Welcome

It is a pleasure, as the University of Bristol’s new Vice-Chancellor and President, to introduce the Review of the Year for 2014-15. I cannot take any credit for the successes described in this report, but reading it made me feel even more proud to have joined this great University.

On 2 September 2015 I became the University’s 13th Vice-Chancellor. I would like to pay tribute to Sir Eric Thomas for all he, and the University, achieved under his 14-year reign. I have taken over a university with an outstanding reputation for research and teaching, which is a destination of choice for many more excellent students than we are able to accommodate.

Talking to my colleagues, there are a few moments over the past year that stand out. One of the foremost has to be coming fifth for research intensity in the UK in the Research Excellence Framework. Other high points included the opening of the new state-of-the-art Life Sciences building and the refurbished Richmond Building. The latter, with its study spaces, studios, bars and cafés, is transforming our students’ experience.

Before I came to Bristol I was President and Chief Officer of University College Dublin for 10 years, and during that time led the organisation through some necessary, if occasionally painful, changes. Bristol is a very different proposition. I have already sensed ambition from my new colleagues to build on the excellent foundation we have and take a step forward, and over the next year I will be developing a new vision and strategy collaboratively with my colleagues, our students and the wider Bristol family. I look forward to reporting back to you next year on the outcomes of that process.

Professor
Hugh Brady
Vice-Chancellor and President
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Our world-renowned research spans a broad spectrum of disciplines and tackles some of society’s biggest issues head-on. Here’s a selection of highlights from the past year.
Top five for research

The Research Excellence Framework 2014, an assessment by the government of research at every UK university, ranked Bristol among the UK’s top research universities. Thirty-six per cent of the University’s research received the top 4* rating, defined by the Higher Education Funding Council for England as ‘world-leading’. This is twice the level the University achieved in the Research Assessment Exercise 2008, and six per cent above the sector average, placing Bristol 10th in the Russell Group.

All six faculties had 4* submissions and Bristol achieved particular distinction in the areas of public health, health services and primary care; geographical sciences; earth sciences; chemistry; mathematical sciences; and sport and exercise sciences. Further analysis of the results by Times Higher Education combined the grade point average for each university with data regarding the proportion of all eligible staff who were submitted as part of the assessment, to produce a measure of each institution’s research intensity. This league table placed Bristol joint fifth with the University of Oxford.
The cuttlefish has inspired researchers to create a smart materials system that can change colour.

New spaces The Fry Building

Work has begun on the Fry Building, the Grade II-listed new home for the University’s School of Mathematics. The University has spent £54 million on capital projects this year.

The future of healthcare

Launched in 2013, SPHERE (Sensor Platform for HEalthcare in a Residential Environment) is a five-year collaborative project that seeks to address the challenges faced by the UK’s healthcare system. Leading researchers from the Universities of Bristol, Southampton and Reading are working with clinicians, engineers, designers and social care professionals, as well as members of the public, to develop a digital ‘home help assistant’ that can monitor patients around the clock.

By tracking the behaviour of individuals with health conditions, it is hoped that this technology will help predict falls, detect strokes or act as an early warning system to prevent conditions like heart disease and dementia.

Bristol Doctoral College

The Bristol Doctoral College (BDC) provides a focal point for doctoral training activity and researcher development. It brings together all our doctoral training activity and research from faculties across the University and in collaboration with our partnership institutions. We have one of the largest concentrations of funding for collaborative research training in the UK, offering more than 250 PhD scholarships across our six faculties. This includes doctoral training grants from all UK Research Councils alongside EU funding and charitable organisations.

Masters of disguise

Cephalopods like the squid, octopus and cuttlefish are some of nature’s masters of camouflage, changing their skin tone and texture to help them sneak up on prey or hide from predators.

Now researchers from the Department of Engineering Mathematics have attempted to mimic this extraordinary skill by designing a smart materials system which creates patterns that change and morph over time.

Artificial skin, made from electroactive dielectric elastomer, can effectively copy that action of the chromatophores, small pigmented cells in cephalopods’ skin.

“Our ultimate goal is to create artificial skin that can mimic fast-acting active camouflage and be used for smart clothing such as cloaking suits,” says Aaron Fishman, Visiting Fellow in Engineering Mathematics.
Bristol Is Open
Bristol took its first step towards becoming the world’s first ‘open programmable city’ with the launch of Bristol Is Open, a joint venture set up between the University of Bristol and Bristol City Council.

From spring 2015 the centre of the city became home to three new high-speed networks – in the ground, bouncing from lamppost to lamppost, and connecting wirelessly along the Brunel Mile – to help researchers capture information about varying aspects of city life, from air quality to traffic flow.

“Bristol Is Open will enable the people of Bristol to interact, work and play with their city,” says Professor Nishan Canagarajah, Pro Vice-Chancellor for Research. “The project is a unique opportunity for the University and city council to work together to ensure the city is at the forefront of technological innovation.”

Vetlesen Prize for Bristol professor
Professor Stephen Sparks of Bristol Faculty of Science and School of Earth Sciences has been awarded the Vetlesen Prize for his work in furthering our understanding of how volcanoes work. The prize is considered by many to be the Nobel Prize of earth sciences.

Green light for driverless cars
Reduced congestion, safer roads and increased access to mobility: these are just some of the ways in which we could benefit from driverless cars, according to the leader of the VENTURER project, which sets out to explore the feasibility of the technology in the UK.

The VENTURER consortium, which includes the University of Bristol’s Communication Systems and Networks Group, will begin its trial in early 2016, testing the BAE Systems Wildcat on private and public roads for 36 months.

The project will investigate the legal and insurance implications of driverless vehicles and assess how the public reacts to them. The trial is being funded by Innovate UK.

