

2009/10

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The year in pictures

2009 August **Twitter channel takes off**

The University launched a channel on the web-based group messaging service, Twitter, which it uses to disseminate information about news, events and general announcements. In April 2010 it also launched its official YouTube channel.

September **Sir David packs the Great Hall**

Sir David Attenborough received a standing ovation after his lecture about the British scientist Alfred Russel Wallace, one of the early proponents of the theory of natural selection. The legendary broadcaster's talk in the Great Hall of the Wills Memorial Building was part of the University's centenary lecture series.

October **Royal opening for new Medical Centre**

The Princess Royal officially opened the new Bristol Heart Institute Medical Centre, a £61-million, state-of-the-art regional cardiothoracic centre funded by the Department of Health. The Centre is a partnership between the University and University Hospitals Bristol NHS Foundation Trust.

November **War, patriotism and conscience**

A new book, *Telling Tales About Men*, by Lois Bibbings, Senior Lecturer in Law, explores how conscientious objectors to compulsory military service were viewed and treated in England during the First World War.

December **Brains + beauty = art**

'Sunrise' by Eva Polk, a postgraduate in the Department of Physiology and Pharmacology, one of the winners of the annual Art of Science competition held by the Faculty of Medical and Veterinary Sciences. The works were exhibited at the city's At-Bristol science centre.

2010 January **Light gets knotted**

A team of physicists at the universities of Bristol, Glasgow and Southampton achieved the remarkable feat of tying light in knots. The team designed holograms using a branch of abstract mathematics called knot theory and created 'optical vortices' which can be tied into knots. The research could lead to a new generation of laser devices.

February **RAG fund opens coffers**

The Students' Union invited local voluntary and community groups to apply for grants of up to £1,000 from its Raising and Giving (RAG) fund. The fund is open to local groups supporting people who are disadvantaged or isolated – in particular children, older people and those with long-term illnesses.

March **Brains ahead**

A giant brain appeared in Bristol's Millennium Square to mark International Brain Awareness Week, which aims to increase public awareness about brain research. Bristol Neuroscience, which brings together all neuroscience research at the University, worked with At-Bristol to run activities throughout the week.

April **Probing phantom jams**

Dr Eddie Wilson in the Department of Engineering Maths published his research into the causes of 'phantom' traffic jams (ie jams with no apparent cause). Mathematical modelling revealed that changes in vehicle speed and road position sometimes combine in a 'perfect storm' to create these jams. The EPSRC-funded research will lead to better traffic-flow forecasting and help prevent congestion.

May **Bristol promotes interactive learning in India**

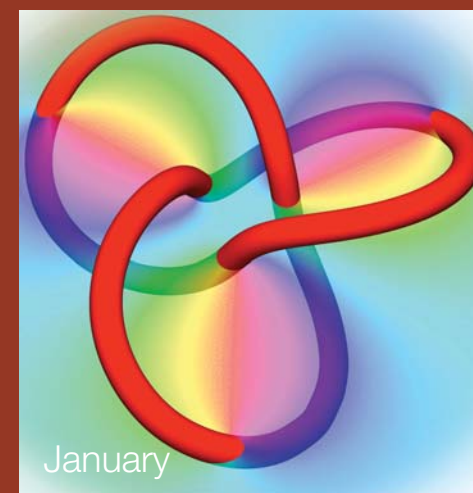
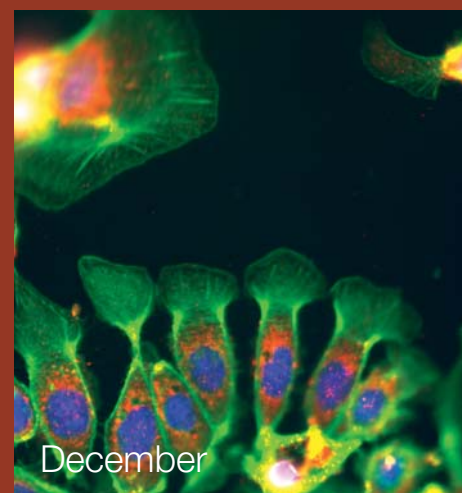
Dr Sri Subramanian from the Department of Computer Science led a project examining the use of interactive technology in schools in India, in collaboration with several Indian non-profit organisations. Multi-touch tables were installed in two Delhi schools, and students' experiences were assessed. Initial results suggested that this activity-based approach encourages greater co-operation and communication between students.

June **Bristol celebrates Penguin's birthday**

The art and design of Penguin Books come under the spotlight at the University as part of an international event celebrating its 75th anniversary. The University Library's Special Collections are home to the Penguin Archive, a wealth of materials relating to Penguin Books Ltd from its foundation in 1935 to the mid-1980s.

July **Chinese Herb Garden opens**

A traditional dragon dance featured at the official opening of Europe's first dedicated Chinese Herb Garden at the University's Botanic Garden. There are 200 species of Chinese herbs in the garden, including a mature female ginkgo tree and a sacred lotus, whose essential oil is, weight for weight, more expensive than gold.



Introduction

This review of 2009/10 complements our formal Annual Report and Financial Statements and provides a snapshot of some of the many accomplishments and successes that support our world-class reputation. The fantastic achievements of our students and staff are inspirational. Amazing things happen at Bristol.

We are dedicated to academic endeavour at the highest level. Our students benefit from an intellectually demanding, research-informed education that encourages independence of mind and prepares them to achieve their personal goals and serve society's needs across the globe, both during and after their time here. Discovery, learning and enterprise – this is what defines us.

Council, the governing body of the University, is proud to play an important role in ensuring that the University maintains its position as a leading institution at the top of its game, making a significant and unique contribution to society and the economy.

Of course, these are challenging times for all organisations and universities are not immune. For this reason, we have looked at every aspect of our organisation with absolute rigour to ensure that we are best placed not only to deal with the realities of a tough economic climate, but also to continue to invest in order to maintain our global reputation as a first-class institution. We are well positioned to navigate through these difficult waters, but there is no doubt that Council, the senior team and the University as a whole, have an important contribution to make.

We remain true to our mission and, as the successes highlighted in this review show, are well placed to survive in uncertain times and build on our considerable strengths to achieve global recognition as a leading institution in the 21st century.



NICK SMITH



MARTIN CHAINY

Eric Thomas
Vice-Chancellor

Denis Burn
Chairman, University Council

Top: Eric Thomas, Vice-Chancellor
Below: Denis Burn, Chairman, University Council

Mission, vision and values

Through its Royal Charter granted in 1909, the University of Bristol is committed to ‘the promotion of Arts, Sciences and Learning’. In its centenary year, the University restated its mission, together with its vision and values. These are set out below. They also appear at the start of the University’s Vision and Strategy for 2009-16. This Review of the Year, together with the associated Annual Report and Financial Statements, charts progress in 2009/10 against the Vision and Strategy.

Mission

To pursue and share knowledge and understanding, both for their own sake and to help individuals and society fulfil their potential.

Vision

The University of Bristol is an international powerhouse of learning, discovery and enterprise. Its vision is of a university whose excellence is acknowledged locally, nationally and globally and that is:

- dedicated to academic achievement across a broad range of disciplines, and to continuous innovation and improvement
- research-intensive, supporting both individual scholarship and interdisciplinary or thematic research of the highest quality
- a centre for intellectually demanding, research-informed education that nurtures independence of mind and helps students achieve their personal goals and serve society’s needs, both during and after their time here
- an inclusive and collaborative community of scholarship that attracts and retains people with outstanding talent and potential from all walks of life and all parts of the world
- a stimulating and supportive environment for all students and staff, distinguished by a commitment to high standards, respect for the individual and a strong sense of collegiality
- committed to operating in a sustainable manner
- engaged with society’s interests, concerns, priorities and aspirations
- a major contributor culturally, environmentally and economically to Bristol and the South West
- well led and responsibly run, with an emphasis on consultative decision-making and open communication as well as personal responsibility and accountability.

Values

Our mission and vision are underpinned by these values:

- | | | |
|---|--|--|
| <p>Truth
We seek and are inspired by truth, which we pursue for its own sake</p> | <p>Responsibility
We aim to make a positive difference to the wider world and the future</p> | <p>Transparency
We want to be accountable for our decisions and actions</p> |
| <p>Excellence
We strive for the highest quality in all we do</p> | <p>Independence
We encourage independent thinking and cherish academic and institutional autonomy</p> | <p>Diversity
We view the diversity of our staff, students and alumni as a great asset</p> |
| <p>Innovation
We welcome the challenge of the new and value the creative and entrepreneurial</p> | <p>Collaboration
We are committed to teamwork and to partnership with others</p> | <p>Equity
We believe in the equitable treatment of all</p> |
| <p>Ambition
We have high aspirations for the University and all its staff, students and alumni</p> | | |

Right: Graduation at the Wills Building



LIFE/EVERETT COLLECTION



Education and the student experience

The University continues to represent higher education at its best by investing comprehensively in facilities, training, technology and services, and by seeking to create new inroads to university for people from backgrounds where going to university is not the norm via widening participation, e-learning, outreach and international research projects.

The University's priorities in this area are to:

- attract and retain academically gifted and highly motivated students from a wide range of backgrounds, creating a diverse and international University community;
- provide an education of the highest quality that is research-led and focused on the needs and expectations of our students;
- ensure students have a fulfilling, challenging and intellectually stimulating experience while at University, that prepares them for employment and worldwide opportunities when they leave;
- provide effective and enabling educational leadership and structures that support educational enhancement;
- ensure that learning takes place within a high-quality environment that enables both students and staff to achieve their full academic potential.

Education Strategy

Professor Avril Waterman-Pearson, Pro Vice-Chancellor (Education), and members of the Education Committee completed work on the University's new *Education Strategy, Education Strategy 2010-16: Learning in Partnership*, which expands on the priorities stated (see left) and focuses on what students from diverse backgrounds need in order to take full advantage of the opportunities available, to thrive academically and personally and to succeed in a global context. You can find a link to the Strategy (downloadable as a PDF document) at <http://tinyurl.com/edstrat10>.

The new Strategy has provided a framework for the continual improvement of the educational experience at Bristol. During the year work focused on addressing the areas highlighted by the QAA Institutional Audit visit in May 2009. In particular the way that degrees are classified across the University has been reviewed so as to improve consistency and transparency. Further work improved the provision of advice and guidance for staff and students with respect to assessment and feedback, and this was incorporated into new *Regulations and code of practice for assessment of students on taught programmes*.

Feedback from students was gathered through local and national surveys, specifically the National Student Survey (NSS) and the International Student Barometer, and action was instigated at University and departmental level to address issues raised.

In the NSS, at institutional level 84% of our students expressed satisfaction overall (against a national average of 82%) and 79% were satisfied with our learning resources provision; subject level average

scores for library satisfaction increased from 58% to 70% this year with subject specific scores improving in 32 subjects. While the institutional level of satisfaction for assessment and feedback improved by several percentage points, at 58% there is still more work to be done. Our overseas student satisfaction rate was 85% (against a sector average of 82%) with the quality of our education and many of our support services being particularly highly rated.

Employability and skills development

The Careers Service, which now has overall responsibility for supporting the development of the generic skills and employability of our students, offered a wide range of workshops, including job-hunting workshops, summer opening, short courses for unemployed graduates (through Jobcentre Plus) and a telephone helpline. The Service also launched a funded internship programme for Bristol graduates.

The Careers Service launched the new Bristol Plus Award, which recognises and rewards students who have gained significant professional and life skills through involvement in extra-curricular activities. The award is designed to enable students to reflect on the skills they have gained, and learn how to articulate these skills successfully to potential employers. It also incentivises students who already engage in some extra-curricular activities to develop new skills in different areas such as sport, IT, work experience and societies. The award is available to all students and may be attained at two levels: the Bristol PLuS Award or the Bristol PLuS Award (Outstanding Achievement). There is also a Sports+ variant. Over 400 students attained the award in 2009/10 and it is planned to extend the streams available during 2010/11.

