



University of  
**BRISTOL**

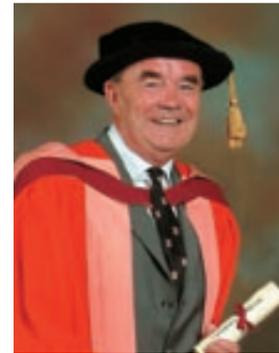
ANNUAL REPORT 2004/05





# INTRODUCTION

In this annual report to University Court and to the wider community, Council has tried to capture something of the flavour of an extraordinary year. History will show whether 2004/05 was a watershed, but it certainly felt as though the pace and scale of change had been turned up a notch.



*The Chairman received an Honorary degree from the University in 2005. See p 27.*

By way of example, in September we had the opening by Lord Sainsbury of the Dorothy Hodgkin Building for integrative neuroscience and endocrinology. In January we received confirmation that Bristol had won bids to the Higher Education Funding Council for England to establish Centres for Excellence in Teaching and Learning in both Chemistry and Medical Sciences. And in February came the opening by Her Majesty The Queen of the Bristol Laboratory for Advanced Dynamics Engineering (BLADE). Progress of this kind, which is doing so much to keep the University at the forefront of research, enterprise and education, was accompanied by a welter of developments in our policies and systems in pursuit of better services and greater efficiency.

When change is taking place at such a rate and across such a broad front, it is all the more important to hold on to the things that are constant – in particular, the University's broad aims, its values and its tried-and-tested methods. Council has been especially careful to maintain its rigorous approach to financial management issues. Thus it has continued to work hard to maintain a healthy operating surplus for the University and to exercise a level of prudence that has ensured the institution's creditworthiness.

Council may be cautious, but it is also highly ambitious for the University. It intends to press ahead with a very substantial programme of investment in buildings, facilities and staff over the next five years – a programme that will support and enhance both the academic output and the student experience and further sharpen the University's competitive edge. Council will do this in a way that is well grounded and sustainable. It will take risks, but only if it is convinced that such risks are manageable. The expectation is that the University will be able to approach its centenary in 2009 in the knowledge that its second century is set to be at least as distinguished as its first, and that Bristol will continue to be a byword for quality around the world.

Finally, I should like to take this opportunity to thank all those who serve on Council and its committees for their expertise and their unfailing commitment and loyalty to this great University and to the diverse community of people who study and work here.

**Dr Moger Woolley**

Chairman, University Council

## FOREWORD

It is all too easy to ‘gush’ in a statement of this kind – to lapse into breathless hyperbole. While I hope to avoid that, it would be wrong to disguise my continuing amazement at particular aspects of this University.



First, the staff. On the academic side, Bristol is fortunate in having some of the most distinguished researchers and teachers in the world. The great news is that not only do people of this calibre want to come here (and we made some spectacular appointments in 2004/05), but also that they tend to stay. As an aside, can anyone tell me of a comparable institution that numbers as many Fellows of the Royal Society (30) among its active and emeritus staff, as well as nine Fellows of the British Academy? And on the support services side, we are privileged to have dedicated teams led by some of the best managers in the whole of higher education. I am optimistic that our Reward project and our Positive Working Environment initiative will help to make the University an even more favoured employer for all categories of staff.

Second, the students. One might expect that given the University’s exceptional popularity and the level of competition for places, Bristol students would be among the most talented and committed of their generation. What one might not expect is that so many of them would also contribute unstintingly as volunteer workers in the local area – in schools, in old people’s homes and in youth projects. Again, I know of no other university at which the students are so committed as citizens as well as scholars.

Having a university community of such distinction places particular duties on those in positions of leadership – to recognise and nurture its quality and to maintain the conditions in which people can fly both academically and socially. This report sets out some of the results in 2004/05, and I believe it is a record of which everyone associated with the University can be proud.

There is much more to do, of course, as there always will be. The landscape of higher education is not going to get any less challenging and the pressure to raise our game will not diminish. Hence our announcement in 2004/05 that an investment of some £250 million would be made over the next five years to help us consolidate or even advance our position in the UK and internationally.

Perhaps I have failed in my attempt to avoid an excess of enthusiasm in this foreword. We must be assessed on our results, not our rhetoric. This report is one of the ways in which we set out our stall to be judged by those with a stake in our University’s future. If the document sparks any ideas or queries, please do not hesitate to let me know.

### Professor Eric Thomas

Vice-Chancellor

## CONTENTS

6	Research and enterprise
14	Teaching and learning
17	The engaged university
20	Students: a world of talent
23	Staff
27	Honorary degrees
28	Capital projects and estate developments 2004/05
29	The University in the media
32	Campaigns and alumni relations
34	Statistics
35	Members of Council 2004/05
35	Credits



# RESEARCH AND ENTERPRISE

Bristol is a research-intensive university, but the relationships between high-quality education, world-class research and innovative enterprise are growing ever stronger.

Results from University research – for example, a study by the Graduate School of Education of PC use in school classrooms – directly inform the teaching of our courses. And while pure research will always be a core activity, Bristol's academics are becoming increasingly aware that good management of intellectual property can play a crucial role in translating research effectively into economic and social benefits.

Entrepreneurship also offers exciting possibilities: discoveries in the laboratory or the workshop can, with careful planning, sound advice and visionary stewardship, lead to something that can be taken to market. The Division of Research, Enterprise and Development (RED) acts as adviser, facilitator, broker and trainer to Bristol's researchers and entrepreneurs.

## Research Themes

The past year saw further implementation of the University's Research Strategy for the period leading up to the next Research Assessment Exercise in 2008. During 2004/05, the faculties, working with their Faculty Research Directors, identified University Research Themes.

Bristol engages in the full range of discipline-based academic research, but while the breadth of that research is a strength, we recognise that we cannot do everything to the same standard and must put a particular focus on what we are best at. As a leading research-intensive university in a highly competitive and under-funded environment, we want to offer something that is distinctive and exciting. Excellent discipline-based research is absolutely essential, but Bristol's distinctiveness will be reflected in its ability to work across the breadth of disciplines thematically and to use our research to answer 'real-world' questions and help to set the agenda for future work. The University Research Themes will allow us to articulate our interests and strengths better.

The established cross-faculty research themes are:

- **Cardiovascular Science**
- **Neuroscience**
- **Epidemiology and Health Services Research**
- **Nanoscience and Quantum Information**
- **Communications**
- **Colonialism**
- **Medieval Cultures**
- **Reception**
- **Applied Quantitative Social Science**
- **Ethnicity and Migration**

The University has identified other interdisciplinary research areas in which it is growing stronger and which have the potential to become themes. The overall list of current and emerging themes is intended to be flexible and will be kept under review.

The up-to-date list can be found at [www.bristol.ac.uk/researchreview](http://www.bristol.ac.uk/researchreview)

The following pages feature some of the developments in research and enterprise during 2004/05.



## Research in a global network

The concept of global research networks, though still relatively new, is rapidly gaining ground as a means of tackling the 'grand challenges' in the developed and developing world. The Worldwide Universities Network (WUN), founded in 2002, is one of the first examples of such a network. Bristol has played a central role in WUN's development, and Vice-Chancellor Professor Eric Thomas is currently its Chair.

The past year has seen a giant leap in the number of research projects co-ordinated under the WUN partnership, which comprises 16 universities worldwide at present. Bristol academics from all faculties have a major involvement in a great many of these projects, including the following.

For more information on these and other projects, please go to [www.wun.ac.uk](http://www.wun.ac.uk)

• **Arctic Climates and Environments (ACE)**, led by Dr Sandy Harrison in Geographical Sciences, is a consortium of scientists dedicated to understanding the causes of past and present climate and environmental changes in the northern circumpolar region. This should lead to improvements in our capacity to predict the likely direction and consequences of future climate and environmental changes in the Arctic. ACE held its launch conference in Bristol in May 2005.

• **Globalisation and Education**, led by Dr Susan Robertson in the Graduate School of Education and Dr Kris Olds at the University of Wisconsin-Madison, examines the impact of globalisation on higher education and research – looking at issues such as virtual communities, the brain drain and the drive to create new 'knowledge spaces'. The group held a major conference, 'Constructing Knowledge Spaces', at the University of Wisconsin-Madison in April 2005.

• **Weathering** is the theme of a consortium that includes Professor Vala Ragnarsdottir in the Department of Earth Sciences as one of the principal investigators. The consortium, consisting of academics from the universities of Sheffield, Bristol and Leeds, has been awarded a £1.74-million grant by the Natural Environment Research Council. It is working in partnership with Penn State University, another WUN member and leader of the Weathering Systems Science Consortium, a network of scientists seeking to integrate cross-disciplinary research of the critical zone – the environment between the bedrock and the treetops that supports life.

• **Medieval Studies** is a well-established group drawn from 11 WUN universities. Bristol has a leading role in two of its themes: Multilingualism in Medieval Societies (led by Dr Ad Putter in the Department of English), examining the cultural consequences of multilingualism in the medieval West; and Digital Medieval Gardens (led by Dr Mark Horton in the Department of Archaeology and Anthropology), which aims to amass a comprehensive collection of primary sources connected with medieval gardens and plants.

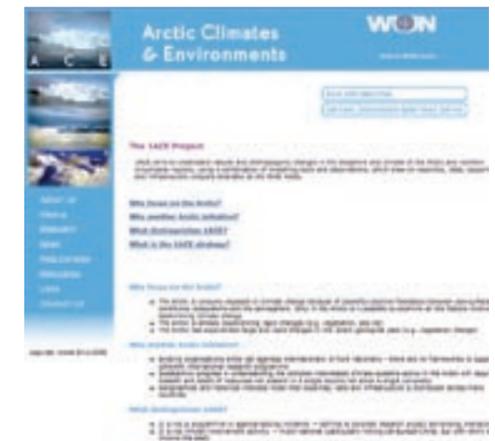
## Full economic costing

One of the most significant and complex projects the University has ever undertaken – changing to an entirely new methodology for costing its activities – progressed rapidly in 2004/05. While Full Economic Costing (fEC) will eventually be extended to teaching and the support services, the first major objective was to meet the 1 September 2005 deadline for applying for Research Council grants on an fEC basis. Preparing for this required many of the support services, including Research and Enterprise Development, the Estates Office, Information Services, the Finance Office and Personnel Services, to work in close co-operation with each other and the academic community.

Together, they:

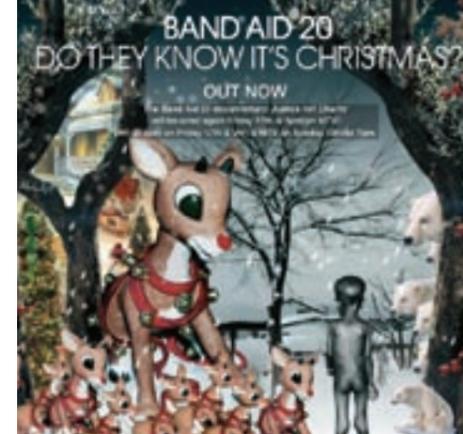
- **managed the in-house development of sophisticated, web-based software to aid the costing and pricing of research projects;**
- **found ways of making fEC as non-bureaucratic and burden-free as possible for academics;**
- **devised and implemented comprehensive communications and training programmes about fEC for the appropriate members of staff.**

There is a long way to go with fEC, but Bristol has made outstanding progress in this sector-wide change-management exercise. The overall aim of the first stage has been to ensure that research is costed and funded in a sustainable way, so that more resources are released for investment in the people and infrastructure on which world-class performance depends.





The SS Great Britain in dry dock in the Bristol Floating Harbour, with the Matthew alongside.



