Tribute to women in science

Baroness Onora O'Neill, left, unveils a bronze bust of Dr Elsie Widdowson with Professor Dame Julia Higgins, who introduced the afternoon's proceedings.

Alex Platt Editor

A PERMANENT encouragement to women working in science, engineering and technology in higher education was unveiled at the College last week, in the shape of a bronze bust of Imperial graduate Dr Elsie Widdowson.

Baroness Onora O'Neill, Principal of Newnham College, Cambridge, unveiled the bust, a copy of the original by Margaret Bainhouse, a principal of the Royal Society, which will now be on permanent display in the College’s main entrance at South Kensington Campus. She spoke of her pleasure at being asked to unveil the tribute: “It has been a pleasure to hear Elsie’s history. We can imagine the incredible amount of pressure she would have been under, holding her position in the world of science.” Dr Widdowson’s career began with a BSc in Chemistry from Imperial in 1928. She then spent the next year working in Imperial’s newly founded Department of Biochemistry and the following three years in the Department of Plant Physiology, where she met her first mentor, Helen Porter FRS, and developed her lifelong love of research. She spent the last 58 years of her career at the Medical Research Council and amongst many other things was responsible for the text The Chemical Composition of Foods, which is now in its fifth edition.

Professor Dame Julia Higgins, Director of the Graduate School of Engineering and Physical Sciences, also spoke at the event explaining how the College’s Academic Opportunities Committee works at addressing the lack of recognition of distinguished women at Imperial. She said: “Dr Elsie Widdowson was one of only three women to graduate in 1928, and her long and fruitful career in research is truly inspirational. When we first discovered her story we were lucky enough to seek and receive her permission to establish the Elsie Widdowson Fellowship, designed to support female academic staff when they return to work following maternity or adoption leave, and to allow them to concentrate initially on consolidating their research activity.”

After the unveiling ceremony, Baroness O'Neill presented the sixth annual Athens Lecture entitled: Re-thinking Informed Consent.

The Athens Lecture is an annual event that celebrates the achievements of women in science. Previous lectures have been given by Professor Lotte Bialyn, M.D., Ph.D, Catherine Cuszkov, European Southern Observatory, Professor Dame Lesley Rice, St Bartholomew’s Hospital, Dr Sue Ion, British Nuclear Fuels, and Professor Wendy Hall, University of Southampton.

Officer with responsibility for the Support Services. Reporting to him will be:

- Information and Communication Technologies (Heather Allard)
- Human Resources (Chris Goiling)
- Finance (Andrew Murphy)
- Estates Project Management (Dave Howe)
- Facilities Management (Nick Razzle)
- Property Management (Neil Juck)
- Research Services (TBA)
- Commercial Services (Paddy Jackman)

Dr Knight will chair the Support Services Committee which will replace the Operations Committee. The new committee will have two strands to its remit, covered by separate meetings on a monthly basis. One meeting will be to report on and review the quality of service provided by the support services (listed above). The other will involve the Faculty Operating Officers, thereby engaging the customers of the Support Services, Departments, Divisions and Faculties.

In another reorganisation, the Capital Investment Planning Group will be restructured into a Portfolio Review Board. It will be chaired by Deputy Rector Sir Lex Buxton and managed by Director of Project Management, Dr Chris Tolver. The Board’s remit includes the planning and prioritisation of all new College projects and the coordination of related cross-faculty and cross-support service issues.

Reorganisation of Support Services

Caroline Gautier Communications

CHANGES to the way the College’s support services are managed, which aim to provide a more efficient and integrated service to Faculty and academic staff, were announced this week.

The new system, which is effective immediately, sees Chief Finance Officer Dr Martin Knight taking on the role of Chief Operating Officer with responsibility for the Support Services.

Two new FRS for Imperial

Abigail Smith Communications

An engineer and a medic from Imperial are among 44 distinguished scientists newly-elected to the Fellowship of the Royal Society.

