

# Trustees' report and financial statements

For the year ended 31 March 2015



THE  
ROYAL  
SOCIETY

### **Trustees**

The Trustees of the Society are the members of its Council, who are elected by and from the Fellowship. Council is chaired by the President of the Society. During 2014/15, the members of Council were as follows:

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Sir Paul Nurse

#### **Treasurer**

Professor Anthony Cheetham

#### **Physical Secretary**

Sir John Pethica\*

Professor Alexander Halliday\*\*

#### **Biological Secretary**

Sir John Skehel

#### **Foreign Secretary**

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Professor Roger Owen

Professor Timothy Pedley\*

Dame Nancy Rothwell DBE

Professor Stephen Sparks CBE\*\*

Professor Ian Stewart\*\*

Dame Janet Thornton DBE\*\*

Professor John Wood\*

\* Until 1 December 2014

\*\* From 1 December 2014

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## Cover

Loch a'Chaolais, Stockinish,  
Isle of Harris in June 2007.  
Published in *Biology Letters*.  
Photo credit: Helen Bennion.

## President's foreword



*Paul Nurse*

Paul Nurse  
President of the  
Royal Society

Science is enjoying an upturn in interest at the moment. The numbers of young people studying science are increasing, there are scientists with a high public profile such as our new Professor for Public Engagement in Science, Brian Cox and the Chancellor of the Exchequer has declared science a 'personal priority'. As the UK's national academy it is vital that we capitalise on this in order to help forge a new compact with society that places science at the heart of modern life.

The Royal Society's strength comes from the scientific quality of our Fellowship. This year that has been clear, whether we have been promoting, recognising and supporting the best science in the UK or on an international stage or in providing the scientific evidence to help shape rational debate among policy makers and the public.

The future strength of UK science depends to a large extent on our education system and this year the Society published a vision for the next twenty years of science and maths education. It envisages a system where science and maths remain integral for all students up to the age of 18 as part of a baccalaureate style framework. It places an emphasis on evolution rather than revolution in the curriculum and on an increase in the numbers of specialist teachers. It has been well received by many in the education community and will shape our work in this sphere going forward.

The outstanding scientific contribution of our Fellows was marked this year with, among others, John O'Keefe's Nobel Prize in Physiology or Medicine and Martin Hairer's Fields Medal. Our own most prestigious award, the Copley Medal, which dates back to 1731 with awardees such as Benjamin Franklin, Charles Darwin and Albert Einstein and is probably the oldest scientific award in the world, was awarded to Sir Alec Jeffreys for his pioneering work on variation and mutation in the human genome.

A matter of great personal importance to me is promoting the engagement of women scientists with the Society through its research awards and the Fellowship. This year has seen the Society make progress in some areas and I am pleased that 11 of the 23 members of the Council of the Society are women. However, there remain areas where we can improve our own practices. Diversity is a problem across science and the Society and the wider science community cannot tolerate situations where women, or other underrepresented groups, face barriers to success not encountered by their peers.

Collaboration has been a key theme of this year. In the UK, ahead of the General Election the Society joined forces with the Academy of Medical Sciences, the British Academy and the Royal Academy of Engineering to publish a report, *Building a stronger future*, on the case for greater investment in research and innovation. The Prime Minister highlighted the report as a 'timely contribution' responding to it by saying he 'shared our desire to maintain and grow the UK's reputation for world-class research and to make the UK the location of choice for research and innovation'.

On the international stage we partnered with the Government of India to hold the first Commonwealth Science Conference in over 50 years. The conference brought together over 300 people from 30 Commonwealth countries under the theme of Science for the common good. Measured against our goals of celebrating excellence in Commonwealth science, providing opportunities for cooperation between researchers, inspiring young scientists and building scientific capacity in the developing nations within the Commonwealth those who travelled to Bangalore felt it was a great success. Our challenge is now to build on that and continue to contribute to furthering those goals.

# Executive Director's report



Dr Julie Maxton  
Executive Director  
of the Royal Society

The Royal Society has expanded its activities in a number of key areas this year. Council has approved an expansion of the Scientific Programme and a greater degree of flexibility in the format of scientific meetings. This increase will enable a greater number of the high quality proposals received each year to be explored as part of the programme of meetings and encourage greater participation in the Scientific Programme overall.

The Public Engagement programme has also increased in reach and participation this year, with a greater number of public engagement events providing more opportunities for the general public to meet researchers and learn about science. In parallel, the *Meet the scientists* programme offers training, advice and opportunities for Research Fellows who wish to engage, inform and inspire the public with their research.

The Royal Society is committed to promoting the cause of research and innovation and the importance of continued investment in science, both in the UK and in Europe. This year has seen the launch of a five year strategy to promote industrial science and translation, support the continued integration of science and industry, and build further connections between academia, industry and government. A key part of the strategy will be the ongoing series of meetings Breakthrough Science and Technologies: Transforming our future, which recently launched with an event focussed on the topic of Machine Learning. The Science, Industry and Translation Committee includes leading scientists and entrepreneurs and is chaired by Dr Hermann Hauser KBE FREng FRS and Sir Simon Campbell CBE FMedSci FRS.

In cooperation with the Academy of Medical Sciences, the British Academy, the Royal Academy of Engineering and the Royal Society of Edinburgh, the Royal Society hosted a public lecture by the European Commissioner for Research, Science and Innovation,

Carlos Moedas. The Commissioner spoke of science and innovation as the biggest driver for prosperity and of science as a tool for diplomacy.

The Society's commitment to cooperation with other organisations and international activities has been prominent this year. The Commonwealth Science Conference was a great success and the Society continues to forge strong links across the world, of which more detail appears later in this report. The Society also presented the King Charles II Medal to Dr Tony Tan Keng Yam, President of Singapore to acknowledge his role in the transformation of Singaporean research and education over the course of his career.

The Society has produced two major policy reports this year. Resilience to extreme weather was launched at the Commonwealth Science Conference and has been promoted at the UNFCCC Conference of the Parties in Lima and the UN World Conference on Disaster Risk Reduction in Sendai, with the latter declaration reflecting many of the recommendations made in the Resilience report. A new strategy for Education has also been launched in further support of the recommendations made in this year's Vision for science and mathematics education report.

2015 marks the 350th anniversary of the publication of *Philosophical Transactions*. The Society has commemorated the launch of the world's first science journal with a series of events and the publication of two special commemorative issues of the journal, and all manner of treasures connected to the early life of the journal have been displayed as part of a celebratory exhibition. The Society is considering ways that we can use our magnificent collection and archive to inspire the next generation of scientists in the future.

# Trustees' report

## The Royal Society

The Royal Society of London for Improving Natural Knowledge, commonly known as the Royal Society, is a self-governing Fellowship of many of the world's most distinguished scientists drawn from all areas of science, engineering, and medicine. The Society's fundamental purpose, reflected in its founding Charters of the 1660s, is to recognise, promote, and support excellence in science and to encourage the development and use of science for the benefit of humanity.