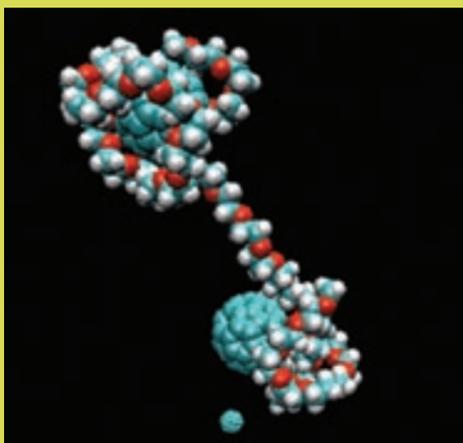
## New Enterprise winners

The University's 2005 New Enterprise Competition was won by Professor Terry Cosgrove and Roger Pettman in the School of Chemistry for Revolymer, a new non-stick chewing gum.

The new polymer will make chewing gum much easier to clean off the streets, thereby saving the taxpayer millions of pounds in cleaning costs. Similar techniques for controlling adhesiveness can be applied to other materials used for coating surfaces in hospitals and medical devices, and for anti-graffiti paints and industrial coatings.

Second Prize was won by *Null Hypothesis*, an irreverent 'journal of unlikely science', described by the *Daily Telegraph* as the 'Private Eye of science'. Third Prize went to Professor Tom Troscianko in the Department of Experimental Psychology and Dr Henk Muller and Dr Angus Clark in the Department of Computer Science for BbPod, a sound system for the nursery that can adapt to the baby's preferences. The Undergraduate Prize went to Ashley Berlin, a Computer Science student, for his Cargo Measurement System.

All the winners and finalists received support from the competition judges and sponsors Business West, Deloitte, Fortis Bank, Osborne Clarke, STMicroelectronics and the Bristol SETSquared Centre.



A simulation of sticky gum between two particles – part of the Revolymer presentation.

## World-class research – local benefits

The University is committed to combining its excellence in research and innovation with a vibrant enterprise culture, and is working with government, industry and other partner organisations to encourage the growth of knowledge-based businesses in the South West.

A recent example of this is Great Western Research, a £14-million partnership formed by south-west universities, with funding from the South West of England Regional Development Agency, the Higher Education Funding Council for England, businesses and the universities themselves.

The project, whose lead partners are Exeter, Bath and Bristol universities, aims to boost research in areas of vital economic importance to the region. Over a hundred new researchers are to be appointed in areas ranging from nanotechnology and economic psychology to sustainable development and advanced engineering. It is the first step in a much wider plan to create a regional research alliance.

## SET for success

Early in 2005, the University's SETSquared Centre invited applications for office space, after the success of three companies – Coull, Enable Interactive and Mobile Life – enabled them to move out of the incubation centre and into their own premises.

SETSquared Centres is a joint venture between the universities of Bath, Bristol, Southampton and Surrey to help knowledge-based entrepreneurs in southern England. It provides affordable, serviced office space with free access to a host of support services, including experienced advisers, funding routes and investors, and guidance from business support organisations and industry sector specialists.

- **Coull's** unique technology platform, an 'intelligent messaging core engine', provides for a vast array of online applications. In 2004, Coull signed its first major deal with Universal Music, creating an interactive application that converts online video into a revenue-generating portal. This got a high profile when Coull created an online version of the video for Band Aid 20's 'Do They Know It's Christmas' that enabled viewers to click on parts of the video that linked directly to the Live Aid website (see above). Coull's other clients now include MTV, AOL, EMI, the Disney Channel, the National Trust and the UK Treasury.

- **Enable Interactive** is a creatively-led company that delivers highly accessible, usable and engaging interactive websites. The content is rich, often entertaining and sometimes surprising – see, for example, [www.electricpavilion.org](http://www.electricpavilion.org), the website for Creative Bristol's flagship arts and culture project. Other clients include the 'green power' provider Ecotricity, fairtrade pioneer Percol, English Nature and Bristol Media.

- **Mobile Life** helps businesses to explore the growing market for applications and services accessible on mobile phones and PDAs. SETSquared referred the company to the South West Angel and Investor Network (SWAIN), an independent not-for-profit company supported by the South West of England Regional Development Agency. At an investors' forum arranged by SWAIN, Mobile Life unveiled a new piece of software, SlipStream, which allows web designers to develop mobile-compatible websites and then generates content compatible with mobile phones and PDAs. As a result of the forum, a private investor agreed to make a significant investment in Mobile Life, and joined the company as an executive director.

## 3C Research

3C Research (3CR), a University-based company launched in 2003, manages a range of collaborative research projects in the fields of digital media processing and communications. The University's commercial partners include Granada, Toshiba, QinetiQ, Thales, Provision and U4EA.

3CR is running five world-class collaborative research projects, two in communications and three in digital media processing. These are due to finish in 2006.

During 2004/05, 3CR was successful in bidding for a further collaborative research project, VISUALISE, under the DTI's Technology Programme. This project, due to start in 2006, aims to provide an enhanced experience for spectators of large-scale outdoor events such as the World Rally through local-area access to a range of media (such as action replays, statistics and archive material) via a hand-held device.

3CR has developed a unique Intellectual Property management infrastructure in association with the patent attorneys, Murgitroyd, to assist with the complex issues that can arise when competing commercial organisations work together on a project. 3CR has also employed the specialist services of a group of entrepreneurs to assist 3CR members in assessing the market potential of project results.

3CR actively seeks new projects and partners for further collaborative research projects and is bidding for further funds.

For further information, please go to [www.3cresearch.co.uk](http://www.3cresearch.co.uk)

The Motion Ripper team have been working with Red Vision Bristol, a local CGI company, to capture ant motion and create a swarm of army ants to be used in a BBC natural history programme due for broadcast in late 2005.



## BRISTOL WORK

A selection of notable research and enterprise activities from around the University.

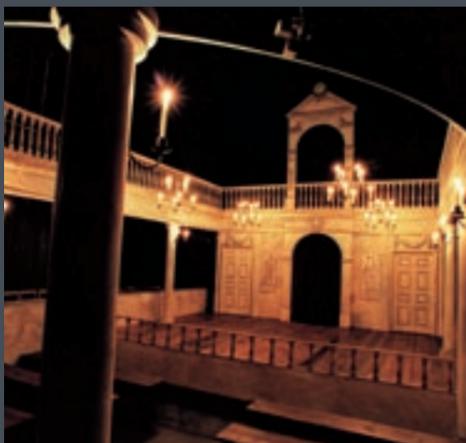
### Inigo Jones and a theatrical experiment

The Wickham Theatre in the Department of Drama hosted a unique experiment in the winter of 2004-05: a full-scale, candle-lit reconstruction of the interior of a Jacobean indoor playhouse (see below).

The project, part of a research programme funded by the Arts and Humanities Research Council, was led by Martin White, Professor of Theatre at Bristol, who worked closely with the Department's stage designer, Jennie Norman, to create the reconstruction, which was based on drawings attributed to Inigo Jones held in the Library of Worcester College, Oxford.

The project had two main aims. The first was to explore aspects of historical theatre practice in a 'laboratory' setting. A group of professional actors, dressed in authentic clothing (provided by Shakespeare's Globe in London), explored a range of issues surrounding indoor theatre performance in the early 17th century. They performed in the light of hundreds of candles – some pure beeswax, others tallow – made by a chandler in Leeds. The project's findings were aired at an international seminar on the Inigo Jones drawings at the Globe in February, chaired by Professor White.

The second aim was to document the live performance aspects of this research using new high-definition film cameras. A professional film crew recorded the actors' work on four linked cameras from different positions. The footage is being transferred directly to DVD, which will allow users to compare audience viewpoints. The DVD will include an interactive virtual reality model of the playhouse (created by a team from the University of Warwick and Bristol's Computer Science Department), as well as a range of new essays on indoor performance and interviews with scholars. The DVD will be finished in early 2006 and is likely to be made available to researchers and teachers at a later date.



Project staff member Dr Nila Nilavalan with a prototype antenna system.

### Radar: the new tool in breast cancer detection

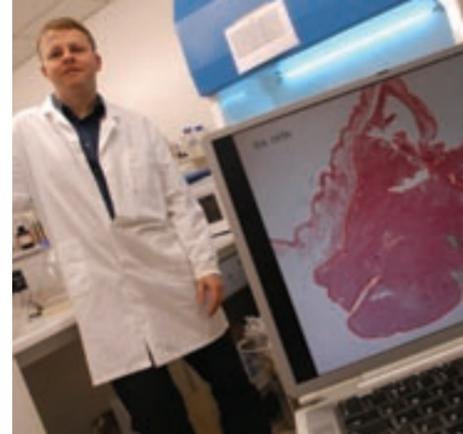
A cross-faculty team is working towards a breakthrough in early detection of breast cancer, which is the largest killer of women between the ages of 35 and 55 in Europe.

Self-examination and mammography are currently the key methods of early diagnosis; but mammography, besides involving discomfort, exposes tissues to ionising radiation and is not always effective in younger women.

The Bristol team, led by Dr Ian Craddock in the Department of Electrical and Electronic Engineering and Professor Alan Preece in the Department of Medical Physics, is developing an alternative: a prototype radar system, based on a technique devised by Professor Ralph Benjamin (also in the Department of Electrical and Electronic Engineering) for the detection of landmines. The new system offers the potential of a freely repeatable test for early-stage breast cancer.

After constructing a prototype radar system, the team had to find a way of testing it that did not involve real people. Their solution was a 'phantom' – actually a plastic tub containing a thick substance – that has the same electrical properties as human tissue. The prototype successfully detected a 6mm phantom tumour, and the team expects ultimately to be able to detect tumours as small as 2 or 3mm. A number of female volunteers helped in the process of designing a 'breast-shaped' antenna system, ready for the first human test subjects late in 2005. Plans are being finalised to introduce the radar detection system to patients in 2006, through the NHS Avon Breast Screening Service and the Oncology Centre in Bristol.

This groundbreaking project was funded initially by the United Bristol Hospitals Trust and the University's Enterprise Development Fund. It was subsequently awarded over £100,000 of venture capital through the Sulis Seedcorn fund, to enable preparatory work for the commercialisation of this technology through a new spin-out company.



### Bristol scientists find key to unlock body's own cancer defence

Scientists in the Department of Physiology have found a new ally in cancer treatment: a protein already present in normal body tissues and blood.

A team led by Dr Dave Bates (above), British Heart Foundation Lecturer, and Dr Steve Harper, Senior Research Fellow in the Microvascular Research Laboratories, has discovered that the protein, known as a vascular endothelial growth factor (VEGF), can prevent cancers from growing. The research findings were published in the world's most prestigious scientific cancer journal, *Cancer Research*.

The growth of a cancer depends on its ability to maintain a blood supply that will deliver nutrients. For a cancer to grow from the size of a pinhead to that of a golf ball, the blood supply of the tumour has to grow with the expansion of the tumour itself. Most forms of VEGF help this growth, but VEGF165b, which the team discovered in 2002, inhibits it.

The team hopes to take this forward in the next few years to work out how to treat patients with cancer, eye disease and other conditions where this protein is important, such as diabetes and arthritis.

### Watch their dust

New display technology being developed at Bristol could put an end to bulky, expensive TV screens – and the magic ingredient is diamond dust. Flat-panel display technology is a still-growing area, with great commercial interest in improving on Liquid Crystal Displays. A leading contender is Field Emission Displays (FEDs), which feature improved brightness, higher efficiency, perfect colour quality and a faster response time for video viewing.

Advance Nanotech, a US-based company, is collaborating with the University on a two-year multidisciplinary project, NanoFED. The Bristol team comprises lead scientist Dr Neil Fox in the Department of Physics, Professor Mike Ashfold, Head of Physical and Theoretical Chemistry, and Professor David Cherns, Head of the Microstructures group in the Department of Physics. This collaboration could lead to the next generation of products in the home and the workplace.

The FED technology, which is based on a novel diamond nanoparticle material, has been licensed to Advance Nanotech by the University, giving exclusive rights to the FED technology in return for a royalty-based income stream.