Education and the student experience continued

Innovation and excellence in teaching and learning

The University invested over £100,000 during 2009/10 in extending the capability of its virtual learning environment, BlackBoard. Investment was also made in library facilities, including refurbishment of the Medical Library and the Arts and Social Sciences Library (ASSL). Opening hours were extended in the ASSL and provision made for an increase in textbook budgets of £250,000 (virtually doubling the spend; see also p24).

Both Bristol ChemLabS and AIMS, the University's two Centres for Excellence in Teaching and Learning, marked their success at the end of their first five years of existence by developing their plans for sustainability, as funding from the Higher Education Funding Council for England (HEFCE) ended.

Admissions, fair access and widening participation

Our document *Widening Participation Strategy 2009-2016: Realising Potential* continues the policies and initiatives that have proved successful in recent years, while responding to changing contexts and developing new ideas to ensure we remain a leader in the field. The Strategy introduces student support as a key theme, articulates our commitment to our Widening Participation Research Cluster and places new emphasis on monitoring, evaluation and developing links with employers. While maintaining a commitment to collaborative, generic awareness-raising activities, the focus of this strategy will be more on widening participation and fair access to the University of Bristol.

In 2009/10, specifically:

- We expanded the Access to Bristol Scheme to offer 15 subject streams, accommodating 275 students from over 40 local schools. A graduation ceremony was held for 400 attendees, including parents, teachers and careers advisers.
- The Director of the Widening Participation Research Cluster's work on assessing

educational disadvantage and the use of contextual data received national attention and was featured in the report by Sir Martin Harris on access to highly selective universities.

- The University was awarded the Frank Buttle Trust Quality Mark for supporting care leavers. In addition, 61 local schools and colleges took part in Aimhigher-funded activities involving 5,000 young people and 1,500 parents and carers.

Attracting the 'most able but least likely' students to a research-intensive university like Bristol remains a significant national challenge. In order to seek to understand the constraints and to identify the most helpful interventions, the University – in collaboration with 12 other highly selective universities – made a successful bid to HEFCE for funding to undertake a national study. The project, entitled *Realising Opportunities*, offers a nationally agreed framework of support for able students from disadvantaged, low-performing schools. The programme will support over 700 students through a range of aspiration-raising activities and the development of research skills to enhance their applications to research-intensive universities. The programme will include activities such as e-mentoring, study support and an opportunity to demonstrate their academic potential. Students who apply to any of the partner universities will be given additional consideration at the point of offer-making, in what is a very competitive time for places, as well as recognition through tariff of additional project work they may undertake, where appropriate.

The year also saw a new partnership between the University and the College of Law (a leading provider of legal education and training) which aims to encourage disadvantaged students from state schools who want to enter the legal profession. The scheme targets young people who will be the first in their family to attend university, and whose parents are in non-professional occupations. The partnership, in conjunction with the Sutton Trust and supported by



DAVE PRAIT



ALISTAIR HOOD

Top: Dr Tony Horseman and student in the Communication Systems and Network Laboratory, Department of Electrical and Electronic Engineering
Bottom: Undergraduates at Goldney Hall, one of the University's halls of residence

several Bristol law firms, will pool expertise and resources to deliver the Pathways to Law scheme, designed to attract fresh talent to the sector. These students will be offered careers advice, guidance on university applications and mentoring at school and university. The scheme will also introduce them to contacts in the legal world, opening up possibilities for work experience and placements. Participating legal firms include Clarke Willmott, Bond Pearce, Osborne Clarke, Bevan Brittan LLP, Beachcroft LLP, Veale Wasbrough and Lyons Davidson.

Supporting and rewarding teaching staff

In 2009/10 the University launched its Teaching Fellowship Scheme to mirror its existing Research Fellowship Scheme. The recipients will be funded to take time away from their day-to-day work to develop and disseminate their pedagogy. Following an open competition across all six faculties, Professor Judy Harris and Dr Phil Langton, both in the Faculty of Medical and Veterinary Sciences, were awarded the inaugural Fellowships.

University Teaching and Learning Awards, which were instigated to recognise excellent teachers, were awarded this year to:

- **Dr Genevieve Liveley**
Department of Classics and Ancient History
- **Susan Hooper**
Department of Oral and Dental Science
- **Professor Christine Willis**
School of Chemistry

The Rising Star category of award, for those who have been teaching in higher education for less than five years and who show excellent potential, was given to:

- **Dr Lauren Hughes**
Department of Physiology and Pharmacology
- **Dr Ben Maughan**
Department of Physics
- **Magnus Feldmann**
Department of Politics

We also recognised innovation and the effective use of e-learning in the delivery of programmes and the support of staff and students through the University e-Learning Award, which this year went to **Dr Gus Cameron** (Department of Biochemistry).

In addition, we continued to recognise the contributions made by support staff to supporting teaching and learning, and the following were recognised in this way:

- **Christine James**
Department of Anatomy
- **Maggie Gamble**
School of Biological Sciences
- **Sandra Osmond**
Department of Sociology

The University's annual Learning and Teaching exhibition was held at the Priory Road Complex in the Faculty of Social Sciences and Law on 7 January. The event, organised by the Education Support Unit, featured talks and sessions given by staff from across the University. The keynote presentation, on the Higher Education Achievement Record, was given by Professor Stephen Hill, Director of Teaching and Learning Innovation at the University of Gloucestershire. During the event, the 2009 University Teaching Awards were presented.



Above: New arrivals on Bristol's Harbourside

ALISTAIR HOOD

Education and the student experience continued

Statistics and commentary

Financial support to students

The University provides financial support to students in the form of bursaries, scholarships and discretionary assistance from hardship funds. In 2009/10, the University disbursed the following amounts in these kinds of financial support:

	Bursaries £m	Scholarships £m	Hardship funds £m
Undergraduate	2.9	0.3	0.3
Postgraduate	0.1	1.9	0.1
Total	3.0	2.2	0.4

Total student numbers 2009/10

	Undergraduate	Postgraduate taught	Postgraduate research	Total
Arts	3,127 (83.57%)	363 (9.70%)	252 (6.73%)	3,742
Science	2,831 (80.79%)	110 (3.14%)	563 (16.07%)	3,504
Engineering	1,735 (69.76%)	425 (17.09%)	327 (13.15%)	2,487
Medical and Veterinary Sciences	1,469 (81.21%)	99 (5.47%)	241 (13.32%)	1,809
Medicine and Dentistry	1,693 (72.29%)	463 (19.77%)	186 (7.94%)	2,342
Social Sciences and Law	2,613 (55.23%)	1,556 (32.89%)	562 (11.88%)	4,731
Year total	13,468 (72.35%)	3,016 (16.20%)	2,131 (11.45%)	18,615

Total student numbers 2008/09

	Undergraduate	Postgraduate taught	Postgraduate research	Total
Arts	2,774 (83.81%)	248 (7.49%)	288 (8.70%)	3,310
Science	2,950 (81.16%)	87 (2.39%)	598 (16.45%)	3,635
Engineering	1,584 (67.84%)	424 (18.16%)	327 (14.0%)	2,335
Medical and Veterinary Sciences	1,414 (81.59%)	62 (3.58%)	257 (14.83%)	1,733
Medicine and Dentistry	1,658 (71.50%)	468 (20.18%)	193 (8.32%)	2,319
Social Sciences and Law	2,583 (53.68%)	1,501 (31.19%)	728 (15.13%)	4,812
Year total	12,963 (71.45%)	2,790 (15.38%)	2,391 (13.18%)	18,144

Number of degrees awarded

	2009/10	2008/09
Undergraduate	3,028	3,471
Postgraduate taught	1,739	1,810
Postgraduate research	533	409

Graduate destinations

Every year, new graduates are asked to complete a questionnaire concerning their employment or study status. The resulting figures enable the University to build a year-on-year picture of the destinations of its graduates.

The impact of the economic downturn continued throughout 2009/10, and vacancy numbers changed little from the previous year. Although the 'unemployed' figure for 2009 graduates rose to 6.1%, this is still well below the national average for graduates.

Graduate destinations 2009

Full-time paid work	50.0%
Part-time paid work	6.1%
Voluntary/unpaid work	2.4%
Work and further study	6.0%
Further study	21.5%
Assumed to be unemployed	6.1%
Not available for employment	4.8%
Other	1.2%
Explicit refusal	1.9%

Graduate destinations 2008

Full-time paid work	51.0%
Part-time paid work	5.3%
Voluntary/unpaid work	1.8%
Work and further study	7.5%
Further study	22.0%
Assumed to be unemployed	5.4%
Not available for employment	4.9%
Other	0.7%
Explicit refusal	1.4%

Research

Research at Bristol includes much that is of public benefit. The University's activity is engaged in the fullest sense: engaged with urgent issues such as disease, climate change, energy, social justice, natural resources and the welfare of the individual; engaged with the cultural life and history of nations and communities across the world; engaged with the future of technology and science and the development of innovations in medicine, nanotechnology, quantum cryptography, composite materials, stem-cell engineering and other emerging fields.

The University's priorities in this area are to:

- be recognised globally for the quality of our research;
- create a positive research environment and infrastructure that will attract and retain the highest quality researchers and postgraduate students worldwide;
- develop our portfolio of flagship and high-impact research, working across and between disciplines to answer important societal questions and contribute to the social, political, environmental and economic well-being of the region, the UK and the wider world;
- seek, manage and provide professional support for strategic relationships and alliances with key national and international partners – business and industry, the public sector, user communities, sponsors of research and policy-makers;
- play a leading intellectual role in enterprise, knowledge exchange and economic and social impact agendas, and continue to be a beacon of good practice and leader of innovation in the city and region;
- develop a sustainable portfolio of research informed by evidence-based leadership, management and administration and supported by high standards of governance.

Bristol leads on National Composites Centre

The University is leading a new centre for design, manufacture and marketing of composite materials for widespread use in industry. The National Composites Centre will form an international hub, linking activities across all sectors of the UK in research, education and training, technology transfer and incubation of new enterprises.

Composites are manufactured from high-performance fibres such as carbon fibre, and their development is a key strategy in cutting the environmental impact of industries (aerospace, construction, automotive, renewable energy, etc) that have traditionally been heavy carbon emitters.

The Centre is being funded by the Department of Business, Innovation and Skills, the South West Regional Development Agency and the European Regional Development Fund. Some of the world's leading engineering companies are to participate in the centre, including Vestas, Rolls Royce, AgustaWestland, Airbus UK and GKN. A purpose-built facility is under construction at the Science Park (or S-Park) in Emerson's Green and is expected to be ready in spring 2011.

A simple calculation, a world first

Quantum computing is now a step closer, after a team at the Centre for Nanoscience and Quantum Information performed a simple calculation on a photonic chip. The experiment was conducted on a primitive quantum computer that uses single particles of light (photons) whizzing through a silicon chip. This world first, part of research led by Professor Jeremy O'Brien, Director of the Centre for Quantum Photonics, is a major

step forward in the quest to realise a super-powerful quantum computer. Areas in which quantum computing could fuel major advances include the development of new pharmaceuticals and materials and the arrival of a new standard for encryption and secure internet communication.

Preventing brain injury in newborns: a banner year

Neonatal research at Bristol made several important breakthroughs in 2009/10, mostly through the work of Professor Marianne Thoresen and Professor Andrew Whitelaw.

The results of a trial involving 42 universities in Europe and Israel – the largest study of its kind – found that brain damage caused by lack of oxygen at birth could be mitigated if infants are given cooling treatment within the first six hours of life. This confirms the research, begun by Professor Thoresen in 1992 and subsequently funded by the Medical Research Council, which suggested that mild cooling reduces injury in the newborn brain after hypoxia.

Cooling by itself only partially reduces disability and does not prevent it in all babies. However, in April it was announced that another pioneering technique developed by Professor Marianne Thoresen had proved successful, when xenon gas was delivered to a newborn baby deprived of oxygen at birth. This was carried out, in combination with the cooling treatment, at St Michael's Hospital, part of University Hospitals Bristol NHS Foundation Trust. Professor Thoresen developed the use of xenon gas with Dr John Dingley from Swansea University, in a study funded by Sparks, the children's medical research charity.

