Lift off for Centenary!

Imperial celebrates the launch of its Centenary year

WOLVES ON THE PROWL
Could Scotland see the return of wild wolves?
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Reintroduction of wild wolves a possibility for Scottish Highlands

Reintroducing wild wolves to the Scottish Highlands could have a positive impact on local conservation, says new research published in Proceedings of the Royal Society B: Biological Sciences, on 31 January, 2007. The study suggests that the return of wolves, which were eradicated from the Scottish landscape in 1769, would benefit the local economy and could aid efforts to reforest the highlands and increase bird biodiversity in the region.

The primary benefit of reintroducing wolves, say Imperial researchers, would be controlling the population of red deer, which would be their main wild prey in the Highlands. There is currently a large population of red deer in the region—close to the maximum capacity that the ecosystem can support—and their numbers have considerable negative economic and ecological impacts on the region.

The large populations of deer hamper attempts to reforest the region, they compete with livestock for grazing, and trample trees and vegetation necessary to support bird populations. At the moment this high density of deer is controlled by organised culls, which carry a significant cost for local landowners and farmers. Introducing wolves to the region would reduce the need for costly culls, saving landowners’ money whilst restoring balance to the ecosystem.

The team carrying out the study also surveyed people living in rural Highland communities and in Scottish cities to assess public attitudes towards the reintroduction of wolves to the countryside. Both groups surveyed were generally positive about the idea, although farmers in particular were less positive than other groups, because of the concern that some sheep may be killed by reintroduced wolves. The survey did find, however, that the farmers surveyed were significantly more positive about the idea than the organisation that represents them: the National Farmers Union for Scotland.

Dr E.J. Milner-Gulland from the Division of Biology said: “The pros and cons of reintroducing wolves into Scotland are widely debated, but our study has shown that there would be significant benefits to both the ecosystem and the regional economy if this path was followed. We have shown that reintroducing wolves would significantly reduce the need for expensive culling, and the resulting decline in deer numbers would lead to a marked increase in plant and birdlife biodiversity, and reforesting the area would be easier too.”

Co-author of the study, Dr Tim Coulson, added: “Scotland is a very different case to other parts of the world where wolves have been reintroduced, such as Scandinavia and North America. In these other places there is a culture of deer hunting for meat which has led to conflict between hunters and wolves. As Scotland only supports a small trophy hunting industry, these problems wouldn’t apply.”

—Danielle Reeves, Communications

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The culling of red deer restores balance to the ecosystem.

The re-introduction of wolves to the Scottish Highlands could be the key to increasing bird diversity.

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Imperial MBA second in London

The Financial Times published its annual ranking of the world’s best MBA programmes on 29 January. The Imperial MBA taught by Tanaka Business School was ranked 56th in the world, and 17th in Europe. The programme is now the second highest ranked MBA programme in London. The ranking highlighted the successful work of the School’s careers team, with the School placed third in the UK for placement success and third for the percentage of students who have accepted job offers within three months of graduation. At the same point in their careers graduates from the School also had the ninth highest average salaries in Europe. Data for the ranking was drawn from several different sources, including recent alumni. They were quick to hail the School’s expertise in entrepreneurship and economics when filling in their questionnaires, granting Tanaka Business School a ranking of ninth in the world, second in Europe for entrepreneurship and seventh in the world for economics.

Robotics Information Day

The Institution of Engineering and Technology’s Robotics and Mechatronics Network held a workshop about the EU Framework 7 research programme at Imperial’s Institute of Biomedical Engineering last month. The event was organised by Dr Ferdinando Rodrigues y Baena, Lecturer in Robotics at the Institute and the Department of Mechanical Engineering. With a budget of £50 billion over seven years, Framework 7 is the largest research programme ever undertaken by the European Union with robotics as a major element.

Visit www.iee.org/events/fp7roboticsinfoday.cfm to see presentations from the day.

Imperial as One student forum

Imperial as One, the College’s black and minority ethnic advisory group, hosted a student forum on 24 January. The forum provided black and minority ethnic students with advice on marketing themselves and building up their CVs. Speakers at the event included Dr Mark Richards from the High Energy Physics Group, Dr Sunday Popo-Ola, Civil and Environmental Engineering, Elspeth Farrar, Director of Imperial’s Careers Advisory Service, and Student Union’s Deputy President, Ben Harris. In addition, Professor Yike Guo, Technical Director of the Parallel Computing Centre at the College, spoke of his experiences of advancing his career.

Visit www.imperial.ac.uk/spectrum/hr/hr_Info/equality/race/imperialasone.htm for further information.
EnVision launched

A project to maintain and enhance Imperial’s position as an international leader in engineering education was officially launched last month. An EnVision 2010 dinner and presentation for key industry figures was hosted by Engineering Faculty Principal, Dame Julia Higgins.

EnVision 2010 aims to ensure the Faculty of Engineering offers every engineering undergraduate the best possible education.

During December, an open invitation was sent by Dame Julia to all academics, asking for their ideas and project proposals to enhance and develop Imperial’s engineering undergraduate education. A range of proposals has already been received from across the Faculty which will be considered by the EnVision Board over the coming weeks. It is hoped that a number of the successful schemes will be taken forward by the EnVision team during this academic year.

The first proposed project under the initiative will be the Racing Green project. Students from across the Faculty will design, build and race a zero-emission fuel cell car. The project will also give students the opportunity to work on cutting edge fuel cell research.

The idea behind the EnVision 2010 initiative originated from student and staff feedback. Students were keen for a greater development of their personal and professional skills and wanted to apply their knowledge in real world contexts. EnVision 2010 aims to achieve this by developing new departmental and cross-faculty projects, which would help to inspire the students, develop their professional skills and deepen their engineering knowledge through application.

Dr Ruth Graham, Director of the project explains: “EnVision aims to ensure that the Faculty has equal confidence in its teaching strategy as that already secured in research. We believe that Imperial College is ideally placed to take the European lead in engineering education.”