### Diabetes vaccine trials to begin

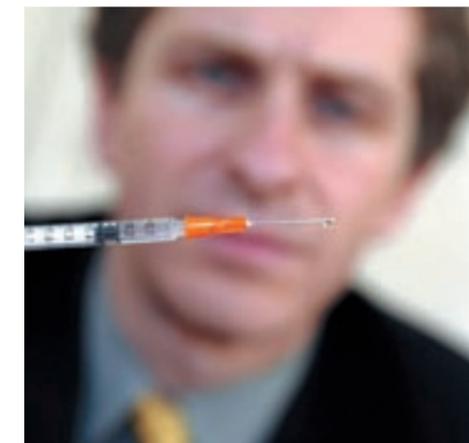
A cure for Type 1 diabetes may be in sight, thanks to researchers at Bristol and King's College London. The two teams are preparing to test a vaccine on human subjects.

Type 1 diabetes, formerly known as Juvenile Onset Diabetes, is caused by the presence of white blood cells that attack insulin-producing cells in the pancreas. The condition tends to develop before the age of 40, and those affected must inject themselves with insulin every day, or their blood sugar would reach fatally high levels. The vaccine follows work by Dr Polly Bingley and Professor Edwin Gale from Clinical Science at North Bristol, who evolved a technique for predicting with 90 per cent accuracy whether people will develop diabetes.

'The word "vaccine" is a bit of a misnomer,' says Dr Colin Dayan (below), Head of Clinical Research at the Henry Wellcome Laboratories for Integrative Neuroscience and Endocrinology. 'Vaccines increase the immune response – we're reducing it.'

The crucial ingredient is a tiny fragment of protein called a peptide, identified by co-researcher Professor Mark Peakman from King's College London, that encourages the production of protective immune cells to defend the cells in the pancreas against attack. After successful results in animals, the team is now ready to begin trials in humans, jointly funded by the Juvenile Diabetes Research Foundation International and the Diabetes Vaccine Development Centre in Melbourne, Australia. Initially, injections will only be given to volunteers who have had diabetes for at least five years. 'These patients will have no insulin-producing cells left,' explains Dr Dayan, 'so we can ensure that the white blood cells respond in the way we predict without putting any healthy insulin-producing cells at risk.'

The researchers hope to be able to stop early diabetes in its tracks and, eventually, prevent the disease before it begins. 'Maybe we can even stimulate the re-growth of cells,' says Dr Dayan.





### Faith and ethnicity, love and learning difficulties: two major studies

A new book by Professor Tariq Modood, founding Director of the Centre for the Study of Ethnicity and Citizenship, examines racism and Muslim politics in Britain. *Multicultural politics: racism, ethnicity and Muslims in Britain* (Edinburgh University Press) was published just as the debate over Muslim identity acquired a new urgency.

'Muslims have come to be perceived as the "Other" that is most threatening to British society,' Professor Modood commented. 'What began as a narrative of racial exclusion and black-white division has been complicated by cultural racism, Islamophobia and an unexpected challenge to secular modernity.' He makes the argument that any analysis of Muslims in the UK must put faith at the core of the discussion.

A new book from the Policy Press argues that people with learning difficulties have significant barriers to exercising their human rights to consenting same-sex relationships. *Secret loves, hidden lives?* distils new research by David Abbott and Joyce Howarth at the Norah Fry Research Centre, working in partnership with Terrence Higgins Trust and REGARD.

Barriers include harassment, discrimination and lack of social services support, but co-author David Abbott said that one of the strongest messages was that people with learning difficulties are 'forging their lives and identities and striving to lead full sexual and emotional lives'.

### Fingerprints in the sky

In November 2004, Professor Sir Michael Berry and Dr Mark Dennis in the Department of Physics published the most compact and elegant explanation of one of nature's simplest phenomena: how light behaves in the sky. The research appears in the *New Journal of Physics*, published jointly by the Institute of Physics and Deutsche Physikalische Gesellschaft (German Physical Society).

The Bristol scientists, in collaboration with Raymond Lee of the US Naval Academy, successfully predicted the patterns of polarisation of skylight using a geometry-based type of mathematics called elliptic integrals.

Daylight is polarised light – that is, the light waves vibrate differently in different directions. This creates patterns in the sky, similar to the ridges in human fingerprints, which are used by many species of birds and insects as an aid to navigation.

The patterns include a pair of points near the sun, known as singularities, where the light is not polarised at all. The physicists set out to write the simplest possible description of polarisation, using the singularities as a starting point. To test the result, co-author Raymond Lee took polarised sky photographs at the United States Naval Academy in Annapolis, Maryland. Comparisons of these detailed pictures with the pattern predicted by the model yielded a good fit. 'We've been able to replace pages and pages of formulae,' says Sir Michael, 'with one very simple solution that predicts the pattern extremely well.'



Above (left to right): Professor Paul Langford, Chief Executive of the Arts and Humanities Research Council (AHRC); Professor Charles Martindale, Department of Classics and Ancient History and Director of BIRTHA; Vice-Chancellor Professor Eric Thomas; Professor Nigel Llewellyn, Director of Centres of the AHRC; and Sam Barlow, BIRTHA Administrator.

### Birth of an Institute

Research in the University's Arts Faculty has had a powerful boost, with the unveiling of the Bristol Institute for Research in the Humanities and Arts (BIRTHA).

BIRTHA is independent of the University committee structure; its policy is determined by the Executive Committee, with advice from an external board.

Professor Charles Martindale, Director of the Institute, says: 'BIRTHA hopes to build on the Faculty's successes, increase its international reputation, explore current research frontiers and open new ones.'

### Bristol in top ten for postdocs

The University has won an award from *The Scientist*, a US magazine for researchers, in its annual 'Best Places to Work for Postdoctoral Researchers' survey. Postdocs themselves voted Bristol the fifth best institution outside the United States, and Bristol is the only UK institution to appear in the top ten.

### Knowledge Transfer Partnerships

One of the fundamental objectives of the University's research development strategy in 2004/05 was to make academic research more accessible and relevant to industry.

Knowledge Transfer Partnerships (KTPs) focus on placing highly qualified graduates in companies for up to three years. These placements allow for collaborative work on projects, with the potential to enhance profitability. The programme is funded by the Department of Trade and Industry in addition to an annual contribution from the participating company.

The year 2004/05 saw an increase in KTP activity for Bristol, resulting in two new active KTP programmes, plus three that have been approved and another three in preparation. Many Bristol academics have been coming forward to develop existing relationships with companies via a three-year KTP, which also enables their department to fund a large proportion of a PhD.

### Social enterprise

In 2005, RED, together with the other members of the SETSquared partnership, developed a new programme of social and environmental enterprises. The aim is to harness university research, know-how and technology for demonstrable social and environmental benefit.

As with all 'mainstream' businesses, social enterprises have a requirement to be financially sustainable. However, social enterprises are not driven by demand for shareholders' profit; they maintain social and environmental objectives as part of a 'triple bottom line' approach to success.

Here is a selection of the many projects the University is currently supporting.

#### Safe nutrition for babies in HIV/AIDS-stricken countries

A plant-derived enzyme also present in breast milk is added to affordable formula milk, providing greater resistance to bacteria and viruses for newborn babies. Between ten and 16 per cent of all transmissions of HIV are from mother to child, often through breastfeeding. The freeze-dried enzyme will help prevent mother-to-child HIV/AIDS transmissions, by providing a safe and sustainable alternative. It also reduces the risk of severe diarrhoea or enteritis from unclean water.

#### Disaster relief water purification

This is a forward osmosis water-cleaning process that safely sterilises water and rehydrates food, designed for disaster relief when access to clean water is unavailable. The new technology is inexpensive, requires no energy and is simple to use. By using an osmotic driver, such as sugar, a sterile drink can be obtained from almost any water source, thereby reducing the time and cost to transport containers of clean water.

#### Effective landmine detection

Some 80 million landmines are buried in 68 countries worldwide, with more being laid every year, much faster than they can be cleared (see below). Landmines account for one per cent of the entire population of Angola being amputees, and current removal methods are slow and dangerous. But a team in the Department of Electrical and Electronic Engineering, led by Dr Ian Craddock, has been working on a new application of ground-penetrating radar that builds an accurate image of plastic and metal landmines on or beneath the ground. The new technique, funded by the Defence Evaluation and Research Agency and now patented at Bristol, has undergone promising field trials.



## ENTERPRISE 2004/05: A FEW FIGURES

Contractual documents processed	1,100	* The University spinouts are:	
Income generated from these contracts	£40 million	Imetrum Ltd	ArchLight Ltd
Patents filed	20	Cleanicepig Ltd	Infinesima Ltd
Number of spin-out companies supported	21*	Argelcom Ltd	ProVision Communication Technologies Ltd
Products/services in the market	6	Adiuri Systems Ltd	Apitope Technology Ltd
Licences granted (% to UK companies)	43	Ascend Biotechnology Ltd	ProXara Biotechnology Ltd
Licence income	£304,000	Bio-Results Ltd	NeuroTargets Ltd
		Iktrix Ltd	IHG Diagnostics Ltd
		MicroRheology Ltd	Hunter-Fleming Ltd (Aegis)
		D-Sense Ltd	Advanced Transport Systems Ltd
		Rotary Wing Innovations Ltd	Surface Active Ltd
		Clarity	

## TEACHING AND LEARNING

Bristol is a research-intensive university, but teaching and learning do not take a back seat; they sit alongside research, and are informed and energised by it. The University's well-established Education Strategy underpins its teaching and learning activity and seeks to ensure that at every level, from undergraduate programmes through to taught postgraduate degrees, Bristol continues to demonstrate excellence.

### Excellence has two new centres at Bristol

News came in January 2005 that the teaching of Medical Sciences and Chemistry at Bristol is to be transformed with the aid of funding worth £9 million from the Higher Education Funding Council for England (HEFCE), matched by a further £12 million from the University. The award will fund two Centres for Excellence in Teaching and Learning.

Bristol ChemLabS (Bristol Chemical Laboratory Sciences) will feature professional-standard laboratories with state-of-the-art instrumentation and facilities for the e-learning of modern laboratory chemistry. The HEFCE funding will also support fellowships for seconded schoolteachers, University Teaching Fellowships, and outreach programmes for schools and the general public. New ways of teaching and learning practical science will be disseminated nationwide.

The AIMS Centre (Applied and Integrated Medical Sciences) will pioneer the integration of medical sciences and clinical skills. The teaching of anatomy, physiology and pharmacology will include models, images and simulations of body structure and function. Resources will include a vast, web-based image library; a Clinical Anatomy Suite in which traditional approaches to anatomy teaching are complemented by digital imaging; a surgical training centre; and computer-driven 'manikins' which can simulate a wide range of conditions such as heart disease and asthma, as well as responses to the drugs used to treat them. Two of these manikins were unveiled at the first-ever joint conference of the Physiological Society and the Federation of European Societies, hosted by the University in July.



At the July conference, a reporter from Radio Bristol interviews Dr Judy Harris, co-director of the AIMS Centre, about the new human patient simulators. The BBC also covered the event on its evening regional news programme for the South West, Points West, and online.



### Festival of Language Learning

In September, the School of Modern Languages held its annual Festival of Language Learning for Year 13 students from local state schools and colleges. The event attracted 160 students from 22 institutions. The programme included a choice of two taster sessions in six languages, followed by a further choice of three cultural inputs ranging from the life of Chilean singer Violeta Parra to a tour of Graz or an introduction to French rap (above). Students could also discuss employment opportunities and prepare their personal statements for UCAS.

### Bristol professors on the future of education

Professors Guy Claxton and Angela MacFarlane in the Graduate School of Education were among 18 leading thinkers in education to be asked by the government to contribute their opinions on how to make the UK education system responsive to the changing demands of life and work in the 21st century.

The Qualifications and Curriculum Authority, which leads developments in curriculum, assessments, examinations and qualifications, commissioned the think-pieces after launching a wholesale review of the 5-19 curriculum.

### Learning and Teaching Exhibition

The University's 2004 Learning and Teaching Exhibition, organised by the Teaching Support Unit and the Learning Technology Support Service, was held at the School of Veterinary Science in Southwell Street in December. A range of exhibitors hosted information stands for delegates. There was also a series of short talks, with the keynote speech, 'Rewarding and Promoting Excellence in Higher Education', being delivered by Liz Beaty, the Learning and Teaching Director of the Higher Education Funding Council for England. Pro Vice-Chancellor Professor Patricia Broadfoot presented the 2004 Teaching Prizes.



