2005/06

Our Mission

The University's mission is the advancement and dissemination of knowledge and understanding. As a leading international centre of academic excellence, the University has as its core mission:

- to sustain and develop its position as a research and teaching institution of the highest international quality and to benchmark its performance against world-class standards;
- to provide an outstanding educational environment, supporting study across a broad range of academic disciplines and serving the major professions;
- to produce graduates equipped for high personal and professional achievement; and
- to contribute to society, promoting health, economic and cultural wellbeing.

As a great civic university, Edinburgh especially values its intellectual and economic relationship with the Scottish community that forms its base and provides the foundation from which it will continue to look to the widest international horizons, enriching both itself and Scotland.

"At the heart of all that we achieve are our students and staff, and our alumni and friends, and I must thank the entire University community most warmly for the great achievements of the last year."

2005/06

Principal's Foreword

Each year the *Annual Review* presents us with the opportunity to capture as best we can a flavour of the life of the University over the previous year. The fact that this is such a challenge is a measure of the breadth of activities at the University, as well as the energy and talent of its staff and students.

The University has again enjoyed success in many areas over this past year, working in partnership with a range of individuals and organisations to build on the strength of our research and teaching, and develop in a way which benefits both the University itself and the wider world.

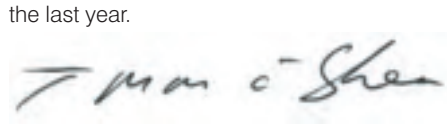
New links have been forged locally, nationally and internationally. The initiative led by the School of Mathematics last spring to help local sixth-year students with their exam revision is a great example of positive joint working on a local level (page 18). On an international level, we were delighted to have been chosen by the Chinese Ministry of Education to be the home of the first Confucius Institute in Scotland, a resource which we hope will be of benefit to Scotland as a whole (page 4). The year also saw the launch of our Enlightenment Lecture Series (page 24), which has proved extremely popular with both the University community and the local community alike and has afforded us the privilege of welcoming some of the world's most influential figures to Edinburgh.

In the *Annual Review* of two years ago, I highlighted the relevance and the innovative nature of our research portfolio. The University's reputation for influential research is now even stronger. This year's *Review* highlights some of the exciting research colleagues are carrying out into various aspects of mental health, the results of which have the potential to benefit all of us. This includes the fascinating work of Professor Deary and his team into the effects of ageing on the brain (page 10), and the increasingly important research by Professor Porteous and his colleagues into schizophrenia and manic depression (page 14).

The University takes great pride in its history and its tradition of excellence in research and teaching, and indeed in other areas which fall into neither of these categories. It is these solid foundations which form the basis for the confident, forward-thinking and progressive nature of the institution today. Nowhere is this better evidenced than the way in which we have embraced technology in the use of e-Learning to support student education, particularly in the College of Medicine and Veterinary Medicine though the development of impressive Virtual Learning Environments (page 22). Within the University we are also undertaking strategic research and taking local action to combat one of the great challenges of our time, that of global warming (page 26). I am sure that the University community will embrace the 'Switch and Save' campaign with typical enthusiasm so that our *Annual Review* in four years' time will report success in meeting our ambitious target.

I must also mention one of the highlights of last year, the launch of our new fundraising campaign (page 16). The University of Edinburgh Campaign was launched last October on a most memorable evening in the heart of the Old College quadrangle. Our aims for the Campaign are closely aligned to our vision and our hopes for the future of the University, and the projects that it will support will be key to ensuring that we can continue to compete at the highest possible level with the highest quality staff and students, and the best possible facilities for them to use.

I do hope that this *Review* achieves its objective of giving you a flavour of what the University has been about over the past year and that you will enjoy reading it. I am grateful to everyone who has contributed to the University's wonderful work over the past year, only a few aspects of which can ever be highlighted in a publication of this length. At the heart of all that we achieve are our students and staff, and our alumni and friends, and I must thank the entire University community most warmly for the great achievements of the last year.



Professor Timothy O'Shea BSc, PhD, FRSE

2005/06

Shaping the Future of Scottish-Chinese Links

In Beijing last March, Scotland's First Minister, Jack McConnell, and the Chinese Minister of Education, Zhou Ji, jointly announced the establishment of the Confucius Institute for Scotland, highlighting the major role the University of Edinburgh is playing in opening up Scottish links with China.

The Confucius Institute for Scotland, based in the University of Edinburgh, has been set up with support from the Scottish Executive and with the prestigious Fudan University in Shanghai and Tsinghua University in Beijing, two of China's foremost universities, as its principal Chinese partner universities.

Its main objectives are: to promote and deliver the teaching of Chinese language in Scotland; to promote academic study and public awareness of Chinese culture; to act as an intermediary between Scotland and Scottish institutions and China in linguistic, educational, cultural and business fields; and to provide educational and research activities to support Scottish-Chinese links.

The Ministry of Education in China intends to open around 100 Confucius Institutes across the globe by 2010, and they are keen to use the highest-ranking universities. Edinburgh is one of only three universities in the UK, and the only one in Scotland, to host a Confucius Institute.

"We have deep institutional and educational links with China, and the Chinese government recognise that the links with universities such as Edinburgh are crucial to the development of the high-class research and education that are needed by their growing knowledge economy," says University Vice-Principal Professor Geoffrey Boulton, who is in charge of developing the University's links with China.

"China is currently a low-wage economy which must develop within the next ten years, and that means a need for research and education.

"We can, because of long-standing and developing links, knock on doors that many Scottish institutions and businesses can't at the moment. Crucial to this is our reputation in the areas of research, scholarship and education, where the Chinese seek our engagement. In this, we are helping to spearhead an enterprise which should benefit many in Scotland concerned to engage with China.

"As a research-intensive global institution, we are not an unknown quantity. Chinese institutions have approached us because they know us through our historic links with China and through our international reputation."

Productive collaboration between the University of Edinburgh and China stretches back at least a century and a half. The first Chinese graduate, Huang Kuan, took his MD at Edinburgh in 1855. Since then, outstanding Chinese alumni of the University have included: the late Professor Huang Kun, who worked with Max Born, the Edinburgh Nobel prize-winner in Physics, and who received the 2001 Supreme Scientific and Technological Award from President Jiang Zemin for his pioneering work in solid state physics; Professor Yang Liming, a major figure in nuclear physics in China; and Professor Zhong Nanshan, who identified the SARS virus, and who will receive an honorary degree from the University of Edinburgh in Beijing in 2007.

In association with appropriate Colleges and Schools within the University and those in other Scottish universities, the Institute will promote scholarships relating to China, develop senior visiting fellow programmes and support specific programmes of research, as well as other academic activities such as lecture series, workshops and conferences.

"The Institute will promote and deliver the teaching of Chinese to citizens, business persons and students at appropriate levels," says Professor Natascha Gentz, Chair of Chinese at the University of Edinburgh and Director of the Confucius Institute. "It will also serve as a consulting and linkage centre between the Scottish business community and their counterparts in China, and as a provider of language and acculturation programmes for Scottish entrepreneurs to support their work in China."

In cooperation with the Scottish-China Education Network, the Institute is developing programmes for training teachers of Chinese. It will also provide support for those teaching Chinese in Scotland while putting on programmes of Chinese language for the general public.

This year the Institute, with the collaboration of Dr Dorota Ostrowska of Film Studies, has organised the first major festival of Chinese film in the UK, with outreach activities for schools. It will coincide with an exhibition of Scottish silverware going to China and an exhibition of Chinese modern art (curated by the Chinese Academy of Fine Arts) coming to Edinburgh this autumn.

"The Confucius Institute is for Scotland, not just for the University," says Professor Boulton. "China thinks its culture has been marginalised internationally and they want it recognised."

Importantly, China also wants to be seen as a force for peace, for change and for good.

"China is a society in transition which should not be shunned but engaged with," Professor Boulton continues. "This is most likely to have a 'liberalising' effect. Shouting about Tibet will not bring change. If you want a man to take his coat off, you let the sun shine on him rather than have the wind blow cold over him. Engagement produces collaborative and human contact."

Last year the University and the China Scholarship Council established 20 new PhD scholarships at Edinburgh, while Peking University and Edinburgh agreed that they each would supply three full-fee scholarships, marking an important collaboration between the two universities in research and teaching.

Beijing Film Academy has sent four members of staff and students to Edinburgh to undertake MSc courses in various subjects in the last two years, while a recent documentary about Chinese students at the University of Edinburgh is being shown throughout China this year on China Central Television.

Professor Geoffrey Boulton

Yi Jing Book of Changes

The University's – and possibly Europe's – first Chinese graduate was Dr Wong Fun (Huang Kuan) who graduated MD in 1855. However, the University had acquired its first Chinese book in 1628. Robert Ramsay (later to graduate MA in 1645) presented a fine copy of the *Commentary on Zhou Yi (Yi Jing)* by Hu Guang, printed from wood blocks in 1440 and probably still the oldest printed book in the Library. In 1892 Dr Dugald Christie LRCP LRCS, who studied medicine at the University in the late 1870s, established a hospital in Mukden (Shenyang) in 1883; it was formally constituted in 1892 as the Mukden Medical School and is now part of the National Medical University of China.

Professor Natascha Gentz heads the new Confucius Institute for Scotland, which will help establish business and education links between Scotland and China

2005/06

Shaping the Future of Scottish-Chinese Links, continued

Crucial to these developments is the International Liaison Office (UEILO), which the University opened in Beijing in 2005 to enhance its profile and reputation with top-ranking Chinese universities, to develop research and educational links with these universities and institutes, such as the China Academy of Science, the China Academy of Social Sciences, the Natural Science Foundation and the China Scholarship Council, and to support recruitment.

Through the UEILO, led by Dr Nini Yang, the University is developing links with a number of other leading universities, including Tsinghua, Peking, Fudan, Nankai and Beihang, to continue to develop new and established research-based links, to seek possible articulation arrangements such as joint degrees, joint PhD programmes and research projects and to use these universities as bases for postgraduate and undergraduate recruitment.

"Corporate globalisation of the University began in earnest in the 1990s," says Professor Boulton. "That has meant developing links with international bodies and overseas Higher Education Institutions (HEIs) and being more receptive to the needs of international students and to the distinctive benefits their different perspectives will bring.

"We want 'broad-band' relations with other countries like China, with institutions and in regions of the world which are developing dynamically and have specific needs we are able to address. A broad-band relationship means not only attracting Chinese students but also developing many other forms of collaboration, so that we are seen as a robust and reliable partner.

"We have concentrated on links with prestigious universities in China and we have tried to create scholarships to attract their very best students and to create cutting-edge joint programmes, especially at postgraduate level, such as planned Masters degrees in Advanced Computing, and in Informatics."

There are at present over 500 Chinese postgraduate and undergraduate students at the University, a number likely to double at least in the next ten years, especially as Edinburgh is now associated with the best HEIs in China and is seen as being among the best internationally by Chinese students.

Director of the International Office, Alan Mackay, says: "China will lead future global demand for an overseas education in the next 15 years. The high number of Chinese students currently at the University highlights our strong reputation in China and the major increases in recent years of Chinese students studying abroad. The number of Chinese students studying abroad is expected to reach 200,000 in 2010. The Chinese Vice Minister for Education has indicated that in 2020 the number of Chinese students overseas would reach 300,000.

"However, for many Chinese students the value of studying overseas is not just the qualification but also the experience of living and studying abroad. At the University of Edinburgh there is a very active Chinese Students and Scholars Association and many cultural events are held across the academic year. In our increasingly interdependent world there is real educational value in having Chinese students at our University as they make a valuable contribution to our academic social life and establish important connections with our staff and students for the future."

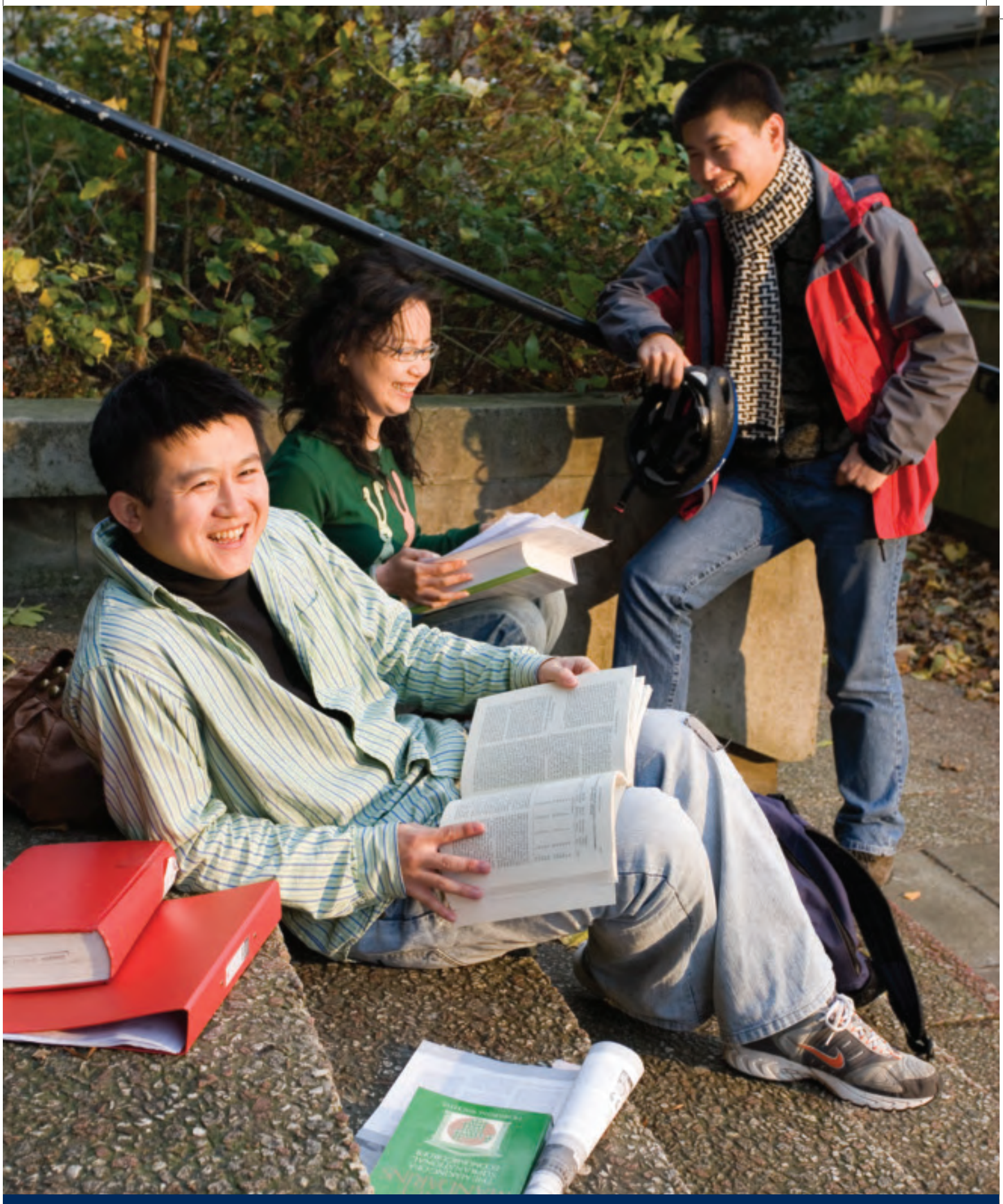
Chinese culture is highly developed, and understanding the cultural base people work from is crucial. "In Chinese culture you have to develop confidence in each other – a confidence which produces a sense of mutual commitment and respect to build up a professional relationship and business relationships," says Professor Boulton. "The Chinese recognise the benefits we can bring as well as the benefits we can gain. It's about enhancing our reputation for unreserved commitment to excellence.