Issues that EnVision 2010 will examine include how the College rewards and supports academic staff, how to motivate and inspire undergraduates and how to improve and develop teaching spaces in the Faculty.

One early focus of the project is to establish a number of new scholarships for undergraduate students, for example the Rolls-Royce Engineering Scholarship for Energy Efficient Technologies.

Dame Julia added: “EnVision has been in the planning phase up until the beginning of the year. Now we are underway and will start to deliver some of the exciting ideas generated.”

—NAOMI WESTON, COMMUNICATIONS

Politics of the lab

A local MP was given a taste of the scientific world in January when he spent a day in the labs with an Imperial College researcher.

Andrew Slaughter MP visited Imperial neuroscientist Dr Mark Ungless on the Hammersmith Campus, part of Mr Slaughter’s Ealing, Acton and Shepherd’s Bush constituency. The two were paired as part of the Royal Society’s MP-scientist pairing scheme, which aims to build bridges between some of the UK’s best researchers and members of parliament.

Dr Ungless, from the Clinical Sciences Centre, researches a chemical messenger known as dopamine, which is found in the brain. He is investigating dopamine neurons and the long-term effect on them of addictive drugs, which activate the dopamine system.

The researcher showed Mr Slaughter a variety of labs and equipment, and introduced the MP to many of his colleagues. Mr Slaughter took a look at a positron emission tomography (PET) scanner which is used to investigate the underlying neural mechanisms in psychiatric disorders. He also had the chance to look down various microscopes to view close-ups of cells for anatomical experiments.

Dr Ungless said that he wanted Mr Slaughter’s visit on 12 January to demonstrate the variety of research being carried out in the Clinical Sciences Centre.

He explained: “A real range of work goes on here, from single cells through to whole brain imaging in humans. I hope that Andy learned that much interesting and important science is being carried out in his constituency. I hope also that he learned about some of the struggles that scientists face, not just when trying to make scientific breakthroughs, but also with the practicalities of pursuing their careers in science.”

The men’s roles were reversed in November 2006, when Dr Ungless spent four days with Mr Slaughter at the House of Commons, to find out about the MP’s work. Dr Ungless toured the House of Commons and the House of Lords, watching debates in both houses, and met members of the Science and Technology Select Committees.

Dr Ungless added: “I think what was most surprising to me was the direct access we had to those who are influencing and forming science policy. I suppose I didn’t have a clear idea about how science fits in at parliament and now I feel I have a better grasp of the structure of the various committees and the ways in which science policy could be formed.”

—Laura Gallagher, Communications
Stressed isn’t best, says baby development research

The Daily Telegraph

Crown was one of the inspirations for part of the so-called scientific revolution.” by using his discovery to measure its volume. Dr Cuomo adds that Galileo was moved crown was made of solid gold—something the mathematician was able to determine was actually acting as ‘a detective for his king’, who wanted to make sure that his new Centre for the History of Science, Technology and Medicine, explains that Archimedes Archimedes, said to have run naked down the street after discovering the principles of density and buoyancy while in the bath, is debated on Radio 4. Serafina Cuomo, for the History of Science, Technology and Medicine, explains that Archimedes was actually acting as ‘a detective for his king’, who wanted to make sure that his new crown was made of solid gold—something the mathematician was able to determine by using his discovery to measure its volume. Dr Cuomo adds that Galileo was moved by Archimedes to write his own treatise on hydrodynamics. “So what he did with the crown was one of the inspirations for part of the so-called scientific revolution.”

Scientific revolution traced back to soggy mathematician

In Our Time, BBC Radio 4, 25 January

The truth behind the famous “Eureka!” moment of ancient Greek mathematician Archimedes, said to have run naked down the street after discovering the principles of density and buoyancy while in the bath, is debated on Radio 4. Serafina Cuomo, Centre for the History of Science, Technology and Medicine, explains that Archimedes was actually acting as ‘a detective for his king’, who wanted to make sure that his new crown was made of solid gold—something the mathematician was able to determine by using his discovery to measure its volume. Dr Cuomo adds that Galileo was moved by Archimedes to write his own treatise on hydrodynamics. “So what he did with the crown was one of the inspirations for part of the so-called scientific revolution.”

Stressed isn’t best, says baby development research

The Daily Telegraph, 27 January

Men who behave abusively towards their pregnant partners could be having a negative impact on the mental development of their babies, according to research led by Vivette Glover, Surgery, Oncology, Reproductive Biology and Anaesthetics. The team found that women who reported stress during pregnancy due to relationship problems went on to have babies who scored lower in mental development tests and were more prone to anxiety. “The father has a big part to play,” says Professor Glover. “The state of their relationship with the mother affects the hormonal and chemical balance in the mother’s body, which in turn affects the development of the child’s brain”.

Rector launches a year of Centenary events

A grand tour of the history of Imperial College and predictions for the future of scientific research comprised the Centenary launch lecture, From Albert to Z bosons and beyond, given by the Rector, Sir Richard Sykes, on 30 January.

Presenting to an audience of 750 staff, students, alumni and members of the public, Sir Richard described Prince Albert’s vision for the arts and sciences in South Kensington, fuelled by the Great Exhibition of 1851. Prince Albert’s support led to the foundation of the colleges that came together to form Imperial College in 1907. The presentation cited key scientific achievements in the College’s history, such as Fleming and Chain’s discovery of penicillin, and the past was brought to life with a recording of King George VI from 1945 in which he congratulated Imperial engineers on their contribution to the success of the D-Day landings.

Sir Richard described the College as a fascinating place of learning for some 140,000 students over 100 years. “Everything we do is about the people”, he continued, emphasising that “the people in this room today will help drive forward the College’s mission.”

Looking to the future, the Rector highlighted big issues that will be tackled by Imperial scientists. Citing the work underway at CERN as one of these, he said: “Understanding the creation of the universe helps us to understand the rules of science”. Solving the mysteries of systems biology, developing the use of stem cells to combat diseases and preparing for the effects of climate change also appeared on Sir Richard’s scientific agenda for tomorrow. “Imperial has a real role to play in modern society”, the Rector concluded, and set the challenge that by 2050, Imperial’s people would be “partners of choice for governments, commerce and industry across the world”.