### Putting the ping back into science

Three Bristol psychology students developed an innovative way of teaching science to secondary school pupils. 'Physically representing atoms' uses games involving ping-pong balls inscribed with chemical symbols to explain abstract concepts such as atoms and molecules. Rozie McCallam, Laura Wells and Anna Peters, aka 'The Chemical Sisters' (above), devised the idea for the Teach First Challenge, a competition developed by Teach First, an independent non-profit organisation that trains top graduates to be teachers, in conjunction with the National Endowment for Science, Technology and the Arts. The Bristol entry attracted considerable interest from the judges and it is likely to be implemented in London schools.

### Spotlight on maths teaching

How technology can be used to teach mathematics in schools was the focus of the seventh International Conference on Technology in Mathematics Teaching hosted by the University's Graduate School of Education and John Cabot City Technology College in July. The four-day event brought together educators, researchers and developers with a common interest in enhancing the teaching and learning of mathematics through the use of Information and Communications Technology.

### Teacher training ranks high

Bristol came sixth out of 74 in a world league of institutions offering teacher training, compiled by Shanghai Jiao Tong University.

### Vets' teaching facilities open for business

The Right Honourable the Earl of Selborne opened the new £2.5-million suite of teaching facilities at the Department of Clinical Veterinary Science in Langford in October.

The Pearson Building – named after the late Professor Harold Pearson, one of the first vets to graduate from Bristol (1954) – comprises the 150-seat Hodgkin Lecture Theatre, four seminar rooms, two computer suites, a teaching laboratory and a suite of offices. The building is equipped with state-of-the-art audio-visual aids, microscopes and computers.

### Brain site is at the top

Youramazingbrain.org, a website created by At-Bristol with the assistance of a number of Bristol academics, was named as Britain's top educational website by Yahoo. The Wellcome Trust-funded website has been featured in a number of newspapers including *The Independent*, *The Mirror* and *The Guardian*.

### Teaching appeal of bird droppings

When students from the Graduate School of Education were tasked with finding teaching activities for secondary school pupils in an out-of-school context – such as a field trip – they came up with the idea of devising a test for a theory one of them had overheard that birds poo on blue cars more than others because that colour looks like the sea.

Incidentally, the test, devised as a possible scientific study for Key Stage 3 pupils, had unexpected results. After 40 trainee teachers had surveyed 1,760 cars in the city and analysed the data using statistical techniques appropriate to the school environment, they found a higher evidence of bird droppings on white cars than was expected. Perhaps unsurprisingly, this prompted numerous enquiries from the media.

### Bristol helps develop BBC online learning project

The University played a key role in the planning and production of online learning resources to accompany BBC One's flagship series *British Isles: A Natural History*.

In partnership with the University of the West of England, Bristol secured a prestigious contract to work with the BBC and the Open University to devise innovative ways of building on the interest sparked in viewers by this and other major productions about natural history and the environment. The University's contribution to the joint bid for the contract was led by Professor Angela MacFarlane of the Graduate School of Education and staff from the School of Biological Sciences and the Department of Earth Sciences.

Interactive web-based material complementing the programmes and maximising their educational value is one of the outcomes of the venture. At the launch in Bristol of the *British Isles* series, John Willis, Director of BBC Factual and Learning Programmes, praised the 'fantastic web content' developed by the partners.

A page from the 'learning resources' section of the *British Isles* website.



## TEACHING PRIZES

### Rising Star

Dr Dudley Shallcross in the School of Chemistry won a National Teaching Fellowship Scheme award worth £50,000 in recognition of his outstanding contribution to learning and teaching. He is the first academic at the University and the first chemist in the UK to receive the award in the Rising Stars category.



Dr Dudley Shallcross (right) and Tim Harrison, with Amanda Hilton from Fred Longworth High School, Manchester, at the National Academy for Gifted and Talented Youth Summer School, held at the University in summer 2005.

### Real-time winner

Dr Naim Dahnoun of the Department of Electrical and Electronic Engineering was presented with the first Texas Instruments DSP Educator Award. The award was given in recognition of the important role played by universities in general, and by Dr Dahnoun in particular, in educating engineers in new technologies such as real-time Digital Signal Processing.

### Clifford Wharton Prize

The 2004 Clifford Wharton Prize for Teaching, awarded annually to a member of staff in the School of Chemistry to reward excellence in undergraduate teaching, was awarded to Professor Andrew Orr-Ewing.

### Theatrical language teaching takes centre stage

Rogelio Vallejo of the Department of Hispanic, Portuguese and Latin American Studies won a prestigious award from CiLT, the National Centre for Languages.

The CiLT European Awards for Languages are given in recognition of innovative work in improving the quality of European language learning and teaching. Rogelio won the award in the category for achievement in higher education for his pioneering work in developing a unique course entitled 'Language Through Theatre'.

A performance of *Ser Hamlet* by students on the award-winning Language Through Theatre programme.



### Bristol scoops unique double teaching award

Dr Dudley Shallcross and Tim Harrison of the School of Chemistry were the recipients of two Royal Society of Chemistry Teacher of the Year awards. The double award in one institution is unique. Only one went to a lecturer in higher education – Dr Shallcross, who won the Higher Education Teaching Award. Tim Harrison from Rednock School, Dursley, who has been appointed as Bristol ChemLabS Teacher Fellow in the School of Chemistry for 2005/06, won the Schools Education Award.

### E-learning

The future is blended! This is the conclusion that the University community has reached in formulating its new 'E-learning' strategy, developed in 2004/05. The use of new technologies allows students to interact with their tutors by email and to access course materials on the web and so study at a distance. In the comfort of their hall bedroom, or even while far away from the University, they can interrogate the library catalogue or catch up on a missed lecture which can be made available to them by video on the web. E-assessment is also becoming increasingly popular, saving students and staff time and enabling the delivery of exciting new ways of testing students' achievements and learning processes.

But in addition to enriching the student learning experience, E-learning offers exciting opportunities for inter-institutional collaboration. With students able to access learning materials and tutorial support at a distance, it is increasingly possible to conceive of specialist courses hosted by a combination of several institutions, both in the local region and internationally. Bristol's membership of the Worldwide Universities Network, in particular, is now making it possible to collaborate with leading universities in the United States, Europe and China to deliver masters programmes involving some of the leading scholars in their field in the world.

An example of the possibilities of the virtual learning environment is the WUN 'Horizons in Human Geography' weekly seminar series, convened jointly by the universities of Bristol, Wisconsin-Madison and Illinois on the topic of 'Globalisation and Beyond'. This is available for graduate students simultaneously in all participating WUN member universities. In addition, the ESRC and WUN funded a research seminar series, 'Researching dialogue and communities of enquiry in elearning in HE', during 2005.

## THE ENGAGED UNIVERSITY

The phrase 'community (or public) engagement' is becoming a familiar one in higher education – yet the diverse activities and programmes it can cover are far from new. These include public lectures and community debates, summer schools and short courses, the dissemination of research results, public tours, visits to schools, dialogues with the public about science, volunteer work by students and staff – even collaboration with TV and new media companies. Bristol's 'Engaged University' strategy, adopted in early 2005, attempts to incorporate a range of such activities in one coherent model, and to embed that model in the core of the University's mission.

Engagement with the public is both part and parcel of the work of many academic departments and a prime function of several offices within the University, including the Widening Participation Office, the Centre for Access and Communication Studies and the Public Programmes Office.



Pupils from local schools came to the University throughout the year, for events including (left to right): the Earthquake Engineering Challenge, run by the Earthquake Engineering Research Centre and At-Bristol; the Sutton Trust Summer School; Schools Week in the Department of Biochemistry; a degree graduation ceremony for primary school pupils; and an awards ceremony for participants in the Aimhigher West Mentoring Scheme, which trains university students to act as mentors to Year 10 and 11 pupils.

### Widening Participation Office

In 2004/05, the Widening Participation (WP) Office organised over 100 events for groups ranging from seven- to eight-year-olds and the gifted and talented to mature students and parents. Here are a few highlights of the year:

#### Primary schools

Over 100 pupils from Gay Elms, Hareclive, Headley Park and Teyfant Schools took part in a project run by the universities of Bristol and the West of England. The children completed a 'University Big Book' recording their impressions of students and university life as well as their work with academic departments, including 'The Science of Ice Cream', an event organised by the Physics Department.

#### Gifted and talented

As the first part of a three-year contract with the National Academy for Gifted and Talented Youth, the WP Office organised a two-week summer school for 120 11- to 16-year-old students. The scheme offered academically challenging courses from six different departments, as well as a creative and exciting social programme. The participating departments were Chemistry, German, Earth Sciences, Economics, Engineering Mathematics and Medical Sciences.

#### Post-16

The WP Office recently launched the Brightside Trust E-Mentoring scheme, which links students on degree courses in Medicine and Dentistry with young people in Year 12 who are interested in these careers. Mentors offer advice and encouragement as well as sharing their first-hand experience of training for these professions. In this first year of the scheme, 21 undergraduates mentored at least three mentees each.

#### Anthropology at the British Museum

Bristol was one of 11 UK universities contributing to an Anthropology Widening Participation Day held in June at the British Museum. Beth Cullen, an MA student in the Department of Archaeology and Anthropology, and Fiona Bowie, Senior Lecturer in Anthropology, accompanied Bristol secondary and sixth-form pupils to London for the event.

The talks and workshops covered subjects as diverse as human evolution, mate choice and sexual selection in humans, visual anthropology, and primates in anthropology. There were workshops on ethnography, which included an example of 'anthropology at home' among the white working class in Bermondsey, south-east London. There was even a workshop on the anthropology of Anne Summers parties. During the lunch break there was a chance to watch films presented by the Royal Anthropological Institute.

Left: Pupils from north Bristol schools at a Primary Science Day at Clifton College Preparatory School, organised by Clifton Scientific Trust in July. Bristol Neuroscience staff and students from the School of Medicine talked to the pupils about how their work impacts on everyday life.





## Public Programmes Office

The Outreach Team in the Public Programmes Office works to encourage dialogue, partnerships and collaborations with all sections of the community – public, private and voluntary. The vehicles for this include:

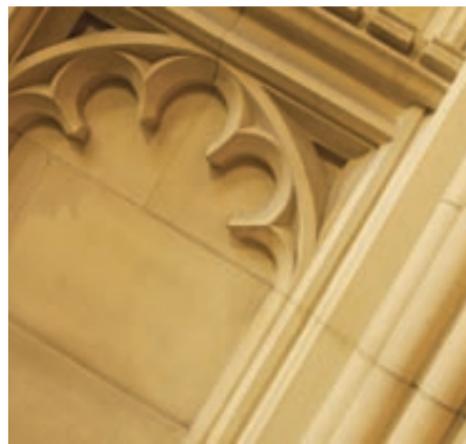
- public lectures and lunchtime talks by academics, in venues across the city (a total of 39 took place in 2004/05);
- the Science Matters series, a collaboration with At-Bristol and the University of the West of England, led by Professor Kathy Sykes, Collier Chair for Public Engagement with Science and Engineering, in which the public can discuss issues of concern directly with researchers and policy makers;
- the Mature Student Ambassador programme, developed in partnership with the Widening Participation Office, to send students into community venues to promote the benefits of higher education;
- the Volunteer Recruitment Fair, which serves as an annual showcase for volunteering organisations in the Bristol area. The Fair, organised by the University in consultation with the voluntary sector, gives members of the public the chance to find out about the wealth of volunteering opportunities available in the region. The 2005 Fair was held in the Great Hall of the Wills Building, and over 50 voluntary organisations took part, from the local chapters of Age Concern and the Samaritans to less well-known groups such as The Compassionate Friends (a volunteer befriending scheme for bereaved parents) and Dhek Bhal (which runs health and well-being programmes for South Asian communities in Bristol and South Gloucestershire);
- the Community Challenge, an annual event in which University staff undertake a project that improves the environment for local residents (see the June entry in 'The Year in Pictures', inside front cover, for details of the 2005 Community Challenge).