The Society is the national academy of science in the UK, and its core is its Fellowship and Foreign Membership. The Fellowship comprises the most eminent scientists of the UK, Ireland, and the Commonwealth. Fellows are elected through a peer review process on the basis of their excellence in science. At the time of writing there are 1,449 Fellows and a further 167 Foreign Members, including ten Honorary Fellows. The Fellowship and Foreign Membership includes 80 Nobel Laureates. It is from the eminence of its Fellowship and Foreign Membership and its independence from government and particular interests that the Society derives its authority in scientific matters. Fellows and Foreign Members are invited to fulfil a range of responsibilities for the Society on a voluntary basis. Many others, scientists and non-scientists, also contribute to the work of the Society on a voluntary basis. The Fellowship is supported by staff based in London.

A major activity of the Society is identifying and supporting the work of outstanding scientists. The Society supports researchers through a range of schemes funded by government, foundations, trusts, research councils, industrial organisations, gifts, and from the Society's own resources. The Society facilitates interaction and communication among scientists via its discussion meetings and disseminates scientific advances through its journals. The Society also engages beyond the research community, through independent policy work, the promotion of high quality science education, and communication with the public.

The Royal Society has six strategic priorities, detailed in the Strategic Plan 2012 – 2017:

- Promoting science and its benefits
- Recognising excellence in science
- Supporting outstanding science
- Providing scientific advice for policy
- Fostering international and global cooperation
- Education and public engagement

### Public benefit

Research and innovation advance our economic, social and cultural well-being and health and are the key to sustainable long-term economic growth. The Society's mission is to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity. As shown in this report, the Society undertakes a broad range of activities that provide public benefit either directly or indirectly. These include providing financial support for early career scientists to pursue outstanding research, organising discussion meetings to advance science, providing expert scientific advice to policy makers including on science education, promoting the importance of science internationally and the staging of programmes to engage the public with science. The Society is concerned with excellent science, wherever and by whomever it is done and is committed to increasing diversity in science, technology engineering and mathematics (STEM).

### Looking forward

In the year ahead the Society will continue to pursue its mission to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity. We will deliver an expanded scientific programme with an increasing focus on industrial science and will develop a diversity strategy to help break down barriers to participation in science and in particular at the Royal Society. Our support for outstanding science will be strengthened through projects such as the expansion of the Newton Fellowships. In the policy sphere we will publish a report on cybersecurity, will continue to press for the implementation of our vision for science and maths education and will explore new areas such as machine learning. On the international stage, among other activities, the Society will seek to build on the success of the Commonwealth Science Conference. The Society will also continue to expand opportunities for the public to meet real scientists and to find out, first hand, about the ground breaking science being done in the UK and about the science behind some of the big policy issues of the day.

#### Below left

Medal winners Professor Terence Tao FRS and Professor Howard Morris FRS.

#### Below right

Lord Stern, President of the British Academy (left) and Sir Paul Nurse, President of the Royal Society (right) discussing the joint academy report *Building a Stronger Future* during the *Tackling the Great Challenges of the 21st century* event.





Priscilla Carrero De Souza  
Diretora de  
Marketing & Relações Institucionais



## Promoting science and its benefits

The Royal Society engages with scientists working in industry, the public sector, charities, other academies and universities to highlight the importance of research to our health and wellbeing, as well as to our economic and social progress.

# Promoting science and its benefits

“I very much enjoyed the Labs to riches evening. I do believe that this is vitally important for the future of Britain. Without new industries and successful companies our economic future is bleak: hence my books on Spin-outs and creation of IP Group”

Professor Graham Richards CBE, Inhibox Ltd.

## Science, industry and translation

The Royal Society is committed to supporting innovative science and scientific research wherever it is found. World class research and development in UK industry is essential for transforming innovative ideas into commercially successful products.

Building on this commitment, in February 2015 the Society launched a five year science, industry and translation strategy to promote industrial science and translation, and to ensure that industrial science is highlighted across our programme of scientific events.

The five-year strategy will underpin the integration of science and industry, using the Society's unique influence and position to promote the value and importance of science by connecting academia, industry and government. Implementation of the strategy is led by the Society's Science, Industry and Translation Committee, chaired by Dr Hermann Hauser KBE FREng FRS and Sir Simon Campbell CBE FMedSci FRS, whose membership includes leading scientists and entrepreneurs.

The science and industry programme also supports the Society's aims to make the strongest case to Government for increased investment in the science base and address the shortage of skilled engineers and scientists in some sectors. Committee members supported and contributed to the Royal Society response to the Dowling Review on collaboration between business and universities and the Hauser Review on the Catapult Network. The Society is developing a number of initiatives to promote industrial science and translation.

## Science CEO Summit

In June 2014 the Royal Society hosted the Science CEO Summit, which is part of the Silicon Valley Comes to the UK (SVC2UK) programme. The summit provided an opportunity for the leaders of small and growing science-based companies to attend workshops chaired by successful entrepreneurs and investors in order to learn how to grow a small company. Attendees were nominated by a group of industry professionals, venture capitalists and other organisations within the science community.

Mentors included successful entrepreneurs such as Sir Robin Saxby (former chairman of ARM Holdings plc), James Bilefield (Skype, Condé Nast, OpenX, Yahoo!), and Dr Hermann Hauser FRS (co-founder of Acorn Computer Group, Amadeus Capital, former Vice President of Olivetti).

One highlight of the summit was the publication of the 'Science 50 Index' by Hermann Hauser and Sherry Coutu, ranking the best-performing businesses in the British science and enterprise sectors. The companies listed created a turnover of £13.1 billion during 2013.



### Labs to riches

The Society's flagship industry event Labs to riches brings together leaders in academia, industry and government to promote the importance of research and development to the UK economy and to celebrate the achievements of some of our leading innovative thinkers and entrepreneurs.

This year's event was held in February 2015 and was opened by Sir Paul Nurse, President of the Royal Society, who stressed the importance of research to the UK economy. The keynote address was given by the Rt Hon Greg Clark MP, Minister for Universities, Science and Cities, who described the importance of scientific research and highlighted key messages from the Government's recent science and innovation strategy.

Many of the guests provided very positive feedback, describing Labs to riches as giving a "welcome, optimistic outlook for science and innovation in the UK" and as "a good environment to get your messages out to government, industry and supporters". Feedback and discussions from the event are being used to inform future science and industry programme activity.

His Royal Highness, the Duke of York presented the Brian Mercer Awards for Innovation and the Brian Mercer Feasibility Awards. The Brian Mercer Awards are explained on page 38.

"A welcome, optimistic outlook for science and innovation in the UK."

An example of the feedback received at this year's Labs to riches event.

### Above

Sir Paul Nurse delivers the welcome address at Labs to riches in February 2015.



**Above**  
Professor Shankar  
Balasubramanian  
FMedSci FRS and  
Professor David  
Klenerman FRS.

### **Success Stories**

The successful translation of world-class research from academia to industry is essential to realise the potential of innovative ideas to drive economic growth and transform people's lives. As part of the Society's strategy to promote industrial science and translation, the Society has identified a number of success stories that showcase examples where scientific breakthroughs have been successfully translated into commercial success in the UK. The second round of success stories is currently in development, focussing on small and medium enterprises in the UK involving scientific advances.