Research continued

Another line of research bore fruit when details were published of a new treatment that reduces disability in premature babies with serious brain haemorrhage by washing the brain to remove toxic fluid. The development of the technique, known as DRIFT (Drainage, Irrigation and Fibrinolytic Therapy), was led by Professor Andrew Whitelaw and Ian Pople (paediatric neurosurgeon at North Bristol NHS Trust), and a randomised trial, funded by grants from Cerebra and the James and Grace Anderson Trust, began in 2003. Its success means that the technique, now known as ventricular lavage, is likely to be set up as a service at Bristol's Southmead Hospital.

Found: Alfred the Great's granddaughter

Bones excavated in Magdeburg Cathedral in 2008 were confirmed as those of Saxon Princess Eadgyth. Dr Alistair Pike and Professor Mark Horton from the Department of Archaeology studied the teeth preserved in the upper jaw by measuring the strontium and oxygen isotopes that were mineralised in the teeth as they were formed. The results clearly indicated a childhood spent in the chalk regions of southern Britain. Meanwhile, colleagues from the University of Mainz made similar measurements of teeth from burials of people local to Magdeburg and confirmed that these isotopes were completely different. Princess Eadgyth was the granddaughter of Alfred the Great and died in AD 946, making hers the oldest surviving remains of an English royal burial. The discovery attracted great media interest; the bones will be reburied in Magdeburg Cathedral later this year, 500 years after their last interment in 1510.

Bristol leads in poverty research

The Centre for the Study of Poverty and Social Justice, established in 1998 at the School for Policy Studies, provides a focal point for scholarship and research in criminal justice, socio-legal studies, poverty and social exclusion. During 2009/10 the Centre's projects included a number of high-profile studies, the outcomes of which are expected to inform government policy and practice.

The Centre's Dr Eldin Fahmy led a study of social exclusion commissioned by the Cabinet Office, building on earlier work led by Professor Ruth Levitas from the Department of Sociology that resulted in the Bristol Social Exclusion Matrix (BSEM). Dr Fahmy used the BSEM framework for the new study, along with data from the General Household Survey and the British Household Panel Survey. The findings, published by the Cabinet Office, indicate that 16 per cent of working-age adults without children over the age of 25 – or 2.6 million people – experience multiple forms of social exclusion at any one time.

Meanwhile, one of the Centre's member groups, the Townsend Centre for International Poverty Research, is a leading partner in the UK's largest-ever research project into poverty and social exclusion. The initiative is funded by the Economic and Social Research Council, and also involves researchers from Heriot-Watt University, the National Centre for Social Research, Northern Ireland Statistics and Research Agency, The Open University, Queen's University Belfast, University of Glasgow and the University of York. The project aims to support the ambitions of the Child Poverty Act 2010, which formalises the UK's commitment to ending child poverty by 2020.

Driverless transport wins award

A revolutionary form of driverless travel – the ULTra (Urban Light Transport) – pioneered at the University's Faculty of Engineering won the Viva Award for 2009. ULTra was conceived by Martin Lowson, Emeritus Professor of Advanced Transport and President of Advanced Transport Systems Ltd. The Viva Award recognises transport innovation or development in Europe; ULTra is an innovative form of Personal Rapid Transit that uses 70 per cent less energy per passenger-kilometre than a car. ULTra was featured at the Science Museum as 'the 21st-century equivalent of Stephenson's Rocket'. This year the first public ULTra system – also the first commercial Personal



STATE OFFICE FOR HERITAGE MANAGEMENT AND ARCHAEOLOGY, SAXONIANPALI



ADVANCED TRANSPORT SYSTEMS LTD

Top: The raising of the lid of Princess Eadgyth's tomb
Bottom: The ULTra in action

Rapid Transit system anywhere in the world – opened at London's Heathrow Airport.

Hearing on the wing

Bionanoscience is an emerging field of study, as researchers bring computing power and nanoscale technology to bear on the natural world. Professor Daniel Robert's research group in the School of Biological Sciences investigates some of the smallest working structures in nature, in collaboration with colleagues in the Department of Engineering Mathematics and elsewhere. During 2009/10, members of these groups published two groundbreaking studies of the mechanisms behind insect hearing.

The ear of a tropical butterfly contains a structure that enables it to distinguish between high- and low-pitch sounds, according to a paper in the *Journal of Experimental Biology*. Lead researcher Katie Lucas used a tiny laser beam to scan the surface of the ear, which consists of a membrane at the base of the wing, and found that lower-pitch sounds caused vibrations in only one part of the outer membrane while higher-pitch sounds made the entire membrane vibrate. Lucas and her colleagues (at Bristol, the University of Strathclyde and Carleton University, Ontario) argue that the structure of the membrane may enhance the abilities of these butterflies to listen for birds by detecting the beating of birds' wings (lower pitch) and tuning into birdsong (higher pitch).

Some of the remarkable features of mosquito hearing – including the male's ability to hear the faintest beats of the female's wings without being deafened by much louder noises – have been explained by a mathematical model produced at the Bristol Centre for Applied Nonlinear Mathematics. Building on the discovery by Professor Robert of the process of hearing in male mosquitoes through multiple individual sensory units called scolopidia, postdoctoral researcher Dr Daniele Avitabile and colleagues developed a mechanistic model of the active amplification in the Tanzanian mosquito species *Toxorhynchites brevipalpis*. The model (described in a paper

in the *Journal of the Royal Society Interface*) tallies with recent experiments and observations, and also generates new hypotheses about the details of the process.

Lost voyage comes to light

Evidence of a previously unknown voyage to North America in 1499, led by Bristol explorer William Weston, was published by Dr Evan Jones from the Department of History in the journal *Historical Research*. In a letter from Henry VII to his Lord Chancellor, the King instructs him to suspend an injunction served against Weston in the Court of Chancery because Weston shall shortly 'with God's grace pass and sail for to search and find if he can the new found land'. The letter had an odyssey of its own, having been miscatalogued, rediscovered and almost destroyed, before Dr Jones finally brought it to public attention.

Taking research to market: SETSquared

RED manages the University's SETSquared Business Acceleration Centre, part of the SETSquared Partnership, which also includes the universities of Bath, Southampton and Surrey. This enterprise collective comprises some 6,500 researchers, who together are responsible for 7 per cent of the UK's research budget. The Centre draws on in-house expertise and a wide consultancy network of entrepreneurs, academics and finance experts to support emerging technology companies with high growth potential.

Over 100 businesses are currently receiving support through the SETSquared Partnership. It was reported late in 2009 that, despite the recession, companies in SETSquared incubators received £52.5 million from private investors and venture capital funds, creating 142 new jobs in the process. In March 2010, the University's SETSquared Business Acceleration Centre was identified by FutureStory – an initiative showing how businesses across the UK are adapting to the new global economy – as a key player in ensuring Bristol's future economic success.



KATIE LUCAS



EVAN JONES

Top: The ear on the wing of the Blue Morpho butterfly
Bottom: The 'lost' letter from Henry VII

Research continued

Bristol Enterprise Competition

The winners of the 2010 New Enterprise Competition were Rupert Baker and Alex Ross, recent graduates from the Department of Mechanical Engineering, for Teamup, a free-to-access sports web application. Teamup allows users to join, create and share micro-events (informal gatherings to participate in sports and activities such as football, cycling, swimming, tennis, yoga, pilates, climbing, etc) in their local community. Teamup also allows providers of commercial services to manage and market their resources more effectively. The prize included £20,000 plus six months managed office space at the Bristol SETsquared Business Acceleration Centre.

The runners-up were:

- Lee Arromba, an undergraduate in the Department of Computer Science, for Accelormatix – software that allows a musician or band to create, manipulate and loop music in a live setting via simple hand or body movements;
- James Cornford, an undergraduate in the Department of Mechanical Engineering, for Sundio – a social enterprise using sustainable solar refrigeration technology to improve the efficiency and profitability of farming in rural India.

The entries were judged by a panel of experts from the sponsoring organisations including Bristol City Council, Business Link, Deloitte, EADS, IP Group, Motorola, Osborne Clarke, Santander, SETsquared Business Acceleration Centre (Bristol), Withers & Rogers and Wyvern Seed Fund.

Grants

The University attracted a total of £118 million in grants during 2009/10. This included the following:

£4.3 million from the Economic and Social Research Council for a major study of poverty in the UK to be led by Professor Dave Gordon from the Centre for the Study of Poverty and Social Justice. Poverty and Social Exclusion in the United Kingdom – the 2010 Survey, a 42-month research project, will involve colleagues from the School for Policy Studies, the Department of Sociology and the Norah Fry Research Centre, along with researchers at Heriot-Watt University, the National Centre for Social Research, Northern Ireland Statistics and Research Agency, the Open University, Queen's University Belfast, the University of Glasgow and the University of York. This is the largest grant ever awarded for poverty research in the UK.

£1.94 million from the National Institute for Health Research for DISCOVERY (Diagnosis of Symptomatic Cancer), a wide-ranging research programme led by the University's Department of Community-based Medicine (in partnership with the universities of Durham, Cambridge, Oxford and Cardiff, and with NHS Bristol) that aims to improve cancer diagnosis.

A Wellcome Trust Programme Grant of over **£1.7 million** for a study, by Professor Stafford Lightman and Dr Becky Conway-Campbell at the Henry Wellcome Laboratories for Integrative Neuroscience and Endocrinology, of stress hormones and their effect on genes in the brain and in the liver, the mechanisms of memory and the development of metabolic disease such as diabetes mellitus.

£2.7 million from the Tubney Charitable Trust for a project led by the Department of Clinical Veterinary Science (together with the RSPCA and the Soil Association) to improve the welfare of farm animals in the UK.

£1.7 million from the Engineering and Physical Sciences Research Council and the Arts and Humanities Research Council (through the RCUK Digital Economy programme) for a project that aims to revolutionise the design of wearable technologies for supporting research. PATINA (Personal Architectonics of Interfaces to Artefacts) will be led by the Department of Computer Science in collaboration with the universities of Brighton, Greenwich, Newcastle, Southampton and Swansea, and with involvement from Microsoft Research, Nokia Research and the Victoria and Albert Museum.

£1.3 million from the Wellcome Trust for trials of a device, developed by Professor Chris Probert in the School of Clinical Sciences and Norman Ratcliffe at the University of the West of England, that can 'sniff out' the presence of disease. OdoReader 'reads' the odour of stool samples to diagnose *Clostridium difficile*, a highly infectious gastro-intestinal disease that can cause severe diarrhoea, especially among hospitalised patients.

£357,430 from the Arts and Humanities Research Council to Professor Ad Putter in the Department of English for a study of verse forms in Middle English romances, in collaboration with the University of California Los Angeles and the Chaucer Studio at Brigham Young University.

Students

The University is proud of its students. It recognises that, in order for them to make the most of their time here, they need a supportive environment, comprehensive facilities and a range of opportunities. The University is committed to providing a full range of support that will enable students to excel in every aspect of their lives at Bristol and to make their university career a genuinely transformative experience.

The University's priorities in this area are to:

- ensure a fair and transparent system of student representation that provides students with the opportunity to shape their educational and extra-curricular experience;
- support a vibrant, active and democratic Students' Union;
- ensure the provision of learning and skills opportunities that enhance students' future employability;
- offer a rewarding extra-curricular experience that provides for students' health, well-being and personal development;
- provide advice and support for students' personal welfare and ensure effective integration into the University and local community.

Bristol student team triumphs at MIT

An interdisciplinary team of students from the Bristol Centre for Complexity Sciences (BCCS) won a gold medal and a prize for Best Model after going head-to-head with 111 other teams at a prestigious international competition in the field of synthetic biology.