—Caroline Gaulter, Communications

Visit: www3.imperial.ac.uk/aboutimperial/events/onlinelectures to watch the stream or download a video podcast of the lecture.
Clinical trial mystery unravelled

A possible reason why the Parexel clinical trial of the drug TGN1412 at Northwick Park caused multiple organ failure in human volunteers was revealed by Imperial researchers at a conference last month near Paris.

The research shows that stimulating the molecule CD28 on T-cells that mediate the immune response can have an adverse effect if these immune cells have been activated and altered by infection or illness in the past.

The scientists found that when they artificially stimulated CD28 on these previously activated ‘memory’ T-cells, this caused the cells to migrate from the blood stream into organs where there was no infection, causing significant tissue damage. CD28 is an important molecule for activating T-cell responses and the TGN1412 drug tested on the human volunteers strongly activates CD28.

Around 50 per cent of adult human T-cells are memory cells, having been activated by infections and illnesses during the course of a person’s life. However, animal models, such as those used to test TGN1412 before tests were carried out on humans, do not have many memory T-cells because they are deliberately kept in a sterile environment shielded from infections.

The research, by scientists from Imperial, King’s College London and the Babraham Institute, was presented at the Club de la Transplantation conference in Cernay la Ville, near Paris.

Dr Federica Marelli-Berg, lead author of the research from Imperial’s Department of Immunology explained: “The drug TGN1412 appeared to be relatively safe when it was tested in animal models. However, when the drug was tested on human volunteers, some experienced very severe side-effects.

“Our research suggests that this is because the human subjects’ memory T-cells lost their sense of direction and started migrating into several areas of the body where they were not supposed to go and caused damage.”

— LAURA GALLAGHER, COMMUNICATIONS

Podcast offers monthly slice of College life

A snapshot of work and play at Imperial will be available in monthly instalments, thanks to the College’s new podcast launched this week.

Available on the first working day of every month, each edition will supply a round-up of Imperial’s latest news, findings and events, providing listeners with a taste of life at the College, and the scientific and academic work it carries out.

The podcast is presented by Gareth Mitchell, a lecturer on the Science Communication MSc course and the presenter of the World Service’s Digital Planet programme. In the launch edition, he explores topics including new breakthroughs in reducing heart attack risks and the next steps in computer-generated art with the scientists who are leading the research. Also included is a report from Imperial student Alex Johnson on her day out with Jezebel, Imperial College Union’s 1916 fire engine maintained by successive generations of students. Gareth said:

“This is a great opportunity to take Imperial’s ground-breaking work to a wider audience so that people with an interest in science can hear the voices of our researchers directly. As a practising science journalist, I’m treating contributors as I would do on any other radio programme—drawing out their stories but also challenging them and being irreverent. Hopefully what emerges is a real sense of what’s going on at the College.”

The monthly podcast is the latest addition to Imperial’s ongoing commitment to new media, with video podcasts and video streaming of special lectures already taking place.

— ABIGAIL SMITH, COMMUNICATIONS

Visit www.imperial.ac.uk/aboutimperial/pressoffice/podcasts to download the podcast.

Search for the next Rector begins

A search committee has been established by the College Council to undertake the task of identifying and recommending a successor to Sir Richard Sykes following his retirement in the Summer of 2008.

The members of the Committee include Lord Kerr of Kinlochard, Chairman of the Court and Council; Lord Rees of Ludlow, President of the Royal Society; Professor Richard Kitney; Staff Governor, Senior Dean and Director of the Graduate School of Engineering and Physical Sciences; and Professor Sir Ara Darzi, Head of the Division of Surgery, Oncology, Reproductive Biology and Anaesthetics.

The Committee will be looking within the College, as well as across the United Kingdom and abroad, and expects to recommend a person of international stature, who is able to command respect at the highest international levels of science, engineering or medicine, with successful experience of leading large and complex organisations and of interacting with and influencing government, industry and commerce at the most senior levels.

The appointment was advertised in the press last month, but the Committee particularly wishes to canvass views as widely as possible within the College.

— ALEXANDRA PLATT, COMMUNICATIONS

For further information and a full list of committee members visit http://www3.imperial.ac.uk/secretariat/collegeinfo/collegenotices/8 or email a.mitcheson@imperial.ac.uk to submit a nomination.
Giving and gaining through volunteering

Volunteering has been an experience of ‘giving and gaining’ for Wendy Byrne, a Research Technician in the Plant Science group at Wye Campus.

Prompted by her mother’s poor health, Wendy enrolled on an ITEC diploma course in holistic massage, and now regularly volunteers to give hand, neck and back massages to elderly people.

After starting her volunteering independently in a branch of Age Concern in Ashford, Wendy heard about the College’s employee volunteering scheme. She said: “I had to fit into Age Concern’s timetable initially, which meant going along early in the afternoon on a Wednesday. My manager agreed to this and I made up my time by arriving early for work. This support has meant that I can now volunteer more frequently at a residential home for the elderly, which gives me the option of paid employment in the future.”

Minna Ruohonén, Community Relations Manager at the College, is keen to encourage other staff to volunteer, explaining that the College will give them up to two hours a week of paid time to volunteer, by condition that this is matched by an equal number of voluntary hours over a six month period. She said: “This is a great opportunity to get involved in community activities during your normal working hours. Volunteering can lead to learning new skills that may not be available to you in your day-to-day work.”

Wendy enjoys her volunteering and would definitely recommend others getting involved. She said: “This experience has been one of giving and gaining for me as well as allowing me to use the skills which I learnt on my course. Some of the people I help have a range of physical and mental disabilities and emotional problems that I find very rewarding to work with. Everyone has appreciated the treatments coupled with the time to chat on a one-to-one basis.”

—Alexandra Platt, Communications

A fairer deal for PhD students

All home and EU PhD students will receive a minimum stipend of £14,300 from August, it was announced by the College last month, bringing them in line with the recommended London weighting payment.