"We have to recognise that if international links are going to be strong they must be of mutual benefit. We have as much to gain from such links as the Chinese do. We have to respond to each other's priorities. It's about partnership."

Plaque to Dr Wong Fun (Huang Kuan)

Professor Bonnie McDougall

The Sino-Scottish Society was founded in Edinburgh in 1929, and in 1930 it was claimed that there were more Chinese students studying for different professions at the University than at any other individual college in the UK. More recently, two of the University's famous links with China were the diplomat and scholar Sir Reginald Johnston, tutor to Puyi, the Last Emperor of China, and the athlete Eric Liddell, who died in China in an internment camp in 1945. The Department of Chinese was established in 1965 under Dr John Chinnery, together with the University Library's East Asian Collection. The Chair of Chinese was established in 1991 with the appointment of Professor Bonnie McDougall. Professor Natascha Gentz is the University's current Chair of Chinese.



Chinese students at the University have the opportunity to learn alongside students from more than 130 countries worldwide

Left to right: students HouChao Li, Li Ding and Dai Wang

2005/06

Going for Gold: Edinburgh's Sporting Talent

These are exciting times for sport in the UK. With London announced as the host of the 2012 Olympics and Glasgow making a serious bid to host the 2014 Commonwealth Games, there is an even greater incentive to find new sporting talent close to home. Edward Nicholas, the new President of Edinburgh University Sports Union (EUSU), is aiming high: "The University is already attracting a number of hugely talented young sports people, many of whom have their sights firmly set on competing at the upcoming Olympics and Games."

The University of Edinburgh has long been recognised as Scotland's leading sporting university. With one of the largest and best-developed multi-sport programmes in Scotland, it was placed fifth overall in the British Universities Sports Association's (BUSA) rankings in 2005/06, while the 2007 *Times Good University Guide* gives Edinburgh a five-star rating for its sport and exercise provision. The University is now aiming to build on this reputation.

"We are achieving all-round sporting excellence, and to move up to fourth place in the BUSA rankings should be achievable within a year. Our ultimate goal, however, should be to become the best academic sporting institution in the UK," says Mr Nicholas.

Jim Aitken, Director of the Centre for Sports and Exercise (CSE), outlines why this is possible: "The University's growing and enviable reputation in sport and exercise is founded on the provision of state-of-the-art facilities and cutting-edge advice and support services. The CSE has a commitment to open and affordable access for all and to establishing productive in-house partnerships between academic, student and service agencies with an interest in sport. In a competitive marketplace, it is this commitment that allows Edinburgh to attract people with outstanding sporting abilities and potential."

Recent sporting success stories to have emerged from the University of Edinburgh include Chris Hoy (Olympic gold and silver in track cycling), Katherine Grainger (Olympic silver in rowing), Mike Hart (Commonwealth gold in power lifting), Ian Edmund (World Championship silver in swimming), Tim Mundon (World Student Games medallist in archery) and Shirley Webb (Olympic hammer thrower). They were all beneficiaries of the University's sports bursary programme, a scheme set up by the CSE in association with EUSU to benefit students with proven excellence in their sporting field.

The University of Edinburgh offers three bursary programmes – for individual sports performers, teams and elite-level golfers – to support the needs of leading student athletes. These programmes allow the recipients to combine their sporting and academic aspirations by providing tailored support, including cash awards, sports medicine care from the CSE's nationally renowned Fitness Assessment and Sports Injuries Centre and expert advice on training.

The hope is that the University's current sports bursars can match the successes of alumni such as Hoy and Grainger. Twenty-two students are recipients of sports bursaries. They include Alan Clyne, a Physical Education student and Scottish Universities Squash Champion and Shanthy Sooriasegaram, an English Literature student and Tae Kwon Do UK gold and European bronze medallist.

Alan Clyne is clear about the benefits the bursary has offered him: "It has allowed me to get the best squash equipment available – the best is expensive and difficult to afford without sponsorship – and I get priority use of courts before my morning lectures, which is a huge advantage."

Shanthy Sooriasegaram intends to live and work in Edinburgh after she graduates so that she can continue to make use of the CSE: "I can't overestimate the importance of the individual training programme that was devised for me at the CSE, which, of course, also has superb facilities," she says. These include a 100-station cardiovascular and 35-station Nautilus gym.

The breadth of talent within the University's sporting community is impressive, and it is not confined to those on the bursary programme. In terms of team competitions, both the men's and women's first hockey teams are competing in the premier league of hockey in Scotland, and both boast current international players. The archery team also includes internationalists and possible future Olympic stars, while the women's lacrosse team is a perennial winner of the British Universities championship.

Aside from team competitions, around 2,000 students regularly take part in the University's intramural leagues, which include no fewer than 56 football and 12 rugby sides. They offer the chance to compete in a more relaxed atmosphere, and offer further proof that sport at the University of Edinburgh is available to everyone.

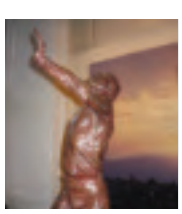
"Whatever your sport and whatever level you want to compete at, there's a club or team for you. And it's not just about competing; it's about meeting and making friends, about enjoyment and recreation," says Edward Nicholas, who himself was first attracted to study at the University of Edinburgh because of its sporting reputation and provision.

"My sports are orienteering and climbing. While still at school I met members of the University's climbing club at Chamonix. They were among the best, and I found them friendly and encouraging. That clinched my coming to Edinburgh, and when I arrived here I already felt part of the University."

"The University's sporting tradition has never been about elitism, even though it has always pursued excellence," explains Jim Aitken. "Our primary aim is to promote the health and wellbeing of students and staff, as well as that of the local community, who can make use of the facilities at low cost. With 11,300 members, the CSE is the biggest 'meet and mix' social facility in the University, as well as one of the largest leisure providers in the country. It promotes self-development, team-building and leadership qualities and skills – all important tools that can be applied in people's wider lives – and in doing so it lies at the heart of what is a great and growing academic sporting institution."

Edward Nicholas agrees: "When I meet with alumni it's not always their academic subjects or their classes that they want to talk about: it's more often their sporting days, their sporting experiences, which they recall with some relish. Sport is at the heart of the University."

Chris Hoy



Eric Liddell's statue in Old College

The University Athletic Club was founded in 1866 under its (Honorary) President Lord Neaves. The Women's Athletic Club, founded in 1900, had been anticipated during the middle 1890s by the formation of a Women's Cycling Club and the Hockey Club of the School of Medicine for Women. Excellence in sport has always been the University's goal, but its highest pinnacles are still the famous achievements of Eric Liddell at the 1924 Olympic Games and the British Empire and United States Games shortly afterwards. 2004 Olympic Gold medallist Chris Hoy and 2000 Olympic Silver medallist Katherine Grainger join him in the Edinburgh University Hall of Fame.

The University of Edinburgh football team achieve a historic win against Keith FC in the Scottish Cup

Michael Hazeldine (in University green), striker and first year medical student

2005/06

The Age of Cognition

When William Wordsworth wrote that "The child is father to the man" he was not to know that whether you live to a ripe old age actually depends in part on your childhood mental ability. But pioneering research led by Professor Ian Deary, Professor of Differential Psychology at the University of Edinburgh, has perhaps given added meaning to the poet's famous line by establishing that a person's IQ at the age of 11 is associated with how long they live.

A Fellow of the British Academy, Professor Deary holds a Royal Society Wolfson Research Merit Award (2003–2007) for his work on human cognitive ageing, for which he also received the first of the annual Chancellor's Awards of the University in 2003. With his colleague, Professor Lawrence Whalley, Professor of Mental Health at the University of Aberdeen, he helped to establish the field of what is now called cognitive epidemiology, the study of how mental ability influences morbidity (illness) and mortality, in an article in the *British Medical Journal* in 2001.

Professors Deary and Whalley also study cognitive ageing across the lifecourse. "By discovering what helps to retain memory and thinking skills in old age it might be possible to prevent some of the age-associated cognitive decrements. In other words, determining the causes of cognitive decline could lead to preventative treatments, bringing us a step closer to a society in which older generations can live dignified and active lives in their later years," says Professor Deary.

"It's important to keep cognitive skills to maintain your independence as you grow older, but how do you measure someone's cognitive abilities unless you know where they started?"

In addressing this crucial question, in 1997 Professor Deary and his colleague discovered that there existed a vast wealth of unique data held by the Scottish Council for Research in Education. On 1 June 1932, practically every child attending school in Scotland and born in 1921 took the same mental test with the same time limit after hearing the same instructions. Thus Scotland was – and remains – the only nation in the world with mental test data for almost an entire birth cohort. What is more, they repeated the exercise in 1947, testing almost all people born in 1936. Retracing and retesting some of these people has allowed the team, uniquely anywhere in the world, to study cognitive changes between age 11 and old age.

The team found a sizeable association between scores on the psychometric intelligence tests (IQ) at age 11 and survival to age 76. They discovered that intelligence was reasonably stable over 70 years and that factors affecting ageing were many and varied, ranging from the genetic to the social.

"We discovered that a variant of the gene Apolipoprotein E, known to dispose people towards dementia, does have a slight negative effect at the age of 80, though not at the age of 11 if you have it. So there is a genetic effect, but only in old age.

"We're also discovering that people who had more white matter lesions in the brain tended to do less well in old age tests and we are doing more research on this biological mechanism. Hypertension (high blood pressure) also seems to be a risk factor for more white matter lesions. Fifteen years ago no one knew about the effects of this gene, or the meaning of these lesions," says Professor Deary.

The research found people who didn't smoke had better intelligence in old age and that bodily fitness goes with better cognition in old age. Social factors also play a role. People with more years of education and with more professional jobs tend to do slightly better. Intellectual engagement, therefore, might be said to keep the brain more healthy. An individual can build up cognitive reserves to call on in later life. Some other research shows that social engagement also seems to help cognitive ability.

Researchers are now looking further at health behaviours. For people born in 1921, for example, growing into adulthood at a time when there weren't health warnings about smoking, there was no correlation between those who started to smoke and their IQ, but there was between those who gave it up in later life.

Part of the team's focus is now on health behaviours, health messages and health literacy in general and their relation to IQ. For instance, is healthy eating related to IQ?

"Our research has indisputably put on the map that your IQ at the age of 11 is associated with how long you live," says Professor Deary. "It affects whether you get cardiovascular disease (the biggest cause of death), high blood pressure and 'all cause mortality'. Our aim now is to try to find out why this association occurs.

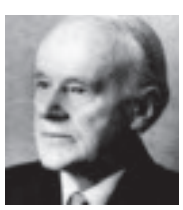
"Many research teams around the world have replicated this association between early life IQ and survival and it's not just explained by social class," says Professor Deary, whose pioneering work has had to convince not a few sceptical critics.

"Presenting IQ scores as health- and death-relevant predictor variables to epidemiologists, the majority of whom seem initially to have a bent toward social-environmental causes of the associations, has been an interesting experience; rather like parading a clever but noisily disobedient and mucky child before staid and suspicious relatives," he adds.

That said, however, many of these critics are now convinced collaborators and co-investigators on this groundbreaking research project.

In short, IQ is a new player in health equalities in the new field of cognitive epidemiology, and in lifecourse cognitive ageing. The University of Edinburgh, in conjunction with its partners, is playing a major role in its development.

Professor Ian Deary



Professor James Drever
primus

James Drever *primus*, the first Professor of Psychology at a Scottish university and a former schoolteacher, joined the University in 1906 as Assistant to the Professor of Education. He became Combe Lecturer in Psychology in 1919, and first holder of the Chair from 1931 to 1945 when his son followed him. James Drever *secundus* was Professor from 1944 to 1967, when he moved to the University of Dundee as Principal and Vice-Chancellor. Following in the promotional tradition, Ian Deary has occupied the Chair of Differential Psychology since 1995, having joined the University as a lecturer in Psychology in 1985.

Professor Ian Deary's research could "bring us a step closer to a society in which older generations can live dignified and active lives in their later years"

2005/06

Equality, Diversity and Alchemy

The University of Edinburgh is going for gold in the promotion of equality and diversity among students and staff – which is as it should be at one of the friendliest universities in the UK.

In the past year the University has gained two prestigious awards in a nationwide initiative that seeks to support women involved in science, engineering and technology, and it has created the new post of Vice-Principal for Equality and Diversity, one of the first of its kind in the UK.

In March, the School of Chemistry became the first subject-specific department in the UK to receive a Silver SWAN (Scientific Women's Academic Network) award in recognition of its commitment to two key areas of SWAN's work: introducing practices which encourage a good life-work balance and fostering policies which encourage success among women involved in science.

The University as a whole received a Bronze award for helping to raise the staff profile of women involved in science, engineering and technology; providing positive support for women, particularly at key career transition points; and influencing the gender balance in the decision-making process.

Professor Lesley Yellowlees, Head of the School of Chemistry, says the Silver award was a vindication of the School's work over a number of years: "We changed the way the School of Chemistry was managed, making it very structured with regular staff appraisals and making it easier for female staff with children to do their work part-time.

"If you help everyone to do better you'll help female staff. It's a holistic approach. I don't want to favour or disfavour anyone. That's why you need to aim for improvement in general and not positive discrimination. Positive discrimination means the playing field is not level. You need to make the working environment good, fair and pleasant to attract people to give their best to the School and be a good team player.

"The University of Edinburgh School of Chemistry has more women academic staff than most UK departments, but in looking to encourage women to apply you are looking for the best and do not want to appoint someone simply because of gender," she says.

The SWAN awards, which are retained over three years, are part of the Royal Society Athena Project, which seeks to promote the careers of women in science, engineering and technology in higher education and research, and to achieve a significant increase in the number of women in top posts.

Professor Yellowlees, who became Head of School in August 2005, now wants to go for gold.

"I'm a chemist, not an alchemist, but I do want to turn silver into gold this year – we're not starting with lead, after all – and we want to encourage other schools in science and engineering to put in for the Athena awards as well," she says.

In May last year the University decided to revitalise its race equality and women's staff networks and will this year move towards a single equality scheme across all areas of the University, reflecting the government's new single equality body, the Commission for Equality and Human Rights (CEHR), which will come into being in October.

"We'll be one of the first UK universities to do this," says Ian Bettison, the University's Equality and Diversity Manager, "and with the establishment of the post of Vice-Principal for Equality and Diversity, this puts the University at the leading edge."

In August 2006 Professor Lorraine Waterhouse was appointed to this new post, which she took up in early 2007. Her role is to help develop policy as part of a cross-University team, addressing the whole population of the University, both staff and students, to develop best practice and to try to evaluate progress.

"I want to stimulate thinking about equality and diversity, to try to identify issues that are important to students and staff, and to focus on practical action informed by international practice," she says.

"Working closely with the student leadership I hope to identify ideas for developing around all issues concerned with creating a community that has an openness on areas including culture, race, disability and gender; to open up access to all students so there are no artificially imposed barriers.

"Equality and diversity should start from the moment a student makes an enquiry and be effective right through until that student is a graduate."

With a background in child welfare and social work, Professor Waterhouse believes her experience in these areas will be of immense value.

"Extensive experience in the National Health Service, which is a service for all, was a powerful part of my education, dealing with families from all backgrounds who received exactly the same treatment. This complete even-handedness in the way all were treated will certainly inform my work in my new post," she says.