Professors David Elwain, Mechanical Engineering, and Marc Feldmann, Kennedy Institute of Rheumatology, bring Imperial’s total number of Fellows of the Royal Society to 61.

Professor Elwain is an expert in the field of vibration engineering and the dynamics of rotational machinery. He is currently the director of the Centre of Vibration Engineering at Imperial, which includes the Rolls Royce University Technology Centre. He comments: “Throughout my career, with my colleagues and students at Imperial, I have worked closely with Rolls-Royce so I’m pleased that the fellowship explicitly recognises that long collaboration.”

Professor Marc Feldmann, head of Imperial’s Kennedy Institute of Rheumatology, is recognised for his discovery of anti-TNF (tumor necrosis factor) treatment for rheumatoid arthritis, which has led to a new therapy used by more than a million patients.

The work of Professor Feldmann and his colleague, Sir Ravinder Maini, has led to the development of new drugs, which have proved effective in patients previously resistant to treatment. Most importantly, they also protect the joints from further destruction. They were awarded the Cruft’s Prize in 2000 and the Albert Lasker Award in 2003 for the development of this new therapy.

Fellowships are given to distinguished scientists by the Royal Society in recognition of ‘contribution to science, both in fundamental research resulting in greater understanding, and also in leading and directing scientific and technological progress in industry and research establishments’.

IN BRIEF

Hand wins Wolfson award

Professor David Hand, Department of Mathematics, has been awarded a Wolfson Merit Award by the Royal Society. The grant, entitled Pursuit discovery theory and methods, runs until 31 March 2011. The primary aim of the Royal Society Wolfson Research Merit Award scheme is to enable UK-based distinguished scientific researchers of "outstanding achievement and potential" to develop and implement new areas of research. Professor Hand is best known for his work on the foundations of statistics, and in particular for his work on the foundations of statistics.

New Head in Medicine Faculty

Professor Charles Pusey, has been appointed Head of Postgraduate Medicine for the Faculty. He will be responsible for leading the Faculty’s activity relating to postgraduate medical education and training. Professor Pusey is currently a Professor of Medicine and Consultant Cardiologist and Director of the Heart Failure Unit at the London Hospital.

Bright Idea nominated in Europe

Research carried out by Professor Donald Bradley, Head of Physics, was recognised with a nomination in the first-ever European Inventor of the Year awards this month.

Professor Bradley received the nomination for his work on the development of high-performance, low-cost, ultra-sensitive photodiodes (PLDAs), a technology based on his discovery that certain plastics can be made to emit light. It is this kind of innovation that the awards, launched by the European Commission and European Patent Office, are designed to reward and promote. Despite not being successful this time, Professor Bradley said: "It’s an honour to be nominated for this prestigious award along with my colleagues Richard Friend and Jeremy Burroughes. Europe’s global competitiveness very much depends on encouraging inventors to run with their ideas.”

Travel bursary awarded

Mansoor Ansari, a PhD student in the Department of Chemical Engineering and Chemical Technology, has won a Particle Technology Subject Group bursary from the Institution of Chemical Engineers to attend the World Congress on Particle Technology in Orlando, Florida. The modest travel bursary competition aims to promote research excellence in the field and to enable promising PhD students to gain experience by study visits overseas. Mansoor explained: "My objective is to develop a theoretical approach to particle size prediction in a binder granulation process—a vital process step in chemical, food and pharmaceutical industries."
Playing the game

Alex Platt Editor

A CAREER in the computer games industry may beckon for Imperial’s computer science graduates following a games and media event held last week.

Senior figures from companies including Sony and Lionhead Studios converged on the College to persuade students from taking a job in the City.

The day of talks, presentations and demos put together by the Department of Computing explored the role of computer science and software engineering, and the opportunities open to students, in the computer entertainment industries.

Focusing on topics such as artificial intelligence, robotics and building virtual environments, the event brought together a range of speakers working within the industry. These included Peter Molyneux, CEO of Lionhead Studios and creator of the ‘God game’ concept, which gives players control over the lives of a small population of computerized people, who share his vision of the future of games technology and design.