New spaces The Queen’s Building
A new wing on the Queen’s Building is being built in order to provide additional teaching and research facilities for the Faculty of Engineering. The new wing will feature a flexible teaching space, an undergraduate laboratory space, meeting rooms and research offices.
**The mathematics of caring**

Whether it’s a male stickleback fanning his nest or a female koala carrying her joey, caring for young, it seems, is seldom equally shared in the natural world. But why?

It’s a question addressed by Professor John McNamara from the School of Mathematics, in collaboration with Dr Max Wolf from the Leibniz Institute of Freshwater Ecology and Inland Fisheries. They found that small differences which predispose one sex to care more than the other are exaggerated once the ability to care evolves. As a result, one sex will evolve attributes that enhance their ability to provide care – for example, pouches in female marsupials, mammary glands in female mammals or increased brain size in some fish. The majority of care is therefore provided by this sex.

But while it’s almost always left to one parent to provide the majority of the care, this does not necessarily mean that it’s always the female’s job. Professor McNamara said: “The sex with the lower cost or higher benefit of care evolves to both be more able to care and to provide much higher levels of care than the other sex.”

**Mirror, signal, manoeuvre**

Bats obey their own set of traffic rules when they’re trawling for food, chasing each other, performing tandem turns and slowing down to avoid collision.

These are the findings of Dr Marc Holderied in the School of Biological Sciences, after studying pairs of Daubenton’s bats foraging for stranded insects near Barrow Gurney in Somerset. To perform these impressive aerial feats, the bats emit high-pitched biosonar calls, listen for returning echoes and, if another individual is close, copy that bat’s flight direction within four or five wingbeats.

**Mixed messages**

Uncertainty or denial about climate change in the media has affected how scientists themselves view the phenomenon, according to a new Bristol study.

Professor Stephan Lewandowsky from the School of Experimental Psychology and the Cabot Institute, and colleagues from Harvard University and three Australian institutions, have shown how the language used by people who oppose the scientific consensus on climate change has led scientists themselves to unwittingly reinforce the misleading message that we’re experiencing a hiatus or pause in global warming.

At the same time, an international team led by Dr Bert Wouters in the School of Geographical Sciences reported a sudden increase of ice loss in the Southern Antarctic Peninsula, a previously stable region.

From 2009, multiple glaciers along the 750km coastal expanse suddenly started to shed ice into the ocean, making the region the second largest contributor to sea level rise in Antarctica.
New spaces
The Life Sciences building
The new, £56-million, state-of-the-art Life Sciences building was opened by Sir David Attenborough in October 2014 and is fully equipped to become one of the UK’s leading facilities for the advancement of Biological Sciences and a range of related disciplines.
Working with Somalia

Professor Eric Herring, Reader in International Politics and Co-Director of the Somali First initiative, has been appointed by the Minister of Foreign Affairs and International Co-operation of the Federal Republic of Somalia to lead its foreign policy advisory group.

Professor Herring co-ordinated the University’s co-hosting of a visit by the UK’s Ambassador-designate to the Federal Republic of Somalia, Harriet Mathews OBE, who met members of the city’s Somali community in an event organised by Act for Somalia, a Somali advisory and awareness-raising organisation.

The London Effect

London’s diverse ethnic population has been cited as the reason for the ‘London Effect’ – that is, the high levels of attainment and progress achieved by pupils in the capital.

A study from Bristol’s Centre for Market and Public Organisation found that pupils in London scored about eight GCSE grade points higher than those in the rest of England, relative to their attainment at age 11.

The study showed that white British pupils achieved the lowest GCSE scores and that this group made up 34 per cent of Year 11 pupils in London compared to 84 per cent in the rest of England. Research leader Professor Simon Burgess said: “We know that ethnic minority pupils score more highly in GCSEs relative to their prior attainment than white British pupils. London has a lot more of these high-achieving pupils and so has a higher average GCSE score than the rest of the country.”

Peace-building study

A team from the School of Sociology, Politics and International Studies (SPAIS) has led a successful Horizon 2020 bid from the EU for a pan-European project, ‘Preventing and responding to conflict: developing EU civilian capabilities for a sustainable peace’.

The €1.714-million, three-year project, led by Dr Ana Juncos Garcia in SPAIS with co-investigators Professor Tim Edmunds and Dr Ryerson Christie (members of the University’s Cabot Institute), will provide a comprehensive, comparative and multidisciplinary analysis of the EU’s current conflict prevention and peace-building activities. It includes 10 different institutions and organisations from eight countries in Europe, and is based at the Global Insecurities Centre.

New spaces

Priory Road Lecture Theatre

The £4-million development of the Priory Road Lecture Theatre was completed in October 2014, providing the largest and most comprehensively equipped lecture theatre in the University.
Tackling premature deaths
Dr Pauline Heslop in the School for Policy Studies has been awarded a contract worth £2.4-million by the Healthcare Quality Improvement Partnership (HQIP) to investigate the high incidence of premature deaths among people with learning disabilities.

The three-year National Learning Disability Mortality Review Programme, led by Bristol's Norah Fry Research Centre, will build on previous research by the centre which found that nearly a quarter of people with learning disabilities died before they were 50 years old, and that a third of these deaths might have been prevented by good-quality healthcare.

Working with the HQIP and NHS England, the programme’s objective is to help develop and implement a strategy to reduce this inequality among some of society’s most vulnerable people.

Migration myths debunked
Leading scholars from five continents and eight different disciplines have tackled misconceptions and myths about global migration in a three-volume work, co-edited by Dr Diego Acosta from the University of Bristol Law School and Dr Anja Wiesbrock from Maastricht University.

Global Migration: Old Assumptions, New Dynamics is a collection of essays that explore the past, present and future measures that have been implemented to deal with migration, and seeks to inform readers, allay fears and advance solutions.