### **Breakthrough Science and Technologies: Transforming our Future**

The Society has launched a new series of unique, high-level conferences. The *Breakthrough Science and Technologies: Transforming our Future* series brings together representatives from industry, academia and government to discuss the major scientific and technical challenges of the next decade. The first of these meetings on machine learning was held in May 2015 with further meetings planned.

### **Enterprise Fund**

The Royal Society Enterprise Fund was created in 2008 from donations to the Society totalling approximately £7 million, with the purpose of becoming a financially successful contributor to early-stage science-based companies and a role model for the translation of excellent science for commercial and social benefit. During its first four years, the Fund made initial and follow-on investments in five companies. The Society was advised by the board of a wholly owned subsidiary company, Royal Society Enterprise Fund Limited, whose members had relevant expertise, when making investment decisions. After a detailed assessment of the options that would give the greatest likelihood of the Fund becoming financially successful, Council concluded that the objects of the Fund could best be achieved by delegating the management and administration of the Fund to a suitably qualified venture capital investment manager and by transferring the Fund into a suitable investment vehicle to be managed by that manager. Following a selection process, Council selected Amadeus Capital Partners Limited as the investment manager. The selection was made on the basis of Amadeus's relevant experience and also that it operates commercial venture funds with investment policies in close alignment to that of the Enterprise Fund.

During the year, the Society and Amadeus signed a Limited Partnership Agreement to govern Amadeus RSEF LP. Under the agreement, Amadeus is responsible for the management and administration of the Fund in accordance with a Programme Related Investment policy. The Fund will be invested in seed-stage and early-stage companies developing and commercialising scientific ideas and inventions that may benefit the public. The Programme Related Investment policy includes appropriate requirements and controls, including that in advance of making any investment in a new company, Amadeus must provide the Society with the relevant investment memorandum so that the Society may satisfy itself that the investment is compliant with the policy. If the Society deems that any such proposed investment is not compliant, it may instruct Amadeus not to proceed with the investment. The Limited Partnership made new investments in four companies prior to 31 March 2015 and in four further companies during April 2015. During the coming year, the Fund is expected to make further investments and the Society will offer to engage companies in which the Fund invests in suitable elements of its programmes in science, industry, and translation.

### **Scientific Programme review**

This year, the Society undertook a full review of the Scientific Programme. The review was led by Professor Michael Cates FRS, with Professor Richard Morris CBE FMedSci FRS and Professor Steven Furber CBE FREng FRS and considered the objectives, quality, organisation and logistics of all the scientific meetings held by the Society.

Council supported the review's recommendation that, subject to budget, the Society should increase the size of the scientific programme in view of the large number of high quality proposals that were received by the Hooke Committee. The Society is also enabling more flexibility in the format of the scientific meetings.

As a result of the review, the Society is introducing a new series of discussion meetings, Science + meetings, which will allow the Society to broaden the scope of its scientific meetings to include wider considerations including policy.

The Hooke Committee has already agreed additional meetings as a result of the review with the main impact of the increased programme to be seen from 2016.

### **Scientific meetings**

In 2014/15, almost 2,000 people attended the Royal Society's scientific programme, comprising 31 meetings spread between the Royal Society at Carlton House Terrace and the Kavli Royal Society International Centre at Chicheley Hall, the Society's property in Buckinghamshire.

“The scientific meetings I have attended at the Kavli Royal Society Centre have been brilliant. Stimulating, productive, and really well organized. Chicheley Hall is a fantastic facility for meetings. Truly world-class. I hope I get invited back before too long.”

Speaker at *Evolutionary analysis beyond the gene* Theo Murphy international scientific meeting, November 2014

## Royal Society Scientific discussion meetings 2014/15

### ***The new chemistry of the elements***

Organised in conjunction with the German Academy of Sciences by Professor Peter Edwards FRS, Professor Nicholas Long, Professor Anthony Cheetham FRS, Professor Bernt Krebs, Professor Paul Raithby and Professor Martin Schroder

12 – 13 May 2014

### ***Antimicrobial resistance – addressing the threat to global health***

Organised in partnership with the Academy of Medical Sciences by Professor Sir Roy Anderson FMedSci FRS and Professor Sharon Peacock FMedSci

22 – 23 May 2014

### ***Human Evolution: brain, birthweight and the immune system***

Organised by Professor Barry Keverne FMedSci FRS, Professor Graham Burton FMedSci and Professor Ashley Moffett

9 – 10 June 2014

### ***Utilising triplet excitons in organic electronics***

Organised by Professor Andy Monkman and Professor Sir Richard Friend FEng FRS

15 –16 September 2014

### ***Arctic sea ice reduction: the evidence, models, and global impacts***

Organised by Professor Daniel Feltham, Dr Sheldon Bacon, Dr Mark Brandon and Professor (Emeritus) Julian Hunt CB FRS

22 – 23 September 2014

### ***Biological challenges to effective vaccines in the developing world***

Organised by Professor Nicholas Grassly, Professor Gagandeep Kang and Professor Beate Kampmann

10 – 11 November 2014

### ***Feedbacks on climate in the Earth system***

Organised by Professor Eric Wolff FRS, Professor John Shepherd CBE FRS, Dr Emily Shuckburgh and Professor Andrew Watson FRS

8 – 9 December 2014

### ***Release of chemical transmitters from cell bodies and dendrites of nerve cells***

Organised by Professor John Nicholls FRS, Professor Francisco de Miguel

19 – 20 January 2015

### ***The paradigm shift for UK forensic science***

Organised by Professor Sue Black and Professor Niamh NicDaeid

2 – 3 February 2015

### ***Origin and evolution of the nervous system***

Organised by Professor Nicholas Strausfeld FRS and Dr Frank Hirth

9 – 10 March 2015

**Theo Murphy meetings at the Kavli Royal Society Centre at Chicheley Hall 2014/15*****Number fields and function fields: coalescences, contrasts and emerging applications***

Organised by Professor Jon Keating FRS, Professor Zeev Rudnick and Professor Trevor Wooley FRS  
29 – 30 May 2014

***Do we need a global project on artificial photosynthesis (solar fuels and chemicals)?***

Organised by Professor Thomas Faunce, Professor Fraser Armstrong FRS, Professor Adam F Lee, Professor Duncan H Gregory, Professor David F Coker and Professor Paul Mulvaney  
8 – 10 July 2014

***New approaches in coronal heating***

Organised by Dr Ineke De Moortel and Professor Philippa Browning  
26 – 27 August 2014

***When senses take flight: the evolution, development, mechanisms and function of avian senses***

Organised by Dr Hannah Rowland, Professor Innes Cuthill and Dr Tom Pike  
4 – 5 September 2014

***Amazing (caviton) bubbles***

Professor Shengcai Li, Professor Christopher Earl Brennan and Professor Yoichiro Matsumoto  
4 – 5 November 2014