The team (comprising postgraduate and undergraduate students and staff from the BCCS, the School of Biological Sciences and the Departments of Biochemistry and Engineering Mathematics) travelled to the US to compete in the 2009 iGEM (International Genetically Engineered Machine) Jamboree at Massachusetts Institute of Technology. Having won a bronze medal and the Best Model prize at the 2008 iGEM Jamboree, this year they retained the Best Model prize and upgraded their medal to gold.

The team's 2009 project, 'Vesecure', aims to improve communication between bacteria by developing new methods of packaging signals – a technique that could potentially play a role in many different fields including drug delivery. The team created tools to put signals into parcels called outer membrane vesicles, enabling multiple signals to be delivered simultaneously. They used computer modelling to demonstrate this, and developed laboratory tools for the packaging of signals – tools that may have much broader applications in the future.

Enterprising students inspire school kids

Among the dozens of societies run through the Students' Union are two student enterprise societies – the Social Enterprise Project and Bristol Entrepreneurs. During the spring term, members of these societies visited Brislington Enterprise College to talk to pupils about entrepreneurial career options, and set them a challenge to design and market a new ethical food product. It is hoped that the scheme will develop into a city-wide, student-run annual programme.

Good works: Bristol students in the charitable and voluntary sector

Students at Bristol have a long history of community work and fundraising: the first raising and giving (RAG) event was held in 1925. The Students' Union emphasises to its members the importance of escaping the 'student bubble' and engaging with the local community in a positive way – as well as developing and sharpening a range of skills to complement their academic work and enhance their CV.

Students continued

RAG

In the year 2009/10, RAG activities raised a total of £252,446 through a varied programme that included street collections, sponsored activities such as skydiving, trekking and 'jailbreaking' and the annual RAG procession. Of this, £8,684 went to local charities.

A sponsored RAG climb of Mount Kilimanjaro raised £9,000 towards the Dorothy Hodgkin Scholarship – offered jointly by the University and the Windle Trust – which enables students from war-affected parts of Africa to undertake a postgraduate course at Bristol. The University waives the student's tuition fees, and the Windle Trust pays the travel expenses; students raise money for the living expenses and accommodation of a scholar, and the sum is match-funded by the Alumni Foundation. The most recent recipient of the Dorothy Hodgkin Scholarship is Severio Sebit, a student from Sudan who fled the country's civil war when he was 12 years old and is now studying for an MSc in Economics, Finance and Management.

SCA

Student Community Action (SCA) is a volunteering organisation founded in 1970 to complement RAG, co-ordinate and train student volunteers and develop links with the Bristol community. During 2009/10, SCA ran 24 projects involving over 1,400 volunteers, and held 16 volunteer training programmes.

One of the SCA projects, Pitstop, received a Children in Need grant to support its programme of day trips and activities for teenagers with learning and physical disabilities. Pitstop helps provide a supportive community in which the teenagers can develop social skills and form friendships with others that they can relate to, and encourages them to build key skills in independent living.

James Ashton-Bell, an undergraduate in the Department of Politics, received the Inspire Bristol 2009 Enterprise and Innovation Award for his volunteer work on the SCA's Primary Schools Project, which sends volunteers into schools to help children with reading, writing and numeracy skills. Under his management, the scheme – which began with a handful of volunteers in three schools – now involves over 100 student volunteers in 30 schools.

Bristol medic heads BMA student committee

Nicholas Deakin, a third-year Bristol medical student, has been elected co-chairman of the British Medical Association (BMA) Medical Students Committee, which represents more than 22,000 BMA student members from UK medical schools on a wide range of issues affecting medical students. Members of the committee also sit on policy subcommittees that deal with issues relating to the finance, education and welfare of medical students across the UK.



Top: Severio Sebit, recipient of the Dorothy Hodgkin Scholarship
Bottom: Nicholas Deakin, co-chairman of the BMA Medical Students Committee

Student awards and prizes

Complexity student wins poster prize

Chris Musselle, a postgraduate student in the Bristol Centre for Complexity Sciences, won the Best Student Poster prize at the 2009 European Conference on Complex Systems. The poster, entitled 'Malware defence using artificial immune systems', suggests a new method of detecting malicious computer programs, such as viruses, that mirrors the workings of the human immune system.

Boeing recognises Engineering students

Six students in the Faculty of Engineering – Rafic Ajaj, William Costin, Richard Vigars, Corin Rathbone, Ross Turner and Alexey Likhoded – won awards from Boeing for the exceptional quality of their project work. Four of the students won prizes for the best final-year or MSc projects; the other two won a highly prestigious Boeing scholarship worth £3,000. The awards mark the beginning of a new relationship with Boeing, after the company chose the University of the Bristol as one of a select cohort of universities that will support the development of its intellectual capital and provide continuing education for its employees.

Excellence in engineering

Robert Matthews, a PhD student on the Aquatest Research Programme at the University's Water and Health Research Centre, received an award from the Worshipful Company of Engineers. He won the 2010 Fiona and Nicholas Hawley Excellence in Environmental Engineering Award for developing a low-cost, portable incubator that maintains the temperature of water samples without relying on electricity.

Fellowship for Vet School PhD

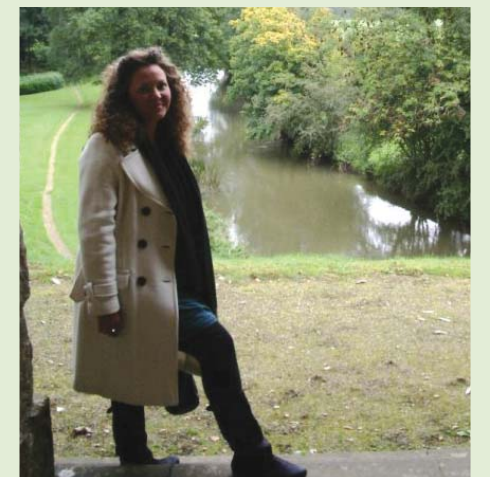
Jo Edgar, a PhD student in the Department of Clinical Veterinary Science, received a prestigious Parliamentary Office of Science and Technology (POST) Fellowship from the Institute of Food Science and Technology. The Fellowship enables her to work on a science-based project in POST at the Houses of Parliament.

Garden History prize makes four in a row

Laura Mayer, a PhD student in the Department of Archaeology and Anthropology, won the prestigious Garden History Society Annual Essay Prize – becoming the fourth Bristol winner in an unbroken run. She won the 2010 prize for 'Landscape as legacy', an exploration of the influence of Elizabeth Percy on the landscape at Alnwick. The judges praised Mayer's 'engagement with the landscape, her close analysis of the archival material and her lively yet scholarly writing which challenged accepted interpretations of the site'.

Students devise winning low-carbon energy solution

A team of Bristol students were joint winners of the RWE npower 'Energy Challenge', a national competition to devise new ways of delivering low-carbon energy for the future. The 'Bristainable Energy' team's entry included proposals to develop more renewable energy and an innovative fixed-price green energy tariff. The Bristol team tied with the University of Birmingham for first place.



Top: The 'Bristainable Energy' team
Bottom: Laura Mayer, winner of the Garden History Society Annual Essay Prize

Staff

The University works hard to make Bristol an attractive destination for exceptionally talented people, both academic and support staff. In 2009/10 it continued with its commitment to ensure equality, diversity and transparency throughout the organisation and make working life productive, enjoyable and healthy for all. The range and quality of the work undertaken by academic and support staff continues to inspire, and we report on some outstanding examples of good practice and individual achievement below.

The University's priorities in this area are to:

- recruit and retain first-class talent;
- foster a high-achieving workforce that is competent, committed, creative and capable of managing and responding positively to change;
- develop a culture and an environment that motivates and enables people to make an excellent contribution.

New ways of working

A major restructuring in Personnel Services led to the creation of a new Organisational Development Team. This brings together three dedicated, specialist teams, with the aim of providing a greater degree of coherence and co-operation across the areas of change management, leadership and management development, staff development, equality and diversity, and Positive Working Environment activity and ethos. The team's mission is to help the University achieve its strategic objective of responding flexibly, effectively and efficiently to the evolving external environment. This includes supporting the academic agenda to achieve international distinction as a leading centre for education, research and enterprise, and understanding student expectations and their implications for staff.

Managing change

Work continued on the Support Process Review (SPR), which was initiated in 2008/09 in response to the financial pressures on the higher education sector and the prevailing economic climate. SPR aims to transform the efficiency, consistency, resilience and cost-effectiveness of the structures and processes that underpin education and research.

The first stage of the SPR confirmed there are inconsistencies and duplication in the way the University operates its key support processes at central, faculty and departmental levels. A new organisational model has been developed by the senior management team in consultation with staff, faculty, school and resource managers, academic heads and trades unions that will enable the University to operate in a more cost-effective and efficient way. The model

is built around the concept of process ownership, whereby single process owners have clear responsibility, accountability and authority for the design, service quality and overall delivery objectives of the process. Faculty-based teams will provide support for key processes such as finance, personnel and research.

The implementation planning phase is under way and involves agreeing structures and staffing levels for each process, faculty centre and school; agreeing and evaluating the job descriptions for senior posts; developing a detailed timetable for implementation; and increasing the level of engagement and communication with colleagues in the detailed planning of processes, resource levels, structures and roles.

A new voluntary severance and early retirement scheme for support staff was launched in July in a further effort to control costs and achieve financial sustainability.

Moving with the times

Bristol is collaborating with the University of Leeds on a project designed to enable higher education institutions to engage with and support their staff so they can perform better during challenging times.

The Leeds-Bristol collaboration is one of seven projects funded by the Higher Education Funding Council for England (HEFCE) as part of its £1.5-million 'Leading Transformational Change' initiative. This sees the resources of HEFCE's Leadership, Governance and Management Fund used for projects that will capture emerging good practice in responding to the economic downturn and preparing for recovery.

The Leeds-Bristol project builds on the work of a HEFCE-funded series of 'well-being-themed workshops' originally set up in 2008. The two-stage project will first consider examples of good practice in the UK and move on to consider different aspects of well-being in the workplace. Bristol's involvement will concentrate on how to take people through the change process.



Bristol leads on well-being

Managing change effectively has become one of the main features of Bristol's Positive Working Environment (PWE) initiative. The University was selected from 22 entries from nine countries to win one of three 2009 Global Human Resource Development Awards from the International Federation of Training and Development Organisations. Bristol won in the performance management category for its PWE agenda, which aims to make work life at the University more productive, rewarding, enjoyable and healthy.

Equality and diversity high on the agenda

The University's Equality and Diversity Strategy supports the organisation's efforts to attract the best employees from all walks of life and all parts of the world, improve motivation and productivity and reduce staff turnover. During the past 12 months, the equality and diversity team has worked closely with senior management involved in restructuring, providing the framework for, and expertise on, equality impact assessments to support and de-risk organisational change.

Other achievements include:

- the introduction of a new Gender Equality Scheme;
- the development of new policy and guidance on disability and employment;
- the introduction of a Carers Support Group, bringing together staff who are balancing work with caring for an ill,

elderly, or disabled family member, friend or partner;

- a 'case conference' approach to supporting students with mental health difficulties, with support staff working in partnership with academic colleagues;
- the introduction of new policies and procedures for dealing with allegations of harassment and bullying (from both staff and students); and
- the launch a new Work and Family website for staff with responsibilities outside the workplace – from childcare to eldercare.

University Apprentices awarded NVQs

Twelve University Apprentices were awarded their NVQ Level 2 in Business Administration in 2009/10. The qualifying staff were: Sarai Chisimba (Estates), Laura Done (Student Health), Zoe Ford (Geographical Sciences), James Hughes (Deaf Studies), Catherine Lee (Education Support Unit), Abby Morris (Personnel Services and Staff Development), Charlotte Rodman (Department of Earth Sciences), Emma Taylor (School of Law) and Faye Travers (General Office), Paul Edwards (Aerospace Engineering), Stephanie Keary (Politics) and Kim Hua (Electrical Engineering).