The move, which applies to those already registered on a PhD course, as well as new students, was prompted by a presentation given to the Strategic Education Committee by members of the Union including its President, John Collins.

Professor Sir Leszek Borysiewicz, Deputy Rector, said: “We must be aware that London can be an expensive place to study. By PhD students receiving the London weighting allowance regardless of how they are funded, I believe we have reached a very fair conclusion. This shows productive work between the Union and the College that can only mean the best outcome for our students.”

—Alexandra Platt, Communications

Is the weight finally over with new obesity drug?

Professor Steve Bloom from Investigative Science, Faculty of Medicine, has been awarded one of three inaugural awards, under the Wellcome Trust’s Seeding Drug Discovery initiative, for a new drug to tackle obesity based on a hormone found naturally in the gut.

Recent research by Professor Bloom and his team identified the role played by gut hormones in appetite control. These hormones are released when a person eats, acting as neurotransmitters to indicate to the brain to stop eating. In particular, the researchers are interested in pancreatic polypeptide (PP), which they believe may provide a solution to appetite suppression and is the most likely candidate for translating into a treatment.

Professor Bloom explained: “Developing a treatment based on natural appetite suppression, mimicking our body’s response to being full, has the potential to be safe and effective. We believe that pancreatic polypeptide may be the answer.”

Professor Bloom points to research showing that people with benign PP-secreting tumours have elevated levels of the hormone and yet appear to show no adverse side effects.

“These people may have had high levels of PP for 10 or 15 years without showing side effects,” he said. “In that sense, they have provided us with a natural experiment that suggests that excess levels of PP over a long period are safe. It does not appear to raise blood pressure or heart rate, or have any other obvious side effects.”

With this funding, Professor Bloom and colleague Dr Caroline Small also from Investigative Science hope to develop a synthetic form of PP which can be administered to patients.

“The trouble with PP is that it would need to be injected daily and cannot be taken as a pill,” he says. “Naturally, this is not very convenient, so we need to develop an injectable form that is longer lasting and can be administered on a weekly basis.”

If successful, the proposed research may lead to a treatment within five to eight years.

—Alexandra Platt, Communications

Volunteering can be a chance to learn new skills. Wendy Byrne has gained a qualification in holistic massage

Contact Minna Ruohonén at minna.ruohonén@imperial.ac.uk for more information.
Dr Upadrasta Ramamurty, Associate Professor at the Indian Institute of Science, Bangalore, who is collaborating with Imperial's Dr David Dye, received the UKIERI Major Award from Gordon Brown last month.

UK–India collaboration takes off

A research project aimed at developing alloys for use in greener aircraft engines is the winner of a new UK-India Education and Research Initiative Major Award, it was announced on 18 January.

The six Major Awards and 23 Standard Awards were announced in New Delhi by Chancellor Gordon Brown at a reception that celebrated and promoted links between India and the UK.

The alloys, to be developed by researchers at Imperial, the Indian Institute of Science, Bangalore, and the Indian Institute of Technology, Bombay, will lead to engine components that can change shape or position at a particular temperature. The team hopes that these could replace mechanical moving parts in aircraft, leading to reduced engine weight and increased energy efficiency.

The lead collaborators on this project are Dr David Dye, from Imperial’s Department of Materials, and Dr Upadrasta Ramamurty, from the Department of Metallurgy at the Indian Institute of Science, Bangalore. In addition, there will be five studentships contributing to the project, two funded by Imperial and three funded by the Indian Institute of Science.

The UKIERI Major Award of £204,000 over three-and-a-half years, will be used to support collaborative research workshops between the institutions.

Rolls-Royce Plc will also collaborate on the project, working with teams from Imperial and the Indian institutes to design ‘self-actuating’ components suitable for use in aero engines—likely to be applied initially to noise and emissions reductions systems.

Welcoming the award, the Rector said: “Imperial has many research links with institutions in India, a country that is doing a great deal to position itself as a place where scientists can do business. These global partnerships between leading research centres are a vital part of finding the solutions to major world challenges, so the work that UKIERI does in facilitating such relationships is extremely important.”

Imperial was also awarded two Standard Awards which provide a maximum of £150,000 per project. Professor Philip Poole-Wilson, from the College’s National Heart and Lung Institute, in collaboration with Professor Srinath Reddy, Head of the Department of Cardiology at the All India Institute of Medical Sciences, were awarded funding for their research on cardiovascular disease, its prevention and origins.

Professor Andrew Miller, from the Department of Chemistry at the College, also won a Standard Award in collaboration with Dr Ahmed Kamal, Principal Researcher at the Indian Institute of Chemical Technology, and Professor Manfred Schneider at Bergische University, Wuppertal, Germany. Their project researches biomedical solutions for India and the UK to discover next generation anti-infectives.

— NAOMI WESTON, COMMUNICATIONS

Visit www.ukieri.org for more information

Awards and honours

Cancer research boost

Imperial researchers will better understand what happens to cells when they are affected by diseases such as cancer, thanks to a £5 million scheme funded by the Engineering and Physical Sciences Research Council. The Single Cell Proteomics project, established in partnership with the Institute of Cancer Research and the London Research Institute of Cancer Research UK, is led by Professor David Klug of the Department of Chemistry. His 18-strong multidisciplinary team will focus on the proteins found in the cell membrane, many of which are affected by diseases or are the targets of existing drugs. A greater understanding of where and when these proteins are expressed may lead to new treatments and drugs for cancer.