## Centre for Access and Communication Studies

The Centre for Access and Communication Studies (CACCS) provides a range of educational opportunities and events for disabled people and those working with them. These include professional development courses, short courses for the public, workshops and summer schools, and other activities.

Here are two examples from 2004/05:

- Dinosaur workshop. CACS and Remmert Schouten from the Department of Earth Sciences held a workshop for visually impaired students on the Bristol Dinosaur in December 2004. Remmert began by giving a history of the Bristol Dinosaur, while the students were able to feel and inspect fossils and bones from the dinosaur (above). The students were also given raised diagrams of a skeletal impression of the Bristol Dinosaur and had the opportunity to feel a cast of the dinosaur's front leg. The event was funded by the European Social Fund.
- Blind summer school. A group of blind and partially sighted students came to the University to take part in a special summer school in July 2005. The course, the only one of its kind in the country, was run by CACS in conjunction with the School of Chemistry and the Department of Physics. The students, ranging in age from 20 to 80-plus, conducted several experiments, including how to make chocolate melt in the mouth but not in the hand and how to take measurements using talking thermometers and voltmeters. There were also talks on subjects such as the structure of the atom and the life of Albert Einstein.



## Reaching out from everywhere

Departments throughout the University are involved in activities that contribute to Bristol's impressive record of engagement with the community and the region – and sometimes, through online resources, for example, further afield.

Here are a few examples.



### Sport Volunteering Fair

The first Sport Volunteering Fair to be held in the UK took place at the University's Coombe Dingle Sports Complex in May. The Fair, hosted by the Bristol Sport Education Forum and funded by Sports West and Bristol Year of Sport, gave members of the public a chance to find out about new sport volunteering and training opportunities in the region.

### Climate change in the classroom

Bristol ChemLabs, one of the University's two new Centres for Excellence in Teaching and Learning (see p 14), was involved in a range of school projects over the summer. One of these was the Climate Change in the Classroom project at Rednock School, run by Chemistry teacher Tim Harrison, who became a Teacher Fellow at Bristol ChemLabs in September, and Dr Dudley Shallcross, Outreach Director for Bristol ChemLabs. Rednock students also trialled some new AS-/A-level Chemistry practicals at the School of Chemistry over the summer. Bristol ChemLabs will be offering secondary schools the chance to carry out these practicals, which support A-level Chemistry but are impossible to carry out in schools, because of lack of specialised equipment, timetable constraints or health and safety restrictions.

### New network fights injustice

A new network to help people wrongly convicted, pioneered by Dr Michael Naughton in the School of Law, was launched in September. The UK Innocence Network will also be actively involved in research into wrongful convictions. Supporters include Paddy Hill, one of the Birmingham Six, broadcaster and author Sir Ludovic Kennedy and Michael O'Brien of the Cardiff Newsagent Three.

The organisation, which is similar to networks in the US and Australia, brings together victims, campaigners, academics and politicians.

### Infertility support thrives online

ReproMED's online discussion forum, which was launched in 2003 as an addition to the patient website of the University's Centre for Reproductive Medicine, has been going from strength to strength. Couples can log on at any time, anonymously if they wish, to discuss treatments and feelings with other couples. Julie Hinks, ReproMED's Deputy Nursing Director, presented a paper at the annual conference of the European Society for Human Reproduction and Embryology reviewing the changes in mutual support between infertile patients and the increasing role the internet is playing in this support. Her research has received international recognition and was chosen for a prize presentation session at the conference.

### RWA readings series

The Department of English joined forces with the Royal West of England Academy (RWA) to present a series of dayschools and lunchtime readings, entitled 'Literature and Art at RWA', to complement the RWA's spring and summer exhibitions.

The three dayschools examined British portraiture, art and writing, and landscape. The readings, from works by authors such as Doris Lessing, Jane Austen, Saul Bellow and Zadie Smith, were followed by discussions.

### Exercise classes for cancer patients

The Centre for Sport, Exercise and Health launched a new exercise class exclusively for cancer patients (below) – one of the first of its kind in the country. The exercise rehabilitation programme, called ENERGISE, is part of the centre's Community Exercise Programme. The class aims to help maintain or improve physical function, strength and mobility during or after cancer treatment. Supported by Cancer Research UK, it was launched following a successful feasibility study last year involving patients from the Bristol Haematology and Oncology Centre.

Other community classes include over-60s keep fit and swimming, and healthy hearts and start-to-exercise classes.



# STUDENTS : A WORLD OF TALENT

Bristol continues to attract students of exceptional calibre from all walks of life, and from across the globe. In 2004/05, the University had approximately 11,500 undergraduate students and about 2,600 postgraduates. Their achievements during their time here – whether in the academic, sporting, cultural or other arena – are a reflection of the vast array of talent and determination residing in the student body.

## Postgraduate Union launch

Autumn 2004 saw the launch of a Postgraduate Union, the first such dedicated representative body for postgraduates in the country. The new Union took over the former Postgraduate Society's role, representing postgraduates both within the University and Students' Union, and on national and international student bodies such as the National Postgraduate Committee and Eurodoc. It also provides welfare support, a central point of contact for students on postgraduate issues, a gateway to training opportunities and a framework for social opportunities. It is run by postgraduate volunteers and a dedicated member of staff.



Left to right: Dries Neiryneck, Chairman of Convocation Stuart Goldsmith, Philippa Jill Meadows.

## Convocation Awards

The winners of the 2004 Convocation Awards were Philippa Jill Meadows (third-year PhD Chemistry), Postgraduate Senate Representative (2002/04) and Departmental Research Student Representative (2002/05); and Dries Neiryneck (third-year PhD Electrical and Electronic Engineering), President of the Postgraduate Society in 2002/03 and Chairman in 2003/04.

A former President of the Postgraduate Society, Jill represented postgraduates at every level in the University and the Students' Union and played a vital role in raising the Union's awareness of postgraduate issues. Dries helped establish the Postgraduate Society, and played a key role in its evolution into the Postgraduate Union (see above). A dedicated member of Student Council, he worked on welfare issues such as the integration of international students.

## Gemilang 2005

The Malay Cultural Society (MCS) pulled out all the stops for its annual Malam Gemilang, an evening of cuisine, music and dance. Dinner was followed by a performance in the Winston Theatre of Nakhoda Manis, a 15th-century tale of filial indifference and callous youth. The staging wove together dance, martial arts, singing and dikir barat, in which performers sit cross-legged, weave their arms and sway in time to the music. Guests included Fadzli Shah from the UK Executive Council for Malaysian Students and Tuan Syed Kamal, a representative of Petronas, sponsors of geology student and MCS president, Faizal Riza Mohammad. The occasion was partly sponsored by the families of two of the participating students, with a further grant from the Alumni Foundation.

## Screentest festival

In March, the Students' Union hosted the first-ever nationwide film festival to showcase and celebrate the work of student film-makers. Screentest, which was organised by the Film-making Society, included three days of screenings staged throughout Bristol, as well as a host of events at which student film-makers could gather to develop new ideas and techniques. Local schoolchildren enrolled in media classes were also invited to attend free screenings. Twice Oscar-nominated actress and Bristol graduate, Emily Watson, hosted a question-and-answer session about the film industry in the Victoria Rooms and presented the Best Student Film award at the close of the festival. The event was supported by the Alumni Foundation, Bristol Odeon and *The Independent*.



A scene from *Superduck and the Evil Cheese*, one of the films featured in the Screentest Festival.

## German Drama Festival

A performance by Bristol students of Arthur Schnitzler's *Die Verwandlungen des Pierrot* was just one of the eight student productions on offer at the British and Irish German Language Drama Festival hosted by the University in February. More than 500 visitors came to the Students' Union to watch the productions from the universities of Nottingham, Aberdeen, Edinburgh, Maynooth, Oxford Brookes, St Andrews, Trinity College Dublin and Bristol. The Festival received backing from the Austrian Cultural Forum and the Conference of University Teachers of German in Great Britain and Ireland. Its success was all the greater owing to the help of the University's Alumni Foundation, the Dean of Arts, the German Department and the Drama Department, which provided most of the costumes for the Bristol students' production.

## A first for the sailing 1st

Bristol's sailing 1st team won the British Universities Sports Association 2005 Team Racing Championships in April. The star-studded team, consisting of Eddy Green, Ed Hill, Athol King, Sophie Sutcliffe, Jess Mackey and Amanda Lissan, were seeded second, behind their old adversaries Southampton (winners for the previous three years). This was the first time Bristol had won the competition, and indeed the first time the trophy had been won by a team other than Southampton, Cambridge or London. The ladies team came second, narrowly losing to Southampton.

## RAG celebrates record-breaking year

Students celebrated 80 years of RAG (Raising and Giving) with a procession comprising a marching band, floats decorated by student halls of residence (below) and a selection of American trucks. The procession, opened by the Lord Mayor of Bristol, Councillor Simon Cook, marked the beginning of RAG Week in February, a week of activities organised by students in aid of local charities.

In 2004/05, students raised more than £80,000 for RAG. One record-breaking weekend in November saw them raise £12,571 for Children in Need, the largest amount ever collected by Bristol Raggies in 24 hours. More than 40 collectors hit the streets of Bristol, and totals were raised further by a pirate party at the Dorothy Hodgkin Building and a charity night at Goldney Hall.



Left to right: Bristol students Noam Kostucki, Julian Weinberg and Shane O'Doherty, publicising international student organisation Aiesec, whose logo features the image of a blue man.

## Global Fiesta

Students celebrated Bristol's cultural diversity through Global Fiesta, a one-day event aimed at increasing cultural awareness, respect and understanding. Activities included demonstrations of henna art, origami and Chinese writing, and workshops and seminars on drumming and African dancing, corporate social responsibility and Tibetan culture. All of the funds raised went towards the Hodgkin Scholarship Fund, which was set up to bring one international student each year, who would not otherwise have the opportunity to leave their home country for political or social reasons, to come and study at the University.



Muzzamil Lakhani receives his award from Lord Kinnoch.

## International Student of the Year

Muzzamil Lakhani, a partially sighted student from Pakistan studying Physics at Bristol, was named 'International Student of the Year 2005' by the British Council in April. Muzzamil received the top Gold Award, while another Bristol student, Dionna Tong from Singapore, won the Silver Award.

Comprehensive support networks at Bristol have helped Muzzamil to lead an independent life. Within a month of arriving in the UK, Muzzamil had started to train with a long cane. He joined the Institute of Physics, became a member of a choir and took piano lessons, and recently secured a work placement with Unilever.

Dionna Tong, a Law student, is a committee member of the European Law Students' Association and a member of the University's Model United Nations Society. She is also involved in the University's Widening Participation scheme, which encourages partnership working with local secondary schools.



## On top of the world

Science student Jake Meyer (above) made history in June by becoming the youngest Briton to climb the world's seven highest mountains. The Seven Summit Challenge has only been completed by 150 people worldwide. At 18, Jake scaled Mount Elbrus in Europe and Mount Aconcagua in South America. He conquered one of the coldest mountains in the world, Mount Denali in North America, aged 19, then Mount Kosciusko in Australia and Mount Vinson in Antarctica by the time he was 20. His final conquest was Mount Everest. Part of the reason for this climb was to raise money for the Children's Wish Foundation, a charity dedicated to granting wishes for dying children.

## GE Foundation Scholarship Awards

Undergraduates Benjamin Leavett (Computer Science), Sundas Ali (Economics and Econometrics) and Stephen Lee (Mechanical Engineering) were among the winners of the first GE Foundation Scholarship Awards to be given in the UK in September. Each student was awarded £2,000 as part of the scholarship programme, which runs in ten countries around the world in partnership with the Institute of International Education. The award identifies low-income first-year students who have demonstrated academic excellence, community involvement and financial need, and continues throughout their second and third years of study. The students are offered a mentorship opportunity within GE UK and will participate in community work in the home or university countries.