The Cabot Institute
Named after Italian explorer John Cabot, who set sail from Bristol and discovered North America, the Cabot Institute drives new research in the interconnected areas of climate change, natural hazards, water, food and energy security, and the structure of governance of resilient, sustainable cities. Alongside the Elizabeth Blackwell Institute (see p13), the Cabot Institute is one of the University’s flagship Research Institutes and supports cross-disciplinary research of an institutionally defining scale and quality.
Cancer surgery study

Cancer surgery or biopsy may trigger the development of cancer or pre-cancer cells, researchers at the Universities of Bristol and Aarhus have found. The team used zebrafish larvae to investigate how inflammatory cells react to cancerous wounds and discovered that these cells, called neutrophils, are rapidly diverted from wounds to pre-cancerous cells, causing increased growth.

“All surgery and biopsy collections carry an element of risk and this study reveals a further potential risk for clinicians to consider,” said Professor Paul Martin, who led the project from the School of Biochemistry and the School of Physiology and Pharmacology. “We can now watch the interplay between inflammatory cells visiting wounds and nearby cancer cells, and use this to determine why and how this occurs and what we might learn to prevent it.”

Understanding immunity

The common fruit fly has helped a team of researchers learn more about how immune cells detect a wounded or damaged site.

The team, led by Will Wood, Professor of Developmental Biology, in collaboration with colleagues from the University of Sheffield, used time-lapse microscopy to study the behaviour of immune cells in fruit flies to identify what causes the cells to migrate to sites of damage where they then detect, ingest and degrade dying cells, debris and pathogens.

It is hoped the findings could help scientists design therapies to manipulate the cell repair process and direct immune cells away from sites where they are doing damage, such as tumours, and send them to places where they are needed.

Lipids in the blood

Using data collected from around 4,000 people in the UK, a Bristol-led team has identified a rare genetic variant that dramatically reduces certain types of lipids in the blood.

Dr Nicholas Timpson, with colleagues at University College London and the Wellcome Trust Sanger Institute, compared their subjects’ genome sequences with data about their lipid levels. They uncovered an association between levels of a type of lipid called triglycerides and the presence of the APOC3 gene variant – specifically, those with the gene variant typically have lower levels of triglycerides.

Lower levels of triglycerides have been linked to a reduced risk of cardiovascular disease, so it is hoped that as a result of this and other studies, therapies may be developed to help treat those at risk of cardiovascular disease.
‘Bristol researchers have played a key role in a multinational study to map the evolution of Ebola since the 2014 outbreak’

**Heart of the matter**

While more than eight out of 10 babies born with complex congenital heart disease (CHD) reach adulthood, the long-term outcome for most of them remains poor. This is, in part, due to the lack of growth potential in the graft materials used to repair CHD, which means patients’ hearts outgrow them.

Professor Massimo Caputo in the School of Clinical Sciences aims to address this problem by investigating the use of stem cell therapy in the treatment of CHD.

Following a £1.4-million donation from the Sir Jules Thorn Charitable Trust, Professor Caputo and his team will work with colleagues at the Bristol Royal Hospital for Children on a five-year project to create live tissues using patients’ own stem cells. The grafts will first be tested in animal models and those that show the best results will then be investigated in a first-in-human safety study in infants.

**Ebola evolution mapped**

2014-2015 saw West Africa in the grip of the largest known outbreak of Ebola and, during this time, there have been fears about the speed at which the virus has been evolving, and the corresponding effect this has on vaccines, diagnostics and treatment.

In response, researchers from the School of Cellular and Molecular Medicine have played a key role in a multinational study to map the evolution of the virus since its outbreak over a year ago.

The Bristol team, led by Dr David Matthews, used blood samples taken from patients and compared changes in the genetic material of the virus throughout the outbreak. In doing so, they were able to show that it had a single point of origin and predicted that diagnostics and treatment would be effective on the current form of the virus.

**An ambitious programme**

Cancer Research UK (CRUK) has awarded the University of Bristol’s Professor Richard Martin and Professor Caroline Relton a £4.1-million grant to undertake “an ambitious programme” of research into six types of cancer.

Called ‘Reducing the burden of cancer: causal risk factors, mechanistic targets and predictive biomarkers’, the programme will seek to strengthen causal inference in cancer epidemiology by applying Mendelian randomisation approaches and exploring epigenomic and metabolomic intermediates in lung, prostate, renal, breast, ovarian and head and neck cancers.

**The Elizabeth Blackwell Institute**

Bringing together leading researchers from a variety of fields, The Elizabeth Blackwell Institute (EBI) seeks to find solutions to the most pressing health problems of the 21st century. It identifies and supports talented young people, develops trusted external partnerships and encourages public involvement in research to help translate scientific breakthroughs into benefits for patients. The EBI – one of the University’s Research Institutes – has been set up to promote and support multidisciplinary learning, and is co-funded by the Wellcome Trust and the University of Bristol.
‘The project will examine the battle between ideas, interests and institutions’

Pension Reforms probe
The roots, construction, implementation and consequences, both intended and unintended, of Margaret Thatcher’s pension reforms will be put under the spotlight in a new three-year project led by Dr Hugh Pemberton from the Department of Historical Studies.

The Conservatives carried out major reforms to Britain’s pension system in the 1980s, and the project, titled ‘Thatcher’s Pension Reforms and their Consequences’, will examine the battle between ideas, interests and institutions that took place, study the compromises that were forced, and delineate the legacy of the policy changes that resulted.

The project, funded by the Arts and Humanities Council, will take advantage of the 20-year rule for the release of government papers.

Quipu Project nears target
In the 1990s hundreds of thousands of men and women in Peru were sterilised. The majority came from impoverished or indigenous communities and many were coerced or given insufficient information to decide whether sterilisation was what they wanted.