Ulrich Kadokoski, a postgraduate in bioinformatics attended the event last year too. He said: ‘Despite this not being my specific area of study, I enjoyed the event last year and was keen to come again. I was keen to come again. It was keen to come again. The windows from 1890 and possibly came from Pimpernel’s music room at his house in St John’s Wood. The figures represent art, music and literature, which were Professor Pimmer’s interests.

At the time of their donation, they were thought to have been made by Edward Burne-Jones, a member of the Pre-Raphaelite Brotherhood and designer for Morris and Co., the company Burne-Jones and William Morris founded to promote the Arts and Crafts movement. However, they are now thought to be by an artist from the circle of Henry Holiday and to have been made by Powells of Whitefriars.

Pimmer represents an early link between the histories of St Mary’s Hospital Medical School and Imperial. He held a lectureship in pathology at St Mary’s from 1898 to 1902 and then became director of the cancer laboratories at the Lister Institute until his appointment to a new chair of comparative pathology at Imperial College in 1915, where he became renowned for his lectures on immunology.

The frames were made especially for the windows by the College carpentry workshop and were installed for the St Mary’s and Imperial morgan exhibition in 1988 and were shown to advantage in the Queen’s Tower illumination ceremony in 1989.

The Faculty of Natural Sciences celebrated the arrival of Professor Fotsis Kafatos (pictured here with Nathan Richardson, left, and Peter Dukes from the MRC) and his research team last week with an afternoon of scientific talks. Professor Kafatos gave an inspirational talk on his pioneering research career, most recently using molecular biology and immune immunity to reparameter malaria research. The afternoon closed with a lecture from Professor Alan Ezekielz, Harvard University, who paid tribute to Professor Kafatos’ international scientific leadership. Look out for A Ward with... Professor Kafatos coming soon.

Record total for telethon

Rosalind Griffin Office of Alumni and Development

EACH year, the Office of Alumni and Development runs two eight-week long telethons, contacting alumni by letter and telephone to raise money for the Student Opportunities Fund (SOF).

This year’s telethons have raised more than ever before. Alumni have demonstrated an overwhelming level of support and over £13,000 has been received in gifts, which will go straight to supporting the fund. More than 500 new donors to the College have been attracted this year, as well as 250 people who have been encouraged enough to make another donation.

The Student Opportunities Fund is a collegiate-wide scholarship fund providing support for those students who need it most, many of whom would not have been able to consider taking up their place at Imperial without the scholarship. Over the last three years the SOF has supported 22 undergraduate and postgraduate students studying a wide variety of subjects. From the next academic year even more undergraduate scholarships will be offered in order to attract increasing numbers of talented applicants.

This is just one of the ways in which former students of the College can directly help current and future students. As part of the College’s centenary year, alumni will be asked to consider making a gift to one of three areas: student support, the Library and the Imperial College Union refurbishment.

Donations from alumni and staff are extremely important to the College and it is encouraging to see the increase in support each year.

For more information visit: www.imperial.ac.uk/alumni/supporting/sof or email supporting@imperial.ac.uk.

The Queen’s Tower stained glass windows

For many years, the stained glass windows to the Queen’s Tower were thought to have been designed by Edward Burne-Jones.

THI windows in the lower arches of the Queen’s Tower were presented to College in memory of a staff member, Professor Henry George Pimpernel (1856-1918), in 1921. The windows date from 1890 and possibly came from Pimpernel’s music room at his house in St John’s Wood. The figures represent art, music and literature, which were Professor Pimpernel’s interests.

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Nietzsche: "The future will be..."

Schiller: "Patrie, du bist verheiratet...

Dostoevsky: "...he pressed forwards.

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From Mendel to the Maldives

Tony Stephenson Communications

LEANNE Bellamy, a fifth year medical student, has been awarded the George Mendel medal as Britain's top young researcher in biotechnology at the SET (Science, Technology and Engineering) Young Researchers Day. She also swapped the size of £5,000 which she intends to spend on a trip to the Maldives.