## Double victory for Engineering undergrads

Two Engineering students at Bristol were awarded a prestigious Leadership Award Scholarship from the Royal Academy of Engineering, beating thousands of applicants from all over the UK. Daniel Dodd (MEng in Aeronautical Engineering) and Daniel Meredith (MEng in Engineering Design) were among only 26 undergraduates to receive the award, which includes money to be spent on personal development, business management training at Cambridge University and mentoring from the Sainsbury Management Fellowship Scheme.

## Student Community Action

Student Community Action (SCA) celebrated the work carried out by the University's student volunteers with a week of volunteering events in February. These included helping to revamp a local community garden with the SCA's environmental project Greenforce; hosting a dinner dance for local senior citizens (below); and a sponsored sleep-out by students from all over the South West to raise money for local projects working with homeless people, such as the Julian Trust Night Shelter. In total, more than £1,000 was raised from the various events.

SCA's volunteers contributed a total of [tbc] hours to the local community in 2004/05.



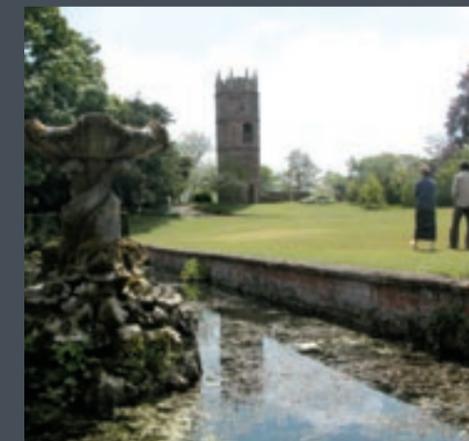
## STAFF

The University employs over 5,500 staff, covering a huge range of academic disciplines, professions and jobs. Together, they constitute the University's most important resource. This chapter gives a brief overview of some personnel-related activities and policy developments in 2004/05, together with a resumé of the many distinctions gained by members of staff.

## Positive Working Environment

Work towards creating a more positive working environment (PWE) continued throughout 2004/05. A Steering Group, comprising a cross-section of academic and support staff and chaired by a Pro Vice-Chancellor, meets bimonthly to drive forward the PWE agenda. Steps taken during the year to implement the improvement plan have included:

- the publication of a leaflet outlining the University's PWE 'Commitments';
- the publication of four advice sheets in the 'Positive Communications' series, addressing the use of internal email, effective leadership, time management and workplace bullying;
- the launch of a PWE website;
- support services and research staff conferences run under the PWE banner;
- increased training and career development for research and technical staff, along with dedicated websites;
- the offer to staff to enrol free on a selection of part-time and short courses organised by the Public Programmes Office;
- the launch of a technical trainee scheme;
- the promotion of the University's flexible working policy;
- increased resources for, and the promotion of, the staff counselling service;
- the launch of the 'Staff Wellness Programme' by the Centre for Sport, Exercise and Health, including wellness days, lunchtime walks, talks and exercise classes;
- significant resources earmarked for leadership development.



## Reward Agenda

The University is now two years into the huge and complex task of introducing a new, more transparent pay and grading structure and harmonised terms and conditions for all members of staff. During 2004/05, much progress was made on the second phase of the project, which involves evaluating all job roles across the University.

For academic and research staff, generic role profiles have been drafted. These will be underpinned by job evaluation and individual roles will be matched to them. In addition, the preparation of an academic career grade leading to more transparent progress to senior lecturer is well advanced.

Meanwhile, support staff have been completing job descriptions on a phased basis prior to evaluation. Academic-related roles will also be matched where possible with generic role profiles. The trades unions have been fully involved throughout the process. The positive relationship between them and the University has been of fundamental importance to the progress achieved.



## Developments for research staff

The process of establishing better career support for research staff has been assisted by additional 'Roberts Review' funds starting in 2004/05. A number of measures have had a positive impact on the career development of research staff, at the same time enhancing the quality of Bristol's research output.

### These include:

- appointment of a full-time Research Staff Career and Development Adviser;
- appointment of Departmental Research Staff Representatives;
- significant increases in targeted training and development for research staff;
- new approaches to the marketing and communication of initiatives to research staff, including a website ([www.bristol.ac.uk/researchstaff](http://www.bristol.ac.uk/researchstaff));
- research staff contacts scheme;
- development of potential research staff career paths to help them manage their future careers, linked to formal job evaluation of all research roles;
- new approaches to fixed-term employment to improve skills retention and employment security;
- launch of an 'academics with families' group to provide information and support;
- development of a UK online staff opinion survey of research staff, entitled the Careers in Research Online Survey;
- articles in the media highlighting positive action at Bristol;
- production of an annual report promoting these developments inside the University and to funding organisations.



## Investing in technical skills

Following a series of recommendations from a Technical Staff Working Party to the Director of Personnel Services and Staff Development, and Deans, an advertising campaign was launched at the end of 2004 to attract seven new technical trainees for 2005/06, with more to follow.

The trainee scheme is the result of collaborative working between Personnel Services and Staff Development, technical managers and Amicus, the trade union representing technical staff. The trainee is employed at the University while completing a part-time degree in a relevant subject at the University of the West of England or another college or university on a day-release basis. The University pays the full costs of the degree and the trainee also receives an annual salary while they study. On completion of the course, the University would normally expect to be able to offer the trainee a permanent technician job.

The campaign to attract high-quality trainees, called 'Earn and Learn', included press adverts and press releases to local radio and television.

## Joe McGeehan ranked a 'top technologist'

Joe McGeehan, Professor of Communications Engineering in the Department of Electrical and Electronic Engineering and Director of the Centre for Communications Research, has been placed sixth in a list of the world's 'Top Ten Technologists' compiled by leading online magazine silicon.com. Bill Gates came in at number two.

In the same poll, Joe came 25th out of the top 50 high-tech agenda setters from the worlds of technology, business, entrepreneurialism and politics



## DISTINCTIONS

### Queen's Birthday Honours

Three Bristol academics were honoured in the Queen's Birthday Honours list.



**Joe McGeehan**  
Professor of Communications Engineering and Director of the Centre for Communications Research, was awarded a CBE.



**Dr Vincent Smith**  
Reader in Physics, was awarded an MBE.



**Linda Ward**  
Professor of Disability and Social Policy and Director of the Norah Fry Research Centre, was awarded an OBE.

### New Fellows



**Professor Bob Evans in the Department of Physics** was elected a Fellow of the Royal Society. He is honoured for his unique contributions to physics, particularly the statistical mechanics of liquids and surfaces.



**Professor Sir Michael Berry in the Department of Physics** was elected a Fellow of the Royal Society of Edinburgh, Scotland's National Academy. Fellows are chosen in recognition of outstanding contributions to their field.



**Professor Eric Thomas, Vice-Chancellor**, was made an Honorary Fellow of the Royal College of Physicians in recognition of his achievements as an obstetrician and gynaecologist and his distinguished career in academic medicine.

### British Academy honours



**The Chancellor, The Right Honourable The Baroness Hale of Richmond**, was elected to Honorary Fellowship of the British Academy.



**Professor Peter Townsend in the School for Policy Studies** was elected to Senior Fellowship.



### New Chairs



**Chair in German**  
**Dr Alexander Košenina**, formerly Visiting Professor at the Humboldt University, Berlin.



**Chair in Experimental Cardiovascular Medicine**  
**Professor Paolo Madeddu**, formerly Senior Researcher at the Medical University of Sassari, Italy and Director of Experimental Medicine and Gene Therapy at National Inter-university Consortium INBB, Osilo, Italy.



**Chair in Physiology**  
**Clive Orchard**, formerly Professor of Physiology at the University of Leeds.



**Chair in Experimental Psychology**  
**Dr Klaus Oberauer**, formerly a research scientist at the University of Potsdam, Germany.



**Chair in Human Geography**  
**Dr Wendy Larner**, formerly Senior Lecturer in Sociology at the University of Auckland, New Zealand.



**Chair in Inorganic and Materials Chemistry**  
**Ian Manners**, formerly Professor of Chemistry and Canada Research Chair of Inorganic, Polymer and Materials Chemistry at the University of Toronto.



**Chair in Seismology**  
**Professor Michael Kendall**, formerly Professor of Seismology at the University of Leeds.



**Chair in Number Theory**  
**Professor John Conrey**, formerly Professor of Mathematics at Oklahoma State University.



**Chair in Pure Mathematics**  
**Professor Ben Green**, formerly a Fellow of Trinity College Cambridge.



**Chair in Public Health Nutrition**  
**Dr Janice Thompson**, formerly Research Assistant Professor and Director of the Office of Native American Diabetes Programs at the University of New Mexico Health Sciences Center.



**Chair in Social Work and Applied Social Sciences**  
**Professor John Carpenter**, formerly Professor of Applied Social Studies (Social Work) at the University of Durham.



**Chair in East Asian Studies**  
**Professor Ka Ho Mok**, formerly Associate Dean and Associate Professor at the City University of Hong Kong. Professor Mok is also the Director of the University's new Centre for East Asian Studies, which was launched officially in September 2005.



**Leverhulme Chair in Industrial Organisation**  
**Professor In-Uck Park**, formerly Assistant Professor at the University of Pittsburgh.



## Appointments to external bodies

**Professor Martin White in the Department of Drama** (who is also Provost of the Institute for Advanced Studies) was appointed to the Board of Management of the Arts and Humanities Research Council. His appointment lasts for three years from the beginning of September 2004.

**Professor Carol Propper of the Department of Economics** was appointed to the Council of the Economic and Social Research Council.

**Professor Angela MacFarlane of the Graduate School of Education** was appointed to the Board of Governors for Teachers' TV. The first publicly funded channel of its kind, Teachers' TV aims to improve overall educational standards, ensure that teachers are better skilled and resourced, and improve the status of teaching as a profession.

**Professor Steve Sparks of the Department of Earth Sciences** joined a working group of scientists for the Government considering the issue of global natural hazards. The group was commissioned by the Office of Science and Technology and is chaired by Sir David King, the Chief Scientific Adviser to the Government.

**Professor Kenneth Iwugo of the Department of Civil Engineering** was elected to the Strategic Council of the International Water Association. He was also appointed a member of the Regional Environment Protection Advisory Committee, the Expert Advisory Panel of the Environment Agency in England and Wales.

**The Chancellor of the University is The Right Honourable The Baroness Hale of Richmond.**

The Pro Chancellors are:

**Dr Stella Clarke, CBE**

**James Foulds**

**Sir Derek Higgs**

## Executive team

The end of the year saw the retirement of Professor Sir John Beringer, CBE from the post of Pro Vice-Chancellor, as well as a number of other changes at the top. The executive team supporting the **Vice-Chancellor, Professor Eric Thomas**, now comprises:

**Professor Patricia Broadfoot, Pro Vice-Chancellor**

**Professor Selby Knox, Pro Vice-Chancellor**

**Professor Malcolm Anderson, Pro Vice-Chancellor**

**Professor David Clarke, Pro Vice-Chancellor**

**Derek Pretty, Registrar**

**Alison Alden, Deputy Registrar**

## Deans

The Deans of the University's faculties are currently:

<b>Professor Robert Fowler</b>	Arts
<b>Professor David Muir Wood</b>	Engineering
<b>Professor Len Hall</b>	Medical and Veterinary Sciences
<b>Professor Gareth Williams</b>	Medicine and Dentistry
<b>Dr Bill Boyd</b>	Science
<b>Professor Malcolm Evans</b>	Social Sciences and Law

(Professor Harriet Bradley completed her term of office as Dean of Social Sciences and Law in July 2005.)