***Evolutionary analysis beyond the gene***

Organised by Professor Christopher Howe and Dr Jamie Tehrani  
17–18 November 2014

***Spatial transformations from fundamentals to applications***

Organised by Professor Yang Hao, Professor Roy Sambles FRS and Professor Patrick Grant  
26 – 27 January 2015

***Complement: driver of inflammation and therapeutic target in diverse diseases***

Organised by Professor Paul Morgan and Professor Sir Peter Lachmann FMedSci FRS  
23 – 24 February 2015

***Subglacial Antarctic lake exploration: first results and future plans***

Organised by Professor Martin Siegert, Professor John Prisco, Dr Irina Alekhina, Professor Jemma Wadham and Professor Berry Lyons  
30 – 31 March 2015

### Diversity

Diversity is an essential part of the Royal Society's mission to recognise, promote and support increased excellence in STEMM (science, technology, engineering, mathematics and medicine). This is because a diverse and inclusive scientific workforce draws from the widest range of backgrounds, perspectives and experiences, thereby maximising innovation and creativity in science and fuelling economic growth.

The Society has been running a number of initiatives to increase participation in science from underrepresented groups. The Society's activities have been overseen by its Equality and Diversity Advisory Network (EDAN) chaired by Professor Ed Hinds FRS and a steering group chaired by Dame Julia Higgins FRes FEng FRS which oversaw a four year joint STEMM Diversity Programme with the Royal Academy of Engineering.

### Diversity Day

The Society's second annual Diversity Day was held on 17 June 2014. Diversity Day brought together members of the scientific community and those active in equality and diversity to discuss key issues, identify barriers to improvement and share information on good practice and current initiatives. The day included a series of themed sessions including presentations by Jaguar Land Rover, IBM, FDM and Caterpillar. Professor Dame Sally Davies FMedSci FRS, Chief Medical Officer gave the keynote speech.

That evening saw 'My life in Science: Diversity in British Science' with videos from "Inspiring Scientists: Diversity in British Science" which explores the stories of ten scientists from different ethnic backgrounds active in UK science today. This was followed by Professor Joanna D. Haigh CBE FRS in conversation with Alok Jha, Science correspondent at ITV News. Joanna spoke to Alok about how she first became interested in meteorology back in her childhood, when she built herself a home weather station, and how studying physics at university helped her to make weather and climate the main focus of her subsequent career.

**Below left and right**  
Attendees at the  
Royal Society's  
annual Diversity Day.





### Diversity in STEMM: Establishing a business case

As part of the BIS STEMM diversity programme, the Society commissioned research into the business case for diversity in the scientific workforce. Our policy study report *Diversity in STEMM: Establishing a business case* was launched on 3 June 2014.

The research, conducted by Westminster Business School explored whether (1) there is a business case for diversity in STEMM occupations and (2) whether diverse teams are more likely to do 'good science'. The report offers a unique STEMM specific perspective on the business case/s for diversity. The findings highlight the business benefits of diversity, which are often highly contextual. The report also investigates the role that specific organisational cultural factors, leadership behaviours and managerial practices play in facilitating progress towards a more diverse workforce.

The Society has been asked to share the report's findings at WES Women in Engineering conference for National Women in Engineering Day and Sanger Sex in Science Careers Day in June 2015, as well as a biomedical and diversity group hosted by the Wellcome Trust.

### Celebrating Black History Month: Inspiring Scientists Twitter chat

To celebrate Black History Month, on 22 October 2014 we held a live Twitter chat between two of the scientists featured in our *Inspiring Scientists* series of films and the public to ask questions on their science field, their experience of diversity in UK science and their career paths into science:

**Professor Saiful Islam** is a chemist who never wears a white lab coat. Rather than conduct experiments in laboratories, he uses the world's most powerful computers to produce computer models of the inner, 'atomic' structure of materials used in 'green' energy applications.

**Dr Charlotte Armah** was born in London to parents who had emigrated from Ghana. She has been very successful in science – presenting her work all over the world – without feeling that science has ever been an obsession; she explains that rather than playing with chemistry sets as a child, she preferred to sing along to the Radio 1 pop music chart.

Using Social Media in this way led to a 20% increase in the overall views of the *Inspiring Scientist* project videos, and Twitter activity reached over 700,000 accounts. Engagement through social media platforms forms an increasingly important role in the Society's scientific and public engagement activities.



**Top**  
Professor Saiful Islam

**Above**  
Dr Charlotte Armah

## Working with others

### Diversity and the Royal Society

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The Royal Society's 2014 report *A picture of the UK Scientific Workforce* analysed data in relation to diversity characteristics across the scientific workforce. One of the report's recommendations was that improved links between existing datasets would facilitate greater understanding of the information surrounding entry, progression and retention within the workforce with relation to diversity issues.

In partnership with the Department for Business, Innovation & Skills (BIS) and the Royal Academy of Engineering, a meeting was arranged to share some key findings and look at the practicalities of what needs to be done to improve data collection, linkage and analysis. Chaired by Professors Dame Julia Higgins FREng FRS and Dame Wendy Hall FREng FRS, the discussion meeting brought together over 30 key figures including government representatives, dataset owners and researchers working on diversity in STEM.



**Left**  
Attendees at the  
Royal Society's  
annual Diversity Day.

### **Royal Society University Research Fellowships**

In September 2014, the Society announced the appointment of 43 University Research Fellows, of whom 41 were men and two were women, significantly fewer than in previous years. The Society considered this unacceptable and the President asked three members of Council to investigate. The panel was asked to consider why the number of women appointed was different to previous years and what actions the Society should take as a result of the findings. Having assessed the available evidence, the panel concluded that it could not identify any factor or combination of factors to explain why the outcome in 2014 was so extreme. However, they and Council shared the view that the Society must take actions to ensure that it attracts women to apply and judges their applications on a par with men. The panel made a series of recommendations which the Society is now addressing in order to seek to improve the representation of women in its early career schemes. An update on the implementation of these recommendations will be presented to Council later this year.

### **Diversity strategy**

The Society is now developing a new three year diversity strategy which will be overseen by a new Diversity Committee to be chaired by Professor Uta Frith FRS. The new strategy builds on the previous work and has the following four objectives:

- To maintain a culture within the Society that promotes diversity and inclusion
- To address barriers to participation and success in STEMM
- To work in partnership to maximise the effectiveness of diversity initiatives across the scientific community
- To recognise and champion the achievements of a wide range of scientists from underrepresented groups



## Recognising excellence in science

The Royal Society rewards the excellence and creativity of scientists no matter who they are, or where they are from, electing the best to be Fellows and Foreign Members and giving awards to those scientists who are making a major contribution to society.

**Left**

Dr Faith Osier, winner of the Royal Society Pfizer Award 2014.

# Recognising excellence in science



The beautiful and peaceful surroundings of Chicheley Hall provide an ideal setting for a relaxed and enjoyable journey through some of the most exciting science in which Fellows are currently involved.