Ethical and legal winners

Second year medicine students taking the Medical Ethics and Law course have been awarded prizes for the first time, thanks to sponsorship by the Medical Defence Union and Medical Protection Society. The course, led by Dr Wing May Kong, Honorary Senior Lecturer, Endocrinology and Ethics, gives students the opportunity to discuss and debate ethical dilemmas in a structured format. The prizes were awarded for best group Ethics presentation and best group performance in the law assessments. In keeping with the spirit of the course, the prizes were £500 donations to charities chosen by the winning groups. Ethics winners were Charlotte Askew, Harriet Gardiner, Cattleya Godsave, Danielle Holsgrove, Kayur Patel, Peter Reynolds, and Eleanor Rowland, who chose to donate to the National Association for People Abused in Childhood. Law winners, Muaad Abdulla, Zoheen Ahmed, Edward Bray, Lucy Fisk, Leah Jones, Ravi Khehar, Matko Marlaic, Bhavna Oza, Olivia Raglan, Harriet Scott, Victoria Tan and Sasha Thambapillai, chose to support CHASE hospice care for children, and the Hebron Trust, a charity providing treatment and care and post-rehabilitation support for women.

Undergrad takes science to developing countries

Maths undergraduate Stephen Chambers has received £15,000 from the Royal Commission for the Exhibition of 1851 towards a programme he has devised to place Imperial students in schools in developing countries. The scheme, which has already received United Nations support, aims to promote science education in the host communities and at the same time deepen students’ understanding of how science can improve lives. Steven plans to offer five bursaries of £5,000 each to Imperial students to visit the Balud Elementary School, Philippines, in July where they will support teachers and help improve the facilities of the school, which lacks basic equipment and has no electricity. Following this pilot programme, Steven intends to launch the Imperial Blue Cube Fund in October, which will send Imperial students to disadvantaged communities around the world.

Top peer reviewer

A Clinical Lecturer in primary care research has been named one of the journal's top 10 reviewers out of over 4,000. Dr Josip Car, from the Department of Primary Care and Social Medicine, was chosen this month as one of the journal’s top 10 reviewers out of over 4,000. The ranking is based on the quality, quantity and timeliness of Dr Car’s work, said the BMJ’s editor, Dr Fiona Godlee, who thanked him for his much valued work. The journal reviews its peer reviewers on an annual basis.
Centenary celebrations!

Centenary celebrations from left to right: Stephen Sumner from Catering hands out free coffee vouchers, Ben Harris from the Students’ Union gets balloons ready for release, whitebait makes it on to the Centenary lunch menu in the SCR, Rector Sir Richard Sykes speaks in the main entrance, David Parker from Estates and Jane Neary from Catering in 1907 dress, ICU Big Band entertains the crowds at the Students’ Union, Anna Jedrzejewska from Catering serves coffee on the walkway and student jugglers add to the atmosphere on the Queen’s Lawn.
The pealing bells of the Queen’s Tower marked the official launch of Imperial’s Centenary year on 30 January

Each of the College’s campuses was adorned with red and blue Centenary balloons and the bells continued to star in the day as staff and students queued for tours of the 287ft tall bell tower. The day was packed with events to launch the College’s celebration of 100 years of living science, including a balloon release, a chance to see the Union’s mascot cars and displays of music and juggling by Imperial students.

Lunch time became an adventure with both South Kensington and Wye Campus dining rooms serving cuisine from a 1907 menu recently discovered in the College Archives. A two-course meal was offered for 30 shillings, or £1.50, and Centenary wine was available at one guinea, or £1.05, a glass. Catering staff, many of whom were dressed in historical costume, prepared and served 2,750 meals, consumed in just two-and-a-half hours.

For many on the day, the icing on the cake was just that. Centenary cakes were ceremonially cut and distributed at all of the College campuses and over 5,000 slices were eaten within a matter of hours. As medical students at St Mary’s Campus queued for their pieces, third year medic Shireen Emadossadaty summed up the attitude of many students on the day. She said: “I feel really privileged to be here celebrating 100 years of Imperial College. I have entered the free prize draw and I am looking forward to the year ahead.”

The Rector, who cut the cake in the main entrance of the South Kensington Campus, spoke about how the College has stayed true to its core ideas and its founding principles of advancing scientific endeavour and applying it to find solutions to the world’s challenges. He said: “As we move into our second century and beyond, I have no doubt that wherever there are major breakthroughs there will be an Imperial scientist very close by.”

The day ended with a sold-out lecture from the Rector (see page 5 for a full account), just a taste of the many exciting events still to come this year.

—ALEXANDRA PLATT, COMMUNICATIONS
Share your story on the new Centenary website

You can find out all about Imperial’s past with an interactive timeline or browse other people’s experiences of the College on the new Centenary website, which was launched on Monday 29 January.

You can add to the site by sharing your memories and pictures of Imperial online. Just to whet your appetite, there are already accounts of the 1945 King George VI visit and a student being trapped up the Queen’s Tower!

Other features of the site include a Centenary screensaver, e-postcards and details of Centenary events, news and merchandise.

- Visit www.imperial.ac.uk/Centenary

Centenary launch day stats

- 2,750 ‘1907’ meals eaten at South Kensington and Wye
- 1,000 glasses of Centenary wine sold
- 240 people climbed the Queen’s Tower
- 3,700 entries for the free prize draw
- 46 cakes were ordered for all the campuses – equalling over 5,000 pieces of cake eaten across the campuses

1907 Menu

**Starters**
Mixed Hors D’oeuvres, Devilled Whitebait, or Seafood Bisque

**Main course**
Guinea Fowl, Lamb Canon, Salmon Darne, Chicken Breast, or Bean Cassoulet served with chateau potatoes, mushrooms, tomatoes and rustic winter vegetables with honey

**Dessert**
Vanilla icecream with macaroons or sorbet with Kirsch

- Look out for Archive Corner in the next edition of Reporter where Anne Barrett, Archives and Corporate Records, will explain the full origins of the Centenary menu.
Centenary Campaign hits the ground running

Imperial has marked the launch of its Centenary year with a campaign to raise £207 million from philanthropic donations. The College aims to raise the full amount by July 2010, the culmination of a 10-year fundraising campaign that has so far raised £123 million.

The funding will be used to provide scholarships for gifted students, contribute to building and refurbishment projects across Imperial’s campuses and support the College’s mission to develop its academic activities.