## HONORARY DEGREES 2004/05



Bert Massie

**Acker Bilk, MBE**

Jazz musician and band leader, also long-standing President of the Bristol Jazz Club

**Master of Arts**

**Sir John Bond**

Chairman of HSBC Bank

**Doctor of Laws**

**Lillian Brown**

Member of staff and Convocation and Bristol graduate

**Master of Arts**

**Professor Sir Brian Follett**

Chairman of the Teacher Training Agency and former head of the School of Biological Sciences

**Doctor of Laws**

**Sir Derek Higgs**

Leading businessman and distinguished merchant banker, a Pro Chancellor of the University since 2003

**Doctor of Laws**

**Denis Khen Lee Chang, CBE**

Senior Counsel in private legal practice in Hong Kong

**Doctor of Laws**

**Bert Massie, OBE**

Chairman of the Disability Rights Commission

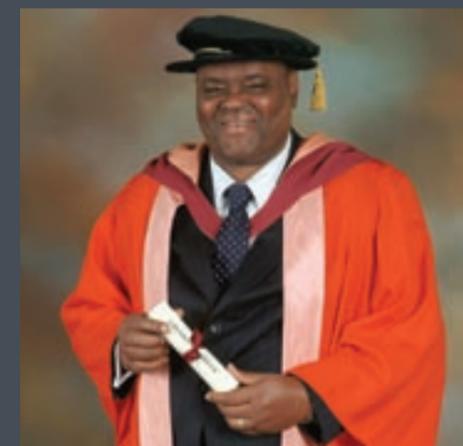
**Doctor of Laws**

**Deborah Moggach**

Novelist, screenwriter and Bristol graduate

**Doctor of Letters**

James Williams



**James Partridge, OBE**

Chief Executive of the charity Changing Faces, which aims to change attitudes to facial disfigurement

**Doctor of Science**

**Professor Sir Keith Peters**

Regius Professor of Physics, University of Cambridge

**Doctor of Medicine**

**Dr Stephen Pilkington, CBE**

Former Chief Constable of Avon and Somerset Police and recipient of the Queen's Police Medal

**Doctor of Laws**

**John Savage**

Executive Chairman of Business West

**Doctor of Laws**

**Anne Weyman, OBE**

Chief Executive of fpa (formerly the Family Planning Association) and Bristol graduate

**Doctor of Laws**

**His Excellency, James Williams**

High Commissioner of Saint Christopher and Nevis and Bristol graduate

**Doctor of Laws**

**Moger Woolley**

Chairman of University Council since 1997 (and the first Bristol graduate to hold the post)

**Doctor of Laws**

**Nigel Wray**

Businessman, entrepreneur and investor

**Doctor of Laws**

Deborah Moggach



## CAPITAL PROJECTS AND ESTATE DEVELOPMENTS

During 2004/05, £19.4 million was expended on various projects. Major projects totalling £ 6.54 million came to a successful completion.

They included:

### SRIF(2) Programme: Functional Genomics

Part of the £28 million funding from the Science Research Infrastructure Fund (SRIF). A number of Functional Genomics laboratories have been refurbished/ upgraded at a cost of £4.3 million. The project was successfully completed in August 2005.

### SRIF(2) Programme: asbestos removal

Part of the £28 million funding from the Science Research Infrastructure Fund. This £1.28 million project has now completed the asbestos removal from the School of Medical Sciences.

### 35 Berkeley Square

Upgrade and refurbishment of the 3rd and 4th floors for the Graduate School of Education, costing £900,000. The project was successfully completed in July 2005.

### Queen's Building

Refurbishment of the Queen's Building foyer at a cost of £60,000.



35 Berkeley Square



Nanoscience and Quantum Information Building (artist's impression)

Several projects are still ongoing, including:

### SRIF(2) Programme: H Floor

Part of the £28 million funding from the Science Research Infrastructure Fund. Major upgrade and complete refurbishment of Level H in the School of Medical Sciences at a cost of £12 million.

### Nanoscience and Quantum Information Building

A £9.2 million project, located in Tyndall Avenue, which will provide space for interdisciplinary research in Nanoscience and Quantum Information. Due for completion in early 2007.

### Small Animal Practice, Langford

A £1.8 million new build project to provide veterinary care to small animals, due for completion in early 2006.

### West Block Chemistry

A complete refurbishment and upgrading of Levels 5 and 6 to provide world-class teaching facilities. This £18.3 million project also includes the replacement of cladding and fenestration. Due for completion in 2007.

## THE UNIVERSITY IN THE MEDIA

The University continued to have an exceptionally high profile in the media, particularly for its research. It also remained a frequent port of call for journalists seeking informed opinions about the issues of the day, including the shifts and changes within the world of higher education. What follows is a small selection of stories that made the news in 2004/05.

### The Independent

26 August 2004

#### Reports of romantic icon's suicide 'greatly exaggerated'

Dr Nick Groom of the Department of English re-examined the evidence surrounding the death in 1770 of the Bristol-born Romantic poet, Thomas Chatterton, and concluded that his death was accidental.

The inquest declared that Chatterton, who died from arsenic poisoning, had committed suicide. Dr Groom investigated the poet's writings, contemporary accounts of his personality, his financial situation and rumours about his private life. He suggested that the poet was taking arsenic as a cure for a sexually transmitted disease and had accidentally confused the dose.

Other media coverage included:

25 August, *Evening Post*  
25 August, *BBC Radio Bristol*  
26 August, *BBC Radio 4*

### Bristol Evening Post

25 September 2004

#### Icy secret found by city scientists

Bristol scientists made a discovery deep within the frozen wastes of the Antarctic indicating that it could be at serious risk from global climate change.

The group, led by Professor Martin Siegert in the School of Geographical Sciences and the British Antarctic Survey, found a new structure deep within the West Antarctic Ice Sheet, which suggests that the whole ice sheet is more susceptible to future change than previously thought.

Other media coverage included:

23 September, *Minneapolis Star Tribune*  
23 September, *The Kansas City Star*  
23 September, *PhysOrg.com*  
24 September, *Innovations Report*  
29 September, *Dajiyuan.com*  
30 September, *Science Daily*

### Western Daily Press

20 September 2004

#### Premature birth linked to learning difficulties

Many premature babies suffer from significant learning difficulties, according to Dieter Wolke, a Visiting Professor at the Children of the 90s project, who found in separate research that about 40 per cent of so-called miracle babies experience developmental problems. As part of the EPICcure study, the largest investigation into premature babies, researchers followed 1,200 infants born alive at less than 26 weeks' gestation. Only 308 of these survived to see their sixth birthdays.

The study's findings were reported in a BBC1 *Panorama* programme, 'Miracle Baby Grows Up', on 22 September.

Other media coverage included:

19 September, *BBC News Online*  
20 September, *The Scotsman*  
20 September, *Bristol Evening Post*  
22 September, *IC Coventry*  
22 September, *News-Medical.Net*  
23 September, *The Economist*

### CNN.com

9 December 2004

#### Half of kids suffer war, poverty, AIDS

The United Nations Children's Fund report, *The State of the World's Children*, found more than one billion children were growing up hungry and unhealthy, schools had become targets for warring parties and whole villages were being killed off by AIDS.

Compiled by UNICEF and researchers at Bristol's Townsend Centre for International Poverty Research and the London School of Economics, the report found that over half the children in developing countries lived in poverty without access to basic goods and services.

The report was widely covered by the world's media. Newspapers, broadcast media and websites featuring the story on 9-10 December included: *AllAfrica.com*, *Al Jazeera International*, *BBC Mundo (Spanish)*, *The Globe and Mail (Canada)*, *The Guardian*, *The Independent*, *India Express*, *News 24 (South Africa)*, *ABC News (Australia)*, *Channel News Asia (Singapore)*, *The Mirror*, *Le Figaro*, and *The New York Times*.

## The Times

(front page) – 13 December 2004

### New vaccine trials bring hope of cure for diabetes

A vaccine against Type 1 diabetes is to be tested on humans, raising the prospect that a cure could be widely available in less than a decade. Dr Colin Dayan of the Henry Wellcome Laboratories for Integrative Neuroscience and Endocrinology told *The Times*: 'If the principle works, we will then want to conduct a further 18-month full clinical trial, and if there have been no adverse events begin work on more complex vaccine sequences.'

The report was widely covered by the world's media. Newspapers, broadcast media and websites featuring the story in December included: *Daily Telegraph* (Australia), *Indian Express*, TVNZ (New Zealand), *South African News*, Xinhua (China) and *Khaleej Times* (United Arab Emirates).

## The Times

(front page) – 23 December 2004

### Household chemicals in direct link to asthma rise

Frequent use of household cleaning products and other chemicals in the home could be linked to cases of asthma among Britain's children, according to research from Dr Andrea Sherriff and colleagues at ALSPAC, published in *Thorax*.

The study of respiratory health among young children showed a clear connection between breathing problems and the mothers' use of common products such as bleach, paint stripper and carpet cleaners.

**Other media coverage included:**

23 December, *BBC News Online*  
23 December, *Daily Mail*  
23 December, *Western Daily Press*

## The Times

5 July 2005

### Footprints in time that add 30,000 years to history of America

Scientists unearthed human footprints in central Mexico which they claim are around 40,000 years old, shattering previous theories on how humans first colonised the Americas.

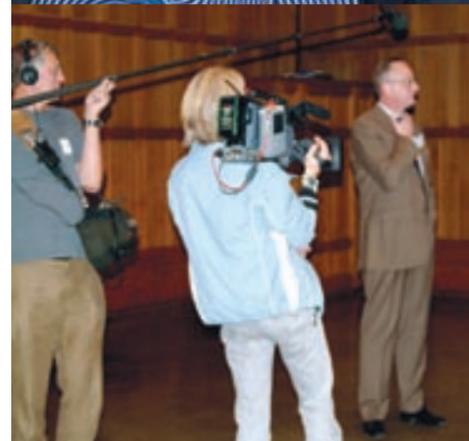
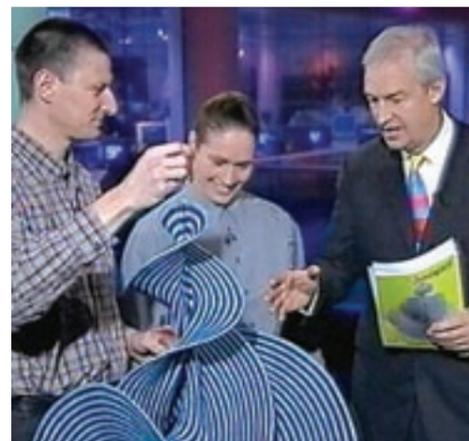
An international team of geoarchaeologists, led by Dr Silvia Gonzalez from Liverpool John Moores University, discovered the footprints in an abandoned quarry in September 2003 and subjected them to a number of dating techniques. These included uranium series dating carried out on animal bones from the site by Dr Alistair Pike of Bristol's Department of Archaeology and Anthropology.

**Other media coverage included:**

5 July, *The Daily Telegraph*  
5 July, *The Guardian*  
5 July, *The Independent*  
5 July, *Bristol Evening Post*  
9 July, *New Scientist*

*Below: Dr Hinke Osinga and Professor Bernd Krauskopf of the Department of Engineering Mathematics appear on Channel Four News, with their crocheted model of chaos (see 'The year in pictures', inside front cover).*

*Bottom: Camera crews and other members of the media are a regular feature in the University precinct.*



## BBC News Online

7 February 2005

### Engravings found in County cave

A number of ancient engravings were found on the wall of a cave known as Aveline's Hole in Burrington Combe, Somerset, by two members of the University's Spelaeological Society, Graham Mullan and Linda Wilson. The discoverers, assisted by Dr George Nash, formerly of the Department of Archaeology and Anthropology and an Honorary Recognised Teacher in Archaeology (Continuing Education), and experts from the British Museum, believe these engravings are likely to be around 10,000 years old.

Graham Mullan received a call from the granddaughter of W T Aveline, after whom the cave was named, after the discovery was broadcast on BBC Points West.

**Other media coverage included:**

8 February, *The Times*  
8 February, *Evening Post*  
8 February, *Western Daily Press*  
8 February, *Los Angeles Times*  
8 February, *ABC News*  
8 February, *Washington Post*  
9 February, *Kaleej Times, UAE*

## The Independent

19 July 2005

### Most people plan to spend children's inheritance

Two out of three adults say they plan to enjoy life and not worry too much about leaving a legacy, according to the first-ever national survey of attitudes to inheritance carried out for the Joseph Rowntree Foundation.