The Quipu Project, a collaborative project between Dr Matthew Brown in the Department of Hispanic, Portuguese and Latin American Studies and Dr Karen Tucker in the School of Sociology, Politics and International Studies, along with Chaka Studio, was launched to bring the stories of those affected to a wider audience and, it is hoped, encourage the Peruvian government to listen again to their testimonies.

The project is close to raising the £20,000 needed to complete its work, helping to develop technologies to allow Peruvians to record themselves speaking about their experiences.

Prize-winning professor
Robert Fowler, Henry Overton Wills Professor of Greek, has won the prestigious Charles J Goodwin Award of Merit for his outstanding contribution to classical scholarship.

Professor Fowler’s Early Greek Mythography Volume 2: Commentary is the companion volume to his Early Greek Mythography Volume 1: Text and Introduction, a critical edition of the work of 29 Greek authors dating from the late sixth to the early fourth centuries BC.

The authors, widely considered to be the first historians, systematically recorded Greek mythology in prose and were contemporaries of Herodotus and Thucydides. Through his critical edition and commentary on the entire corpus, Professor Fowler seeks to bring these writers back to the forefront of scholarship.

In addition, Professor Fowler was elected as a Fellow of the British Academy in recognition of his outstanding research.
At Bristol we expect the best from and for our students. We deliver research-rich education of the highest quality to ensure our students have a fulfilling, challenging and intellectually stimulating experience.
Global university

Bristol attracts scholars from across the globe – a factor critical to the overall student experience.

Many students are given the opportunity to study abroad for a semester or a full academic year as part of their course. Work placements abroad are also offered.

Bristol is a member of the Worldwide Universities Network, a consortium of 16 universities from 10 countries on five continents, enabling us to forge close partnerships with other leading global institutions.

In 2014, the President of the Republic of Singapore, Dr Tony Tan Keng Yam, visited the University as part of his four-day state visit. Dr Tan was given a presentation of cutting-edge research from the Faculty of Engineering’s £12 million SPHERE Project (see p6), and the University’s Cabot Institute held a workshop to identify opportunities for collaboration between the UK and Singapore.

During the event, the President witnessed the signing of a Memorandum of Understanding between Nanyang Technological University (NTU Singapore) and the University of Bristol to collaborate in healthcare technology research.

This follows the signing of Memoranda of Understanding with other leading international institutions such as Chonnam National University in South Korea (in 2011) and Kyoto University (in 2012).
Our researchers have worked with colleagues in Australia on 1,456 joint publications.

We have over 4,150 alumni in China and have worked with colleagues from Chinese institutions across the country on more than 1,449 publications.

Bristol has produced 411 publications with colleagues from Denmark.

We have over 1,200 Bristol alumni living in Hong Kong.

Bristol has 126 alumni, 26 current undergraduates and six current postgraduates from the United Arab Emirates.

More than 260 Bristol alumni live in Singapore.

Malaysia is home to over 1,200 Bristol alumni, 277 current undergraduates and 60 current postgraduates.

Bristol has alumni living across Africa, including Mozambique, Namibia, Rwanda, Botswana, Sudan and Cameroon.

Bristol researchers have worked on 873 research publications with colleagues from institutes in Russia. We also have 15 members of staff from the country.

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At Bristol we set the bar high, and encourage excellence in our teaching and the overall student experience.

Our 2015 National Student Survey (of final-year undergraduate students) results showed that 90 per cent of our students found their course intellectually stimulating. Our YourBristolSurvey (for non-final-year undergraduates and postgraduate taught students) and PRES (for postgraduate research students) all demonstrated high levels of satisfaction.

Supporting our students’ success in developing their skills and experience is a key priority. We provide strong leadership in subject disciplines to instil a powerful sense of academic community. Our framework for student support and tutoring encourages independent and active learning, and our work with the Bristol Students’ Union (Bristol SU) champions greater student engagement and representation.

Excellence in teaching
The Bristol Teaching Awards illustrate the value we place on excellence in teaching. It is an opportunity for staff and students to recognise and reward those who have made an outstanding contribution to teaching. The University’s Teaching Development and Fellowships Group supports academic colleagues who wish to apply to the National Teaching Fellowship Scheme (NTFS), which recognises those who make an outstanding impact on the student learning experience.

Skills development
Students receive myriad academic and personal development opportunities, and we incorporate key sustainable development issues into teaching through the University’s Education for Sustainable Development initiative. The International Foundation Programme is an expanding area that prepares students for undergraduate study in the UK through English language classes and attendance at lectures and seminars in their chosen subject area. In addition, the Applied Foreign Languages programme offers modern languages units open to undergraduate students across the University.

More than 2,000 paid roles are available to students across the University, including Campus Internships and the University Internship Scheme.

The University works very closely with Bristol SU, a membership organisation democratically led by students, supported by a team of 50 staff and managers. Core to its purpose is improving the student experience and ensuring that the organisation meets the needs of its members by providing the appropriate services including a large number of student clubs and societies.

Entrepreneurial education
Our researchers are addressing many of society’s most pressing challenges in fields including healthcare and clinical medicine, climate change, earthquake resilience, and the future internet, as well as driving innovation in areas such as volcano monitoring, food security and high-performance computing.

To strengthen these links between research, innovation and education, we have launched a major series of programmes that bring academic subjects together with courses in innovation and entrepreneurialism, to enable students to develop into the change-makers and leaders of the future. The first of the Bristol Innovation Programmes – four-year, integrated undergraduate Master’s degrees in innovation with in-depth subject specialism – will begin in 2016.

Employment opportunities
Over 500 employers visit the University each year, giving students specific sector knowledge and the chance to experience the reality of different careers. The Industrial Mentoring Scheme, meanwhile, introduces students to the challenges of a career in civil/structural engineering while also enabling them to relate their studies to industrial life.