Leanne won the award for her research, which suggests how genetically pre-pregnant women can leave them at an increased risk of cardiovascular disease later in life. The Professor showed pregnant women with pre-ecclampsia carried a significantly increased risk of cardiovascular disease. With 70,000 women affected by pre-eclampsia in the UK each year, this could be a significant cause of ill health and potential mortality for large numbers of women," said Leanne.

Pre-eclampsia is a complication which can occur in pregnancy, affecting one in 10 women. It is caused by a defect in the placenta, which joins mother and baby and supplies the baby with nutrients and oxygen from the mother's blood. This can cause low birth weight and other problems for the baby. Despite the numbers who could potentially be affected, there are currently no systems in place to monitor how pre-eclampsia could affect health in later life.

We would like to see the government introduce a surveillance scheme to monitor women at risk. This could prove of enormous significance, reducing not only the burdens of cardiovascular disease to the NHS, but also helping women to take responsibility for their own health, added Leanne.

Leanne began the project as part of her BSc, under the supervision of Dr David Williams, whom she describes as a "brilliant supervisor", having enjoyed a placement working in obstetrics and gynaecology, and winning the medal for the subject in her year.

Leanne was attracted to this area as she is keen to do academic medicine, enjoying the mixture of patient care and research, citing the importance of patient-led research that provides direct benefits.

Leanne chose Imperial, as she wanted to work in one of the more "exotic" parts of her home town of Torquay, describing Imperial as "a wonderful place" and being awed by the Sir Alexander Fleming building upon first seeing it.

Professor Stephen Smith, Principal of the Faculty of Medicine commented on the award saying: "Leanne's work is incredibly innovative yet simple, and could make a huge difference to many people. Academic medicine has an increasingly important role to play in providing for the health and wealth of the nation, and young researchers like Leanne are going to be essential in helping the UK to remain at the forefront at scientific and medical research."

Jolly good fellows

Wendy Raeside Communications

THIS year's distinguished academic to be elected to Fellowship of Imperial College London have been announced. They will be formally admitted by the Chairman at the Postgraduate Awards Ceremony on Wednesday 31 May in the Royal Albert Hall.

Professor Sir John Lawton

Professor Sir John Lawton is one of the world's most distinguished environmental scientists and an outstanding leading scientific administrator. He has had an extraordinary influence in both ecology and environmental science.

Sir John, the most cited environmental biologist in Europe, was elected to the Royal Society in 1989 and has received numerous prizes including the Gold Medal of the British Ecological Society in 1987, the Ecology Institute Prize in 1996 and the Japan Prize in 2004. He is currently chair of the Royal Commission on Environmental Pollution and President of the British Ecological Society. For his service to science, scientific administration and conservation, he was created CBE in 1997 and knighted in 2005.

Professor Frank Leppington

Professor Frank Leppington, has had a long and distinguished career at Imperial. He joined the Mathematics Department in 1954 as an Assistant Lecturer and completed 40 years' service before retiring in 2004.

Professor Leppington's lectures courses were always popular with students and he was one of the first in Mathematics to receive the College's Excellence in Teaching Award. He was Principal of the Faculty of Physical Sciences from 2002 to 2004 and Acting Principal of the Faculty of Engineering in 2004.

Sir Christopher O'Donnell

Sir Christopher O'Donnell is currently Chief Executive of Smith & Nephew Plc, one of the UK's top 100 companies. Sir Chris- topher graduated from Imperial in 1968 with an Honours degree in Mechanical Engineering and began his career working for Davy Astorhome, setting up steel mills. In 1972, he moved to Vickers, and joined Smith & Nephew in 1988, becoming Chief Executive in 1997.

Sir Christopher is a member of the Institution of Mechanical Engineers and a Chartered Engineer. In 2003, he was knighted in the Queen's Birthday Honours for services to the medical devices industry.