Stephen McKay of Bristol's Personal Finance Research Centre and Dr Karen Rowlingson of Bath University found that little more than a quarter of those with the potential to make a bequest say they will deliberately budget to do so.

**Other media coverage included:**

19 July, *The Daily Telegraph*  
19 July, *Daily Mail*  
19 July, *The Times*  
19 July, *Today, Radio 4*  
19 July, *You and Yours, Radio 4*  
19 July, *Radio 5 Live*  
*Interviews with 25 local radio stations*

## OTHER SIGHTINGS

### A few moments of science

Several Bristol academics appeared in *Science Matters*, a series of 90-second programmes made by ITV West in autumn 2004 in which scientists answered some common – and not-so-common – questions. Among the Bristol contributors were Jeremy Phillips in Earth Sciences ('What causes a volcano to erupt?'), Dr Vincent Smith in Physics ('How does gravity work?'), Dr Nick Walker in Chemistry ('Where does oxygen go after we breathe it in?') and Professor Hugh Coakham in the Division of Surgery ('How does my brain work?').

### Teacher's TV

The Graduate School of Education was involved in some of the output on the new digital 'Teachers' TV' channel. Professor Rosamund Sutherland and Jan Winter featured in two programmes about ICT in primary schools. They were shown working with Simon Mills, a Year 4 teacher from Teyfent Community School, and discussing the way he used ICT to support the learning of numeracy.

### Bristol academics host Coast

Dr Mark Horton from the Department of Archaeology and Anthropology and Dr Alice Roberts from the Department of Anatomy were two of the presenters on *Coast*, a 13-part BBC TV series exploring the entire UK coastline. One of the other co-presenters, zoologist Miranda Krestovnikoff, is a University of Bristol graduate.



*Clockwise from top: Miranda Krestovnikoff, Dr Mark Horton, Nick Crane, Alice Roberts, Neil Oliver.*

# CAMPAIGNS AND ALUMNI RELATIONS

Philanthropic giving plays a vital role at the University of Bristol. The generosity of our supporters makes a real difference, helping to ensure that Bristol continues to be a place of learning, research and enterprise where excellence is a hallmark.

## Raising is rising

During 2004/05, over £3.2 million was raised in gifts and pledges from individuals, companies and charitable trusts. This is an inspiring total and demonstrates just how much Bristol alumni and friends care about the future of the University. We value this support enormously. It enables us to drive research faster and to provide extra support to both students and academics.

The Annual Fund did particularly well last year, with alumni and parents giving over £438,000 – an increase of 50 per cent on last year's record-breaking result. Income from charitable trusts also grew and we received two donations of particular note: the Wolfson Foundation pledged £500,000 in support of the new Nanoscience and Quantum Information building, and the Hadley Trust confirmed their continued support for the Hadley Centre for Adoption and Foster Care Studies, worth £500,000 over the next five years. And many people chose to remember the University in their will last year; we received legacies totalling nearly £1.4 million.

Our donors work with us in true partnership and over the past year we have sought their advice on plans for the future of the University. The Vice-Chancellor, Professor Eric Thomas, consulted with a wide range of alumni in the business, political, professional, media and education sectors on this subject and on areas they think would be attractive to future supporters.

Looking to the future, we are now firmly focused on our Centenary in 2009, and are working towards a major fundraising campaign to mark this significant occasion.

## The Alumni Foundation

In the past year, the Alumni Foundation distributed £107,035 worth of grants to students. Forty-seven small grants were given to individuals, clubs and societies to support the extra-curricular activities that make University life in Bristol so vibrant. Forty-four postgraduates were given international travel grants totalling £14,836, furthering Bristol's reputation as a centre for intellectual exchange. The Foundation is funded entirely by gifts from alumni and staff of the University.

*A grant of £3,000 enabled the Malay Cultural Society to put on Malam Gemilang – an evening of Malaysian plays, dance, music and food.*



*Students Laura Tomlinson and Nancy Pickup were given a grant of £345 to found an on-campus Fair Trade café.*

## Pioneering breakthroughs

In early 2005, we founded the Bristol Pioneers to recognise and thank those individuals whose philanthropic support for the University reaches £1,000 or more within the academic year.

When we created the Pioneers, 15 people qualified for membership. By 31 July 2005, over 70 qualified fully and a further ten had made ongoing commitments which will ensure their membership in future years. We are delighted to acknowledge the fully qualified 2004/05 Pioneers below. These are individuals whose generosity sets a standard to which others may aspire, and whose support enables the University to transform itself both powerfully and quickly.

- |   |  |
|---|--|
| Dr J Mark Bayley                        | Mr Bill J L Knight                                 |
| Mr John S M Beckwith-Smith              | Mr David A Lunan                                   |
| Mr John E Benson                        | Mrs Inez Lunan                                     |
| Mr A Boorman                            | Mr Edward G P Mallinckrodt                         |
| Mr Denis A S Burn                       | Mr Christopher May                                 |
| Mr Andrew E J Burton                    | Dr Nicoletta Momigliano                            |
| The Rt Hon Lord Chilver, DSc, FRS, FEng | Mr Carlo Momigliano                                |
| Mrs Gillian D Davies (Cutbill)          | Mr Marco Momigliano                                |
| Mr Gerald R H Davies                    | Sir Jeremy Morse KCMG                              |
| Dr Charlotte H Dawson                   | Lady Morse   |
| Mr Robert Dufton                        | Mr Timothy R V Parton                              |
| Mrs Diana E S Dunn (Deterding)          | Mrs Margaret R Peacock                             |
| Dr Jean Eustace (Musgrave)              | Mr John K Pitts                                    |
| Mr Mark Evans                           | Mrs Tania Jane Rawlinson                           |
| Mr Rupert R Faure Walker                | Professor David Rhind CBE, DSc, FRS                |
| Dr Anthony C M Finch                    | Dr John C Riviere                                  |
| Mr Stuart A Goldsmith                   | Mrs Pauline Roberts                                |
| Mr Michael J Gorman                     | Mr Geoffrey H Rowley                               |
| Mrs Christine D Gorman (Wilson)         | Mr Louis Sherwood                                  |
| Dr The Hon Gilbert Greenall CBE         | Mrs Eva Smith                                      |
| Mrs Diane Harrison (Wood)               | Mr Dorelu Tarmurean                                |
| Mr John C Harrison                      | Miss Frances E Taylor OBE                          |
| Sir Derek Higgs FCA, LLD                | Ms Catherine Jane Taylor (Christie)                |
| Mr Stephen T Horn                       | Professor Eric J Thomas LLD                        |
| Mrs Judith M Iredale (Marshall)         | Mr Andrew R Thornhill, QC                          |
| Dr Peter Iredale, DSc                   | Mrs June Turnbull                                  |
| Ms Grace M Jackman                      | The Rt Hon The Lord Waldegrave of North Hill       |
| Mr David H Jones                        | Mr Alexander S Wilmot-Sitwell                      |
| Mr Ali Kazimi                           | Dr Michael Wong Pakshong, LLD                      |
| Dr Ian J E Keil                         | Dr Allen Zimble                                    |
| Mrs Rose M Kenway                       | A further ten individuals wish to remain anonymous |

We are very grateful to the companies, trusts and charitable foundations listed below, all of whom have made significant contributions to the University over the past year.

- |  |   |
|--|---|
| The Wolfson Foundation                             | The Richard Bradford Trust                  |
| Toshiba Research Europe Ltd                        | Alexander Onassis Public Benefit Foundation |
| Franklin Adams Trust                               | P F Charitable Trust                        |
| The Hadley Trust                                   | Barclays Global Investors Ltd               |
| The Harry Crook Foundation                         | Michael Marks Charitable Trust              |
| The Leventis Foundation                            | INSTAP                                      |
| Starfish Trust                                     | Misys Charitable Foundation                 |
| Charitable Trusts for the United Bristol Hospitals | Georgian Group                              |
| National Eye Research Centre                       | National Starch & Chemical                  |
| Smiths Group plc                                   | Foundation Inc                              |
| The John James Bristol Foundation                  | GlaxoSmithKline                             |
| Friends of Bristol Oncology Centre                 | UBS Warburg                                 |
| Rita and David Slowe Charitable Trust              | Tarsh Charitable Trust                      |
| Hewlett-Packard Ltd                                | Aventis Pharmaceuticals                     |
| Abbott Laboratories Ltd                            | Dominion Foundation                         |
| The Law Society Charity                            | Mayfield Medical Centre                     |
| Barclaycard  | Xerox Foundation                            |
| Vodafone   | BP International                            |
| Herbert Smith Solicitors                           | Harptree Fund                               |
| TFC Frost Charitable Trust                         |   |

# STATISTICS

## Full-time students 2004/05

	Undergraduate	Postgraduate Taught	Postgraduate Research
Arts	2441	173	111
Engineering	1585	183	203
Medical & Veterinary Sciences	1348	15	212
Medicine & Dentistry	1391	18	98
Science	2546	45	451
Social Sciences & Law	2172	967	187
<b>Total</b>	<b>11483</b>	<b>1401</b>	<b>1262</b>

All registered students, excluding those writing up or dormant, as of 31 July 2005.

## Staff numbers as at 1 February 2005

	University-funded		Outside-funded*	
	Full-time	Part-time	Full-time	Part-time
Academic and related	1578	309	967	246
Manual and related	365	503	2	14
Secretarial and related	389	317	74	102
Technical and related	294	119	148	94
<b>Totals</b>	<b>2626</b>	<b>1248</b>	<b>1191</b>	<b>456</b>
<b>Grand total</b>	<b>5521</b>			

\* eg research staff funded by research councils, charities and industry, endowed chairs, etc.

## Graduate destinations 2004

Description	Total	%
Full-time paid work	1009	43
Part-time paid work	96	4
Voluntary/unpaid work	46	2
Work and study	281	12
Further study	560	24
Assumed to be unemployed	102	4
Not available for employment	202	9
Other	11	0
Explicit refusal to reply	13	0.5
<b>Total</b>	<b>2320</b>	<b>98.5</b>
Unknown	312	

## Current staff members who are fellows of the following institutions:

Fellows of the Royal Society (including Professors Emeritus)	31
Fellows of the Academy of Medical Sciences (including Professors Emeritus)	12
Fellows of the British Academy (including Professors Emeritus)	9
Fellows of the Royal Academy of Engineering (including Professors Emeritus)	14
Academicians of the Academy of Learned Societies for the Social Sciences	8

### Financial figures

The University's financial figures are available in a separate volume, 2004/05 Financial Statements.

## Members of Council 2004/05

### Lay members (19)

Mr Tim Thom Treasurer  
Councillor Bill Martin Bristol City Council  
Mr Tim Pearce Society of Merchant Venturers  
Mr Stuart Goldsmith Convocation

### Elected by Court

Mrs Alison Bernays  
Mr John Bramhall  
Mr Chris Curling  
Mr Robert Dufton  
Mavis, Lady Dunrossil Gloucestershire County Council  
Mr Jim Foulds  
Mr Geoff Matthews  
Mrs Dinah Moore  
Mr David Ord  
Mr Tim Ross  
Mr Tim Stevenson  
Mrs Jane Venner-Pack  
Mrs Cathy Waithe  
Dr Moger Woolley

### University Members (10)

Professor Eric Thomas Vice-Chancellor  
Professor Sir John Beringer Pro Vice-Chancellor  
Professor Patricia Broadfoot Pro Vice-Chancellor  
Professor Selby Knox Pro Vice-Chancellor

### Appointed by Senate

Mr John Bailey  
Professor Christopher Hawkesworth  
Dr Neville Morley  
Professor David Punter

### Elected members of the non-academic staff

Mr Tony Macdonald  
Mr Robert Massie

### Students (3)

Mr Jerrold Bennett  
Ms Sarah Galvin Students' Union Vice-President  
Ms Sophie Sutcliffe President of the Postgraduate Union

## Credits

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