2009 marks 13 years since the University began its Apprentice Scheme. Some 140 young people have now completed this programme in departments across the University.

Shaping policy

Many Bristol academics achieve the distinction of being appointed to sit on the boards and decision-making committees of government and non-profit organisations, which in many cases enables them to contribute to shaping national and international policy. Some examples from the year are as follows:

- Professor Ronald Hutton from the Department of Historical Studies was appointed the Historical Commissioner of English Heritage. He is part of the team of commissioners who supervise the



Top: University Apprentices with Derek Pretty, Registrar (centre) and, on his right, Barbara Wilyman from Brunel and Gordano Training
Bottom: Professor Ronald Hutton, Department of Historical Studies

Staff continued

organisation's activities and formulate its policy. He also acts as an advocate for the importance of history in national life, and as a statutory adviser to the government on historical issues.

- Malcolm Evans, OBE, Professor of Public International Law, was appointed a member of the United Nations Subcommittee on Prevention of Torture, a unique treaty body established in accordance with the Optional Protocol to the UN Convention Against Torture. It is charged, among other things, with conducting regular visits to the places of deprivation of liberty that are in the jurisdiction and control of the party states.
- Dr Mohan Raj, Reader in Farm Animal Welfare, and an expert in humane slaughter and farm animal welfare, was selected to lead Animal Welfare Approved newly formed Scientific and Technical Advisory Board.
- Dr Sonia Bhalotra from the Department of Economics and the Centre for Market and Public Organisation was appointed to a new Scientific Resource Group on Health Equity Analysis and Research at the World Health Organization (WHO). Members support WHO on its programme of work on equity and health, including advising on strategic directions, work plan content, objectives and priorities, as well as contributing to products and services, in particular those relating to measurement, monitoring, evaluation, analysis and research.
- Dr Emma Hitchings in the School of Law was appointed a member of the Law Commission's Advisory Group on Marital Property Agreements. The group has been examining the status and enforceability of agreements made between spouses or civil partners (or those contemplating marriage or civil partnership) concerning their property and finances. The Law Commission is due to formulate policy and prepare a report and draft Bill on the basis of the group's findings.

- Professor Dudley Shallcross of the School of Chemistry was appointed Director of the AstraZeneca Science Teaching Trust, which aims to improve the education of children and young people in science.

Many others play an active role in industry. Paolo Madeddu, Professor of Experimental Cardiovascular Medicine at the Bristol Heart Institute, was appointed to the Clinical Advisory Board of a leading stem cell company seeking to develop new treatments for peripheral arterial disease or PAD (narrowing of the arteries). The board members will advise UK-based ReNeuron Group plc on the clinical development of the ReN009 therapy and review and monitor its progress along the clinical development pathway.

Fellowships and professional appointments

Many members of staff represent the University through prestigious Fellowships and membership of professional organisations. 2009/10 saw the following appointments, among others:

- Richard Evershed, Professor of Biogeochemistry at the University of Bristol, was elected a Fellow of the Royal Society for scientific excellence in the field of analytical organic chemistry and biomolecular archaeology. This brings to 33 the number of academics currently at Bristol whose work in science, engineering, technology or medicine has been honoured in this way.
- Ray Forrest, Professor of Urban Studies in the School for Policy Studies and Mark Wickham-Jones, Professor of Political Science in the Department of Politics, were elected Academicians of the Academy of Social Sciences. Academicians contribute evidence drawn from research that has a positive impact on public policy-making and practice.
- Emeritus Professor Richard Little of the Department of Politics was elected a Fellow of the British Academy in recognition of his outstanding contributions to international relations theory.



JASON INGRAM



JASON INGRAM

Top: Dr Sonia Bhalotra, Department of Economics and Centre for Market and Public Organisation
Bottom: Jeremy O'Brien, Professorial Research Fellow in Physics and Electrical Engineering

- Professor David May in the Department of Computer Science was elected a Fellow of the Royal Academy of Engineering. Professor May is Chief Technical Officer and co-founder of spin-out semiconductor company XMOS Ltd, which develops software-defined silicon devices and tools. He developed the core technology that enables consumer electronics equipment manufacturers to follow fashions and differentiate products rapidly at minimal cost.
- David Shankland, Reader in Social Anthropology in the Department of Archaeology and Anthropology, was appointed Director of the Royal Anthropological Institute, the world's longest-established scholarly association dedicated to the furtherance of anthropology.
- Professor Sir John Enderby, Emeritus Professor in Physics and an expert on neutrons, was awarded honorary fellowship at the Institute of Physics.

Awards and prizes

Staff continue to distinguish themselves through the receipt of awards and prizes. Accolades from the year include the following:

- Professors Carol Propper and Steve Sparks were awarded CBEs in the Queen's Birthday Honours. Carol Propper, Professor of Economics of Public Policy, was awarded a CBE for her services to social science. Stephen Sparks FRS, Professor of Geology, was awarded a CBE for his services to environmental science.
- Jeremy O'Brien, Professorial Research Fellow in Physics and Electrical Engineering, was awarded the 2010 Adolph Lomb Medal by the Optical Society of America for contributions to quantum optics, optical quantum metrology and quantum information through the foundation of the field of integrated quantum photonics. He was also awarded the 2010 International Union of Pure and Applied Physics Prize in Atomic Molecular and Optical Physics,

again for his work in integrated quantum photonics, and the Institute of Physics Moseley Medal for distinguished research in experimental physics.

- Dr Elizabeth Stanway in the Department of Physics was awarded the 2010 Winton Capital Prize by the Royal Astronomical Society for her work on distant star-forming galaxies. Dr Stanway discovered that these galaxies are young, largely without dust and less numerous than expected and pioneered the detection of otherwise dark galaxies through their radio and sub-millimeter emission, extending the number of galaxies available for study.

- Dr Laurence Ketteringham in the Department of Mechanical Engineering won the Multiple Sclerosis Society's MS Researcher of the Year Award for his groundbreaking research into reducing tremors for people with MS.

- Professor Ron Johnston in the School of Geographical Sciences was given a Lifetime Achievement Award by the Association of American Geographers. Professor Johnston has had a major influence on the field of human geography through his research and writing.

- Dr Ainsley Newson of the School of Social and Community Medicine was named Young Australian Achiever of the Year in the UK by the Australia Day Foundation for her research on the ethical aspects of clinical genetics, reproductive decision-making, and the emerging technology of 'synthetic biology', which aims to design artificial biological components.

- Jerry Woods, the University's Head of Security, was named In-House Security Manager of the Year at the Security Excellence Awards for the development of a bespoke risk methodology identifying minimum security requirements for individual buildings based on the activity within.



JASON INGRAM



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Top: Dr Ainsley Newson, School of Social and Community Medicine
Bottom: Jerry Woods (centre) receives his award from Brian Sims (left), editor of sponsor Security Management Today online, and host Ronnie Corbett

The engaged university

Public engagement at Bristol includes ways in which staff and students interact with the public and plays an important role in the University's external communication and interaction with a wide range of stakeholders. Activities range from talks, festivals, volunteering and performances to research with or driven by community groups, lifelong learning and engaged teaching. Departments involved in these activities are brought together on the Engaged University Steering Group, which sets public engagement strategy and acts as a guardian of the quality of activities. This group is chaired by Pro Vice-Chancellor Professor Avril Waterman-Pearson.

The University's priorities in this area are to:

- support and promote dialogue with staff/students and the public;
- play a leading role in setting the national agenda on public engagement in higher education;
- respond positively to community needs;
- play a positive role in the affairs of the city, region and nation;
- nurture relationships with alumni and other friends of the University;
- behave responsibly as an institution.

Supporting and promoting dialogue

Examples of activities that supported engagement in 2009/10 include the following:

- The Department of Earth Sciences secured a grant for £295,000 from the Heritage Lottery Fund for engagement activities about the Bristol Dinosaur. It is now developing a programme of activities to engage school children, family groups and adults that will be rolled out in 2010/11.
- The School of Biological Sciences held an interactive exhibition in Bristol's Cabot Circus in March. The event included a citizen science project about natural pest control. Dr Darren Evans and Dr Michael Pocock subsequently secured a £19,000 grant from the Natural Environment Research Council to roll out the Citizen Science Leafminer project nationally.
- Four public engagement grants were secured from Research Councils UK, and three public engagement grants from the Biotechnology and Biological Sciences Research Council (BBSRC). The BBSRC-funded projects include engagement activities with schools on biodiversity and a project to raise awareness about the importance of bees.

Setting the national agenda

The University, through its Centre for Public Engagement and other parts of the Communications Division, has been working closely with the National Coordinating Centre for Public Engagement (NCCPE), among other things to develop its Manifesto for Engagement, which will be launched

in December 2010. Through the NCCPE, the University was able to submit comments about public engagement to the Higher Education Council for England's consultation on the Research Excellence Framework.

Responding to community needs

The Engaged University Steering Group hosts public engagement fora throughout the year, to bring together representatives from organisations around the city with academics to explore opportunities for collaborative working. Fora were held this year on Creativity and Ideas, and Connectivity and the Digital Media. Outcomes from previous fora include cross-organisation research bids and work on student volunteering.

Public events

Events run throughout the year, including festivals, exhibitions, performances and work with schools. Highlights in 2009/10 included:

- 'Discover', the University's biennial public celebration of research, in Bristol's city centre shopping malls. The interactive exhibits represented all six faculties and were manned by over 100 academics and students. Over 4,500 members of the public attended, including more than 700 school children;
- opening the Wills Memorial Building, Royal Fort House and the new Nanoscience and Quantum Information building to more than 2,500 people on Doors Open Day and associated events;

- two tents full of interactive exhibits at the Festival of Nature in June. The three-day event included a dedicated schools day attended by more than 800 primary school children. The University also worked with the Bristol Natural History Consortium to deliver Bioblitz – a race against time to identify species in a given area. This project was trialled in Bristol last year and has now been taken up by over 20 other cities in the UK;

- a continuing programme of public lectures and talks. These included the final lectures in the popular centenary series and twilight talks on topics as diverse as farm animal minds, lovesickness in Renaissance literature and human-computer interactions.

Improving outcomes for young people

The University has supported a series of leadership fora with city leaders and teachers to investigate how outcomes for young people can be improved in Bristol and beyond. All the events have been well attended, and have tackled thorny issues such as children's services and leadership in times of change.

Lifelong learning

Although the University's lifelong learning programme is much smaller than it used to be, there are still courses on offer in a number of subjects, including archaeology, modern languages and English. The part-time degree in English Literature and Community Engagement is now entering its third year. It continues to be over-subscribed and attracts people from the poorest areas of Bristol.

Community sport

Sport, Exercise and Health has an active programme of community events. A highlight in 2009/10 was a sports day for over 60 10- and 11-year-olds from the Bridge Learning Campus in Hartcliffe. The event enabled pupils to try out new sports and provided students and staff with an opportunity to get involved with a community project, experience the rewards of volunteering and develop new skills.

Behaving responsibly as an institution

Once again, the University took part in the 'Universities that Count' index, a corporate social responsibility index run by Business in the Community that rates universities on environmental management and social responsibility. This year, the University's score improved to 75%, and it received special commendation for its work on equality and diversity and public and community engagement.

More information about the University's continuing efforts to improve the sustainability of the physical estate can be found on pp22-23.

Nurturing relationships with alumni

Throughout 2009/10, the Campaigns and Alumni (CAR) team continued to support and encourage alumni to engage with the University and with each other, through communications, activities and events, and volunteering opportunities. For instance, in autumn 2009, over 600 alumni met the Vice-Chancellor and others from the University at a series of 12 events in nine countries around the world, and Professor Stafford Lightman presented a Centenary Alumni Forum in London on stress and the brain.

CAR supports the work done by Convocation, the University's alumni body, in alumni outreach, alumni branch activities around the globe, and through Convocation events. In 2009/10, these included a presentation on the future prospects for Africa by Paul Boateng at the London Branch of Convocation centenary lecture.