Key supporters of the Campaign include staff, former staff, alumni, industrial associates and trusts and foundations. Thanks to their generosity the College has already raised £7 million towards 60 student scholarships since 2003, £76 million for campus renewal, which has supported some of Imperial’s key capital developments including the College’s main entrance and Biochemistry building refurbishment, and £40 million to underpin Imperial’s academic mission. This includes the funding of several Chairs within all the College’s faculties, including the recent Winston Wong Chair in Biomedical Circuits and the Lee-Lucas Chair in Experimental Physics.

Donations to the alumni-supported Student Opportunities Fund have so far been translated into scholarships for 42 undergraduates and 18 postgraduates.

Other concrete results of the Campaign will include a major redevelopment of the Imperial College Union Building and the ongoing transformation of the Central Library into a high-tech space providing 24-hour computing facilities and wireless information access zones.

The Rector, who sees the Centenary Campaign as a critical part in developing Imperial’s ability to be master of its own destiny, said: “From the discovery of penicillin to new treatments for rheumatoid arthritis, we have a long history of making breakthroughs that improve countless lives, but this is only possible when we have the financial freedom to set our own priorities. The Campaign will be vital to ensuring that our next scientific trailblazers are not deterred from taking advantage of a world class education by financial considerations.”

—ABIGAIL SMITH, COMMUNICATIONS

Visit: www.imperial.ac.uk/centenary/centenary_campaign.shtml for full details of the campaign

Running for glory

When PhD student Ben Ryall took part in a competition to win the chance to become the College’s 2007 London Marathon runner, he did so to win. With an impressive performance in a fitness challenge event at Ethos and a compelling statement about why he wanted to run on behalf of the College, Ben was an ideal candidate for the place.

Ben arrived at Imperial in 2000 to begin his BSc in Biology and graduated three years later with first class Honours. Since then he has been working on a BBSRC-funded PhD in Dr Huw Williams’ group where he has been researching Pseudomonas aeruginosa, a type of bacterium that affects individuals with cystic fibrosis. In March 2007, when he has finished writing up, he will take up a postdoctoral position within the same group.

When he’s not working with Pseudomonas, a lot of Ben’s spare time is spent pursuing sporting interests. His main passion is triathlon, in which he represented Great Britain in the European Championships in 2006 and qualified for the World Championships. It is perhaps surprising then that London 2007 will be his first marathon. Despite this, Ben is not taking the challenge lightly, setting himself the impressive goal of completing the course in two hours 50 minutes or under.

Ben is using the Marathon place to raise money for the Student Opportunities Fund, which provides entry scholarships for undergraduate and postgraduate students coming to Imperial. Sixty scholarships have been awarded through the Fund since 2003, enabling gifted students to study at Imperial who may otherwise have been unable to do so. The majority of funds to date have been raised from alumni through activities such as the telethon and direct mail appeals.

Of the cause that he is raising money for, Ben says: “I came to Imperial as a mature student and was fortunate that my girlfriend’s parents were able to provide me with accommodation. Without this help, I would almost certainly have not been able to afford my studies here. I am therefore only too aware of the outstanding chances the Student Opportunities Fund can offer to talented students who wouldn’t otherwise be able to attend this world class university.”

He continues: “I feel privileged to be running my first Marathon for Imperial and hope that people around the College will consider supporting me through sponsorship.”

—LIZ GREGSON, OFFICE OF ALUMNI AND DEVELOPMENT

Visit www.imperial.ac.uk/alumni/marathon2007 to track Ben’s progress, including a weekly training diary, and to pledge your support.
Shock

The Flash animated timeline on the Centenary website owes its existence to decades of meticulously maintained archives cared for by Anne Barrett, Imperial College Archivist. In this edition of Archive Corner, she explains the timeline’s origins.

The Centenary team’s brief was to create a timeline complete enough for users to appreciate Imperial’s evolution from 1845 to the present day. Although creating a chronological history may sound straightforward, telling the whole story involved painstaking detective work, collecting and analysing huge amounts of information from the College Archives.

The Archives hold a vast quantity of data in the form of millions of sheets of paper, thousands of photographs and other media, including DVDs, teaching charts, paintings and artefacts, such as machines and models. Only some information is available on searchable computer databases; the rest still subject to an expensive process of conversion from card catalogues and lists. So it was time consuming to search through these to select the correct item to make a particular point.

Good starting points in the quest were people and buildings because they gave context. A building is often the visible legacy of a key member of staff so tracing its origins can help to explain their aspirations for the College. Trickier was finding material such as relevant photographs of staff that could be used to really bring the history alive online. When photographs proved difficult to find, thinking laterally led to the unearthing of lecture posters and objects. Once discovered, these materials often needed further research to trace the copyright owner to get permission for their use, all contributing to the lengthy process of archival work.

History is evolution—Imperial College continues to evolve as do the archives, and in the timeline lies the proof.

—Anne Barrett, Archives and Corporate Records

www.imperial.ac.uk/Centenary

The Archives hold a vast quantity of data in a variety of formats

Professor David Edgerton, Hans Rausing Professor in the College’s Centre for the History of Science, Technology and Medicine, has recently published a new book exploring the difference between flash-in-the-pan inventions and discoveries, and genuinely revolutionary technologies which change people’s lives for generations. Professor Edgerton suggests that the most important discoveries of our age are not necessarily the ones we might think. Communications’ Danielle Reeves caught up with him to find out more...

What do you think is most misunderstood about invention and innovation?

That most of it fails, and that most of it is in areas we don’t think of as being particularly inventive. Humans have invented and innovated so much that we couldn’t possibly use everything novel that has ever been made. We make a mistake when we complain that people are resistant to new technology—we have to be! A second common mistake is to assume that the impact of new inventions and innovations is felt immediately. Typically, it may take decades to become clear.

Which new inventions do you think are the ones that have had a real and lasting impact on the world in the last 100 years?

We more easily think of technologies that are famous for being important. Until AIDS no-one could ask, at least not in public, whether the condom was more significant than the aeroplane. How many people have heard of the Haber-Bosch process [the industrial process for producing ammonia, a key component of fertilisers, polymers and explosives] as compared with the number that know all about aviation? So the list of significant technologies is a long one, and most of the technologies on it are not well-known.