Sir Christopher retains his close links with Imperial. He helped develop the Centre for Biological and Medical Systems (now the Department of Bioengineering), in which Smith & Nephew has funded research worth £1 million and a number of scholarships.

Dr Mark Walport

Dr Mark Walport was appointed as Director of the Wellcome Trust in June 2003. He heads one of the world's largest biomedical research charities, which spends some £400 million each year in pursuit of its mission to foster and promote research with the aim of improving human and animal health. Before joining the Trust, he was Professor of Medicine and Head of the Division of Medicine at Imperial, where he led a research team that focused on the immunology and genetics of rheumatic diseases. He was appointed a member of the Council for Science and Technology in 2004.

Professor Victor Wynn

Professor Victor Wynn is Chairman of the Alzheimer's Research Trust and the Heart Disease and Diabetes Research Trust.

His career began in 1950, when he came to St Mary's Hospital Medical School as a National postdoctoral Fellow. Initially, he worked in the Department of Surgery, but his unit rapidly expanded and he moved to the Department of Chemical Pathology.

Professor Wynn recognised the importance of quantitative methods in medical research, resulting in one of the world's first metabolic medicine departments. He was also instrumental in the purchase of the Mini Wing tables, an invaluable asset for both St Mary's Hospital and the College.

Following retirement from the Medical School in 1986, Professor Wynn founded the Cavendish Clinic to continue his research interests in heart disease and diabetes. He established the Heart Disease and Diabetes Research Trust and the Alzheimer's Research Trust, which have contributed £15 million to research in heart disease and diabetes.

Media mentions

Abigail Smith Communications

Now you see me, now you don't

Invisibility cloaks may no longer be confined to the world of Harry Potter, thanks to work carried out by researchers at Sydney University. The team has found that they can make certain objects vanish by placing them close to a material called a superlens, which effectively erases the light bouncing off the object. Professor Sir John Pendry, Physics, who invented superlenses, tells The Guardian (03.05.06) that the technology has great potential for hiding objects from radar. "The secret is having the cloak itself be invisible and if you can do that cheaply and efficiently and it doesn't need to be metres thick, it would be extremely valuable for stealth," he says. "The military is extremely interested in this."

Diseases the world forget

Governments of wealthy, industrialised countries need to take a broader view of the health challenges facing sub-Saharan Africa, writes Alan Fowlewick, Epidemiology, Public Health and Primary Care, in a letter to The Independent (16.03.05). Arguing that G8 governments should make tackling a tropical diseases such as schistosomiasis, elephantiasis and river blindness a high priority, he says: "With the realisation that they are responsible for massive disability in sub-Saharan Africa, and elsewhere in the developing world, a community of tropical disease specialists has identified the neglected tropical diseases as a fourth member of an uneasy alliance, together with "the big three" diseases—HIV/AIDS, malaria and tuberculosis."

Can't get the staff?

Recreating top quality staff is becoming more difficult for business schools, according to The Independent (11.05.06), which suggests that a shortage of people with business-related PhDs could be partially to blame. Imperial's solution is to "narrow its focus to recruit teachers with specific business specialisms that relate to engineering, medicine and mathematics, according to David Begg, Principal of TANKA Business School. He adds: "Business schools are getting more like football clubs. Global competition has driven up prices."

Evidence of monster meteorite unerased

A football-sized chunk of a several kilometre wide meteorite discovered in South Africa is an exceptional find for scientists, reports Nature (10.05.06), because monster space rocks usually break up into little more than pebbles when entering Earth's atmosphere. Explaining that smaller meteorites can survive intact because the Earth's atmosphere decelerates them, Phil Bland, Earth Science and Engineering says: "The big guys have so much mass they don't really feel the Earth's atmosphere at all."
A day in the life of...

Elaine Holmes, Reader in Biological Chemistry, has worked at Imperial for seven years and describes the best thing about her job as getting results. She said: "By far the most satisfying aspect of my work is helping students and post-docs get good and usable results. It makes the long hours spent in the lab worthwhile." Originally trained as a biochemist, Elaine undertook a PhD in Chemistry and now works in molecular neuroscience, which combines a knowledge of biochemistry with analytical spectroscopy and multivariate statistics. The students working in the laboratory come from varied backgrounds spanning biology, chemistry, mathematics and even astronomy.