“The Fellows Research Weekend was a unique occasion to meet with the leaders in other disciplines and to exchange ideas.”

Feedback provided by a Fellow (supplied anonymously).

## The Fellowship

Fifty new Fellows and ten new Foreign Members were elected to the Society in May 2014. These included seven female Fellows and one new female Foreign Member. New Fellows were admitted in July 2014 at the Admissions Day ceremony, before which each was invited to give a short seminar on their research and field of expertise over a two day period. At 31 March 2015 there were 1449 Fellows and 167 foreign members. A full list of Fellows elected in 2014 can be found on pages 23-25 of this report.

## Fellowship Programme

The ongoing Fellowship Programme enables Fellows to participate more fully in the work of the Society and provides opportunities for Fellows to engage with one another, both professionally and socially.

This year four regional meetings have been held in Exeter, Manchester, Nottingham and London, enabling Fellows to meet and discuss science with each other and Royal Society business with the President. A wide range of topics have been discussed at these meetings including elections to the Fellowship, the Society's engagement in Europe, capital investment in science, academic career structures, collaborations between industry and academia, public engagement with science and the review of the Society's medals and awards.

Research weekends also form part of the Fellowship Programme, and are proving to be immensely successful. The weekends are open to all Fellows and Foreign Members and their guests. This year one research weekend was held on 22/23 November 2014, hosted by Professors Judith Howard CBE FRS and Professor Gideon Davies FRS and was attended by over 30 Fellows and their guests. Most of the talks were given by newly elected Fellows and offered the opportunity to hear recent research and find out about new and emerging areas of science. Professor Michael Hart CBE FRS gave a pre-dinner keynote speech on ‘Synchrotron Radiation: what's it all about?’ Professor Hart was Chairman at the National Synchrotron Light Source in Brookhaven National Laboratory, New York from 1995 – 2000.