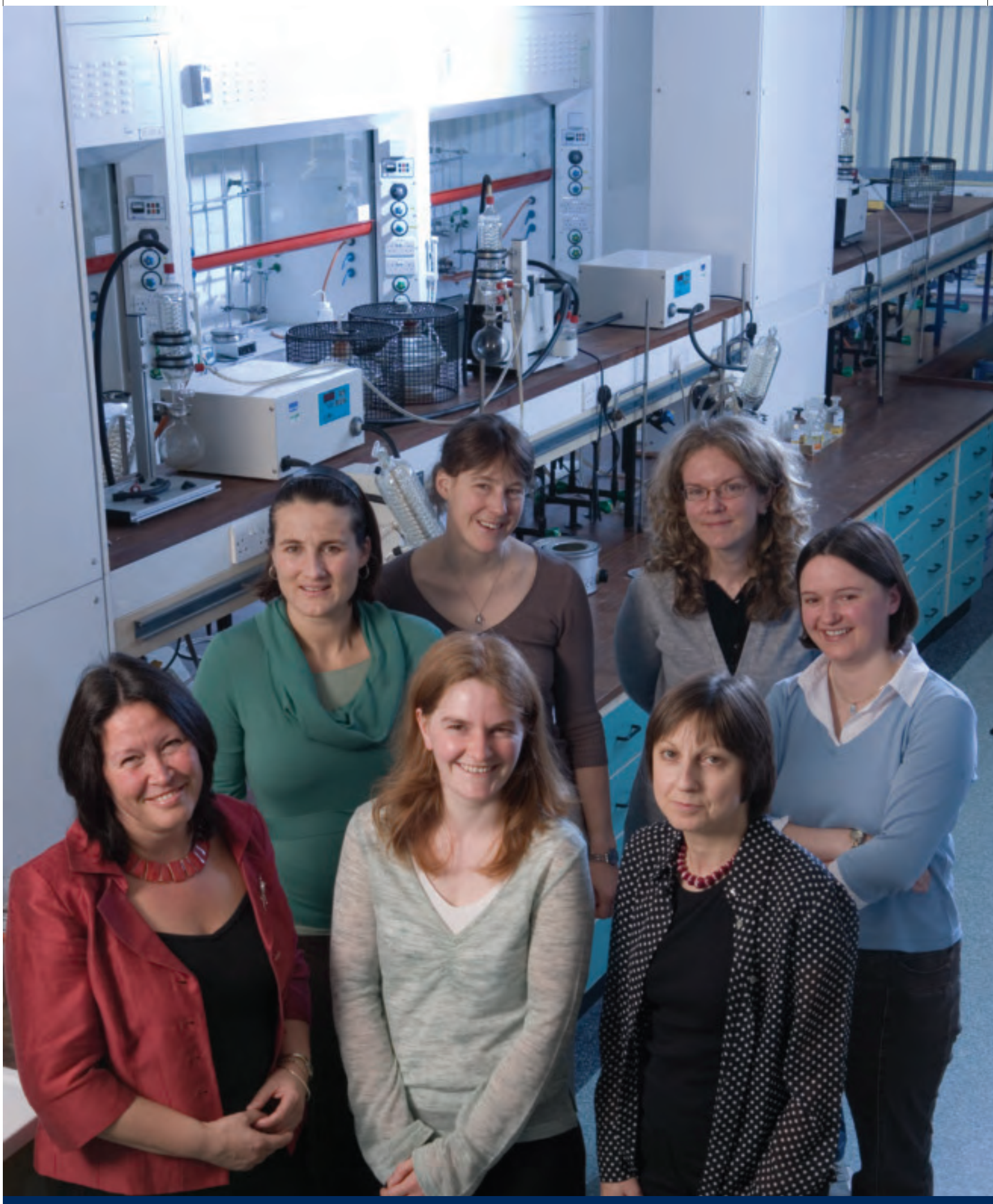
Last year the University was also named the friendliest in Scotland and ranked eighth in the UK overall, in a comprehensive study of data collected by the reunion website Friends Reunited, while it was also rated highly by international students for reputation, friendliness and teaching quality, according to the results of the Student Barometer Project.

"As an international organisation, our staff and student communities need to reflect that outward focus," says Ian Bettison, "enabling us to benefit from the widest possible cultural diversity with all the skills and talents that this brings. Our job is to ensure all staff and students can develop to their full potential and to support the University as a world-class higher education institution."

Professor Lorraine Waterhouse

Plaque to Sophia Jex-Blake

Sophia Jex-Blake was pre-eminent in the admittance of women to the University. One of the first female students officially admitted to classes in the University, Edith Pechey (later Mrs Pechey-Phipson) achieved the highest marks in the Chemistry class of her year, 1869. Because she was a woman, however, she was denied the class prize and the coveted Hope Scholarship which should have been awarded to her. Women could gain Certificates in Arts as early as 1874, but were not allowed to graduate until 1892. The first woman to gain an honorary degree from the University was Eleanor Anne Ormerod (LLD 1900) and the first to hold a Chair was Elizabeth Wiskemann, Montague Burton Professor of International Relations in 1958.



The University's School of Chemistry is the first subject-specific department to receive a Silver SWAN award in recognition of its achievements in encouraging success among women involved in science

Clockwise, from bottom left: Prof Lesley Yellowlees, Head of Chemistry; Dr Perdita E Barran; Dr Alison N Hulme; Dr Bridgette Duncombe; Dr Sarah L Hinchley; Dr Anita C Jones; and Dr Carole A Morrison

2005/06

Breakthroughs in Medical Research

Two research projects underline the University of Edinburgh's leading role in international medical research.

A breakthrough in understanding the biological basis of schizophrenia and bipolar disorder (also referred to as manic depressive illness) by a team of scientists at the University of Edinburgh, led by Professor David Porteous, was given a Medical Research Council grant award of £1.1 million last summer.

In 2000, researchers at the University identified a gene they called Disrupted in Schizophrenia 1 (DISC 1), which was found to increase the chances of people developing schizophrenia, bipolar disorder and major clinical depression.

In November 2005, scientists from the Universities of Edinburgh and Glasgow, and from the pharmaceutical company Merck, Sharp & Dome, reported the discovery of a second gene, phosphodiesterase 4B (PDE4B), linked to DISC 1. Research revealed that DISC 1 acts as a regulator for PDE4B, creating a 'pathway' between the two genes, and that damage to the gene PDE4B also increases the risk of mental illness.

"PDE4B is a very interesting enzyme involved in learning, memory and mood," says Professor Porteous. "Laboratory research shows that DISC 1 controls the activity of this enzyme, which in turn controls key signalling molecules in the brain crucial for building memories. Schizophrenia is a condition characterised by hallucinations and delusions which could be categorised as false memories or false ways of perceiving the world.

"The upshot is that we now have a biological pathway that starts with DISC 1 and links to PDE4B, which we can analyse in some detail to compare how this pathway functions in those individuals who are affected by schizophrenia and those individuals who are not.

"From a scientific point of view, we now have a clear route forward to understanding and treating the biological basis of these debilitating conditions in a much more logical and promising fashion and to develop new drugs."

One in 50 individuals are affected by either of these two conditions at some stage during their life. The World Health Organisation ranks schizophrenia ninth and bipolar disorder sixth in its estimates for disease-related lifetime disabilities. Studies have also demonstrated the high heritability of both conditions.

"There is good evidence to show that in families with schizophrenia, members are also likely to have bipolar disorder more than can be expected to occur by chance. The shared link from DISC 1 to PDE4B is one possible explanation," says Professor Porteous, who provides expert advice on genetics to the European Union, the UK government, the Medical Research Council, the Department of Health and the Wellcome Trust.

The work undertaken by Professor Porteous's team at the University, and other work done worldwide, shows a significant risk associated with heritable functions, of which DISC 1 is now one of the strongest bindings recognised. However, it is also clear that DISC 1 only explains a proportion of the genetic risk of developing schizophrenia or bipolar disorder. Only a subset of schizophrenic patients shows any evidence that the DISC 1 gene is damaged or malfunctioning.

"We can't discount other important genetic factors, but what is unusual about DISC 1 is that it occurs as a possible finding in every research group who have looked for it. But it's also clear that having a damaged version of DISC 1 does not mean you will develop schizophrenia or bipolar disorder, although the chances are increased 15-fold," he says. It is, however, widely recognised that environmental factors, including lifestyle and behaviour, can affect these conditions, which can be treated by methods other than drugs, such as cognitive therapy.

"There are lots of environmental factors," says Professor Porteous. "However, genes do outweigh any known impact."

Professor Porteous's colleague at Edinburgh, Dr J Kirsty Millar, who recently received a prestigious Research Council (RCUK) Fellowship, will now seek ways to modify the DISC 1 pathway and the activity of PDE4B as a promising new approach to treatment, which it is hoped will lead to the development of new drugs.

Another team of medical experts at the University has made a major breakthrough in developing a contraceptive pill that they hope may provide protection against breast cancer and help in the treatment of fibroids, endometriosis and premenstrual tension. The work is the culmination of a ten-year programme of research by the Contraceptive Development Network, based at the Centre for Reproductive Biology in the University of Edinburgh.

Although work is still at an early stage Professor David Baird, Emeritus Professor of Reproductive Endocrinology and lead researcher on the project, is hopeful the new pill could be available within five years.

"Many people have taken it for granted that we have access to safe and effective contraception, but rarely there can be side effects such as an increased risk of breast cancer or thrombosis. It is theoretically possible to design a type of pill that is not only safe but also protects against these long-term risks."

The pill in use today combines the hormones oestrogen and progesterone to prevent eggs being released from the ovaries. The new pill which contains neither oestrogen nor gestogen also inhibits ovulation but in addition stops monthly periods by blocking of the action of the hormone progesterone on the womb (uterus).

"If you reduce the cyclical exposure of the uterus and breast to the ovarian hormones oestrogen and progesterone, you should reduce the risk of cancer," says Professor Baird.

"Additionally, by stopping periods the new pill relieves women from many troublesome symptoms such as premenstrual syndrome and painful bleeding, which is an important cause of anaemia in women, particularly in developing countries."

Professor David Porteous

Professor David Baird

Edinburgh Medical School's arrival on the international research scene is marked by three early 19th century graduates who identified, and have their names associated with, syndromes that paved the way for further work throughout the world. Thomas Addison (MD 1815), Richard Bright (MD 1813) and Thomas Hodgkin (MD 1823) all proceeded from Edinburgh to work and study further at Guy's Hospital, London and are commemorated on a plaque at the entrance to the old Medical School building in Teviot Place. Today's medical breakthroughs by Professors David Porteous and David Baird follow in this tradition and keep it well and truly alive.

Groundbreaking research led by Professor David Porteous has made significant breakthroughs in understanding schizophrenia and bipolar disorder

2005/06

Campaigning for Long-Term Excellence

Under the banner of "Enlightenment in the 21st Century", in early October 2006 the University of Edinburgh launched the largest fundraising campaign for educational purposes in the history of Scotland, and the third largest of its kind in the UK.

The University of Edinburgh Campaign, a five-year project run by Development and Alumni, got off to a flying start with £149 million of the target £350 million secured before the official launch: what the University's Vice-Principal of Development Young Dawkins calls "the quiet seeking of support to show success as we launch."

The purpose of the Campaign is to strengthen areas of excellence in the University and to provide an inspiring context to improve the University's national and international reputation for excellence.

"Although we are among the top 50 universities in the world, and are generally recognised as one of the best in Scotland, we still have to work hard to protect, expand and develop the work of the University. The Campaign is about the ambition to pursue excellence further.

"We measure ourselves against international benchmarks – in other words, by the highest standards. We aim to attract the best and produce the best through a programme of open access," says Mr Dawkins.

Seeking support from 'a community of commitment' which includes the Scottish Executive, private sector corporations and businesses, individuals and trusts, Campaign organisers have identified 34 areas of excellence under three major headings: scholarships, to make the University accessible to the brightest undergraduate, postgraduate and postdoctoral students, regardless of their financial status; support and development of schools and colleges and academic programmes like the new Confucius Institute for Scotland and the Centre for Arabic Studies, which draws upon 250 years of outstanding Arabic and Islamic scholarship at the University; and developing world-class facilities like the Queen's Medical Research Institute at Little France and the new Informatics Building at Crichton Street (to which the Scottish Executive has already committed £14 million).

"We identify Campaign priorities along with companies, trusts and individuals who have an interest in that priority or that particular project," says Development Director Robert Fleming. "We explain why it is a priority of the University, what its importance is and what its outcomes are. It's about informed dialogue, a shared vision with our supporters.

"It might be enlightened self-interest on their part, because if the University is doing well the economy should benefit; remembering the University's annual turnover is over £400 million, if the economy is doing well, the University should be doing well," he says.

Young Dawkins agrees: "There is a definite correlation here. One outcome of the University is to benefit society as a whole. This is not an ivory tower. We care about society and the contributions we can make to the city, the country and the world at large. Active engagement is one of our mandates.

"Scotland in general and Edinburgh in particular have always produced people who think outside the box – entrepreneurial intellect – from the Enlightenment up until today with developments like Dolly the Sheep at the Roslin Institute and the University's own Informatics Building. The business of entrepreneurial intellect is alive and well, and as fundraisers we have the tremendous advantage of representing a dynamic, powerful institution," he says.

The Campaign is not simply about engaging with the bigger institutions or corporations; it is very much about individual commitment.

"The quality of our graduates is one of our real measures of success," says Mr Fleming. "Our graduates take immense pride in the University and that helps us maintain our position as a world-class powerhouse of research and creativity. It motivates them to give something back. Engaging with them is a major part of our work. In fact, they are really the backbone of the Campaign."

Viewing the University of Edinburgh Campaign as a collective process with a real sense of common commitment certainly augurs well for its success – a success built on tradition and on shared Enlightenment values, says Young Dawkins: "A knowledge-based economy is Scotland's future and the University's role in this is vital. For example, Scotland is known internationally for its financial sector, which boasts people who understand the marketplace and can take a world view. We have a tremendously skilled workforce, an intellectual power. And this goes back to Adam Smith and the Enlightenment.

"Scotland has always exported knowledge, as indeed the University has always exported knowledge.

"The business of learning how to think and how to express thought is never finished. There are always new challenges and the University has always risen to them, and it always should. And this, in essence, is what the University of Edinburgh Campaign is about."

www.edinburghcampaign.ed.ac.uk

Robert Fleming

Dr John Muir

The first acknowledged appeal campaign was initiated after the Universities (Scotland) Act 1858, which transformed the ancient Scottish universities into the institutions that we know today. 1864 saw the foundation of an Association for the Better Endowment of the University of Edinburgh, largely through the energy of Dr John Muir, ex-East India Company, who also endowed the Chair of Sanskrit and whose brother Sir William Muir later became Principal of the University. The appeal created a welcome raft of scholarships and prizes, for postgraduate as well as undergraduate study, such as the University had not known hitherto.

Andrew Marr launched the University's landmark five-year fundraising project, the University of Edinburgh Campaign

2005/06

Advancing Mathematics to All

In addition to producing graduates capable of setting up successful new companies, the University of Edinburgh is advancing the cause of mathematics in Edinburgh and Lothian schools.

Rated one of the top mathematics departments in the UK, the University's School of Mathematics has seen admissions rise by 50% – and applications by two thirds – over the last three years, thereby bucking a national trend which has seen a significant decline in student numbers in recent years and the loss of a number of university mathematics departments in other parts of the UK.