Online education
Cracking Mechanics: Further Maths for Engineers

Led by Dr Laura Dickinson from the Faculty of Engineering, the Cracking Mechanics course was the University of Bristol’s first Massive Online Open Course.

It aimed to help students learn how engineers use maths and physics to solve real-world problems.

The free, six-week course was split into bite-sized chunks of 30 minutes per day and covered different themes every week.

Learners watched videos, read articles, answered questions, took tests and quizzes and discussed problems with other students.

Students learned maths skills, including calculus, trigonometry and geometry, alongside laws of physics like Newton’s laws of motion.

The course was aimed at anyone interested in a career in engineering, maths or physical science, particularly sixth-formers.
New spaces
Hiatt Baker Hall
The University completed major improvements at Hiatt Baker Hall in Stoke Bishop, creating an additional 327 bedrooms in new self-catering townhouses and apartment blocks. The £20.7-million scheme at Hiatt Baker Hall has transformed accommodation, improved facilities and provided a new transport hub for students.
New spaces The Richmond Building

In March the University unveiled its multi-million-pound renovation of the Richmond Building, home to Bristol’s Students’ Union. The Right Honourable the Baroness Hale of Richmond, Chancellor of the University, officially reopened the building before the Invisible Circus provided an evening of entertainment for 2,000 students. As part of the celebrations, Hollywood actor and Bristol alumnus Simon Pegg opened a new theatre named in his honour. In excess of £30 million was invested in the building to provide 200 new study spaces, two theatres (including the Pegg Studio Theatre), two café bars, activity rooms, a digital media suite, and dance and music studios. Live music venue The Anson Rooms was also refurbished.
# Opportunities to engage

From record-breaking feats to prize-winning apps, Bristol’s students enjoyed another successful year both in and out of the academic arena.

Bristol’s Sivani Balachandran reached the final of the BBC’s Young Dancer competition. The Civil Engineering student beat entrants from across the country to claim one of five places in the final of the South Asian dance category. Sivani specialises in Bharatanatyam, a classical form of Indian dance that incorporates statuesque poses based on storytelling from Hindu mythology.

Elsewhere, fellow Bristol student James Reilly and childhood friend Ted Simpson became world record breakers as they crossed Loch Ness in a tandem kayak in a time of four hours, 43 minutes and 43 seconds. They raised more than £2,000 for the Cystic Fibrosis Trust.

More than 1,000 students from 23 different sports clubs joined forces to raise money for local charities by taking part in an extreme sports day. Organised by Bristol students Sophia Sullivan and Milly Belcher as part of their Ignit10n initiative, athletes participated in a non-stop, 10-hour challenge covering a variety of activities, including weightlifting and cycling.

It was another successful year for Bristol Big Give as students donated their unwanted items in an effort to raise money for local and national charities. The city-wide scheme — a joint initiative between Bristol City Council, the University of Bristol, the University of Bristol Students’ Union (Bristol SU), the University of the West of England (UWE) and UWE Students’ Union (UWESU) — saw volunteers sort through 72 tonnes of goods and raise over £125,000 for charity.

A project called Green Capital, Student Capital: Unleashing the Power of Bristol Students engaged thousands of students from the city’s two universities in voluntary work in celebration of Bristol’s year as European Green Capital 2015. Bristol SU Get Green and UWESU Green Leaders managed a number of student projects focused on recycling and reducing waste across the university campuses.

Back in the academic arena, a group of Computer Science students won top prize at the European Space Agency’s App Camp for their FarmIQ app. The crop monitoring and management tool, created to help analyse data to suggest field optimisation and identify problems before they happen, was praised for its potential to help tackle food poverty.

Bristol had an excellent run in University Challenge, reaching the quarter-finals before losing in a tough play-off against Magdalen College, Oxford. Anastasia Reynolds (captain), Lewis Rendell, Benjamin Moon and Miles Coleman became the first team from Bristol to win a quarter-final during the Paxman era.

Finally, more than 600 students visited a special ‘puppy room’ during exam season to help them deal with stress. The event raised over £1,300 for the Guide Dogs charity.

## Online education

### Cultural Studies and Modern Languages: An Introduction

The Cultural Studies and Modern Languages course was a University of Bristol Massive Online Open Course (MOOC). Led by Gloria Visintini from the Faculty of Arts, it aimed to give students an insight into the content of a BA in Modern Languages.

Students worked with a team of 12 academics from the School of Modern Languages to learn how languages can reveal insights into nations.

The free four-week course explored eight countries by looking at slogans, books, monuments and images that emerged from them over different periods.

Videos and articles were available online where students could discuss content and explore writing and research opportunities.

Topics covered included Victor Hugo’s Les Misérables and the Holocaust Memorial.

The course was open to anyone, although it was ideal for those thinking about a degree in modern languages, particularly sixth-formers.
education and the student experience

Going strong
Bristol students continue to excel outside the academic arena, taking part in (clockwise from left) the BBC Young Dancer, Bristol Big Give, University Challenge and a record-breaking kayak voyage.
We aim to create a diverse and international university community, attracting gifted students from a wide range of backgrounds and providing effective leadership and support to enhance their educational experience.

**Support to flourish**

**Widening participation**
We are determined to ensure Bristol is accessible to all and recognise the social, educational and cultural benefits a diverse student community offers to students in particular and the institution as a whole. Our outreach work is wide-ranging. Much of it focuses on raising awareness of and aspirations to higher education, working with students from primary school age to those who may have left the classroom decades ago.

Our principal focus is on interventions including Access to Bristol, Pathways to Law and the Sutton Trust Summer School programmes, which together reached over 800 students, many of whom will apply to the University and be accepted onto our degree programmes.

**Student support**
The University is committed to supporting all students to manage and make the most of their academic studies, wider student experience and life beyond university.