## New Fellows 2014\*



Professor Steven Armes  
FRS



Professor Paul Attfield  
FRS



Professor David  
Beerling FRS



Professor Michael  
Benton FRS



Lord Kumar  
Bhattacharyya  
Kt CBE FREng FRS



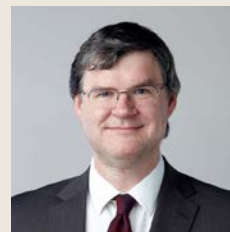
Dr Ewan Birney FRS



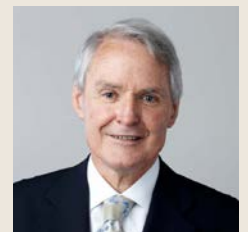
Professor Dorothy  
Bishop FRS



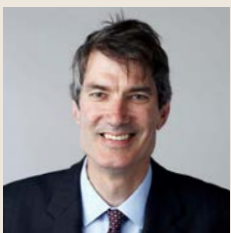
Professor Tom  
Bridgeland FRS



Professor David  
Charlton FRS



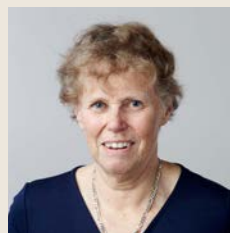
Professor Peter  
Colman FRS



Professor Steven  
Cowley FRS



Dame Sally Davies  
DBE FRS



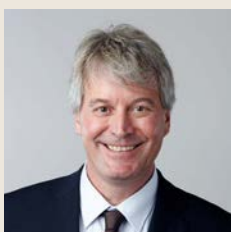
Professor Marian  
Stamp Dawkins FRS



Dr John Dick FRS



Professor Liam Dolan  
FRS



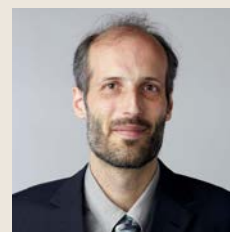
Professor Timothy  
Eglinton FRS



Professor Amanda  
Fisher FRS



Professor Geoffrey  
Grimmett FRS



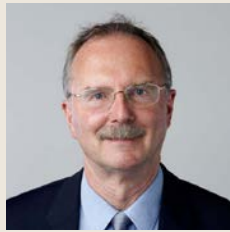
Professor Martin Hairer  
FRS



Professor Richard Hills  
FRS



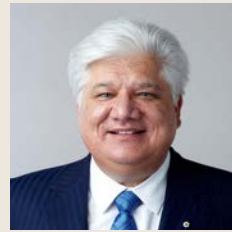
Dr Timothy Barrington  
Holland FRS



Professor Martin Hume  
Johnson FMedSci FRS



Professor Peter  
Keightley FRS



Mr Mike Lazaridis  
OC FRS



Professor Timothy  
Leighton FEng FRS



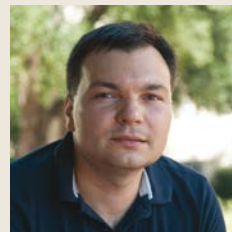
Professor Simon Lilly  
FRS



Dr Michael Lynch OBE  
FEng



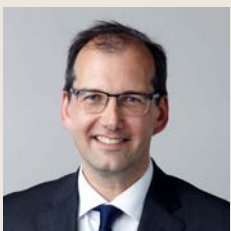
Professor Andrew  
Mackenzie FRS



Professor Vladimir  
Markovic FRS



Professor William  
McLean FMedSci FRS



Professor Paul Midgley  
FRS



Professor Gareth  
Morris FRS



Professor James  
Naismith FMedSci FRS



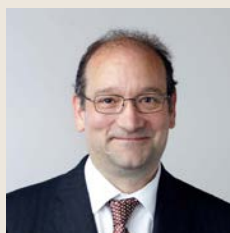
Professor Jenny Nelson  
FRS



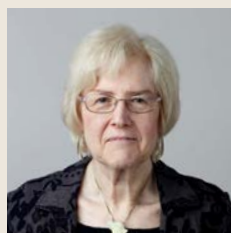
Professor Colin Nichols  
FRS



Professor Miles Padgett  
FRS



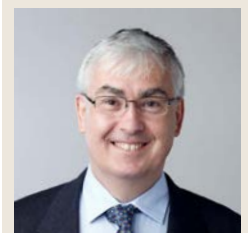
Dr Julian Parkhill  
FMedSci FRS



Dr Karalyn Patterson  
FMedSci FRS



Professor Sheena  
Radford FMedSci FRS



Professor Randy John  
Read FRS

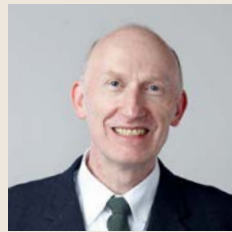




Professor David Ron  
FMedSci FRS



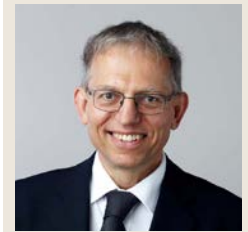
Professor Patrik  
Rorsman FMedSci FRS



Dr Bill Rutherford FRS



Mr Colin Peter Smith  
CBE FREng FRS



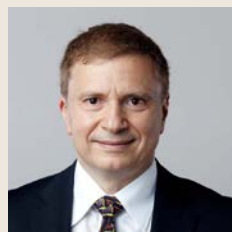
Dr Alan Soper FRS



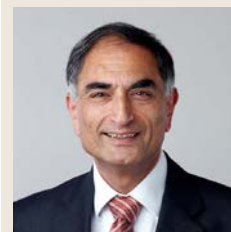
Lord Nicholas Stern Kt  
FBA FRS



Professor Nicholas  
Talbot FRS



Professor Demetri  
Terzopoulos FRS



Professor Rajesh  
Thakker FRS

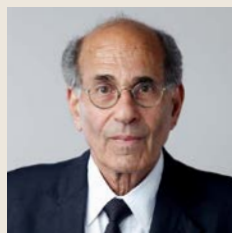


Professor Anthony  
Watts FRS

## Foreign Members



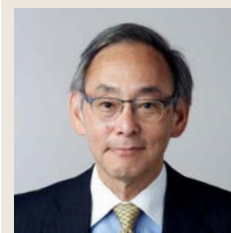
Professor Richard Alley  
ForMemRS



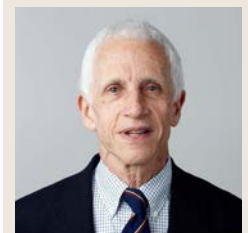
Professor Richard Axel  
ForMemRS



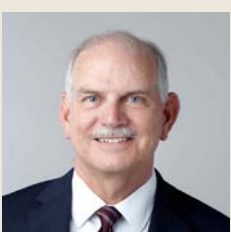
Professor Chunli Bai  
ForMemRS



Professor Steven Chu  
ForMemRS



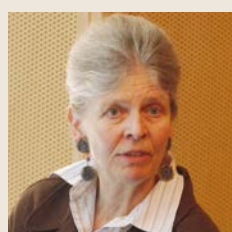
Professor Stephen  
Harrison ForMemRS



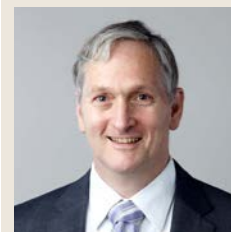
Professor (Harold)  
Vincent Poor FREng  
ForMemRS



Professor Philippe  
Joseph Sansonetti  
ForMemRS



Professor Joan  
Argetsinger Steitz  
ForMemRS



Professor Clifford  
James Tabin  
ForMemRS



Professor Jean-Marie  
Tarascon ForMemRS

## Medals and awards 2014/15

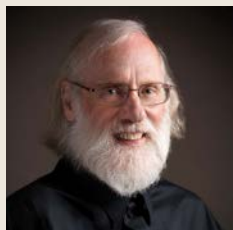
20 medals were awarded by the Society in 2014 to recognise excellence in science.



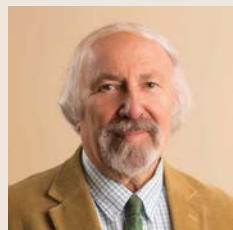
**Copley Medal**  
Sir Alec Jeffreys KBE  
FRS



**Royal A Medal**  
Professor Terence Tao  
FRS



**Royal B Medal**  
Professor Tony Hunter  
FRS



**Royal C Medal**  
Professor Howard Morris  
FRS



**Darwin Medal**  
Professor John  
Sutherland



**Davy Medal**  
Professor Clare Grey  
FRS



**Kavli Education Medal**  
Professor Sir John  
Holman



**Rumford Medal**  
Professor Jeremy  
Baumberg FRS



**Sylvester Medal**  
Professor Ben Green  
FRS



**Armourers and  
Brasiers' Prize**  
Professor Ivan Parkin



**Mullard Award**  
Dr Demis Hassabis



**The Royal Society  
Pfizer Prize**  
Dr Faith Osier



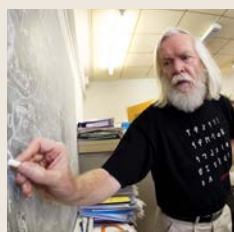
**Michael Faraday Prize  
and Lecture**  
Professor Andrea Sella



**Milner Award**  
Professor Bernhard  
Schölkopf



**The Royal Society  
Rosalind Franklin  
Award and Lecture**  
Professor Rachel  
McKendry



**Bakerian Lecture**  
Professor John Ellis FRS



**Croonian Lecture**  
Professor Nicholas  
Davies FRS



**Francis Crick Lecture**  
Professor Rob Klose



**Kavli Medal  
and Lecture**  
Professor Matt King



**Leeuwenhoek Lecture**  
Professor Jeffrey  
Errington FMedSci FRS

## Medals and awards

### Copley medal



Sir Alec Jeffreys KBE FRS (pictured above, right) was awarded the Copley medal, believed to be the world's oldest scientific prize, for his pioneering work on variation and mutation in the human genome.

The Copley medal was first awarded by the Royal Society in 1731, 170 years before the first Nobel Prize. It is awarded for outstanding achievements in scientific research and has been awarded to eminent scientists such as Charles Darwin, Michael Faraday, Albert Einstein and Stephen Hawking.

Of his award, Sir Alec said: "I am absolutely thrilled to receive the Copley medal, the Royal Society's oldest and most prestigious award. I am particularly delighted that the award recognises our work extending over three decades into exploring human DNA diversity and the processes that generate this variation, and not just our accidental foray into forensic DNA. It is also very satisfying to see the relatively new field of genome dynamics being given such wonderful recognition."

Sir Paul Nurse, President of the Royal Society, said: "It is great news that this year's Copley medal has been awarded to Sir Alec Jeffreys. Since discovering genetic fingerprinting back in 1984, Sir Alec's work has transformed our understanding of human genetics. This award is in recognition of his career-long contribution pioneering science, through his endeavour to unravel the complexity of human genetic variation, and for the immense impact his work has had on our lives through applications in forensics and medicine."



The Copley medal for outstanding achievements in scientific research was first awarded by the Royal Society in 1731, more than 170 years before the first Nobel Prize.

"I am absolutely thrilled to receive the Copley Medal, the Royal Society's oldest and most prestigious award."

Sir Alec Jeffreys KBE FRS on receiving the Copley medal.