At the request of Edinburgh and Lothian secondary teachers, the School of Mathematics offered over 120 sixth-year pupils two Advanced Higher revision sessions last April in a pilot programme that is being expanded this session.

"Initiatives like this are a crucial part of the School's mission," says the Head of School, Professor Michael Singer. "It is essential for universities to work with local schools rather than in isolation if they are to succeed in training the next generation of scientists and mathematicians, including teachers in those subjects."

Advanced Higher is generally recognised as a demanding course to take – and to teach – and the University is keen to support teachers and to encourage pupils to pursue mathematics at university level.

"We strongly recommend Advanced Higher for prospective undergraduates, though we do give offers on the basis of Highers," says School Liaison Assistant, Lois Rollings. "We want to help local schools who have traditionally done well in Advanced Higher, to support further improvement and to highlight the importance of the qualification to us."

With a carefully chosen team, the University supplied all but one of the revision tutors, drawn from staff and students, who focused on all aspects of the syllabus and exam paper, including a special session on exam technique and group work on set questions.

"The Advanced Higher has a packed syllabus, reflecting the fact that maths is versatile and enjoyable and wide-ranging," says Dr Liam O'Carroll of the University's School of Mathematics, who is leading the project. "It is also very popular, as our recruitment figures indicate. Last year we had 240 students in our first-year Honours class alone."

Participating pupils judged the revision course a success. The vast majority agreed that the aims of the sessions had been realised, adding that the content was "just right" or "very relevant". Every pupil taking part said they would recommend the revision days to other pupils.

Nicola Smith, a former pupil at Edinburgh's Broughton High School who is now studying mathematics and economics at the University, says: "I found the revision classes really helpful as we summarised the whole course and it allowed me to identify which topics I needed to go over more thoroughly.

"Learning from different lecturers was good as they all gave us great ideas for exam techniques and revision which gave me more confidence about passing – but it would have been even more useful if the classes had run for a few weeks more as there's a lot of work in the course."

This year's participating pupils received their first session in December, which should prepare them for the coming April sessions. The School of Mathematics is now hoping to run Continuous Professional Development sessions for Advanced Higher teachers.

Initiatives such as these can help to encourage the sort of dynamism which has led to the formation of ThinkTank Mathematics Ltd, an exciting young company supported by the University. The only company of its kind in Scotland, ThinkTank is a technology consultancy and Intellectual Property (IP) generator based at the Edinburgh Technology Transfer Centre at King's Buildings, offering cutting-edge solutions based on PhD-level expertise in mathematics and artificial intelligence.

Originally set up as a partnership by Dr Hannu Rajaniemi and Dr Daniel Winterstein (who took both their first and second degrees at the University's School of Mathematics), the company was incorporated last January. Among its first clients was the electronics giant, Motorola.

"We worked with Motorola to improve their network quality through algorithm design," says Dr Rajaniemi. "We also used data analysis and automation to automate and improve the admission process at the University of Edinburgh, and we made a medical drug application patch more reliable by pre-prototyping an idea for Oxford University."

"The world that has developed from computers is now so complex that modelling it requires sophisticated mathematical tools," says Dr Winterstein. "In other words, the potential for synergy between mathematics and business is greater than ever."

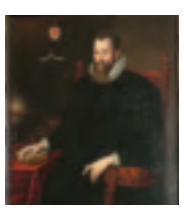
Attracting, developing and supporting innovative ideas and enterprising students is vital to the School of Mathematics. "Our students are discovering that maths can be applied in a whole range of areas," says Dr O'Carroll.

"While many students combine maths with traditionally related subjects like economics, computer science and physics, others are linking it to disciplines like music and philosophy.

"This can only be good for a subject which is, and should be, expanding. Maths skills are vital for the country's education, finance, IT, business and manufacturing sectors."

Funding for the school revision sessions is provided by the Brightside Trust, which was secured by Kathleen Hood and Karen Hinton of Student Recruitment and Admissions.

Professor Michael Singer



John Napier

The Chair of Mathematics was created in 1620 with the appointment of Professor Andrew Young, Regents of Philosophy since 1601. He may have been recommended for the Chair by John Napier of Merchiston, the inventor of logarithms, who presented the College with a quadrant 'for the use of the Professor of Mathematics' in 1621. Later holders of the Chair include David and James Gregory, Colin McLaurin, John Playfair, John Leslie, William Wallace, George Chrystal, and Arthur Edélyi. Professor Michael Singer, recently appointed Head of the School of Mathematics, joined the University as a lecturer and research fellow in 1994.

Pupils at St Thomas of Aquin's High School benefited from the School of Mathematics' revision sessions

2005/06

A Modern Approach to History

Professor Tom Devine, the pre-eminent authority on the history of modern Scotland, took up his appointment as the Sir William Fraser Professor of Scottish History and Palaeography at the University of Edinburgh in January 2006. He is the first modernist to hold what is acknowledged to be the world's premier Chair of Scottish History.

Professor Devine is distinctive among leading historians in that history was not his first chosen subject at either school or university, and also in that he claims no interest in the past *per se*. "I'm not really interested in the past, at least not for its own sake. What interests me are the puzzles and paradoxes which history throws up," he says.

One reason he chose to give his inaugural lecture at the University on "Three Hundred Years of the Anglo-Scottish Union" was to question the received wisdom in some quarters that the Union was (for Scotland) based on the benefits of Empire.

"The Empire has gone but the Union is still here," he says. "The question is: why has it been maintained?"

Similarly, in his contribution to the University's Enlightenment Series of lectures, "A Puzzle from the Past: How Can the Scottish Enlightenment be Explained?", he set out to explore how a country which had lost its Royal Court in 1603 and its Parliament in 1707, and which had a reputation for religious fanaticism, nevertheless succeeded in creating the foundations of modern rationalism, tolerance and pluralism through the Enlightenment virtues which it propounded.

Professor Devine also broke new ground as a pioneer of Scottish-Irish studies, becoming the founder Director of the Research Institute of Irish and Scottish Studies (inaugurated by Irish President Mary McAleese) at the University of Aberdeen in 1999. Here again it was the paradoxes and puzzles which exercised the historian's mind: "Why, for example, had Scotland achieved industrial revolution by the 19th century while Ireland was suffering famine? It's questions like those which attract me," he says.

His comparative approach to unravelling these questions, he believes, both widens the field and sharpens historical analysis.

"A comparative approach counters introspection or parochialism and creates new questions. Comparison, in fact, reveals what is distinctive. The most difficult issue for a historian is not finding answers but producing new questions, fresh approaches and perspectives."

It was in his first year as an undergraduate at the University of Strathclyde that Professor Devine discovered delight in the subject which he had found "boringly taught and not entirely relevant" at school, and which he had not pursued beyond second year. Ironically, it was a former school teacher, Tom Macaloon, then lecturing at Strathclyde, who kindled his interest.

"What happened to me shows the worth of the broad-based Scottish degree which meant taking five subjects in my first year, including European History, which was well taught by Tom. In fact, the way he showed me how to write an essay is still the way I write articles and books," he says.

The tribute is significant, given that Professor Devine has written and/or edited 25 books and authored more than 100 articles. But history was also coming alive in different ways, he says, in the 1960s.

"There was a fresh approach because social and economic history was beginning to emerge alongside the traditional political and religious emphases. There was also an academic influx from the south of people who dropped their English specialisms to take on Scottish issues, bringing with them social-scientific approaches which helped liberate Scottish History from its parochialism. It helped globalise the subject."

In his new post at Edinburgh Professor Devine, who was awarded an OBE in 2005 for his services to Scottish History, is keen to pursue this comparative and interdisciplinary approach:

"I'm an adherent of what the French call 'total history', which looks at everything from politics and economics to education, demographics and other social factors. A confident and sophisticated subject should seek out intellectual relationships with other historians and other subjects.

"My prime responsibility is to continue to raise the excellent quality of Scottish History teaching and research at the University and to forge closer links with the rest of the History School – there are over 70 historians at Edinburgh – and with those social scientists who have a Scottish interest."

But for one of Scotland's most widely read historians, this is only part of the story. He says: "At this time in the nation's history we also have a responsibility to contribute to wider debates and issues in the media. Scottish people want to know more about who they are, more about their culture and their history; and they have a real and great hunger for academic history presented in an accessible form. As professional historians, this is a challenge, which some of us are keen to meet."

Professor Tom Devine

Professor Peter Hume Brown

Peter Hume Brown was the first person to be appointed, in 1901, to the Sir William Fraser Chair of Scottish History and Palaeography. Endowed by a Scottish archivist and genealogist, and the oldest Chair of Scottish History in the UK, it was the second Chair of History in the Faculty of Arts (but Ecclesiastical History in the Faculty of Divinity is older than either of them). Each successive holder, Robert Kerr Hannay (1919), William Croft Dickinson (1943), Gordon Donaldson (1963), Michael Lynch (1994), and now Thomas Devine (2006), has been *primus inter pares* in his day.

Professor Tom Devine is the first modernist to hold what is generally acknowledged to be the world's premier Chair of Scottish History

2005/06

Innovative Teaching and Learning in a Digital Age

At first glance, ecclesiastical history appears to have little in common with subjects such as physics and veterinary medicine. At the University of Edinburgh, however, the Schools of Divinity, Physics and Veterinary Medicine, alongside Education and Medicine, are all linked through their use of new digital technologies to support teaching, learning and assessment.

Already renowned for its medical and veterinary research, the University of Edinburgh is now being recognised as a leader in its development of a fully integrated, e-Learning support system for medical and veterinary education.

Comprising three Virtual Learning Environments (VLEs), the system supports the two five-year undergraduate degree programmes in the College of Medicine and Veterinary Medicine (MVM) and all of the College's taught and research postgraduate students.

Since the system is online, students and staff are able to engage with it from any place or time zone in the world. This flexibility has particular advantages for trainee doctors and vets, who need access to learning and information at any time, day or night, during their clinical placements in hospitals or veterinary practices.

In November 2005, the University received one of the Queen's Anniversary Awards for Further and Higher Education for this work, for a proposal: the Virtual Hospital Online (VHO) – transforming medical and veterinary education.

"The VHO helps our academic teachers to develop e-resources. Virtual patients are delivered on screen for students to address, as junior doctors might in a real-life situation, to enable them to diagnose and prescribe treatments," says Professor David Dewhurst, Assistant Principal for e-Learning and e-Health and Director of Learning Technology in the College of Medicine and Veterinary Medicine at the University.

"Students don't have the same access to real patients that they used to. The VHO goes some way to addressing this. Students can practice in a safe, non-intimidating learning environment, which is good preparation for practising medicine in real life and is also useful for addressing relatively rare medical conditions like tropical diseases that seldom get into the country," he says.

As well as giving students a real sense of the reality of hospital work, the VHO also supports the education process by enabling them to access resources online, create web pages, add their own annotations to resources and discuss issues.

"Receiving the Queen's Award, an institutional equivalent to the Honours List for individuals, is a tremendous promotional boost for the University's use of technology to support teaching and learning," says Professor Dewhurst.

The University has also developed online distance courses at Masters level in Pain Management, Anaesthesia Practice (aimed at medical/clinical staff), Clinical Education and International Animal Health. It will launch a similar Masters degree in Surgical Science, in a collaboration between MVM and the Royal College of Surgeons in Edinburgh, in October this year.

Innovations in e-Learning and teaching have been recognised within the University itself. In August last year Dr Simon Bates, Senior Lecturer and Director of Teaching at the School of Physics, received a Chancellor's Award for his work in developing, supporting and promoting the pragmatic use of e-Learning methodologies across the School's teaching programme.

Among these innovations is the Electronic Voting System (EVS), introduced in September 2005, which mediates communication between a class of several hundred students and the lecturer, making it more interactive and giving students more input into the direction of each lecture.

"We found that more students attended lectures last year and feedback also suggests they find interactive lectures are a good use of their time and more rewarding than simply being talked at by a lecturer," says Dr Bates. "From the teaching point of view it is easy to use, though you have to learn what a good question is and where to place it in your lecture. It thus makes you a more reflective teacher while being in tune with the students' perspective.

"In terms of recruitment we are also finding that, in talking to prospective undergraduates, the EVS is attractive to them and it may well be one reason why our numbers are creeping up while numbers are generally falling across the UK in both Physics and Maths."

The School's e-Learning tracking system shows too that students are using web resources as more than just a digital filing cabinet.

"Reconstructing student pathways demonstrates they are exploring complex routes through material and are interacting with it. I believe it shows that we are giving the students the best of both worlds. e-Learning is not here to replace but to enhance face-to-face learning," says Dr Bates.

The University's ecclesiastical historians are also in the forefront of electronic innovation, as was recognised by a National Award for History Teaching in Higher Education received by Doctors Jane Dawson and Kirsteen Murray of the e-Learning team in the School of Divinity last April.

The annual national competition, organised by the Higher Education Academy's Subject Area for History, Classics and Archaeology, is run in conjunction with the six major professional bodies in history: the Royal Historical Society; the Institute of Historical Research; the Historical Association; History UK; the Social History Society; and the Economic History Society.

The award followed recognition of the Divinity team's work the previous year when Dr Dawson received the Chancellor's Award for Teaching.

The University has also launched its new MSc in e-Learning, offering academics and researchers the chance to undertake advanced study of the ways in which digital technologies are changing learning and teaching.

Dr Sian Bayne, the Programme Director, comments: "Our students are interested not only in what teaching can do with technology, but in what technology does to teaching. The MSc teaches across multiple digital environments including wikis, weblogs and virtual worlds. In using these new spaces as teaching environments, the MSc helps students to think about how we can conduct high quality teaching within an environment of rapid technological change."

Dr Donald Michie

Professor David Dewhurst

The Chair of Education (the first in an English-speaking university) was established at Edinburgh in 1876 with the appointment of Professor Simon Laurie. The University's commitment to computer science and information technology began with the appointments of Dr Donald Michie (later Professor of Machine Intelligence) to the Faculty of Medicine in 1961, and of Dr Sidney Michaelson (later Professor of Computer Science) in 1963 as Director of the new Computer Unit. These two threads have created the University's present environment as a centre of excellence in e-Learning and research under Professor David Dewhurst.

e-Learning innovations can offer students flexibility in how, where and when they learn

2005/06

Enlightenment for the Modern World

On 21 February 2006, more than 1,300 people packed into the Assembly Hall, New College, to attend a unique event: the inaugural lecture in the University of Edinburgh Enlightenment Series, delivered by Irene Khan, Secretary General of Amnesty International.

The event was remarkable in many ways, as Ms Khan is the first woman, the first Asian and the first Muslim to head the world's largest human rights organisation, and this was the first visit to Scotland by an Amnesty Secretary General.

Her lecture "The War on Terror … a War on Liberty?" launched the series of lectures, generously supported by ScottishPower, which seeks to examine aspects of the Enlightenment's legacy in the context of our contemporary world.

The University was central to the Scottish Enlightenment of the late eighteenth and early nineteenth centuries and it remains a vital forum for Enlightenment values today. Regarding the Enlightenment as a process rather than an end in itself, and as more than just the Golden Age of such luminaries as David Hume, William Robertson, Adam Ferguson and Adam Smith, the University has always disseminated ideas to the city, the nation and the wider world. It is in this tradition of the 'democratic intellect' that it continues to attract people who are contributing in a major way to these values and to disseminate their ideas through this important series of free, public lectures.