Reporter's Alex Platt went to meet her to find out about a typical day in her working life.

8.00 Elaine catches the bus to the College and spends the first hour of her day checking and replying to her emails, as this tends to be the only reasonably quiet part of her day.

9.00 Elaine's first appointment of the day is a meeting with a post-doc to look at their results. This particular student is studying neurodegeneration, as part of a project on neurological disorders. Elaine spends time looking at the results gained from studying blood samples analysed by one of the lab’s four 600 MHz NMR spectrometers. She said: "I find supporting students as they begin their research careers really rewarding. The interaction lets me see things with fresh eyes. It’s a big part of my job, as I’ll oversee about 10 PhD students each year."

12.00 Lunch is a sandwich at her desk and another chance to catch up on email correspondence.

13.00 Conference calls with various universities and pharmaceutical companies are a regular occurrence. This afternoon Elaine takes a call to discuss the organisation of a conference in America in which she will showcase some of her most recent work.

14.00 About a third of Elaine’s time at work is spent travelling. She said: "Today I’m making travel arrangements to go to a conference in Sweden. I usually end up in Europe or America. It might sound glamorous, but the majority of the time I see the inside of an airport, a hotel and then a conference room!"

14.30 Elaine spends time preparing for the conference. She is pulling together a presentation on the role of metabolomics in systems biology this time and will often spend her evenings putting the finishing touches to a presentation.

15.30 Several medical departments at the College regularly collaborate with Elaine and her colleagues. This afternoon she spends some time in discussion with some visiting medical students bringing them up to speed on a project, which is aiming to establish why blood pressure and cardiovascular disease differ in individuals, in different societies, by investigating gene-environment interactions.

17.00 Elaine spends the final part of her day preparing for an occasional course that she teaches to PhD students. She said: "I enjoy having the chance to lecture occasionally. The particular course I’m working on at the moment is to train PhD students in the general applications based around chemometrics."

19.00 Elaine finally heads home for the day. She said: "Long days aren’t uncommon and often when I get home I’ll end up tying up a few loose ends from the day. Although recently I’ve been helping my daughter with her GCSE chemistry homework—she says she wants to be a journalist—when she grows up after watching her mother put in the long hours as a scientist! Spending long hours at work means you get to know the people you’re working with extremely well and I’m happy to say many of them are now my friends, as well as my colleagues."

The best thing about Elaine Holmes’ job is getting results.

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Reunite to communicate science

Heather Campbell Office of Alumni and Development

THE Office of Alumni and Development (OAD) has launched its annual alumni reunion programme with the 2006 Alumni Reunion, which will take place on Saturday 16 September on the South Kensington Campus. The event will welcome back alumni who graduated any number of decades ago to celebrate their landmark birthdays.

The theme for this year’s reunion is Communicating Science and will incorporate a wide range of flexible activities. The day will begin with a welcome from the Proctor, followed by keynote speaker, Professor Robert Winston, who will entertain alumni and their guests on the subject of Can we trust the scientists?

After a buffet lunch, alumni will be encouraged to participate in various afternoon activities from lectures to museum and campus tours. The event will close with a dinner, which will provide a wonderful opportunity for alumni to catch up with old classmates and reminisce about their student days. Family orientated activities have also been included in the programme of events to accommodate alumni who want to bring their children along.

With alumni from all disciplines invited back to the College for the reunion, the OAD is looking to work with departments around the College and encourage them to open their doors and welcome back former students. Bookings received so far have shown a significant interest in alumni wanting to tour their former departments and be brought up to speed on the news of the College. The OAD will be contacting individual departments over the next few weeks to investigate how this can be best achieved.

For more information about the 2006 Alumni Reunion visit www.imperial.ac.uk/alumni/ events/reunions.