Which leave you underwhelmed?

Some of the most hyped have been much less significant than their place in the history books suggest: think of supersonic travel, space flight and nuclear power. It is misleading to overstate the importance of a small number of technological developments in any given era.

Do you think there will continue to be a place for technologies and materials invented 100 years ago, as the twenty-first century progresses?

Not just those invented 100 years ago, but also those invented 1,000 and 10,000 years ago. Yet we should be wary of classifying technologies by the date of notional invention. Our ships, wheels, beer and fires are not the same as when they were invented, and will most likely change further.

Why do you think it’s important for a science-based institution such as Imperial to teach and research the history of science, technology and medicine?

Their history brings new evidence to bear to answer some of the most important questions we have about science, technology and medicine, and how they relate to society. At its best, it gives new and better answers. As it happens, there isn’t a world class scientific, technical or medical university that does not have a History of Science, Technology and Medicine Department of the highest quality—Imperial included.

—David Edgerton, Shock of the Old: technology and global history since 1900 is published by Profile Books at £18.99
Dr Martin Knight has been at Imperial since 2004. Now Chief Operating Officer, he has responsibility for the core non-academic functions of the College, the overall financial strategy as a member of the College’s Management Board and is Chairman of Imperial Innovations, Imperial’s technology transfer company. Last edition of Reporter announced the publication of the College’s Report and Accounts 2005–06.

Reporter’s Alexandra Platt went to meet him to discuss the College’s recent financial performance.

How long have you been at the College?
I was appointed to the new post of Chief Finance Officer in 2004. However, I had been a Governor since 1994 and was, in that role, Chairman of the Council’s Finance and Investments Committees for about five years.

How did it feel to take on this new role?
It was very different, as I had viewed the organisation as a detached observer for many years. Seeing things from an internal perspective was very interesting indeed and I was surprised at how much more complicated this beast is from the inside. It was also interesting as my background is business and Imperial hasn’t got the same criteria or norms as business behaviour. The turnover of the College may seem small to some, but it is much more complex to manage than a traditional business.

What highlights jump out from the last financial year?
I think the biggest highlight is the strong growth of the operation. I think it’s growing far more quickly than many people realise, five times more quickly than inflation, in fact. The flotation of Imperial Innovations was another high point for the College, as was the raising of the 50-year bond. Being able to raise money like this and with this maturity is a reflection of just how well we manage ourselves and the quality of what we do here.

Research income has risen by 16 per cent. What does this mean for the College?
It means we’re growing very fast. There is a big management task that goes along with this, ensuring that funds are spent in the right way and in an effective manner.

Looking forward, what challenges do you think Imperial faces?
I think one of our biggest challenges is to keep doing things as well as we are. We need to maintain the virtuous circle of managing our day-to-day activity efficiently, making the most of our assets and planning clearly and cleverly for our liabilities. I think that in the next five years our income sources are going to be different, with an increase in money coming from non-government and non-UK-based sources. It’s going to be a challenge to manage this change. We must remember that Imperial is global player. To remain UK-centric would be to miss many opportunities.

What do you see as your biggest achievement in your time here?
I think it would have to be the integration in the management of the College’s assets and liabilities. They must be seen in the same light. It’s not enough to simply think about how we fund Imperial, we must consider what we have available to us and what may be detrimental to the College. Part of my job is negotiating the best possible terms for our borrowing as well as allocating funding. To do this we must demonstrate the fantastic academic work that goes on here, underpinned by a strong financial base.

You also have a responsibility for the support services. How does this fit in with your role?
I simply see this as a responsibility to provide the best support we can for those at the College. Supporting staff and students in their endeavours is ultimately good for the College as, in return, this leads to quality research and results, which means more resources are invested in Imperial.

Is there someone you’d like to see Reporter have a word with?
Contact the editor Alexandra Platt.
Email a.platt@imperial.ac.uk
Professor Peter Cawley shares his experiences of becoming one of Imperial’s most prolific inventors.

Peter Cawley is both a Professor of Mechanical Engineering and an inventor. Three of his patented technologies have been licensed and he has been involved with three early-stage companies, including Integration Diagnostics Ltd, which develops handheld diagnostic equipment for testing the success of dental implants and was recently sold to Biolin AB.

One of Peter Cawley’s first encounters with commercialisation involved a slightly unusual application for his work. His team successfully created a test to measure the ripeness of fruit, enabling shops to sell a ‘ready to eat’ range, something now commonly seen in supermarkets. He explained: “An old friend who farmed avocados came under pressure from a supermarket to find a way to test fruit ripeness. He contacted me and I realised we could solve the problem with one of our existing technologies, in which an automated lightweight striker taps an object and uses the vibrations to assess its density. We had just never thought of using it in this way”.

Professor Cawley’s most recent collaboration agreement is with BP to develop a monitoring device to measure the wall thickness of metal pipes. The driving motivation of Professor Cawley’s work is solving real industrial problems like these and he believes collaboration is essential.

Professor Cawley is also the lead academic in the EPSRC-industry-funded UK Research Centre in Non-Destructive Evaluation which he set up in April 2003. The Centre is based at Imperial and has 14 full industrial members including Rolls-Royce, BNFL, Airbus, Shell, SERCO Assurance and BP. It also includes collaboration with five other universities. He once again stressed the importance of collaboration saying: “This group is essential to our work. We are able to meet regularly and discuss real problems that these companies are facing. It is where I met the contact for my recent licensing deal with BP”.

Discussing the differences between forming spin-out companies and licensing technologies to industry, Peter explained he personally prefers the experience of creating spin-outs because of the overall control of the direction of the technology. However, he explains: “Not all the technologies I have commercialised were suitable to spin out because they were too problematic or trying to enter a difficult market. If there was an obvious licensee, it was also more appropriate to licence the technology.”

— Charlotte Stone, Imperial Innovations

Imperial Innovations may be able to help you find an alternative commercial application for your research. For further information, please visit www.imperialinnovations.co.uk or contact the technology transfer team on 020 7581 4949.