"You cannot underestimate the importance of these lectures, which can also be accessed by anyone online after the event," says University Vice-Principal, Professor Geoffrey Boulton.

"We need to refocus on the values of the Enlightenment – values which argue that ideas and concepts must have grounding and be tested in reality – because they are under massive attack internationally."

The second lecture in the series, entitled "Globalisation and the 21st Century Enlightenment", was delivered in August by the Nobel Prize-winning economist Professor Joseph Stiglitz, formerly chief economic advisor to President Clinton and Chief Economist at the World Bank from 1997 to 2000.

His most important contribution to economic theory has been his role in shaping and defining the 'third way' economic philosophy, which seeks to rebalance the influence of governments and markets in political economies. Currently a professor at Columbia University, in the sixties he witnessed Martin Luther King's historic "I Have a Dream" speech in Washington DC.

In October, in the third lecture in the series, Professor Tom Devine addressed the question of "Why the Scottish Enlightenment Happened", which led to a panel discussion on the parallel question: "Could the Enlightenment happen again today?". The Sir William Fraser Chair of Scottish History at the University of Edinburgh, Professor Devine believes the public dissemination of Enlightenment values is essential today.

"The two great values of the Enlightenment were: one, to base action on reason; and two, tolerance of diverse opinions. Both are vital to today's world, which is replete with partiality and, in certain parts, full of intolerance," he comments.

Running alongside the lectures is a series of informal lunchtime seminars on the broad theme of "Enlightenment and Popular Culture in the Age of Enlightenment". The first three seminars explored aspects of theatre and performance – to coincide with the Edinburgh International Festival – and were given by members of the School of History and Classics at the University of Edinburgh, covering topics from Handel and the oriental influence on eighteenth-century opera, to street theatre and the performance of sociability at assembly rooms.

Other seminars will focus on the impact of Enlightenment values on society, the Enlightenment's influence on popular music and the popular reception of the work of Henry Raeburn, this last coinciding with an exhibition of Raeburn's portraits and prints at the University's Talbot Rice Gallery in November.

To profile Enlightenment treasures in its special collections and make them openly accessible, the University is preparing two digitalised editions: a sermon by William Robertson and an early copy of Adam Smith's *Wealth of Nations* (complete with student marginalia).

An Enlightenment exhibition is also planned and will include a host of artefacts including manuscripts, portraits, William Robertson's spectacles and Adam Ferguson's coffee pot.

Open access to the University's public lectures, seminars, exhibitions and online collections reinforces the Edinburgh tradition that Enlightenment is for all.

The University of Edinburgh acknowledges the support of ScottishPower in making the Enlightenment Lecture Series possible.

Principal William Robertson

Lord Provost Lesley Hinds

William Robertson, the great historian and Principal of the University 1760-1793, whose portrait by Raeburn now dominates the collection of portraits in the Raeburn Room in Old College, became known as the Father of the Scottish Enlightenment. Before his appointment, the University owed much of its development to George Drummond, Lord Provost of Edinburgh 1725-1764, during which time the philosopher David Hume also studied at the University and at Glasgow but, like most contemporaries, did not graduate. Today, the present Lord Provost Lesley Hinds, together with Professor Timothy O'Shea, aim to show that the city and its University have the potential to be seen once again as a centre for enlightenment and a 'hotbed of genius'.

Irene Khan delivers the inaugural lecture for the University of Edinburgh Enlightenment Series

2005/06

Going Green: Working Together for the Environment

Three hundred thousand cups of coffee are consumed every year at the University of Edinburgh's staff meetings, while a further 1,700kg of coffee are sold across the counters of student cafe-bars. That does amount to quite a hill of beans, and rather important beans at that, because all this coffee is Fairtrade – only fitting for Scotland's first Fairtrade University, a status conferred in March 2004 and recently reaffirmed.

The University's Fairtrade Policy is only one part of its much wider Sustainability Policy, launched in June 2000, which is fast making the University an exemplar 'green' institution.

Defining sustainable development as 'meeting present needs without compromising the ability of future generations to meet their own needs', policy objectives include making sustainability a corporate priority, developing appropriate teaching and research, and maintaining and developing the University in a sustainable manner.

"This policy was initially developed in the early 1990s by Sir David Smith, the University Principal at the time. As a botanist who understood the environmental imperative, he was very keen on 'greening' the University," says David Somervell, who was appointed to the post of Energy and Sustainability Manager in 1989, one of the first posts of its kind in a UK university.

"Sir David's three principles were environmental teaching, environmental research and environmental practice, and they became core objectives adopted by the University Court in 1993.

"Edinburgh has always pursued the notion of 'greening' the curriculum rather than seeing environmental issues as a 'bolt-on'."

In many ways the University has traditionally taken a lead in environmental issues. As early as 1974 it established a fuel conservation group, and in 1990 hosted a conference on energy management which attracted representatives from 150 further and higher education institutions across Britain. In 1994 it hosted the first UK-wide meeting of environmental coordinators, which led to the establishment of the UK Environmental Association for Universities and Colleges (of which it is a founder member). In addition, the University is a proactive member of the Scottish Universities Network for Sustainability and the Edinburgh Sustainable Partnership.

"Sustainability makes sense in what we teach, what we research and how we run our business," says Mr Somervell, whose office deals with the three key areas of energy and water, travel and transport, and waste and recycling.

In the last three years a major commitment to Combined Heat and Power (CHP) has seen the University install three energy-efficient CHP 'power stations' across the city at Pollock Halls, King's Buildings and, last summer, in George Square.

"These CHP stations meet local needs. The University now imports only half of its electricity, which makes for a significant reduction in environmental pollution. CHP runs at 85% efficiency, while a big coal-fired power station runs at about 25% efficiency. Generating electricity locally provides a massive reduction in losses and will save the University over £500,000 per annum," says Mr Somervell.

In January last year an Energy Reduction Campaign – "Switch and Save" – was launched to cut carbon emissions by 40% by 2010, putting the University well on the road to achieving the government target of a 60% reduction by 2050.

The University has embarked on a strategy of sub-metering every building for water and electricity in order to measure consumption and cost and reflect back to staff and students to raise awareness and make energy savings after a pilot initiative achieved an 18% reduction in a single building. As part of this strategy every University building will soon have an energy coordinator and projected savings are being ringfenced for academic subjects.

"We've been exploring another decentralised energy project, Building Integrated Photo-Voltaics: solar panels which generate a 26kWp output at the new William Rankine Building, opened during summer 2006," says Mr Somervell, "and we're very pleased that the new Informatics Building under construction has been rated 'excellent' by the Building Research Establishment's Environmental Assessment Method (BREEAM)."

The University now uses 80% recycled content paper in all offices and copy centres and 100% recycled content paper for all stationery and for many magazines and newsletters printed in-house. It is well on schedule to achieve its targets of recycling 30% of its general waste by the end of this year and to reduce waste to landfill per person by 5% by 2010. It also actively encourages staff and students to walk, cycle or use public transport to and from University campuses.

Combined with such practical strategies, environmental research at Edinburgh includes the Advanced Computer Facility (ACF), used by international researchers to model climate change, while on top of two MSc courses in Environmental Sustainability that are already on offer, the University launched the first undergraduate course in Environmental Sustainability last January, attracting 80 first- and second-year students.

"Most of our improvements are 'hidden' – the new energy centres, better insulation, e-procurement and so on. But we are quietly transforming ourselves from within as an exemplar green institution," says Mr Somervell. "This is vital if we are to retain our leadership role in the UK and Europe as a 'green' university in order to continue to attract the best students. We can't afford to rest on our laurels, however green they are. Every morning it's still a matter of waking up and smelling the coffee."

David Somervell

Professor C H Waddington

The designation as Scotland's first Fairtrade University in 2004, together with its election of two Green MSPs as recent Rectors, are recent events in a continuum of ecological awareness, research and teaching that goes back to the mid-20th century. 'Natural Resources' was formally added to the name of the Chair and Department of Forestry in 1963 with the appointment of Professor John Black.

C H Waddington, Buchan Professor of Animal Genetics since 1946, established the pioneering Centre for Human Ecology in the Faculty of Science and Engineering in 1972, simultaneously with the publication of *The Ecologist's A Blueprint for Survival*.

The University encourages staff and students to opt for more environmentally sound modes of transport

2005/06

The Review of the Year

August 2005

• The Talbot Rice Gallery hosts a lecture by Robert Hughes, award-winning art critic and historian, to celebrate the Gallery's 30th anniversary.

• Scientists at the University develop a new technique which can rid surgical instruments of the infectious agents that cause Creutzfeldt-Jakob Disease (CJD) in humans. The project is funded by the Department of Health and could soon be developed commercially.

• The University pays tribute to Robin Cook, whose long-standing relationship with the University was much valued. He will be sorely missed.

• HRH Prince Philip, Duke of Edinburgh, Chancellor of the University, presents awards to Professor Jean Beggs, from the School of Biological Sciences, for her work on molecular genetics, and Professor Jane Dawson for her development of innovative e-Teaching techniques in the School of Divinity.

• Scientists at the Universities of Edinburgh and Milan make a major breakthrough in tackling neurological conditions like Parkinson's and Alzheimer's. They are the first in the world to develop a new technique to grow pure brain stem cells, helping to discover more about these diseases.

• Researchers from the University of Edinburgh and Pennsylvania State University discover a solution to one of the biggest challenges facing the optics and electromagnetics sector – how to produce near-perfect lenses cheaply.

September 2005

• A trial led by Professor Keith Fox produces landmark results, revealing that more than 5,000 lives could be saved in the UK each year by changing the way Acute Coronary Syndrome (ACS) is treated. Professor Fox's research, funded by the British Heart Foundation, is the first large long-term study to show that early specialist assessment and procedures to repair or bypass damaged arteries can save lives of people with ACS.

• The University's Informatics Forum receives a £19 million boost, with £14 million secured from the Scottish Executive and a further £5 million awarded by Scottish Enterprise Edinburgh and Lothian.

• The University's student web portal, ESP, is replaced by a new web portal service – MyEd. The portal provides a personalised, secure gateway to web-based services within the University and beyond.

• A joint venture to establish the largest ever consortium to support UK academic research using high-performance computers (HPC) is approved. The University of Edinburgh, the University of Manchester and the Council for the Central Laboratories of the Research Councils' Daresbury Laboratory will work together, pooling their complementary expertise.

• The Economic and Social Research Council's Genomics Policy and Research Forum launches at the University. The Forum aims to help further our understanding of the use of genomics-related science and technologies.

• Software developed by the University's Parallel Computing Centre (EPCC) supports a computing grid that stretches across three continents: from the UK across to China and Australia. The three-continent grid – the first of its type and the longest grid in the world – links computers at EPCC, Curtin University of Technology in Western Australia and the Chinese Academy of Sciences in Beijing.

October 2005

• The University opens Scotland's first permanent paved labyrinth. The Edinburgh Labyrinth, which was pioneered by University Chaplain Reverend Diane Williams, was officially opened by Richard Holloway, Chair of the Scottish Arts Council, and funded by the University of Edinburgh Development Trust.

• Dr Zhou Ji, the Chinese Minister of Education, visits the University to promote education, business and research links.

• Sir Michael Atiyah, Honorary Professor at the School of Mathematics, delivers the first Einstein Public Lecture in Mathematics at the University of Nebraska-Lincoln.

• The *Sunday Times University Guide* ranks Edinburgh as the Scottish University of the Year.

• The University joins a ground-breaking international alliance that will work towards the development of new drug therapies. The Scottish Centre for Genomic Technology and Informatics (GTI) at the University is one of nine centres around the world to have been chosen by US genetics company Dharmacon to form a new Genome-Wide RNAi Global Initiative to advance biomedical research.

• The School of Physics helps a schoolgirl from Penicuik to test Einstein's Theory of Special Relativity on top of one of Scotland's highest mountains.

• Vets at the University's Hospital for Small Animals discover that asthmatic cats may be allergic to humans.

• The Edinburgh Research Partnership (ERP) is launched. The £24 million initiative will make Scotland's capital a magnet for international funding and will support postgraduate talent working in key areas of engineering and mathematics.

November 2005

• A consortium of scientists from the Universities of Edinburgh and Glasgow, the Scottish Agricultural College and the Roslin Institute receive funding to investigate the long-term effects of stress on farm animals and their young, and look at ways to improve their welfare.

• The University officially opens a £7 million research facility that will help scientists tackle diseases which affect hundreds of millions of lives worldwide. The Henry Wellcome Laboratories of Infection Biology and Immunology will enable researchers to work on treatments for a range of infectious conditions such as malaria, sleeping sickness, elephantiasis and stomach ulcer bacteria. The new centre, opened by Dr Mark Walport, Director of the Wellcome Trust, will enhance the University's global standing in the two key fields of immunology and evolutionary biology.

• The University wins one of the prestigious Queen's Anniversary prizes for the Virtual Hospital Online, a learning support environment developed in the College of Medicine & Veterinary Medicine. The Virtual Hospital allows students to access a vast range of online resources and services, tailored specifically to their studies.

• Scientists from the Universities of Edinburgh and Glasgow, together with scientists from a pharmaceutical company, identify a new gene linked to major mental illness that links back to a previously discovered gene known to increase the risk of schizophrenia and depression.

December 2005

• Professor Ian Wilmut, whose research led to the cloning of Dolly the Sheep in 1996, is announced as the new head of the Centre for Regenerative Medicine, which will work to develop new treatments for human disease through innovative research with stem cells.

• New research by University scientists shows an important breakthrough in understanding how animals with complex nervous systems, such as humans, achieve rapid signalling between their nerve cells. The discovery may lead to new ways to help treat patients with multiple sclerosis.

• The University's Management School wins the inaugural Scottish Financial Enterprise Innovators Award for its new MSc in Finance and Investment, beating off entries from leading banks and finance and investment houses.

• University scientists discover a potential new treatment for rheumatoid arthritis. They identify a new class of compounds which could lead to the production of a cheaper but equally effective version of an existing treatment of rheumatoid arthritis called anti-TNF therapy.

• The University announces that it is to more than treble the prize money awarded to winners of the James Tait Black Memorial Prize from £6,000 to £20,000. The awards, dating from 1919, are given to the best work of fiction and best biography published during the previous year.

January 2006

• The University's annual turnover exceeds £400 million for the first time, making it the largest university in Scotland, and sixth in the UK, in terms of overall income.

• Researchers at the University announce they are a step closer to producing anti-cancer drugs with fewer unwanted side effects than conventional chemotherapy.

• The University is the first institution in Scotland to take part in the National Student Survey, which asks final-year students for their views on the

quality of their degree programmes and universities.
• Engineers at the University announce that robust cutting tools used to sever underwater cables in the North Sea could soon be adapted to perform delicate surgery. The water jet tools would have the advantage of minimising trauma to surrounding tissue, reducing blood loss and offering greater precision.

February 2006
• The University and Edinburgh College of Art enter into discussions to review the options for future strategic alliance and collaboration over the coming years.
• It is announced that 12 Russian postgraduate students over the course of five years will be awarded scholarships totalling £250,000 by Scottish and Newcastle plc. Half of the scholarships are allocated to the Management School.
• The University collaborates in Generation Scotland, an ambitious and groundbreaking project looking at the ways genetic and lifestyle factors can cause cancer, heart disease and mental illness.
• Green Party MSP Mark Ballard is elected the new Rector of the University, following a closely fought election which employed an electronic voting system for the first time. Ballard (Class of 1994) vowed to support issues such as fair trade, recycling and ethical investment.
• The University signs an agreement with the Systems Biology Institute in Tokyo which will enable multidisciplinary research to take place, bringing together biologists, mathematicians and computer scientists.