We have put an increasing focus on interventions intended to benefit the majority of students. These include:

- piloting UniSmart, the survival guide to university, with 1,000 undergraduate students during Welcome Week;
- training more than 150 staff in mental health first aid;
- piloting the use of Big White Wall, a safe online community of people who help each other by sharing what’s troubling them, guided by trained professionals. This pilot was funded by the Alumni Foundation and attracted more than 650 student users.

**Student wellbeing**
Besides a full range of health, welfare and counselling support services, Bristol offers first-year residential places to undergraduate students to assist their transition from school to university. A 100-strong team of wardens and deputies, senior residents, tutors and others provides pastoral, educational, social, cultural and financial support.

A newly created position, Head of Student Residential Life, ensures that this network of support and resources translates into a consistent experience across all student residences. The new post also co-ordinates pastoral support for students living in private rented accommodation.

**New spaces**
**Beacon House**
Beacon House is one of 10 listed buildings that the University is renovating as part of a £200-million capital investment programme. The former Habitat store, based on Queen’s Avenue, is ideally located to work as a central reception and meeting point for the University community and the public. It will also provide students with an additional 300 seats for quiet, group and social study and help connect some of the key University buildings, such as Senate House, Howard House and the Richmond Building, which houses the Bristol SU.
Bristol SU in figures

17,000 students took part in 120 Bristol SU events during Welcome Week

Welcome events included...
- Latin fiestas
- Mingles
- TED talks
- Club nights

12,600 students took part in over 250 clubs, covering everything from international relations to Pokemon.

£137k raised by the University and Bristol SU to increase participation of postgraduate and international students.

£20,000 worth of funding from the University’s alumni foundation will support the SU’s postgraduate network.

650 course reps are a vital link between the SU, the University and the students.

1,000 students went head-to-head with UWE in a range of sporting events as part of the annual Varsity Series. Events included...
- A boat race
- Horse riding
- Wind surfing
- Rugby union
- Cheerleading

Projects included...
- £30m SU building provides a social hub with study space, music studios, a café bar and a live music venue.
- £125k raised for charity during RAG (Raising and Giving) Week to help students with a range of problems from surviving exam season to finding a house.
- £137k raised during Welcome Week.
- £125k raised for charity during RAG (Raising and Giving) Week to help students with a range of problems from surviving exam season to finding a house.
- £100,000 hours volunteered during European Green Capital year.

Welcome events included...
- Latin fiestas
- Mingles
- TED talks
- Club nights

100,000 hours volunteered during European Green Capital year

...a tea and chatter club with elderly people, adventure breaks for disadvantaged children, robot building with sixth-formers and community gardening.
Every year, as part of our Destinations of Leavers from Higher Education survey, we canvass all our first degree graduates approximately six months after they have completed their course. Here are the most recent figures, which cover graduates from 2013-2014:

- 61.3% working full-time
- 16.9% full-time further study
- 7.4% working part-time
- 5.6% travelling
- 4.9% unemployed
- 1.7% due to start a job in next month
- 1.1% part-time further study
- 1.1% doing something else

Bristol graduates were working for a wide range of employers, with over 1,300 different firms recruiting our leavers, including the NHS, PricewaterhouseCoopers and KPMG.

Four-fifths of those who were in employment at the time of the survey were in a graduate-level role.

Graduate profile

Poppy Trewhella
Sociology (BSc), 2014

Current job role: Development Assistant at Brightside

Since leaving Bristol: “I didn’t have a clear career path in mind when I left university but I knew I wanted to start full-time work straight away. I found it very difficult to get a job and feedback from interviews/assessment centres suggested I needed more work experience. I decided to do an internship within the charity sector at CLIC Sargent, which gave me enough experience to apply for the role I have now.”

In my current job: “I work in a social mobility charity which provides online mentoring for young people experiencing disadvantage. My role is to help bring in new business through research, attending meetings and writing proposals.”

Hints and tips: “Get as much work experience as possible, do extra-curricular activities, internships or placements – because employers are looking for more than just a degree.”
Graduate profile

Greg Dykes
Mechanical Engineering (MEng), 2012


Since leaving Bristol: “I knew that I wanted to work using my engineering knowledge but not as a classic engineer, so I spent evenings scouring job sites/forums/LinkedIn, etc, for jobs/industries that sounded interesting and then looked into what each one actually entailed day-to-day. When I came across adverts for trainee patent attorneys, the job immediately stood out as a specialised role with a lucrative balance of engineering, law and business.”

In my current job: “I am training as a patent attorney in London. It’s a reasonably small profession with only around 1,500 practising attorneys in the UK. As a predominantly legal industry, it is a big change from studying engineering, where there is usually a clear right answer. The training is mostly on-the-job and supplemented by courses run by universities and training companies.”

Having a University of Bristol degree: “The industry is dominated by red-brick university graduates and the overall quality of applicants to trainee roles is very high. I think Bristol is well regarded, and several of my firm’s partners are Bristol graduates so this may have helped!”

Hints and tips: “Take time to research different jobs with a view to focusing your application efforts on a small number of fairly specific roles that are genuinely interesting to you.”
Beyond Bristol

Introducing honorary graduates, catching up with high-flying alumni and saying thank you to our inspirational and generous Pioneers
Honorary degrees

Each year, following very careful consideration, the University bestows a number of honorary degrees on distinguished individuals who merit special recognition for outstanding achievement.

February 2015
Professor Viv Bennett, BA, MSc, RGN, HV, Doctor of Laws (LLD)
Director of Nursing for Public Health England since 2012.

Professor David Clarke, MA, LLM, Solicitor, Doctor of Laws (LLD)
Former Deputy Vice-Chancellor of the University of Bristol.