**Above left**  
Sir Paul Nurse (left) with Sir Alec Jeffreys (right), winner of the Copley Medal.

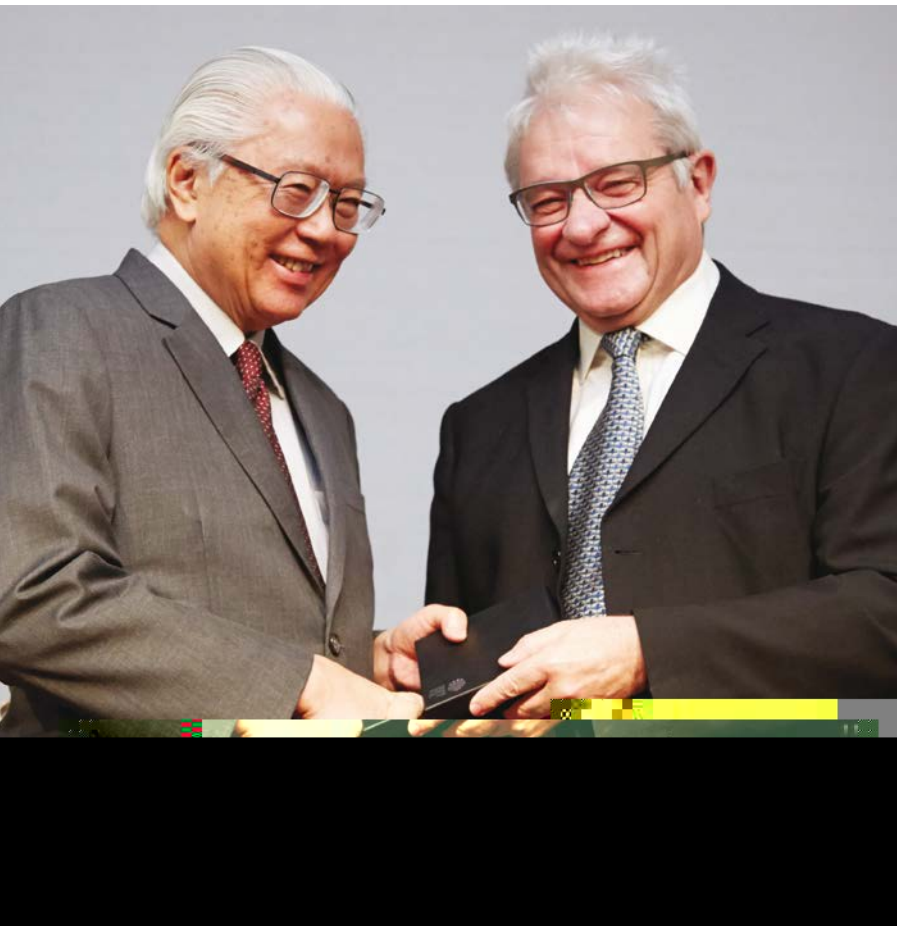
### King Charles II Medal

In addition to the Society's regular awards, the Royal Society King Charles II medal was presented to Dr Tony Tan Keng Yam, President of the Republic of Singapore, for his work in shaping one of the success stories of global science and innovation in recent decades. It was presented during his state visit to the UK in October 2014. The ceremony was held at the Society and was attended by over 200 guests including leading figures from within science and industry along with HRH the Duke of York, the President of the Singapore National Academy of Science, Professor Andrew Wee, and the CEO of Singapore's National Research Foundation Professor Low Teck Seng FREng.

### Medals and Awards review

During 2014 the Biological and Physical Secretaries led a review of the Society's medals, awards and prize lectures. A number of recommendations were made to Council and will be implemented for the 2015 awards.

- Nominations for the Copley Medal as well as the Bakerian and Croonian Medals and Lectures will be open to any individual, not only those resident in Commonwealth countries
- The monetary gift associated with each of the Society's awards will be increased
- A new Awards Committee will be formed to consider the nominations for the six premier awards, namely the Copley, Croonian, Bakerian and all the Royal Medals



#### Left

Dr Tony Tan Keng Yam, President of the Republic of Singapore, who was awarded the King Charles II medal.



**Above**  
Winners of the Royal Society's Medals and Awards.

**Left**  
Professor Clare Grey FRS receiving the Davy Medal.

**Far left**  
The Royal Society Mace, gifted by King Charles II in 1663.



## Supporting outstanding science

Through its Research Fellowships and funding programmes, the Royal Society works in partnership with universities and industry, both within the UK and internationally, to support excellent scientists.

**Left**  
Dr Steven Spoel,  
Royal Society University  
Research Fellow,  
University of Edinburgh.

# Supporting outstanding science

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# 43

new Research Fellows were appointed to the Society's University Research Fellowship scheme in 2014.

## Sir Henry Dale Fellowships

Jointly funded by the Royal Society and the Wellcome Trust, this programme supports outstanding post-doctoral scientists wishing to address an important biomedical question. It enables the best researchers to build their own independent research career in a UK based research institution. 31 appointments were made in 2014 and in total 75 scientists are currently supported under this scheme

## Industry Fellowships

The Royal Society's Industry Fellowships support knowledge transfer between industry and academia and are funded by the Royal Society, the Engineering and Physical Sciences Research Council (EPSRC), the Biotechnology and Biological Sciences Research Council (BBSRC), the Natural Environment Research Council (NERC) and Rolls-Royce plc. Eight appointments were made in 2014. On 31 March 2015, 50 scientists were supported under this scheme.

## Dorothy Hodgkin Fellowships

These Fellowships offer a recognized first step into an independent research career for outstanding scientists for whom career flexibility is essential, providing up to five years' support. Nine appointments were made in 2014, including three which are funded thanks to a collaboration with the Engineering and Physical Sciences Research Council (EPSRC). In total, 34 scientists are currently supported under this scheme.

## Senior Fellowships

### Royal Society Research Professorships

These Fellowships provide up to 10 years support for world-class scientists who would benefit from a period of long-term support to allow them to focus on research. Three appointments were made in 2014. On 31 March 2014, 18 Professors were supported under this scheme.

### Royal Society Wolfson Research Merit Awards

These Fellowships are jointly funded by the Society and the Wolfson Foundation and offer salary enhancements for up to five years with the aim of attracting or retaining in the UK researchers with great potential or outstanding achievement. 62 awards were made in 2014 and on 31 March 2015, 244 scientists were supported under this scheme.

### Royal Society Leverhulme Trust

#### Senior Research Fellowships

Funded by the Leverhulme Trust, these Fellowships seek to provide opportunities for academic researchers to be relieved of all their teaching and administrative duties to concentrate on full-time research for up to one year. Seven Leverhulme Trust Senior Research Fellows were appointed in 2014.

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# 287

scientists were supported under the University Research Fellowship scheme as of 31 March 2015.

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## Royal Society Professorship

Professor Matt Rosseinsky FRS

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Matt leads a research group at the University of Liverpool that works to both enhance the fundamental knowledge of physical and chemical properties of new materials, and to improve the performance of materials for applications including energy storage and generation, communications and catalysis.

**Your research looks at wide range of possibilities relating to the chemical synthesis of new materials – are there any areas that have particularly excelled since the start of your Professorship?**

“We have developed new computational techniques that couple with our experimental work to accelerate the identification of new materials with enhanced properties. This has allowed us to carry out the design of materials with property combinations that have been very difficult to create – for example, a material that combines ferromagnetism and electrical polarization at room temperature. Not only is this a fundamental scientific challenge, it is important for the development of new information processing and storage technologies.”

**Has your Royal Society Research Professorship enabled you to spend more time on your research than would have been possible without it?**

“It has been extremely important in allowing me more time to work on research, though before being awarded the Professorship I had agreed to be a panel member for the 2014 REF which was pretty time-consuming, although interesting too.”