CAR continues to encourage alumni to return to Bristol to meet current students. It has been developing online social networking sites to help facilitate such interaction, and there are now over 4,000 users signed up to Bristol alumni Facebook and LinkedIn web pages.

CAR also encourages charitable donations from alumni and other friends. More details can be found on p27.



Top: Penguin ice sculpture, one of the exhibits at 'Discover'
Bottom: Visitors at the Festival of Nature

Estate development

The University continued to make substantial investment in its academic and residential estate throughout 2009/10, while ensuring that it operates in a financially responsible and sustainable manner.

The University's priorities in this area are to:

- provide all parts of the University with flexible accommodation which is of a quality, size and functionality appropriate to the activities to be delivered and which supports the University's vision;
- ensure the most efficient use of existing space and the development of capacity within the central precinct area wherever appropriate;
- continue to work to reduce carbon emissions and improve the sustainability of the physical estate;
- provide residential accommodation which is attractive to students in form, service and location;
- deliver an ambitious capital programme in support of the renewal of accommodation and the creation of adaptive capacity;
- provide an attractive, safe, accessible and welcoming setting for University buildings that is sympathetic to the wider urban context;
- produce a new Estate Strategy to inform future strategic decisions about the size, nature and direction of the University's estate.

Grand opening for Nanoscience

The highly distinctive, £11-million Centre for Nanoscience and Quantum Information officially opened in September 2009. The building houses specialised laboratories where vibration and acoustic noise levels are among the lowest ever achieved.

High-quality materials have been used throughout the structure, which encompasses several unusual scientific features in its architecture. These include curved Portuguese limestone on the main elevation, which is set out in the 'Fibonacci Series', a sequence of numbers created by the Italian mathematician, Leonardo Fibonacci, in 1202; an atrium dome, shaped like a 'buckyball', a molecular structure (resembling a football) composed entirely of carbon atoms and named after the visionary architect and inventor Richard Buckminster 'Bucky' Fuller; and self-cleaning glass that uses nanoparticles to break down dirt that is then washed away by rainwater.

The basement houses the 'low noise' area with a suite of ultra-low vibration nanoscience laboratories that are anchored to the rock below. The building will house a multidisciplinary and interdisciplinary research community drawn from science, engineering and medicine across the world, encouraging innovation through stimulating interactions and the exchange of ideas.

Plans progress for Queen's Road building

Work continued on a planning application for refurbishing and improving the University's Queen's Road building in Clifton following two public consultations.

The building currently houses the Students' Union and other University facilities, many of which are used by the public, including a swimming pool, the Winston Theatre and the Anson Rooms.

The building is currently in poor condition, but the University has decided to adopt the

more sustainable approach of retaining and re-using rather than demolishing and rebuilding it. The aim is to repair the building to make it more sustainable and fit for the future. Work will include remodelling the interiors, improving access and enhancing its external appearance and setting. The aim is to improve facilities for students and those aspects of the building that also serve the community.

ACCIS extension operational

The Advanced Composites Centre for Innovation and Science (ACCIS) was successfully completed in April 2010. This extension to the Engineering Faculty's Queen's Building comprises new office and laboratory space for the ACCIS team of academics, PhD students and research assistants drawn from the faculties of Engineering, Science and Medicine and Dentistry, as well as two administrators and a dedicated lab support team. The EPSRC-funded ACCIS Doctoral Training Centre also sits within its walls.

The open-plan office area, on the ground and mezzanine levels, has space for newcomers as ACCIS continues to grow. The extension also provides meeting rooms and 'break-out' areas for informal discussion and networking, as well as a heavy-duty laboratory area that extends the existing composites lab facilities threefold. This includes a large clean room, a lab devoted to resin and nanotechnology developments and an equipment hall suitable for large-scale manufacturing development activity.

Building on the work undertaken at ACCIS, the University is at an advanced stage in planning the development of the National Composites Centre, a new research facility for composite materials that is to be located at the Bristol and Bath science park, SPark (see also p9).

New lease of life for existing buildings

The University's programme of library improvements continued in the Graduate School of Education (GSOE; see also p24). The School's new library on the ground floor opened over Easter 2010 and provides enhanced IT facilities and areas for both group working and individual study. The second phase of the £3.5-million project involves refurbishing the space formerly occupied by the library on the first floor. The refurbishment will enable all GSOE staff to be located within one building and allow the University to vacate other space held on lease in Berkeley Square.

Work began on the refurbishment of the University's residential facilities, including a £2.3-million project to update The Hawthorns. As well as refitting all bedrooms, bathrooms and kitchens, the project involves renewing the building's heating, electrical and water systems, and external repairs and redecoration. The residence at 115 Queen's Road is also being updated, and work at the Stoke Bishop halls is being phased in over a number of years.

Reducing carbon emissions

The University adopted a new carbon management plan in June 2010. The goal is to reduce carbon dioxide emissions by 17,000 tonnes by the end of 2020, a 34% reduction on 2005 levels. The plan focuses on a range of areas, from heating and lighting improvements to green technologies and renewable energy, beginning with a £1.5 million project to improve the University's electrical services infrastructure, which aims to save £550,000 a year and over 3,000 tonnes of carbon.

The University is also taking part in the national 10:10 campaign to reduce carbon emissions by 10% during 2010 and in the West of England Carbon Challenge, which supports organisations in the region to reduce their emissions in line with national targets. It challenges all businesses, public and third-sector bodies to commit to make an annual cut in emissions for four years to reach a cumulative total of at least 10% by 2012/13.

Improving environmental awareness

Green Impact, the University's accreditation scheme for environmental best practice, had another successful year. Fifty departments took part in the scheme, with staff taking more than 1,350 environmental actions. Projects have become more ambitious and innovative: as well as energy-saving campaigns and recycling initiatives, this year's actions included converting vehicles to run on biofuel and installing wormeries to get rid of organic waste.

More recycling, less waste

Plastic and food waste recycling have been added to the University's recycling facilities, helping to divert 30 tonnes of waste that would otherwise go to landfill. Students have also been active, helping to run the 'Big GIVE' scheme, an end-of-year charity collection. The team targeted the University's halls of residence, where students were moving out after their first year and getting rid of unwanted clothes, food and household items. Nearly three tonnes of goods were collected and distributed to 12 charities, including Oxfam, the Julian Trust Night Shelter, the Salvation Army, St Peter's Hospice, FareShare and several homeless shelters.

Environmental Management System

The University is committed to developing systems that meet the highest environmental standards. To this end, it has set up an Environmental Management System (EMS), which provides a framework for boosting efficiency, monitoring progress and meeting regulatory obligations. It has adopted the Institute of Environmental Management and Assessment's Acorn Scheme, an officially recognised EMS standard recommended by the government that offers accredited recognition for organisations evaluating and improving their environmental performance through the phased implementation of EMS. The University has so far achieved three of the five implementation levels and aims to complete the process by the end of the year.



Top: Interior view of the buckyball on the roof of the Nanoscience and Quantum Information Building
Bottom: Architect's impression of the National Composites Centre

Information technology and libraries

The University's Information Services Division provides information resources and library services to support University learning and teaching, research and enterprise. Some of the division's achievements and developments, undertaken during 2009/10, are outlined below.

The University's priorities in this area are to:

- provide IT and library facilities to support education, learning and teaching and to enhance the student experience;
- provide IT and library facilities to support research activities and enhance research impact;
- support the University's business objectives by providing efficient and effective processes enabled by well-designed, integrated information systems;
- ensure that our IT Strategy is people-focused and that all members of the University are well supported, trained and equipped to fulfil their roles;
- provide excellent, responsive and resilient IT services for all members of the University;
- develop sustainable approaches to the provision of IT, in order to minimise the impact on the environment.

Improving Library Services

The University is committed to providing high-quality library resources for students and staff. In 2009/10, the Library received an additional £250,000 – largely from alumni donations – for the purchase of key student texts. This fund was allocated on the basis of student need as reflected in National Student Survey feedback.

2010 saw a major refurbishment of the Graduate School of Education Library (see also p23), partially funded by the Wolfson Foundation. The new library provides a modern study environment, with additional sockets for laptops, as well as improved display of, and accessibility to, printed materials.

Student demand for increased opening hours was also addressed. The Arts and Social Sciences Library is now open from 8am to midnight seven days a week during term time, and hours were extended overall across other branch libraries. Vacation hours were also extended.

The Library is currently developing an 'e-Reserves' service, as part of the University's wider e-Learning project. This will provide students with electronic copies of book chapters and print journal articles via BlackBoard.

IT Service Review

A wide-ranging review of all IT provision began in 2009. The IT Service Review set out to gather information on existing provision, analyse relevant processes, provide comparative benchmarks and propose a suitable organisational and career development framework for the provision of IT services and support. This is now part of the Support Process Review (see also p16).

A detailed investigation of the possible new organisational models has led to proposals for the establishment of a new IT

organisation, based on consistent, well-founded customer service and standardised processes. The recommended model has centralised core IT processes (such as development and infrastructure management), with location-based, 'zonal' delivery of IT services to staff and students. At the core will be a central help desk and service line, alongside training, communication and compliance functions.

Support through ICT

The University invests heavily in information and communication technology (ICT) and continues to develop facilities to support teaching, learning and research, as well as management and administration. Examples include support for an increasingly mobile population of staff and students, with wireless networks covering many areas. Five halls of residence now have wireless coverage for a total of 1,700 study bedrooms, over a third of the residential estate. Wireless access is also available on the precinct for visitors.

The University's High Performance Computing (HPC) facility goes from strength to strength and a project has begun to install a high-capacity (one petabyte) storage facility for research data. Usage of the Blue Crystal HPC system is steadily increasing and there are now well over 250 registered users. HPC plays a key role in supporting research in disciplines such as aerospace engineering, molecular modelling, climate change and social medicine, among others, and over 150 HPC-related papers are in preparation or have been published during the past year.

Other significant ICT projects and activities under way include the development of timetabling and room-booking systems (see below) and a programme of learning support developments, including a system for summative assessment, a clinical-

experience recorder and an electronic portfolio tool to support reflective learning.

2009/10 saw an increase in the use of the University portal, My Bristol, and there are now around 1,000 staff, 9,000 undergraduate and 2,000 postgraduate users. The portal is a gateway to web-based services within and beyond the University. It enables users to access a range of tools and services in one place, such as email, remote desktop, course details, Blackboard and Student Info. The Student Laptop Clinic continues to receive positive feedback from students who value the provision of one-to-one support for laptop problems.

In September, the University launched a new strategic website to promote its research themes. The number of websites housed within the University's Content Management System increased to over 250 with more than 800 site editors. The web plays an increasingly important role in the University's external communications, brand and reputation building and a project is under way, led by the Communications Division and supported by Information Services, to ensure that the University's Content Management System continues to meet future needs.

Information Processes and Systems (IPS) Programme

The IPS Programme Office provides support for information, process and system change initiatives throughout the University. Achievements in this area in 2009/10 included:

- the prioritisation of initiatives for improving and standardising administrative processes and systems as part of the Support Process Review;
- the implementation of a new requisitioning and purchasing system in all faculties, to streamline and standardise purchasing activities across the University;
- the launch of the Common Timetabling system for room bookings and centrally managed space requests, with staff timetables linked to calendars and the rolling out of online student timetables.

Work continued on a new online postgraduate admissions system, due to go live in autumn 2010 for the 2011/12 academic year intake.

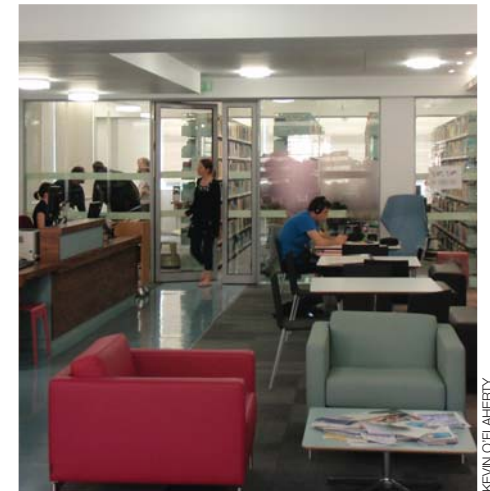
Developing web technologies

Three related projects led by the Institute for Learning and Research Technology (ILRT) in 2009/10 demonstrate the potential of mobile devices to help members of the University and the wider Bristol community access 'just-in-time' information on the move, while also exploring sustainability issues.