Professor Russell Grant Foster, BSc, PhD, Doctor of Science (DSc)
See interview, right.

Laura Perella Marshall, Doctor of Laws (LLD)
Managing Director of Icon Films, one of the UK’s leading independent production companies.

Peter Henry Marshall, Doctor of Laws (LLD)
Creative Director of Icon Films.

Sarah Montague, BSc, Doctor of Laws (LLD)
Presenter on BBC Radio 4’s Today programme and creator of The Educators.

James Graham Hilton Wadsworth, BA, Doctor of Laws (LLD)
Former member of the Council, Treasurer and Chair of the Audit Committee at Bristol, and a founding trustee of Bristol Community Housing Foundation.

July 2015
Professor Frances Balkwill, OBE, BSc, PhD, FMedSci, Doctor of Science (DSc)
One of the country’s leading cancer researchers, prolific author of science books for children and author of more than 240 scientific papers.

Professor Keith John Beven, BSc, PhD, Doctor of Science (DSc)
Known for his work in distributed rainfall run-off modelling and recipient of the Robert E Horton Medal of the American Geophysical Union in 2012.

Wendy Darke, BSc, PhD, Doctor of Science (DSc)
The first woman to head the BBC Natural History Unit.

Ben Emmerson, QC, LLB, Doctor of Laws (LLD)
Leading High Court judge and lawyer who has championed European human rights, including gay rights and free speech.

Nik Gowing, BSc, Doctor of Laws (LLD)
Journalist and news presenter who has worked for ITN, Channel 4 News and BBC World News.

Christopher Ian James Hartley, BSc, FRSA, Doctor of Laws (LLD)
A former Bristol Red and current Chair of the University’s Boat Club Alumni.

Stephanie Vera Hilborne, OBE, BSc, MSc, Doctor of Science (DSc)

Isobel Christine Iles, BA, Doctor of Letters (DLitt)
Whitney Museum of American Art’s Anne and Joel Ehrenkranz Curator of Film and Video in New York.

Barrister and former Labour MP who entered Parliament in 1997 and was in sustained conflict with the government over civil liberties and the Iraq War.

Professor Elizabeth Mary Morris, OBE, BSc, PhD, Doctor of Science (DSc)
The first and, to date, only woman to be President of the International Commission on Snow and Ice and the International Glaciological Society.

David C Ord, BSc, Doctor of Laws (LLD)
Member of University Council since 2005 who served as Chair of the Finance Committee from 2007 until 2013.

Professor David Stuart, BSc, PhD, FRS, FMedSci, Doctor of Science (DSc)
Was elected Fellow of the Royal Society at just 43 years old and is a Fellow of the Academy of Medical Sciences.

Matthew Richard Tanner, MA, MPhil, Doctor of Laws (LLD)
Chief Executive of the ss Great Britain Trust who transformed the charity into a leading visitor attraction.

Honorary fellowships
2014/15 saw the award of an honorary fellowship – the highest honour the University can bestow – to two individuals of exceptional distinction.

Professor Jeffrey C Watkins FRS, FMedSci is a pioneering chemist who conducted groundbreaking work on glutamate receptors and their role as a chemical transmitter in the brain.

Professor Sir Eric Thomas, FMedSci stepped down as Bristol’s Vice-Chancellor in 2015 after 14 years, and has also served as the government’s Education Champion and as President of Universities UK (2011-2013).
Professor Russell Foster

Professor Russell Foster, CBE, FSB, FMedSci, FRS, Doctor of Science, graduated from Bristol with a BSc in Zoology in 1980 and a PhD in 1984. He was presented with an honorary degree in 2014.

Why did you choose to study at Bristol?
I was completely naïve. I simply went through the UCAS handbook and applied to those institutions that did a joint botany and zoology degree. Thank goodness they interviewed me! I spent half an hour talking through my lab books and completely overwhelmed them.

What were your career aspirations at that point?
My first memory is watching a lizard basking on a rock aged three or four so I just had an overwhelming excitement to study biology. I remember hoping I could spend my life studying biology.

How did you find academic life here?
It was like pulling back the curtains and letting the light in. For the first time in my life I found I was mixing with people who also shared a passion for biology – it was so exciting and utterly thrilling.

Were you active in other aspects of student life?
I was in the University Octopush team. As you can imagine it’s not a good spectator sport, but it’s by far the most enjoyable sport I’ve taken part in… although it’s more violent than rugby.

Was Bristol a good city in which to be a student?
At first I wasn’t sure if I should allow myself to have a social life before realising it was a huge part of being a student. I loved music but hadn’t heard much live music and saw my first Wagner Ring Cycle at the Hippodrome in my first year. It led to a lifelong passion for Wagner and opera.

I lived in Hiatt Baker Hall and enjoyed hanging out with people who read a variety of other subjects. One of the great joys was staying up to the early hours discussing everything from the evolution of amphibians to the nature of Christianity. The experience of university life was almost as important as the academic part.

Your BSc in Zoology seems a long way from your current line of research… or is it?
There is a surprisingly natural link. What’s important about a zoology and biology degree is that it gives you a breadth of understanding in biological sciences. We studied JZ Young’s The Life of Vertebrates and I learned that lampreys [a jawless fish] have photoreceptors, which led to my PhD studying photoreceptors in birds.
The conceptual leap was that the human eye would have a photoreceptor. This was revolutionary and the vision community said it was nonsense. But because the idea came from that comparative background, the conceptual leap was not so huge.

What a degree taught me is that we bring disparate information together to bring coherence and understanding.

You were awarded a CBE for services to science in 2015…
For me, being nominated Fellow of the Royal Society and Academy of Medical Sciences was the real gong: your colleagues and peers have elected you into an extraordinary club. The CBE is like a parallel track and it was satisfying to have my work recognised outside of that club. It was a genuine surprise and an immense honour.