March 2006
• The University's eScience Institute is awarded funding of over £2.7 million through an Engineering and Physical Sciences Research Council grant which will enable it to continue its programme of support for the UK eScience community.
• Irene Khan, Secretary General of Amnesty International, gives the first in the University's series of Enlightenment lectures to more than 1,000 guests in New College. The lecture series is generously supported by ScottishPower.
• The Student Barometer Project sees the University rated highly by international students for reputation, friendliness and teaching quality. The study is considered to be a global benchmark of expectations and experiences among international students.

April 2006
• Major funding is announced to enable researchers at the University to tackle some of the most difficult challenges facing biological science. The £8.5 million award, from the Biotechnology and Biological Sciences Research Council (BBSRC), will support a new centre for research into integrative systems biology.
• A new partnership between St Columba's Hospice, Edinburgh and the University is forged. The partnership will help patients with cancer and other life-threatening diseases, improve teaching and training in the discipline of palliative care and may lead to the creation of a world-leading centre for integrative cancer care research.
• A major donation by *Harry Potter* author JK Rowling enables the University to form a Scottish Multiple Sclerosis research centre – the first of its kind in the UK.
• First Minister Jack McConnell and Mr John Brumby, State Treasurer and Minister for Innovation, Industry and Regional Development for the State of Victoria, Australia, are welcomed to the Queen's Medical Research Institute.
• The University of Edinburgh is to participate in the world's first Translational Medicine Research Collaboration. The collaboration is the result of an investment, worth up to £50 million, by Wyeth Pharmaceuticals, one of the world's largest pharmaceutical companies.
• Deputy First Minister Nicol Stephen performs a ground breaking ceremony at the site that will become the new Informatics Forum.

May 2006
• Professor Tom Devine, the pre-eminent authority on the history of modern Scotland, delivers his inaugural lecture reviewing the Anglo-Scottish Union, in the approach to the 300th anniversary of the Union of the Parliaments.
• The Salisbury Green Hotel Conference Centre, managed by Edinburgh First, opens for business after a £2.8 million refurbishment and 12 months of work.
• Edinburgh wins the Walter Scott and Partners Ltd Boat Race between the Universities of Edinburgh and Glasgow. Edinburgh's rowers won four out of the seven races.
• The University appoints two new Vice-Principals. Professor Steve Chapman will take up the position of Vice-Principal of Planning and Resources in September 2007, while Professor Lorraine Waterhouse takes up the position of Vice-Principal for Equality and Diversity in January 2007.

June 2006
• The University launches a major five-year energy reduction campaign internally. The scheme aims to save money, reduce the University's carbon dioxide emissions, and contribute to the global fight against climate change.
• The University will join a £22 million research initiative set up to help scientists better understand the planet's environmental problems. The Scottish Alliance for GeoScience, Environment and Society (SAGES) will focus on subjects such as climate change, soil erosion, floods and greenhouse gases and their wider impact.
• The University launches a new "Public Policy Network" at the Scottish Executive, providing an umbrella for all of the University's public policy activity across all disciplines from the natural sciences through to medicine and social science.
• Edinburgh researchers devise a new means to identify groups of people genetically more at risk from bowel cancer, potentially leading to new measures to prevent the disease for thousands of people in the future.
• The new rector of the University of Edinburgh, Mark Ballard MSP, is officially installed in office at a public ceremony in Old College.
• Ian McEwan and Sue Prideaux are announced as the winners of the University's literary award, the James Tait Black Memorial Prize, which is one of the UK's oldest literary prizes. McEwan won the fiction prize for his novel *Saturday* and Prideaux was presented with the non-fiction prize for *Edvard Munch: Behind the Scream*.
• Graduations proceed almost entirely to plan despite industrial action by some staff.

July 2006
• Edinburgh researchers identify the role of a specific protein cell in the spread of cancer. The findings could pave the way for new drugs to limit the protein's ability to turn a normal cell cancerous.
• The University forms a partnership with its neighbour the Royal College of Surgeons to offer a degree in Surgical Science. The collaboration is thought to be their first ever formal agreement.
• Scientists at Edinburgh discover primitive liver cells in the human body that have the potential to mature into different cell types and help repair a failing liver. The findings suggest alternative methods to liver transplants in treating liver diseases.

2005/06

Financial Review

The University's strong financial performance has continued in the last year. This is clearly a reflection of the teaching and research strengths of the University and the notable activities that have taken place, which build on its international reputation.

The surplus for the year was £8.2 million or 2% of income. This level of surplus has enabled an additional £10 million to be invested in an enhanced capital building programme over the next two years. Gross income increased by £32.9 million (8.2%) compared to the previous year. Funding Council Grants increased by £14.7 million (10.9%), partly reflecting the application of infrastructure funds to major refurbishment projects and partly as a result of the receipt of new research pooling grants. International student numbers continued to grow resulting in an increase in income of £4.4 million (17.5%). Research grants and contracts have again shown strong growth with income increasing by £9.7 million (9.3%). Higher interest rates, in part, helped to increase endowment and investment income by £2.8 million (24.9%).

As the University continued to attract leading academic staff during the year, staff numbers increased by just over 5% and staff costs by £17 million.

Operating expenses increased by £21.1 million with significant increases being noted in repairs and maintenance (£12.1 million) and utilities (£2.7 million).

Group net assets excluding pension liability increased during the year by £31.8 million to £1,018 million. New building works commenced during the year included the Informatics building at Potterrow, the refurbishment of the Hugh Robson building and further investment in the Centre for Biomedical Research. Projects completed in the year included the Queen's Medical Research Institute adjacent to the new Medical School. This investment in University infrastructure is necessary as world-class facilities play a vital part in attracting students and staff.

Moving forward, a key challenge for the University will be to match the growth in income of the top English universities with their resources boosted by higher student fees from home and EU students. As well as this challenge, staff costs are forecast to rise well above the rate of general inflation in part as a result of the impact of pay modernisation. In addition, pension contributions will have to rise to cover the increasing liability.

The University will continue to use its strong balance sheet to invest in a sustainable estate, maximise the allocation of resources towards academic activity ahead of the 2008 Research Assessment Exercise and bring forward new IT systems.

2005/06

Financial Review

Group income and expenditure account for the year ended 31 July 2006

	2006 £ 000s	2005 Restated £ 000s
Income		
Funding council grants	148,693	134,006
Tuition fees and education contracts	65,417	59,116
Research grants and contracts	113,674	103,969
Other income	93,680	94,327
Endowment and investment income	14,105	11,289
Total income	**435,569**	**402,707**
Expenditure		
Staff costs	238,849	221,862
Other operating expenses	166,894	145,803
Depreciation	19,017	19,555
Interest payable	3,919	4,634
Total expenditure	**428,679**	**391,854**
Surplus on continuing operations after depreciation of assets at valuation and before taxation	**6,890**	**10,853**
Gains on disposal of properties	3,283	440
Surplus after depreciation of assets at valuation and disposal of assets but before taxation	**10,173**	**11,293**
Taxation	(8)	(4)
Minority interest	3	3
Transfers to accumulated income within specific endowment asset investments	(1,958)	(736)
Surplus for the year retained within general reserves	**8,210**	**10,556**

Group balance sheet as at 31 July 2006

	2006 £ 000s	2005 Restated £ 000s
Fixed assets	832,149	816,737
Endowment asset investments	201,310	183,153
Net current assets	56,830	55,632
Total assets less current liabilities	**1,090,289**	**1,055,522**
Creditors: amounts falling due after more than one year	(63,806)	(60,434)
Provisions for liabilities and charges	(8,059)	(8,039)
Pension liability	(50,623)	(34,094)
Total net assets	**967,801**	**952,955**
Represented by:		
Deferred capital grants	204,650	199,976
Endowments		
Specific	197,554	179,678
General	3,756	3,475
	201,310	**183,153**
Reserves		
Revaluation reserve	437,554	444,817
General reserves excluding pension liability	174,902	159,091
Pension reserve	(50,623)	(34,094)
Total reserves	**561,833**	**569,814**
Minority interests	8	12
Total funds	**967,801**	**952,955**

The above information reflects the audited accounts for the year to July 2006 published in December 2006. Figures for 2005 have been restated to incorporate the University share of deficits in pension schemes which are now included in the balance sheet under Financial Reporting Standard 17. Anyone wishing further information is invited to contact the Director of Finance at the University.

2005/06

Honorary Graduates and Other Distinctions

Those awarded honorary degrees and Alumnus of the Year between 1 August 2005 and 31 July 2006.

Professor Joseph Felsenstein
Professor of Genome Sciences, University of Washington (Degree of Doctor of Science)

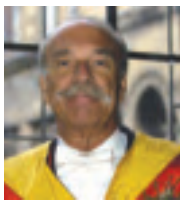
Mr James Boyle
Chairman of the Cultural Commission, Scotland (Degree of Doctor *honoris causa*)

Professor Harry Barkus Gray
Professor of Chemistry and Founding Director of the Beckman Institute at California Institute of Technology (for the Honorary Degree of Doctor of Science)

Professor John L Hennessy
President of Stanford University (Degree of Doctor *honoris causa*)

Dr Peter Greenaway
Film director, painter and writer. Professor of Cinema Studies at the European Graduate School in Saas-Fee, Switzerland (Degree of Doctor of Letters)

Professor John Archer
Petroleum engineer and Vice-Chancellor and Principal of Heriot-Watt University (for the Honorary Degree of Doctor of Science)



Dr Barry Munitz
President and Chief Executive of the J Paul Getty Trust (Degree of Doctor *honoris causa*)

Professor Nicholas Hastie
Director of the MRC Human Genetics Unit (Honorary Degree of Doctor of Science)

Mr Nicholas M Donofrio
IBM Executive Vice-President Innovation & Technology (for the Honorary Degree of Doctor of Science)

Professor D Ruth Schröck
Chair of Nursing Science, Institute of Nursing Science, University of Witten-Herdecke, Germany (Degree of Doctor of Science in Social Science)

Professor J Fraser Stoddart
Fred Kavli Chair in NanoSystems Sciences and Director of the California NanoSystems Institute, University of California, Los Angeles (for the award of the 2005 Alumnus of the Year)

Mrs Kathleen Dalyell
Former chair of the Royal Commission on Ancient and Historical Monuments in Scotland (for the degree of Doctor *honoris causa*)

Benefactors

This award recognises as University Benefactors individuals or organisations that have made significant contributions, financial or otherwise, to the University.

Dr Rodger Mirrey
(Distinction of University Benefactor)

Dr Edwin Feulner
(Distinction of University Benefactor)

Lady Valerie Trotman
(Distinction of University Benefactor)
On behalf of her late husband Lord Trotman, founding Chairman of the University of Edinburgh Campaign Board, former Chairman and Chief Executive of Ford Motor Group

Mr Midge Ure OBE
Songwriter, musical director, record producer and Band Aid trustee (for the Honorary Degree of Doctor of Music)

Mr Joe Simpson
Mountaineer and author (for the degree of Doctor *honoris causa*)

Professor Doreen Massey
Professor of Geography, Open University (for the Honorary Degree of Doctor of Science)

Ms Moira Stuart OBE
Journalist and television presenter (for the degree of Doctor *honoris causa*)

Professor Donald McIntyre
Emeritus Professor, key theorist in initial teacher education (for the Honorary Degree of Doctor of Education)

Sir John (Jackie) Stewart
Former international racing driver (for the degree of Doctor *honoris causa*)

2005/06 Awards

Professor Raj Bhopal
Professor of Public Health in Clinical Sciences and Community Health, has received an honorary Doctor of Science Award from Queen Margaret University College. He is an expert on Legionnaires' disease and has also received several distinguished prizes for his work on health in relation to the environment and ethnicity.

Professor Geoffrey Boulton
Regius Professor of Geology and Mineralogy and Vice-Principal, has been awarded the Lyell Medal of the Geological Society. The medal was first awarded in 1876 and its recipients are a roll call of some of the great names in geology. The other Edinburgh recipient was Sir Frederick Stewart in 1970, Professor Boulton's predecessor in the Regius Chair of Geology. The medal is named after Sir Charles Lyell, a native of Kirriemuir in Angus, the greatest of 19th-century geologists. Professor Boulton was also a recipient of the David Tedford Award for services to science in the inaugural Scots of the Year Awards, presented by the Institute of Contemporary Scotland.

Professor Alan Bundy
has won the IJCAI Award for Research Excellence. This award is given to a scientist who has carried out a programme of research of consistently high quality, yielding several substantial results. This is the third award to an Edinburgh artificial intelligence pioneer, Donald Michie and Geoffrey Hinton being past recipients. Alan Bundy is the only researcher to have won both the IJCAI Award for Research Excellence and the IJCAI Donald E Walker Distinguished Service Award. IJCAI is the International Joint Conference on Artificial Intelligence, the main international gathering of researchers and practitioners in artificial intelligence.

Professor Sarah Cunningham-Burley
Professor of Medical and Family Sociology and Co-Director of the Centre for Research on Families and Relationships, has been appointed to the Human Genetics Commission. The Human Genetics Commission is the UK government's advisory body on developments in human genetics and their impact. Professor Cunningham-Burley will be involved in public engagement activities and in chairing the working group on genetic databases.

Professor Tom Devine
has received the John Aitkenhead Award for services to education as part of the Institute of Contemporary Scotland's Scots of the Year awards. The inaugural awards acknowledge and recognise the achievements of individuals in 12 areas of modern-day Scotland. Professor Devine was also awarded an honorary degree from his *alma mater*, the University of Strathclyde.

Dr Alison Elliot
Associate Director for the Centre of Theology and Public Issues and the first woman moderator of the Church of Scotland, has become the first holder of the James A Whyte Award for services to religion, one of the Institute of Contemporary Scotland's Scots of the Year Awards.

Susan Graham
the University's Records Manager, has been appointed to the position of Chair of the Society of Archivists. The Records Management Group of the Society of Archivists exists to raise the profile of the records management profession.

Andrew Fitzgibbon
an Edinburgh alumnus, has been awarded the Roger Needham Award for his contributions to computer vision and machine learning. The Roger Needham Award is made annually for a distinguished research contribution in computer science by a UK-based researcher within ten years of their PhD. Andrew acquired his PhD from Edinburgh in 1997 for his thesis on artificial intelligence.

Professor Anna Glasier
Director of Sexual and Reproductive Health at the University and lead clinician for Lothian Primary Care NHS Trust, has received an honorary degree of Doctor of Law from the University of Dundee. Professor Glasier is a family planning specialist, one of Scotland's leading 'well woman' experts and a Director and Consultant for the Family Planning and Well Woman Services for Edinburgh and Lothian.

Nina Rzechorzek
a Physiology Honours student, has been awarded the World Leadership Forum Award for the Best Biology or Biotechnology Student, which is judged by the Institute of Biology. The prestigious prize, part of the 2005 Science, Engineering & Technology Student of the Year (SET) Awards, was presented to Nina for her project "Elafin sculptures the local and contralateral ovine pulmonary response to LPS".

Professor Aziz Sheikh
Professor of Primary Care Research and Development, has received the 2005 Royal College of General Practitioners (RGCP) Boots the Chemist Research Paper of the Year Award for his work on a study of children with conjunctivitis. Professor Sheikh and colleagues from other universities published a paper which concluded that most children who have the eye infection get better by themselves and do not require treatment with an antibiotic.