Celebrating long service

This new feature celebrates people who have spent a significant length of time working for the College. In each edition Reporter will feature staff who are celebrating anniversaries of 20, 30 or 40 years at Imperial.

Mr Roger Pownall, Bars Manager, Catering Services, celebrates 30 years of continuous service at the College

‘A little village in South Kensington’ is a phrase Roger Pownall has used to describe Imperial over the past 35 years and says it is the people who have kept him here. Although he celebrated 30 years of continuous employment at the College in January, he has been part of the community since October 1971 when he arrived as a Chemistry undergraduate. He was Manager of the Southside Bar for 24 years and currently manages Harrington’s bar, the shop on Prince’s Gardens and the Ethos café. In these roles, and as President of the Rugby Club, Roger has come into contact with a vast number of students and values the strong network that draws alumni back for a drink at the College bar years after they have left. He is pictured here in front of a print of the Royal College of Science building where he studied Chemistry in his early days at Imperial.

40 years

Mr Martin Gill, Technician, Department of Earth Science and Engineering.

30 years

Mrs Fiona May, Senior Research Support Technician, Division of Cell and Molecular Biology.

Mr Roger Pownall, Bars Manager, Catering Services.

Mrs Piera Brambilla, Technician, Department of Physics.

Professor William Jones, Professor of Combustion, Department of Mechanical Engineering.

20 years

Dr Joan Tilburn, Research Fellow, Division of Investigative Science.

Mr Jack David, Technician, Department of Mechanical Engineering.

Mr Harminder Flora, Research Officer, Department of Mechanical Engineering.

Staff featured have celebrated anniversaries during the period 15 January to 6 February 2007. Data is supplied by HR and is correct at the time of going to press.
Mr Vincent Chang, Humanities
Miss Yvonne Cheng, Business School
Mr Stuart Coleman, Institute for Mathematical Sciences
Mrs Margaret Collett, NMH
Dr Astrid De Wijn, Earth Science and Engineering
Dr Daniel Emmerson, Chemistry
Mr Joseph Forrest, SORA
Mrs Jackie Gadd, Human Resources
Dr Victor Gomez Roman, Investigative Science
Mr David Gray, Finance
Dr Maxim Grigoryev, Institute for Mathematical Sciences
Dr Qingyang Guan, Mathematics
Mrs Edina Hamzic-Maguire, Faculty of Engineering
Mr Stephen Hare, Medicine
Mr Christopher Harris, Investigative Science
Mr Roy Harris, Investigative Science
Miss Lara Hayward, Library Services
Dr Stephen Hicks, NMH
Miss Kathryn Johnson, SORA
Mrs Emira Khalili, Institute for Mathematical Sciences
Dr Eugene Kuzmin, SORA
Miss Alessandra Lanfrancotti, SORA

Moving in. moving on.

Please send your images and/or brief comments about new starters, leavers and retirees to the Editor, a.platt@imperial.ac.uk who reserves the right to edit or amend these as necessary.
what's on

7 February 2007 17.30–18.30
What is Algebraic Geometry?
Professor Alessio Corti
INAUGURAL LECTURE
» Clore Lecture Theatre, Huxley Building
Registration in advance: amy.thompson@imperial.ac.uk

What is Algebraic Geometry?
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14 February 2007 12.30–14.00
Women of Imperial College Lunch
Guest Speaker Professor Lesley Regan, Head of the Department of Obstetrics and Gynaecology
» 170 Queen’s Gate
Registration in advance: c.enright@imperial.ac.uk

15 February 2007 17.30–19.00
Meeting the Energy Challenge
Shell–Energy Futures Lab Clean Fossil Fuels
Lecture by Dr Jan van der Eijk, Group Chief Technology Officer for Shell International BV
» Lecture theatre 1, Blackett Laboratory
Registration in advance: v.harding@imperial.ac.uk

20 February 2007 19.00–20.00
Relieving 500 Million from ‘Forgotten Diseases’
Professor Alan Fenwick OBE, Chair of Tropical Parasitology, Director of the Schistosomiasis Control Initiative
» Lecture Theatre G34, Sir Alexander Fleming Building
Registration in advance: admin@friendsofimperial.org.uk

27 February 2007 18.00–19.00
Medical Imaging and Computational Physiology: the IUPS Physiome Project
Professor Peter Hunter, Director, Bioengineering Institute, University of Auckland
» Lower Ground Lecture Theatre, Tanaka Business School
Registration in advance: madhna.erny@imperial.ac.uk

volunteering

This week’s urgent project...
Robo Lab Volunteers
Project ID: 1831. For: Clapham Youth Centre
Time(s): Friday evenings
Location: London SW3 (nearest tube Clapham Common)

Volunteers needed to provide guidance and support to young people during Robo Lab sessions. These sessions teach young people to control technology, including the LabView programming language based on the Lego Mindstorms NXT product. Volunteers will need an understanding of control technology, knowledge of a programming language and clear communication skills.

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

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

classifieds

Holiday cottages near Pembrokeshire Coast
Panoramic views overlooking Preseli Hills and Fishguard Bay. Local cliff walks and nearby NT beaches. Each with two bathrooms, log fires and good heating. Farmhouse: disabled friendly, four bedrooms; cottage: three bedrooms. Please telephone Isobel Cox on 01973 856114 for more details.

Flat to rent in Chelsea
Lovely, lower ground self-contained (own entrance), fully furnished one-bedroom flat in Chelsea. Close to Gloucester Road and South Kensington underground stations (zone one). Email isobel.anderson@imperial.ac.uk for more details.

Flat to rent in N. London
Large one-bedroom flat (near Turnpike Lane, Piccadilly Line, 40 minutes S. Ken). Double bedroom with fitted wardrobes, large sitting room with piano and sofa bed, very large kitchen/diner leading to lovely garden. Rent £720 pcm + utilities + appropriate council tax. Minimum let six months. Phone Debbie on 020 7381 5531 or 07966 466265 or email lsk@imperial.ac.uk for more.

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