The Mobile Campus Assistant (MCA) system is set up as a mobile-friendly website that can be easily accessed by anyone with a smartphone (a phone with internet capability). MCA integrates data from around the University precinct and also pulls in data from external websites. It allows students access to time- and location-sensitive information, such as where to find the nearest available PC or wireless hotspot, the time of the next bus to their hall of residence, which libraries are currently open and what events are taking place that day.

The software and content have been further developed through the Greening Events project, which explores the extent to which the availability of knowledge tools can help reduce an event's carbon footprint. It is trialling MCA to encourage delegates to choose greener transport options with just-in-time travel information and news from around the country, integrated street views and route-planning data via their mobile phones.

ILRT is also working with the University's Sustainability Unit, the portal team and Bristol City Council to extend MCA's reach into the wider community. This new project, MyMobileBristol, will pilot a sustainable service tailored to users on the move around the University precinct, and will also explore the potential for extending the service to other educational institutions and business in the region.



Top: Graduate School of Education library
Bottom: The University's High Performance Computing facility

Alumni distinctions and honorary degrees

Alumni distinctions

Bristol alumni excel in many fields. The following are among those who were awarded particular distinctions by external organisations in 2009/10.

Fellow of the Royal Society

Professor Peter Cawley Professor of Mechanical Engineering, Imperial College London (BSc 1975, PhD 1979)

Professor Gideon Davies Professor of Chemistry, University of York (BSc 1985, PhD 1990, DSc 2007)

CBE

Clare Tickell (Certificate in Social Work 1986) Chief Executive, Action for Children, for services to young people

Marcia Twelftree (BSc 1971) Lately head teacher, Charters School, for services to local and national education

CMG

Susan Le Jeune D'Allegeershecque (BA 1985) Counsellor, Foreign and Commonwealth Office

CBE

His Honour Judge Keith Cutler (LLB 1971) Circuit judge, for services to the administration of justice

George Ferguson (BA 1968, BArch 1971, Hon MA 1999) Chair of Acanthus Ferguson Mann; founder of the Tobacco Factory, for services to architecture and to the community in the South West

Martin Harman (LLB 1969) Chair of Pinsent Masons, for services to international trade and to the legal profession

Timothy Hollis QPM (BSc 1974) Chief Constable, Humberside Police, for services to the police

OBE

Julia Fawcett (BA 1987) Chief Executive, Lowry Centre, for services to the arts in the North West

Simon Gillham (CertEd 1979) Director, Vivendi; President of the Franco-British Chamber of Commerce and Industry, for services to Franco-British business interests in France

Stephanie Hilborne (BSc 1990) Chief Executive, The Wildlife Trusts, for services to nature conservation

Dick King-Smith (BEd 1975, Hon MLitt 1999) Author, for services to children's literature

Alison Mclean (BA 1972) Consultant; board member of the Commission for Rural Communities, for services to rural affairs in the West Midlands

Honorary degrees

Every year, the University awards its own distinctions. Below we list all those who received honorary degrees from Bristol in 2009/10 in recognition of outstanding achievement.

Anton Bantock Retired schoolmaster; local historian and author; promoter of good causes, Doctor of Letters

Dr Charles Bennett IBM Fellow at IBM Research; computer scientist and physicist, Doctor of Science

Alan Bond Space systems engineer; Managing Director, Reaction Engines Ltd, Doctor of Engineering

Professor Patricia Broadfoot Vice-Chancellor, University of Gloucestershire; former Dean of Social Sciences and Pro Vice-Chancellor, University of Bristol, Doctor of Laws

Daniel Day-Lewis Actor; alumnus, Bristol Old Vic Theatre School, Doctor of Letters

Jim Foulds Pro Chancellor and former Chair of Council, University of Bristol, Doctor of Laws

Helen Fraser Publisher; former Managing Director, Penguin Books, Doctor of Letters

William Lewis Former editor of *The Daily Telegraph*; Bristol graduate, Doctor of Laws

Peter Lord, CBE Co-founder, Aardman Animations, Doctor of Laws

Michael Malim, FRS Professor of Infectious Diseases at King's College London; Bristol graduate, Doctor of Science

Mike Peirce Chief Executive, Southmead Project, Doctor of Laws

Dick Penny Managing Director, Watershed Media Centre; Chair, Bristol Old Vic, Doctor of Laws

Professor Julia Slingo, OBE Chief Scientist, UK Meteorological Office; climatologist; Bristol graduate, Doctor of Science

David Sproxtton, CBE Co-founder, Aardman Animations, Doctor of Laws

Dennis Stinchcombe, MBE Leader, Broad Plain Youth Club, Master of Arts

Professor Nigel Thrift, FBA Vice-Chancellor, University of Warwick; Emeritus Professor, University of Bristol; Bristol graduate, Doctor of Laws

Matthew Warchus Theatre director; Bristol graduate, Doctor of Letters

Philanthropy

The generosity of alumni, friends, companies, charitable trusts and current students and staff enhances the University's teaching and research year on year. The collective impact of donations made to Bristol cannot be underestimated. And behind the numbers each gift takes on a life of its own as it touches an individual student or academic, enabling them to do more, faster.

In 2009/10, Bristol's supporters donated in greater numbers and with ever-more generous gifts:

- Campaigns and Alumni Relations, working with academics and other colleagues, raised over £7.6 million.
- More than 6,700 individuals, companies and trusts from 49 countries made gifts.
- The number of Bristol Pioneers (donors giving £1,000 or more in an academic year) reached 291, with members contributing nearly £1.2 million.
- The Centenary Campaign, launched in celebration of the University's Centenary in 2009, has now raised over £54 million in cash and pledges towards its target of £100 million.

2009/10 Bristol Pioneers £25,000+

Mr Graham H Blyth (BSc 1969)
Mr Richard M Campbell-Breeden (BSc 1984)
Mrs Samantha Campbell-Breeden
Dr John M Davis
Mr Mario A Frering
Mrs Paula Frering
Mrs Kate Holmes
Mr Roger A Holmes (BSc 1981)
Mr Philip W Hulme – The Hadley Trust
Mrs Janet Hulme – The Hadley Trust
Mrs Judi Ritchie
Mr Timothy Ritchie (BA 1978)
Mr William J Rucker (BSc 1984)
Mr Michael J S Seymour (BSc 1971)
Mr Andrew R Thornhill QC
Mrs Helen M Thornhill (LLB 1966)

£5,000-£24,999

Dr John M H Andrews (BSc 1969, PhD 1973)
Mrs Linda J Andrews (BA 1971)
Mrs Carol Barnett
Mr Stuart W Barnett (BSc 1973)
Dr J Mark Bayley (BSc 1982, PhD 1985)
Mr Simon D J Beddow (LLB 1986)
Mr Neil Brambell
Mrs Susan Brambell
Mr Andrew J L Casley (BSc 1987)
Mr Charles J Cazalet
Mrs Jenny Cazalet
The Rt Hon Lord Chilver FRS (BSc 1947, PhD 1951, DSc 1962)
Professor David Clarke
Dr Genevieve R Davies (BA 1994)
Dr Geoffrey G Eichholz
Mr Peter K Estlin (BSc 1982)
Mrs Elinor Goldsmith
Dr Stuart A Goldsmith (BA 1966, Honorary LLD 2007)
Ms Natasha R Good (LLB 1991)
Mr Giles S Harridge (BA 1989)
Mr Tim Herrington (LLB 1975)
Mr David J Jackson (LLB 1974)
Mrs Susan J Jackson (LLB 1975, LLM 2007)
Mr Michael H V Jeans MBE (BA 1964)
Mr Ely Jacques Kahn III
Dr Ian J E Keil (BA 1955, PhD 1965)
Mrs Teresa Keil
Mr Charles D Z Martin (LLB 1982)
Mr Alastair J G Matchett (BSc 1991, MSc 1993)
Mr Timothy A Page (LLB 1985)
Mr Timothy R V Parton (BSc 1986)
Ms Louise M Pitt (BA 1996)
Mr John K Pitts (BSc 1948)

Mr John D W Pocock (BSc 1982)
Mr Andrew Roberts (BSc 1968)
Mr Geoffrey H Rowley (BA 1958)
Mr Daniel J O Schaffer (LLB 1986)
Emeritus Professor Roy T Severn
Ms Lesley G Silvester (BA 1968)
Dr Alison C Smale (BA 1977, Honorary LLD 2009)
Mr Eldar Tuvey (BSc 1992)
Mr Roy Tuvey (BSc 1996)
Mrs Kate Unwin (BA 1982)
Mr Paul A Unwin (BA 1980)
Mr Nigel W Wray (BSc 1970, Honorary LLD 2005)

£1,000-£4,999

Mr Marc Abbey (Erasmus 1986)
Mr Gati S Al-Jebouri (BEng 1990)
Mr Omar Al-Nuaimi (LLB 1994)
Dr Gerald Avison (BSc 1962, PhD 1967)
Mr Allan Aw (BSc 1971)
Mrs Josephine Bache
Dr Adebola O Bada (MB ChB 1969)
Dr Harry Beckhough (BA 1935)
Mr John S M Beckwith-Smith (BEng 1993)
Mr Philip J Beer (LLB 1995)
Mr John E Benson (BSc 1976)
Dr Tony N Bethell (BSc 1960)
Dame Carol Mary Black DBE DSC (BA 1962, MB ChB 1970, MD 1975)
Mr Steven A Blakey (LLB 1980)
The Lord Boateng (LLB 1973, Honorary LLD 2007)
Lady Boateng
Professor Michael Brada (MB ChB 1975)
Miss Davinia Bulford-Cooper (BSc 2004)
Mr Denis A S Burn (BSc 1975)
Mr James Burstall (BA 1987)
Mr Andrew E J Burton (BA 1988)
Dr Margaret H Buston (MB ChB 1950)
Mrs Alison M Bye (BA 1965)
Mr Peter G Bye (BSc 1965)
Ms Jane A Camblin (BA 1973)
Mrs Lorraine Casson
Mr Norman S D H Casson (LLB 1969)
Mr Tony Cates (BSc 1987)
Mr Mark O Cawthron (LLB 1978)
Mr Ian B Chicken (LLB 1987)
Miss Kitty Clarke (BA 1971)
Professor Richard R Clements
Mr Nigel J Cobb (MB ChB 1952)
Mr Graeme S Coulthard (BSc 1988)
Mr Richard H Cunningham (BEng 1982)
Mrs Clare E Cutler (LLB 1994)
Mr Hugh P B Cutler (BSc 1994)
Mr Jeremy R Davidson (BSc 1970)