New Year's Honours List

Alumni names in the New Year's Honours list include:

Professor (James) Louis Appleby
(1977 BSc (M), 1980 MB ChB), who received the CBE for services to Medicine

Professor Patricia Broadfoot
(1977 Med), who received the CBE for services to Social Science

Professor Alan Fairlamb
(1968 BSc (M), 1971 MB ChB), who received the CBE for services to Medical Science

Sheriff John Allan
(1962 BL), who received the OBE for services to the Administration of Justice

Professor Patricia Peattie
(1974 BSc (SS)), who received the OBE for services to Education and to Health in Scotland

Ms Sally Witcher
(1999 MSc), who received the OBE for services to disabled people

Mr Patrick Stirling-Aird
(1966 LLB), who received the MBE for services to Wildlife Conservation

Mr John Wilder MBE
(1962 MA), who received the MBE for services to Education

Ms Naomi Clapham
(1967 BSc (SS)), who received the MBE for services to the British Community in Algeria

Queen's Birthday Honours List

Professor Jean Duthie Beggs
has received the CBE for services to science. Professor Beggs is a Professor of Molecular Biology at the University. In the late 1970s Professor Beggs made a key contribution to the development of yeast molecular genetics in adapting the yeast two micron plasmid, a small circular DNA molecule that exists independently of the yeast chromosomes, as a cloning vector (an agent that transfers genetic material from one cell to another) and she was one of the first researchers to achieve transformation of yeast with DNA. In 1998 she was made a Fellow of the Royal Society, and in 2003 she won the Gabor Medal, which is a biennial prize that acknowledges distinction in the work of the life sciences, particularly genetic engineering and molecular biology. Professor Beggs also won a Chancellor's Award in 2005 (see below).

Professor Nicholas Hastie
Director of the Human Genetics Unit at the Medical Research Council, has received the CBE for services to science. The Unit undertakes basic and strategic research to obtain a molecular and cellular understanding of genetic factors implicated in human disease and normal and abnormal development. Professor Hastie was awarded an honorary degree by the University in 2006.

Professor James Wilson Ironside
has received the CBE for services to Medicine. He is a Professor of Clinical Neuropathology at the University's National Creutzfeldt-Jakob Disease Surveillance Unit and a member of the Centre for Infectious Diseases. Professor Ironside was Director of the National CJD Surveillance Unit from 2002–2004 and was the Deputy Chairman of SEAC, the advisory body to the UK government on prion diseases, from 2002–2005. He has also acted as an expert advisor to the UK Department of Health on the risks of transmission of CJD by blood, blood products and surgical instruments.

Professor Mary Bownes
Vice-Principal for Widening Participation, Recruitment & Admissions and Community Relations and a Professor of Development Biology at the University, has received an OBE for services to Science. Professor Bownes joined the University in 1979 as Lecturer in Molecular Biology. She was appointed Personal Chair of Developmental Biology, was Associate Dean for Postgraduates in the Faculty of Science and Engineering from 1997–1998, Head of the Institute of Cell and Molecular Biology from 1998–2001, and was appointed as Vice-Principal for Widening Participation, Recruitment and Admissions and Community Relations in 2003. She is a Fellow of the Institute of Biology, the Royal Entomological Society and the Royal Society of Edinburgh. Her research is focused on reproduction in Drosophila and mouse.

Alumnus of the Year 2005

Professor J Fraser Stoddart
Professor Fraser Stoddart received the Alumnus of the Year award at a graduation ceremony at the University in June. He received his BSc (1964) and PhD (1966) degrees from the University of Edinburgh. He was also awarded a DSc degree by the University in 1980 for his research into stereochemistry beyond the molecule.

Professor Stoddart is one of the few chemists of the past quarter century to have created a new field of organic chemistry – namely, one in which the mechanical bond is a pre-eminent feature of molecular compounds.

His work has been recognised by many awards, including the Carbohydrate Chemistry Award of the Chemical Society (1978), the International Izatt-Christensen Award in Macrocyclic Chemistry (1993), the American Chemical Society's Cope Scholar Award (1999), and the Nagoya Gold Medal in Organic Chemistry (2004).

He is currently on the international advisory boards of numerous journals and is a Fellow of the Royal Society (1994), the German Academy of Natural Sciences (1999), and the American Association for the Advancement of Science (2005).

He was made an Honorary Professor at the East China University of Science and Technology in Shanghai. He also held the Carnegie Centenary Visiting Professorship at the Scottish Universities in 2005, and has been awarded named lectureships by many universities worldwide.

Professor Stoddart is Director of the CNSI (California NanoSystems Institute) at UCLA (University of California at Los Angeles) and holds the Fred Kavli Chair of NanoSystems Sciences.

Chancellor's Awards 2005

These awards are presented in recognition of innovation, relevance, creativity and personal dedication. They are presented by HRH Prince Philip, Duke of Edinburgh, Chancellor of the University, at a dinner in the Palace of Holyroodhouse.

Professor Jean Beggs, of the School of Biological Sciences, won her award for her work on molecular genetics. She has had an exceptional research career which included developing the first cloning vector for transferring genes between bacteria and eukaryotic cells, making it possible for the first time to extend recombinant DNA work to eukaryotes – in this case yeast, the organism which Professor Beggs has utilised throughout her career.

Dr Jane Dawson won her award for her development of innovative e-Learning techniques in the School of Divinity. Her ground-breaking work combines e-Teaching strategies with traditional teaching, and she has also worked hard to ensure that a wealth of primary historical evidence is being placed on the University's website for open access learning.

2005/06

Appointments

Appointments commenced between August 2005 and July 2006.

College of Science & Engineering

Personal Chairs

Dr Chris Williams
Personal Chair of Machine Learning

Dr Ian Underwood
Personal Chair of Electronic Displays

Dr Stuart West
Personal Chair of Evolutionary Biology

Dr Sandy Tudhope
Personal Chair of Climate Studies

Dr Josephine Pemberton
Personal Chair of Molecular Ecology

Dr Lesley Yellowlees
Personal Chair of Inorganic Electrochemistry

Dr Jacek Gondzio
Personal Chair of Optimization

Dr Steve Playfer
Personal Chair of Experimental Particle Physics

Dr Jon Oberlander
Personal Chair of Epistemics

Dr Jane Jacobs
Personal Chair of Cultural Geography

Dr Judith Allen
Personal Chair of Immunobiology

Dr Jin Ooi
Personal Chair of Particulate Solid Mechanics

Dr José Figueroa-O'Farrill
Personal Chair of Geometric Physics

Dr Nick Read
Personal Chair of Fungal Cell Biology

Dr Richard Ball
Personal Chair of Mathematical Physics

Dr Hamish McNab
Personal Chair of Heterocyclic Chemistry

Professor Ian Halliday
Personal Chair of Physics

Professorships

Professor Ian Bryden
Chair of Renewable Energy

Dr Andrea Schaefer
Chair of Environmental Engineering

Dr Andrew Huxley
Chair of Physics in Quantum Ordering
at Extreme Conditions

Dr Michael Davies
Jeffrey Collins Chair of Signal and Image Processing

Professor Leonid Libkin
Chair of Foundations of Data Management

Honorary Professorships

Professor Howard Baker
Engineering & Electronics

Professor G Brebner
Informatics

Professor Ken Brown
Mathematics

Professor Andrew Cairns
Mathematics

Dr N Cape
Chemistry

Professor Jack Carr
Mathematics

Professor Mike Chantler
Engineering & Electronics

Professor Mike Christie
GeoSciences

Professor Patrick Corbett
GeoSciences

Professor Ali Danesh
GeoSciences

Professor Dugald Duncan
Mathematics

Professor Chris Eilbeck
Mathematics

Professor John Ford
GeoSciences

Professor Serguei Foss
Mathematics

Professor Ian Galbraith
Engineering & Electronics

Professor Gavin Gibson
Mathematics

Professor Denis Hall
Engineering & Electronics

Professor Duncan Hand
Engineering & Electronics

Professor J Hendler
Informatics

Professor Jim Howie
Mathematics

Professor Des Johnston
Mathematics

Professor Julian Jones
Engineering & Electronics

Professor Sergei Kuksin
Mathematics

Professor Andrew Lacey
Mathematics

Professor David Lane
Engineering & Electronics

Professor Colin MacBeth
GeoSciences

Professor Angus Macdonald
Mathematics

Professor Markus Newborough
Engineering & Electronics

Professor Derryck Reid
Engineering & Electronics

Professor Bob Reuben
Engineering & Electronics

Professor Alan Sangster
Engineering & Electronics

Professor Jonathan Sherratt
Mathematics

Professor John Side
Engineering & Electronics

Professor B Smart
Engineering & Electronics

Professor K Smith
GeoSciences

Professor Ken Sorbie
GeoSciences

Professor Richard Szabo
Mathematics

Professor Adrian Todd
GeoSciences

Professor Bahman Tohidi
GeoSciences

Professor Andrew Walker
Engineering & Electronics

Professor Andrew Wallace
Engineering & Electronics

Professor Richard Warburton
Engineering & Electronics

Professor Howard Waters
Mathematics

College of Medicine & Veterinary Medicine

Personal Chairs

Professor David Dewhurst
Personal Chair in Student Learning (e-Learning)

Dr Robert Minns
Personal Chair in Paediatric Neurology

Dr David Newby
Personal Chair in Cardiology and Cardiovascular Medicine

Dr Sarah Cunningham-Burley
Personal Chair in the Sociology of Health and Medicine

Professor Donald Salter
Personal Chair in Osteoarticular Pathology

Dr Sarah Howie
Personal Chair in Immunopathology

Dr Andrew Jarman
Personal Chair in Developmental Cell Biology

Dr Richard Ribchester
Personal Chair in Cellular Neuroscience

Professor John Savill
Personal Chair in Experimental Medicine
(previously in existing established Chair of Medicine)

Professor Robert Will
Personal Chair in Clinical Neurology

Honorary Professorships

Professor Hamish Fraser
Clinical Sciences and Community Health

Professor Richard Baldock
Molecular and Clinical Medicine

Dr Nick Bateman
Molecular and Clinical Medicine

Dr Harry Griffin
Royal (Dick) School of Veterinary Studies

Professor Philippa Saunders
Clinical Sciences and Community Health

Professor Mike Ford
Molecular and Clinical Medicine

Professorships

Professor John Iredale
Chair of Medicine

Professor David Argyle
William Dick Chair of Vet Clinical Studies

Professor Mark Woolhouse
Chair of Infectious Disease Epidemiology (previously in the Chair of Vet Public Health and Quantitative Epidemiology)

Professor Marie Fallon
St Columba's Chair in Palliative Medicine

Professor Scott Murray
St Columba's Chair in Primary Palliative Care

Professor Tony Harmar
Chair of Pharmacology (previously held a Personal Chair in Molecular Pharmacology)

Professor Stuart Forbes
Chair in Transplantation and Regenerative Medicine

College of Humanities & Social Science

Personal Chairs

Professor Timothy Lim
Personal Chair in Hebrew and Second Temple Judaism

Professor Peter Nelson
Personal Chair in Music and Technology

Professor Jeff Haywood
Personal Chair in Education and Technology

Professor Rosemary Mander
Personal Chair in Midwifery

Professor Viviene Cree
Personal Chair of Social Work Education

Professor Ed Hopkins
Personal Chair in Economics

Professor Randall Stevenson
Personal Chair in Twentieth Century Literature

Professor Paul Nugent
Personal Chair of Comparative African History

Professor R Mackenney
Personal Chair of Italian Renaissance History

Professor Tony Wilkinson
Personal Chair in Near Eastern Archaeology

Professorships

Professor Hans M Barstad
Chair of Hebrew and Old Testament Studies

Professor Natascha Gentz
Chair of Chinese

Professor Judith Green
Chair in Medieval History

Professor Abhay Abhyankar
Baillie Gifford Chair of Financial Markets

Professor Thomas Devine
Sir William Fraser Chair of Scottish History

Professor Simon Frith
Tovey Chair of Music

Professor Robert Lingard
The Bell Chair of Education

Professor Jill Schofield
Somers Chair of Health Care Management

Professor Lizbeth Stanley
Chair of Sociology

Professor Richard Taffler
Martin Currie Chair of Finance and Investment

Professor Stephen Yearly
Chair in Sociology of Scientific Knowledge

Honorary Professorships

Professor Sandy Robertson
School of Social & Political Studies

Professor Gaby Weiner
Moray House School of Education

Professor Charlene Harrington
School of Health in Social Science

Professor Colin Leys
School of Health in Social Science

Dr David Breeze
School of History & Classics

2005/06

Appendix 1

1. Undergraduate applications and acceptances

	2003 year of entry			2004 year of entry			2005 year of entry		
	Men	Women	**Total**	Men	Women	**Total**	Men	Women	**Total**
Applications*	14,578	17,869	**32,447**	16,692	20,386	**37,078**	18,767	22,959	**41,726**
Places taken up	1,836	2,344	**4,180**	1,908	2,439	**4,347**	2,043	2,477	**4,520**

*Notes: *Figures defined as number of applications received in each cycle for entry in the same year or deferred entry for following year.*

2005/06

Appendix 2

2. Student numbers

2.1 Student headcount by level of study and gender

	Undergraduate			Postgraduate Taught			Postgraduate Research			Grand Total		
	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06
Female	9,570	10,011	10,424	1,681	1,640	1,655	1,287	1,485	1,485	12,538	13,136	13,574
Male	7,393	7,522	7,855	1,172	1,149	1,169	1,724	1,899	1,870	10,289	10,570	10,894
Grand Total	**16,963**	**17,533**	**18,279**	**2,853**	**2,789**	**2,834**	**3,011**	**3,384**	**3,355**	**22,827**	**23,706**	**24,468**

2.2 Student headcount by college

	Undergraduate			Postgraduate Taught			Postgraduate Research			Grand Total		
	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06
Humanities and Social Science	9,906	10,565	11,012	2,318	2,249	2,226	1,081	1,198	1,200	13,305	14,012	14,438
Medicine and Veterinary Medicine	1,923	1,818	1,974	126	99	113	795	907	881	2,844	2,824	2,968
Science and Engineering	5,134	5,150	5,293	409	441	495	1,135	1,279	1,274	6,678	6,870	7,062
Grand Total	**16,963**	**17,533**	**18,279**	**2,853**	**2,789**	**2,834**	**3,011**	**3,384**	**3,355**	**22,827**	**23,706**	**24,468**

2005/06

Appendix 2

2.3 Student headcount by domicile region

	Undergraduate			Postgraduate Taught			Postgraduate Research			Grand Total		
	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06
Scotland	7,815	8,199	8,518	1,561	1,413	1,374	1,248	1,367	1,443	10,624	10,979	11,335
Other UK	6,498	6,520	6,781	276	302	319	557	622	591	7,331	7,444	7,691
EU (non-UK)	1,099	1,143	1,168	328	365	341	409	504	491	1,836	2,012	2,000
International	1,551	1,671	1,812	688	709	800	797	891	830	3,036	3,271	3,442
Grand Total	**16,963**	**17,533**	**18,260**	**2,853**	**2,789**	**2,831**	**3,011**	**3,384**	**3,353**	**22,827**	**23,706**	**24,468**