Professor Russell Foster
Professor Russell Foster, CBE, FSB, FMedSci, FRS, Doctor of Science, graduated from Bristol with a BSc in Zoology in 1980 and a PhD in 1984. He was presented with an honorary degree in 2014.
Alumni success

Bristol alumni are making an impact all around the world. Below, we have highlighted just a few of their recent achievements.

Jane Leslie (BA 2004), aged 65, became a world champion triathlete after winning the 65 to 69-year-old category at the World Triathlon Grand Final in Edmonton, Canada. Leslie completed a 1,500m swim, 40km cycle and 10km run in 2 hours 47 minutes and 21 seconds.

After being named one of National Geographic’s Emerging Explorers in 2014, Nizar Ibrahim (BSc 2006) was appointed the first ever palaeontologist TED fellow. Nizar was part of the team that discovered the Spinosaurus which, at 50 feet long, nose to tail, was the largest predatory dinosaur to ever walk the earth.

Professor Dame Julia Goodfellow CBE (BSc 1972, Hon DSc 2002) was elected President of Universities UK. She is the first woman to lead the organisation in its near 100-year history.

Astrophysics graduate Shreya Singhal (BSc 2012) played a pivotal role in safeguarding the right to freedom of speech on India’s internet after her challenge to legislation relating to penalties for people ‘causing offence’ online was upheld by India’s Supreme Court.

Not one but two Bristol alumni, Simon Sylvester (MA 2004) and Mahesh Rao (BSc 1995), made the six-strong shortlist for The Guardian’s Not the Booker Prize 2014. Both were recognised for their debut novels. Sylvester’s The Visitors, a haunting thriller about a remote community in the Shetlands, went on to win the award after a public vote.

Professor David Balmforth (BSc 1968) was elected the 150th President of the Institution of Civil Engineers. Professor Balmforth is Executive Technical Director at MWH Global Inc, where his work covers urban flood control, pollution management and climate change adaptation.

Two dental graduates were appointed to presidential roles in professional associations. Alasdair Miller (BDS 1977) is the current President of the British Dental Association, while Alastair Nicoll (BDS 1984) is President-Elect of the Canadian Dental Association.

Jenny Griffiths (MEng 2009), whose Snap Fashion app has changed the way people shop online for clothes, was awarded an MBE for her achievements – at the age of just 27.

In recognition of her outstanding voluntary work, Teocah Dove (MSc 2014) was among 60 young people from across the Commonwealth to receive a Queen’s Young Leaders Award at a ceremony at Buckingham Palace.

Professor Charles McKean (BA 1968), a leading historian who died after battling cancer last year, was honoured posthumously with Scotland’s flagship literary prize, the Saltire Scottish Book of the Year, for his epic study of 18th-century life in Scotland, co-authored with Bob Harris.

Legacy of recognition

There is a long-standing tradition among Bristol’s alumni and friends of leaving a gift to the University in their will. During the University’s Centenary Campaign, which came to a close in December 2014, Bristol received more than £13 million in legacies. More than £7 million was donated to support the University’s many talented students.

In 2014/15, legacy gifts, ranging from £1,000 to £730,000, accounted for more than £1 million of philanthropic income. One such gift was received from Peter and Jean James, alumni from the Faculty of Medicine who met at Bristol in the early 1940s. It was their belief that the University had provided them with so many opportunities in life that inspired them to leave a legacy.

Their gift ensures that future generations of bright students will not be discouraged by the heavy financial burden of a medical education, regardless of their background.
Mr ALEX S Brooks (EBS 1998)
Ms Aileen M Broomfield (EBS 1984)*
Dr Dwight S Brothers (AYA 1962) and
Mrs Sue C Brothers (1959)
Miss Naomi K Buffery (LLB 2000)
Mr Nick Bugler (BA 1982)
Mr Ross D Bull (EBS 1969, MSc 1972)
Dr Susan M Burge OBE (Adams) (EBS 1971)*
Mr Denis A S Burn (EBS 1975)*
Mr James Burstall (BA 1987)
Mr Andrew E J Burton (BA 1986)* and
Mrs Anna-Marie Burton
Mr Peter G Bye (EBS 1965)* and
Mrs Alison M Bye (Hi) (BA 1965)*
Mr A Alexander Cameron QC (LLB 1985)*
Mr Norman S D H Casson (LLB 1969) and
Mrs Lorraine M Casson*
Mr Nigel S Cawthorne (EBS 1970)*
Mr Mark O Cawthron (LLB 1978)*
Mr Richard B Chadwick (EBS 1993)*
Mr James Charatan (BA 1983)*
Mr Hon M Cheang (EBS 1964)*
Mr Ian B Chicken (LLB 1987)*
Dr Soo C Choo (MSc 2000)
Mr Robert A Churcher (BA 1972)
Professor David Clarke (Honorary LLB 2015) and
Mrs Judith Clarke
Mr Donald L Clarke (EBS 1962)*
Miss Kitty Clarke (BA 1971)*
Mr James S Clayton (BEng 2003)*
Professor Richard R Clements MBE*
Mr Stephen J Cockes (EBS 1989)*
Dr Arthur Codd (MB ChB 1958, MD 1972)
Mr Nigel W H Cooper (EBS 1978)
Dr Alec J Coppen (MB ChB 1953, MD 1957)
Dr J Philip Grimshaw Bolton (MB ChB 1974)*
Mr Roger T Brison (BA 1963) and
Mrs Joy D Brison (Keen) (BA 1964)*
Mr Alex S Brooks (EBS 1998)
Ms Aileen M Broomfield (EBS 1984)*
Dr Dwight S Brothers (AYA 1962) and
Mrs Sue C Brothers (1959)
Miss Naomi K Buffery (LLB 2000)
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