Mr Thomas J G Davies (BA 2000)
Mr William G R Davies (BSc 1971)
Mrs Alison C Davis (BSc 1984)
Professor Richard N Dixon, FRS
Mr Richard H Dodd (BSc 1983)
Mr Robert Dufton (LLB 1983)
Mrs Diana E S Dunn (BA 1977)
Mr Ian M Eddleston (BSc 1988)
Mrs Matti Egon
Mr Nicholas Egon
Dr Paul J England (BSc 1965, PhD 1968)
Mr A Stephen Fagg (BSc 1962)
Sir Christopher Floyd
Lady Floyd
Dr Roy F Followell (BSc 1954, PhD 1958)
Mrs Judith Fowler
Professor Robert L H Fowler
Mr David T Frank (LLB 1976)
Mrs Helen Gaastra (BSc 1979)
Mr Stephen Gaastra (BSc 1979)
Mr Brian J Gallagher (LLB 1974)
Mrs Sarah L Gallagher
Mr Stephen D Gleadle (BSc 1980)
Mr Douglas M Goldin (BSc 1957)
Mr Ben Gordon (BSc 1981)
Mrs Christine D Gorman (BA 1958)
Mr Michael J Gorman (BA 1960)
Mr Alan Gourgey (LLB 1983)
Mr Colin H Green CBE (BSc 1971, Honorary DEng 1997)
Mrs Jessica F M Ground (BA 1997)
Professor Joseph V Hajnal (BSc 1981, PhD 1985)
Mr Adam C Hale (BSc 1987)
Mrs Janet Hall
Professor Len Hall
Dr Rachel Hall
Mr Richard C Hall (BSc 1974)
Mr Christopher I J Hartley (BSc 1983)
Mr Daniel E Hatfield (BSc 1995)
Dr Elizabeth A Hatfield (MB ChB 1994)
Mr Andrew E Heathcock (LLB 1974)
Mrs Catriona M Heathcock (BSc 1973)
Mrs Aglaia Hill (Honorary MA 1999)
Mr Anthony Hinchliffe (MB ChB 1960, ChM 1971)
Mr Andrew D Hine (LLB 1986)
Mr Christopher Hobbs (LLB 1980)
Ms Gillian S Howard (LLB 1972)
Mr Michael J Howell (BSc 1977)
Dr Barbara A Hulse (MB ChB 1972)
Mr Jonathan P F Hurst (BSc 1980)
Mr C Nigel Hurst-Brown (BSc 1973)
Mr Bishr Ibrahim Baker Ibrahim (BSc 1987)
Mrs Lindsay Jack (BSc 1988)
Mr Patrick W Jacob (BA 1979)

Philanthropy continued

Mr Alfred S L James (BA 1948, Certificate in Education 1949)
 Mrs Sarah Jarman
 Mrs Barbara J Jester (BA 1952, Certificate in Education 1953)
 Mr Christopher J H Jolly (BSc 1968)
 Mr Nicholas D E Jones (BA 1978)
 Mrs Sally Jones (BA 1978)
 Ms Lesley A Kaye (BA 1985)
 Mr Alan J Kelly (BA 1980)
 Mrs Carol J Kelly (BA 1980)
 Sir John Kingman FRS (Honorary LLD 1989)
 Lady Kingman
 Dr Julie Knox (BSc 1973, PhD 1977)
 Professor Selby A R Knox (BSc 1966, PhD 1969, DSc 1985)
 Mr Simon J Lake (BSc 1977)
 Miss Charlotte E Lambkin (BA 1994)
 Ms Lesley Lander (BSc 1970)
 Mr Daniel Lavender (BA 1991)
 Ms Lucy C Lavender (BA 1991)
 Mrs Caroline Leeds Ruby (LLB 1985)
 Mr Guy G Levy (BSc 1997)
 Mr Eng Bian Lim (BDS 1985)
 Mrs K Lim Sze
 Mr William J Littlewood (BSc 1987)
 Mr C Stephen Lloyd (BSc 1982)
 Mrs Kyung Lloyd
 Mr Anthony H W Luckhurst (BSc 1974, MSc 1975)
 Mr Ian Z Mackenzie (MB ChB 1966, MD 1981)
 Dr Jane E Manley (MB ChB 1984)
 Dr John C Manley (BSc 1978, PhD 1982)
 Dr Vanja Markovic (MSc 1981, PhD 1985)
 Mr Geoffrey P Matthews (BA 1980)
 Mrs Patricia P Matthews (BSc 1981)
 Mr Ian J Maurice (BSc 1973)
 Mr Daniel H R McCausland (BA 1992)
 Dr Alasdair A D McKerrell (PhD 1981)
 Mr Nikhil V Mehta (LLB 1975)
 Mr Adrian J Mezzetti (LLB 1965)
 Mr Anthony S Minns (LLB 1968)
 Dr Nicoletta Momigliano
 Dr Janet E M Mordue (BSc 1960)
 Mrs Catrin Morgan (BA 1990)
 Mr David S Morgan (BA 1966)
 Mr Neill F Morgan (BA 1990)
 Mr Iain C S Morpeth (LLB 1974)
 Mr Thomas D Morton (BSc 1995)
 Mr Robert N Myers (BSc 1970)
 Professor Nick C Norman (BSc 1979, PhD 1982)
 Professor A Guy Orpen
 Mrs Monica A Owen (BSc 1970, MSc 1972)
 Dr Thomas D Owen (MSc 1968, PhD 1974)
 Dr Mary-Claire Parker (MB ChB 1986)
 Mr Attilio Passerini
 Mr Andrew Paynter (BSc 1986)
 Mrs Margaret R Peacock
 Mrs Jan Phillips (LLB 1983)
 Mr Simon D Pillar (BSc 1982)
 Mr Andrew R Pinnington (BA 1989)

Professor Charles E Polkey (BSc 1960, MB ChB 1963)
 Mrs Maureen A Polkey (BSc 1960, Certificate in Education 1961)
 Mr Rupert W Prescott (MB ChB 1957)
 Mrs Caroline Pym (BVSc 1954)
 Mr Nicholas Rawlinson
 Mrs Tania Jane Rawlinson
 Mr Bill Ray (BSc 1975)
 Mrs Karen Ray
 Mr David S Redfern (BSc 1988)
 Dr John C Riviere (PhD 1954, DSc 1994)
 Professor Arthur L Rose (MB ChB 1957)
 Mr Howard H Russell (BSc 1996)
 Mr Andrea V Salvato (BSc 1989)
 Mr Keith D Scott (BA 1960)
 Mr George E S Seligman (BSc 1973)
 Mrs Veronique S Seligman (BSc 1975)
 Mrs Pamela C N Sinyor (LLB 1978)
 Miss Samantha J Smith (BSc 1995)
 Mr Graham V Smith (BSc 1981)
 Ms Victoria P Stace (BA 1971)
 Dr Rosalyn M Stanbury (BSc 1975, MB ChB 1980)
 Mr Philip J A Stear (Diploma 1995)
 Ms Clelia Steele
 Mr Adam M D M Steiner (BA 1993)
 Mrs Eileen B Stott (BSc 1957)
 Mr Robert L Sweeney (BSc 1954)
 Dr Peter J Szanto (BSc 1975, MSc 1976, PhD 1981)
 Dr Timothy R Thom (Honorary LLD 2008)
 Professor Eric J Thomas (Honorary LLD 2004)
 Mrs Narell Thomas
 Mr Robin Thring (BSc 1947)
 Sir James Tidmarsh (Honorary LLD 2002)
 Lady Virginia Tidmarsh
 Mr John Tilney
 Mr Patrick L C To (BSc 1973)
 Mr Otto Tokvam (LDS 1964)
 Mr William J Treen (BSc 1993)
 Miss Doris Tweed (BA 1939, PGCE 1940)
 Mr Alexander J Viall (LLB 1989)
 Dr Nicolas J Wadsworth (BSc 1951, PhD 1955)
 Mr Christopher R Wallis (BSc 1978)
 Mr Antony H C Wardell (BSc 1980)
 Mr Robert Ward-Jones (LLB 1968)
 Mr Martin H Warren (LLB 1982)
 Professor Avril E Waterman-Pearson (BVSc 1970, PhD 1977)
 Mrs Julia M Wathen (BSc 1972)
 Mr Simon W J Wathen (LLB 1972)
 Dr Christopher M K Watts (BSc 1966, PhD 1969)
 Mrs Veronica M Watts (BA 1969)
 Professor Michael Welch MD (MB ChB 1966, Honorary MD 2006)
 Mr Clive J Wells (LLB 1987)
 Mr Jonathan Wheatley (BA 1959)
 Mr Edward T Whitley (BSc 1976)
 Mrs Patricia R C Willford (BA 1948)
 Mr Robert A Willford (BSc 1948)
 Mr Peter G Williams (BSc 1952)

Mr Michael K Wingenroth (BSc 1993)
 Mr Philip E C Wolfe (BSc 1990)
 Mrs Jill Woodhouse
 Dr Richard Woodhouse (BSc 1964, PhD 2010)
 The Rev Hazel G Wotton (BA 1990)
 Dr Christopher A Wright (BSc 1968, PhD 1971)
 Dr Allen Zimble

We are grateful to the following organisations, which have made significant contributions to the University in the past year:

Alzheimer's Research Trust
 Bill & Melinda Gates Foundation
 BRACE
 British Pharmacological Society
 Cats Protection
 City Solicitors Educational Trust
 Countess Eleanor Peel Trust
 Enid Linder Foundation
 Experimental Psychology Society
 First Corporate Shipping Ltd
 GOTEK Polska Sp. z o.o.
 Hewlett-Packard Ltd
 IJ Gates Charitable Trust
 Lloyd's Tercentenary Foundation
 Marks & Spencer Plc
 Misy Charitable Foundation
 National Eye Research Centre
 Novae Group plc
 Rita and David Slowe Charitable Trust
 Rosetrees Trust
 Royal College of Surgeons
 Shimadzu UK Ltd
 Sonardyne Group Ltd.
 Sparks
 The A. G. Leventis Foundation
 The Allan and Nesta Ferguson Charitable Settlement
 The David Telling Charitable Trust
 The Exilarch's Foundation
 The Gatsby Charitable Foundation
 The Grocers' Charity
 The Hadley Trust
 The James Tudor Foundation
 The John James Bristol Foundation
 The John Oldacre Foundation
 The Leverhulme Trust
 The Lloyd Robinson Family Charitable Trust
 The Priory Foundation
 The Richard Bradford Trust
 The Skin Cancer Research Fund
 The Technology Partnership
 The Tubney Charitable Trust
 The Whitaker Charitable Trust
 The Wolfson Foundation



DAN FROWLEY

Bristol alumnus Tim Ritchie (BA 1978) and his wife Judi recently made a gift to stem-cell research that will ensure that PhD student Kyla Brady (pictured) is able to complete the final two years of her research. The long-term aim of Kyla's project is the development of new treatments for joint diseases affecting cartilage, such as osteoarthritis.

For Tim and Judi it was not just Kyla's career they wanted to secure; they were also interested in the human benefit of the research, as Tim explains: 'My wife and I have been making an annual donation for the past couple of years. Most recently, we spent a day at the University and were able to learn more about the pioneering work being undertaken by Professor Anthony Hollander (PhD 1990) and his team, and to hear about the difference this has already made to the quality of life of many people.'

'It was this visit which finally convinced us to give more this year. Learning first-hand of the personal commitment and dedication of those involved in groundbreaking research, and appreciating exactly what difference our own contribution would make to this, really brought the plan to life.'

Council members

Lay members (18)

Mr James Wadsworth – Treasurer
Cllr Christopher Davies – Bristol City Council
Mr Denis Burn – Society of Merchant
Venturers (Chair)
Mr Bill Ray – Convocation

Elected by Court

Mr John Bramhall
Mr Roy Cowap
Mr Chris Curling
Mr Colin Green
Mr Ronald Kerr
Mrs Dinah Moore
Mr Bob Morton (Vice-Chair)
Mr George Morton
Mr David Ord
Mrs Cindy Peck
Mr Tim Ross
Ms Anne Stephenson
Mrs Cathy Waithe
Mr James Wetz

University members (10)

Professor Eric Thomas – Vice-Chancellor
Professor David Clarke – Deputy Vice-
Chancellor
Professor Len Hall – Pro Vice-Chancellor
Professor Avril Waterman-Pearson –
Pro Vice-Chancellor

Elected members of the academic staff

Professor Paula Booth
Professor Tim Bond
Dr Sally Heslop
Dr David Newbold

Elected members of the non-academic staff

Mr Robert Massie
Ms Pru Lawrence-Archer

Students (3)

Mr Owen Peachey – President of the
Students' Union
Ms Ruth Jackson – Vice-President of the
Students' Union
Ms Emma Di'Lorio – Vice-President of the
Students' Union

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