2.4 Student headcount by domicile for top 10 non-UK domicile countries in 2005/06

	Undergraduate			Postgraduate Taught			Postgraduate Research			Grand Total		
	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06	2003/04	2004/05	2005/06
USA	608	712	817	109	129	164	180	192	158	897	1,033	1,139
People's Republic of China	134	164	158	170	222	219	93	122	121	397	508	498
Germany	228	202	189	55	61	53	63	73	78	346	336	320
Greece	93	77	67	97	114	113	117	132	113	307	323	293
Republic of Ireland	101	140	145	53	48	45	48	51	52	202	239	242
France	153	161	168	24	23	15	30	38	41	207	222	224
Canada	108	118	76	44	40	39	54	58	47	206	216	162
Malaysia	88	94	101	12	16	10	29	37	33	129	147	144
Italy	69	60	64	14	16	17	50	62	58	133	138	139
Spain	70	69	69	17	22	21	32	39	38	119	130	128

2005/06

Appendix 3

Benefactions **(This list reflects giving from 1 August 2005 to 31 July 2006)**

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Professor Colin C Bird
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Professor John W Cassels
Ms Amanda Chandler
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Dr Patricia Donald
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James Young Simpson
(£10,000–£49,999)
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Barham Benevolent Foundation
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Lady Eda Jardine Charitable Trust
The late Miss Mary Kratter
Mr Gregor R Logan
Dr Alastair Macdonald
Dr Patricia Mackay
Mr Roger Miller
Dr Rodger Mirrey
Mr David O Mitchell
Mr Steven Morrison
The late Dr John Mullan

2005/06

Appendix 3

Benefactions, continued

Professor Timothy O'Shea
and Professor Eileen Scanlon
The late Dr William Rankine
Mr Martin Ritchie
Row Fogo Charitable Trust
Mr Ian F Rushbrook
Mr Christopher Stone
Dr George Sypert & Dr Joy Arpin Sypert*
T B Macaulay Trust
Mrs Carolyn Thornton
Mr David and Mrs Terri Warnock
Mr Peter Williams
Sir Gordon Wu
The Zachs Adam Family Fund*

James Clerk Maxwell
(£50,000 and over)
Dr Alfred and Dr Isabel Bader*
The late Miss Janet Balston
Bransby Home of Rest for Horses
Mr Richard Burns
Coca-Cola Foundation*
Council of American Overseas Research Centers
Mr George A David
DSG International
The late Mrs Barbara Duncan
Rev Robert Funk*
The late Miss Annie Hopkins
Mary Kinross Charitable Trust
The Kresge Foundation
The late Dr Daniel MacLagan
Martin Currie Investment Management Limited
Professor David Milne
Professor Walter and Dr Norma Nimmo
Miss Gladys Ogilvy-Shepherd
The late Dr Mary Paterson
The late Mrs Helen L Philip
The late Miss Elizabeth Pirie
Mrs Minnie Riddell-Swan
The late Dr Isabella Sharpe
The late Mr Hans Silberstein
The late Mr Stephen Somers*
Lady Trotman and the late Lord Trotman*
The University of Edinburgh USA
Development Trust
The late Dr Lloyd Werden
The late Mr Robert Wilson
The Wolfson Foundation

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(Pledged legacy between
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Mr John R Bergman
Mr Robert J Bideleux
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Dr Szu-Chin Chen
Dr Arthur Clark
Dr Drew Clark
Dr Vicki Clark
Dr Thomas Crichton
Dr H J C Crombie Smith
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Dr Arthur French
Professor O James Garden
Dr Christopher Gillespie
Miss Lesley Gilliat
Mrs Alison Gillies
Mr Crawford S Gillies
Dr Sarah Gray
Miss Catherine Grubb
Mr Richard Grylls
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2005/06

Appendix 4

Research grants and other sources of funding

1. From charities, industry and other institutions

Sponsor type	Sponsor name	Award total £
Charity	Agilent Technologies Foundation	£16,216
Charity	Alzheimer's Society	£179,000
Charity	Anatomical Society of Great Britain & Ireland	£51,255
Charity	Arthritis Research Campaign	£393,425
Charity	Association for International Cancer Research	£205,131
Charity	Association of Anaesthetists of Great Britain & Ireland	£22,114
Charity	Asthma UK	£153,044
Charity	Barnardo's	£16,000
Charity	Biochemical Society	£1,320
Charity	British Heart Foundation	£2,255,925
Charity	British Medical Association	£27,737
Charity	Caledonian Research Foundation	£125,681
Charity	Calouste Gulbenkian Foundation	£6,000
Charity	Cambridge Crystallographic Data Centre	£20,500
Charity	Cancer Research UK	£2,543,473
Charity	Canine Health Foundation	£29,048
Charity	Carnegie Trust for the Universities of Scotland	£9,890
Charity	Chest, Heart and Stroke Scotland	£98,079
Charity	Communication Workers Union	£4,278
Charity	Cunningham Trust	£140,000
Charity	Cystic Fibrosis Trust	£165,870
Charity	Diabetes Research and Wellness Foundation (US)	£29,061
Charity	Diabetes UK	£258,528
Charity	Donkey Sanctuary	£22,000
Charity	European Society for Vascular Surgery	£10,204
Charity	European Society of Anaesthesiology	£9,424
Charity	Fergus Maclay Leukaemia Trust	£125,321
Charity	Foundation for Skin Research	£39,544
Charity	Glasgow Mathematical Journal Trust	£1,000
Charity	Grass Sickness Fund	£20,000
Charity	Historic Scotland	£817
Charity	Home of Rest for Horses	£80,000
Charity	Hypertension Trust	£60,255
Charity	Institute of Chartered Accountants of Scotland	£1,906
Charity	James Madison Trust	£158,846
Charity	Joseph Rowntree Foundation	£61,622
Charity	Jules Thorn Charitable Trust	£10,000
Charity	Leukaemia Research Fund	£791,565
Charity	Leverhulme Trust	£1,181,468
Charity	Loeb Classical Library Foundation	£1,026
Charity	London Mathematical Society	£4,900
Charity	Lothian NHS Endowments	£54,252
Charity	Macmillan Cancer Relief	£85,000
Charity	Melville Trust	£111,869
Charity	National Alliance for Research on Schizophrenia and Depression	£30,089
Charity	National Cancer Research Institute	£1,899,999
Charity	National Kidney Research Fund	£170,547
Charity	Norman Salvesen Emphysema Research Trust	£27,071
Charity	NSPCC	£12,522
Charity	Nuffield Foundation	£10,010
Charity	Parkinson's Disease Society	£150,000
Charity	Perrott–Warwick Fund	£37,500
Charity	PPP Healthcare Medical Trust	£21,000
Charity	Prostate Research Campaign	£40,000
Charity	Ramsay Memorial Fellowships Trust	£68,663
Charity	Research into Ageing	£250,051
Charity	Royal College of Physicians Edinburgh	£187,942
Charity	Royal College of Surgeons Edinburgh	£122,120
Charity	RSPCA	£8,000
Charity	Sail Training International	£70,220
Charity	Salvesen Research Trust	£100,187
Charity	Scotland Inheritance Fund	£565,337
Charity	Scottish Youth Dance	£48,354
Charity	SHERT	£405,420
Charity	Society for Reproduction and Fertility	£1,320
Charity	Society General Microbiology	£1,715
Charity	Sustrans	£10,007
Charity	Tenovus – Scotland	£32,250
Charity	The Church of Scotland	£2,000
Charity	The Health Foundation	£651,282
Charity	The Mind Association	£7,400
Charity	The Premature Baby Charity (BLISS)	£51,528
Charity	The Tapestry Partnership	£156,308
Charity	Wellcome Trust	£23,898,967
European Union – other	American School of Classical Studies at Athens	£9,872
European Union – other	Anglo–German Foundation	£133,486
European Union – other	Deutsche Forschungsgemeinschaft	£33,105
European Union – other	Foundation for Science & Technology (Portugal)	£8,427
European Union – other	German Research Foundation	£38,573
European Union – other	Human Frontier Science Program Organization	£97,291
European Union – other	INERIS Limited	£50,000
European Union – other	Wissenschaftskolleg zu Berlin	£38,710
Industry – European	G E Healthcare, Finland	£308,734
Industry – European	GeoForschungsZentrum	£110,484
Industry – European	Honda Research Institute Europe	£22,200
Industry – overseas	Agilent	£41,666
Industry – overseas	Asilomar Pharmaceuticals, Inc	£13,582
Industry – overseas	BBN Corporation	£99,564
Industry – overseas	Genentech	£321,888
Industry – overseas	Hoffmann–La Roche Inc	£13,500
Industry – overseas	Intel Corporation	£35,100
Industry – overseas	Invitrogen Corporation	£88,000
Industry – overseas	Merck Inc	£1,246
Industry – overseas	TAP Pharmaceutical Products Inc	£93,862
Industry – UK	ADAS Consulting Ltd	£2,101
Industry – UK	Apatech	£15,000
Industry – UK	Applied Research & Technology Limited	£19,821
Industry – UK	ARC International (UK) plc	£21,710
Industry – UK	Astra Zeneca	£39,600
Industry – UK	Bayer plc	£81,081
Industry – UK	Bristol–Myers Squibb	£130,812
Industry – UK	Building Research Establishment	£669,000
Industry – UK	BUPA, Murrayfield Hospital	£160,000
Industry – UK	Chirotech Technology Ltd	£11,700
Industry – UK	Cyclacel Ltd	£58,820
Industry – UK	DEM Solutions Ltd	£44,078
Industry – UK	DTZ Pieda	£7,000
Industry – UK	FM Global	£53,000
Industry – UK	Formpave Ltd	£30,000
Industry – UK	Fuji Imaging Colorants Ltd	£36,000
Industry – UK	GlaxoSmithKline	£110,079
Industry – UK	GR Advanced Materials Ltd	£48,660

2005/06

Appendix 4

Research grants and other sources of funding, continued

Sponsor type	Sponsor name	Award total £
Industry – UK	Infineum UK Ltd	£21,000
Industry – UK	Intrallect Ltd	£4,500
Industry – UK	KODAK	£22,451
Industry – UK	LUX Biotechnology Ltd	£4,950
Industry – UK	Melrose Resources plc	£48,000
Industry – UK	MicroMass UK Ltd	£13,500
Industry – UK	Microsoft Research Ltd	£120,000
Industry – UK	Mobile VCE	£438,514
Industry – UK	Network Rail	£36,500
Industry – UK	Nortel	£15,000
Industry – UK	Pfizer Ltd	£90,000
Industry – UK	Polymer Laboratories Ltd	£3,910
Industry – UK	Roche	£16,000
Industry – UK	Royal Bank of Scotland	£43,200
Industry – UK	Samsung	£90,000
Industry – UK	Schlumberger	£10,500
Industry – UK	Shell	£68,300
Industry – UK	Spiral Gateway Ltd	£26,000
Industry – UK	Stryker International	£225,000
Industry – UK	The Concrete Centre Ltd	£28,000
Industry – UK	The Inside Line Ltd	£21,600
Industry – UK	Triton Electronics Ltd	£29,940
Industry – UK	Unilever	£35,000
Industry – UK	Vexcel	£60,420
Industry – UK	Watson Stonecraft Ltd	£49,034
Learned Society	British Academy	£449,329
Learned Society	Royal Society	£1,974,891
Learned Society	Royal Society of Chemistry	£2,500
Learned Society	Royal Society of Edinburgh	£387,162
Overseas charities	Iran Heritage Foundation	£3,000
Overseas charities	Mayo Foundation	£50,563
Overseas charities	Merck, Sharp and Dohme (MSD) Research Foundation	£22,140
Overseas charities	Morris Animal Foundation	£73,954
Overseas charities	Novartis Foundation	£56,888
Overseas charities	WHO	£10,811
Overseas government	National Aeronautics & Space Administration	£18,251
Overseas government	National Institutes of Health	£224,755
Overseas government	Teagasc	£10,967
Overseas other	Food and Agricultural Organisation	£21,622
Overseas other	Georgetown University	£55,828
Overseas other	HEC Montreal	£2,084
Overseas other	Japan Foundation Endowment Committee	£2,560
Overseas other	University of Bergen	£260
Overseas other	University of Minnesota	£59,544
Overseas other	University of Montreal	£7,916
Overseas other	University of Washington	£18,190
Total from charities, industry and other institutions		**£46,692,689**

2. From research councils and other government agencies

Sponsor type	Sponsor name	Award total £
Research Council	AHRC	£1,188,973
Research Council	BBSRC	£7,855,822
Research Council	CCLRC	£85,334
Research Council	EPSRC	£23,033,340
Research Council	ESRC	£2,350,431
Research Council	MRC	£12,720,540
Research Council	NERC	£4,993,316
Research Council	PPARC	£3,506,806
Research Council	Research Councils United Kingdom	£125,000
European Union – government	European Community	£16,351,055
Government	BGS	£24,000
Government	Biomathematics and Statistics Scotland	£15,709
Government	British Council	£3,200
Government	Chief Scientist Office – Scotland	£20,437
Government	Communities Scotland	£27,681
Government	Countryside Agency	£1,465
Government	CSO	£3,116,190
Government	Deer Commission for Scotland	£76,057
Government	Defence Science and Technology Laboratory	£38,351
Government	Department for Environment, Food and Rural Affairs	£1,179,986
Government	Department of Health	£317,423
Government	DFID	£363,159
Government	DTI	£49,923
Government	Food Standards Agency	£8,320
Government	Horserace Betting Levy Board	£27,850
Government	ITI Techmedia	£4,268,569
Government	Joint Information Systems Committee	£372,315
Government	Knowledge Transfer Partnership	£328,600
Government	Macaulay Institute	£28,500
Government	Meteorological Office	£71,392
Government	National External Quality Assessment Service	£7,707
Government	Quality Assurance Agency for Higher Education	£20,000
Government	Scottish Enterprise	£270,732
Government	Scottish Executive	£2,521,229
Government	Scottish Executive Education Department	£475,603
Government	Scottish Funding Council	£515,104
Government	Scottish Further Education Unit	£14,000
Government	Scottish Natural Heritage	£182,842
Government	Scottish Qualifications Authority	£24,854
Government	Strategic Promotion of Ageing Research Capacity	£17,541
Health authorities	East Renfrewshire	£6,817
Health authorities	Glasgow Centre for Population Health	£23,730
Health authorities	Greater Glasgow NHS Board	£113,120
Health authorities	NHS Lothian Hospital Trust	£598,688
Health authorities	NHS R&D	£42,551
Health authorities	NHS Scotland	£1,809,488
Health authorities	SNBTS	£196,159
Universities etc	Centre for Integrated Healthcare Research	£43,547
Universities etc	Edinburgh College of Art	£28,041
Universities etc	Edinburgh Mathematical Society	£750
Universities etc	Higher Education Academy	£7,659
Universities etc	Imperial College, London	£17,286
Universities etc	Institute of Education, University of London	£800
Universities etc	University Association for Contemporary European Studies	£850
Universities etc	University College London	£71,979
Universities etc	University of Aberdeen	£134,552
Universities etc	University of Cambridge	£110,000
Universities etc	University of Dundee	£923,704
Universities etc	University of Essex	£25,678
Universities etc	University of Glasgow	£244,155
Universities etc	University of Leeds	£148,608
Universities etc	University of Liverpool	£59,789
Universities etc	University of Nottingham	£125,215
Universities etc	University of Oxford	£9,300
Universities etc	University of Reading	£56,713
Universities etc	University of Southampton	£791,322
Universities etc	University of Stirling	£229,370
Universities etc	University of Strathclyde	£262,997
Universities etc	University of Warwick	£2,655
Universities etc	University of Cardiff	£98,663
Total from research councils and other government agencies		**£92,783,542**

Grand Total £139,476,231