne Stray-Pedersen, Institute of Forensic Medicine, University of Oslo

11 NOVEMBER ► LECTURE

Pay regulation kills and other cautionary tales

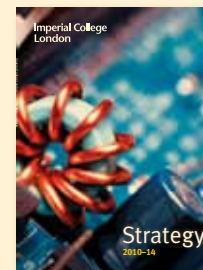
Professor Carol Propper, Professor of Economics (Business School)



take note

Explore Imperial's vision for the future

The College Strategy 2010–14 is now available. Informed by a College-wide consultation process, it sets out how Imperial will build on its strong position and achievements over the next five years.



Download the strategy at: www.imperial.ac.uk/collegestrategy and look out for copies in reception areas across the campuses.

VOLUNTEERING

Conversation Volunteer



Project id: 1792
 Organisation: Imperial College London – Department of Humanities
 Date(s): ongoing
 Time(s): minimum one hour per week
 Location: South Kensington

Volunteers are needed to provide one-to-one English conversation sessions for international students and research associates. The sessions aim not only to increase verbal English skills but also to provide an opportunity for cultural interaction for people new to the UK. You must speak English as your first language to volunteer for this project. Sessions take place mostly on the South Kensington Campus but it is possible to volunteer on other campuses. You will need to commit to at least five conversation sessions.

For more information

To take part in a scheme or to hear more about volunteering in general, contact Marco Benozzi:

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

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

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

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