**Can you tell us about a typical day in the Rosseinsky Group lab?**

“I am not sure there is a typical day in any research activity, but intense discussion of new data between group members, engagement with collaborators and trying to find ways to fix critical items that break at the most inconvenient time seem to be recurring features.”

**What challenges do you look forward to solving in the future?**

“The challenge of creating function in materials by control of atomic and molecular arrangements is one of the outstanding problems in science and I hope we can continue to make contributions to it. There will be no “magic bullet” solution because of the role of both intrinsic materials properties at the unit cell level and of materials processing to modify those properties, rather the community will develop a toolkit of solutions based on fusing chemical and physical understanding with computation. We will focus on materials for energy, catalysis and information storage and processing.”



## Dorothy Hodgkin Fellowship

Dr Hanna Sykulska-Lawrence, Dorothy Hodgkin Fellow, University of Oxford

---

Space exploration is something that has always fascinated me – in particular the challenges of designing the hardware to do it. It is a motivating and inspirational field which inspires future generations, pushes the development of our technologies, as well as helping us understand the world we live in. During my Dorothy Hodgkin Fellowship I am focusing on developing a light sensor – a radiometer – and miniaturizing it using a technique called micromachining while, most importantly, incorporating an in-situ calibration to not compromise the usefulness of the data.

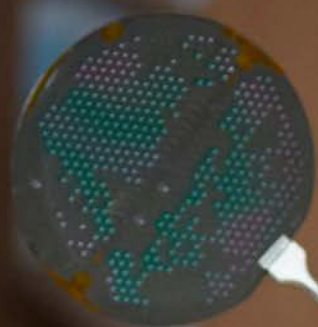
The miniature radiometer directly measures in-situ the radiative balance of planets by monitoring over a wide range of wavelengths with two sensors - one pointing up and one pointing down. The distribution of energy in a planet's atmosphere plays a governing role in climate as it determines the temperature, weather, chemistry and circulation which are all vital for showing how an atmosphere works. Obtaining the energy balance is therefore crucial for studies of climate, providing comparisons to other planets and thereby a broader context for understanding our own planet.

I feel privileged to have received the Dorothy Hodgkin Fellowship which allows me to be in charge of my own research project while also caring for my young family. Having children has been life changing for me and the flexibility of the scheme has been invaluable – being able to work part time enabled me to come back to work earlier and stay competitive in my field. The Dorothy Hodgkin Fellowship is so supportive, it has made such a difference to me as it would be much harder to continue research and spend time with my family without it.

I've been able to take advantage of the networking opportunities the Royal Society provides. Being able to meet past award holders, hear about their experiences and get advice on how to best to make the most of the fellowship has been extremely useful for me. I'm also looking forward to attending the training courses the Royal Society offers during the rest of my Fellowship.

**“Being able to work part-time  
enabled me to come back  
to work earlier and stay  
competitive in my field.”**

Dr Hanna Sykulska-Lawrence  
Dorothy Hodgkin Fellow



## University Research Fellowship

Dr Russell Minns, University Research Fellow, University of Southampton


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How do the atoms inside a molecule move during a reaction? This is an important question in chemistry, and seems like one that would be straightforward to answer. However, the size of atoms and the speed at which they move make it extremely difficult. My research takes advantage of new technologies to develop two ways to make it possible to measure structural changes with atomic resolution. We use ultrashort, ultrahigh intensity or ultrahigh energy laser pulses to act as a camera. By following molecules as they react and change, the fundamental links between their structure and function can be studied and understood.

The University Research Fellowship has had a massive effect on my research and career. The Fellowship has given me, as a young scientist, the chance to prove myself as an independent researcher and build my own research group. Being a group leader is certainly a learning curve but it is something I enjoy and the Royal Society team is extremely supportive if I ever have questions or issues.

Attending Royal Society events and training courses helps you develop a network of people in similar situations which gives you a lot of points of contacts for advice and knowledge sharing. I have been able to connect with other local Research Fellows and build a network of support.

My University Research Fellowship gives me a feeling of scientific freedom. I am able to follow my research goals in an unrestricted way and I have the freedom to explore other avenues of my field – the flexibility of the funding is invaluable. This is all you really want as a scientist.

A man with short brown hair and glasses, wearing a white and grey vertically striped button-down shirt and dark trousers, stands in a laboratory. He is leaning slightly on a piece of scientific equipment. The background is filled with various pieces of laboratory machinery, including a large metal chamber on the left and various cables and components on shelves and tables. The lighting is dramatic, with strong highlights and deep shadows.

**“My University Research Fellowship gives me a feeling of scientific freedom... This is all you really want as a scientist.”**

Dr Russell Minns, University Research Fellow



Dr Mercer was an enthusiastic inventor and entrepreneur and the Brian Mercer Awards aim to encourage these qualities in the next generation of scientists.

### Brian Mercer Awards

The Brian Mercer Awards were established in 2001 as the result of a generous bequest received from the late Dr Brian Mercer. Dr Mercer was an enthusiastic inventor and entrepreneur and these awards provide support for researchers who wish to develop an already proven concept or prototype into a commercial product, or investigate the technical and economic feasibility of commercialising their scientific research. One Innovation Award of up to £250,000 is supported by the Society. Feasibility Awards (each worth £30,000) are funded by the EPSRC.

The Society is grateful for the support of the ERA Foundation who fund an award in the field of electro-technology (including telecommunications and IT systems). The Society is also grateful the Lord Leonard and Lady Estelle Wolfson Foundation who fund awards in biomedical science.

### Brian Mercer Award for Innovation (2014)



Professor Michael Kelly FRS, University of Cambridge



Dr Jade Alglave, University College London

### Brian Mercer Feasibility Awards (2014)



Professor Crispin Barnes, University of Cambridge



Dr Gareth Conduit, University of Cambridge



Dr Steve Gruppetta, City University



Professor Dmitry Shchukin, University of Liverpool

## International Awards

### International Exchanges

The International Exchanges Scheme is for scientists in the UK who want to undertake collaboration with scientists overseas through either a one-off visit or bilateral travel. A total of 206 awards were made in 2014/15. These include awards made under cost share agreements with organisations in Russia and China which enable a greater number of awards to be made.

### The Newton Fund

More detail on the Society's work with the Newton Fund is detailed on page 59 in the section focusing on international collaboration as part of the Royal Society's overall strategy. Details of the grants made are shown below.

### Newton International Fellowship

Newton International Fellowships aim to attract the best early stage post-doctoral researchers from around the world to UK research institutions. They are run in partnership with the British Academy and cover the natural and social sciences, engineering and the humanities. The Academy of Medical Sciences also contribute to this scheme under the Newton Fund. A total of 32 Newton International Fellows were appointed by the Royal Society in the natural sciences and engineering in 2014/15.

### Newton Advanced Fellowships

This is a new scheme to provide established international researchers with an opportunity to develop the research strengths and capabilities of their research group by providing up to £111,000 over three years towards training, collaboration and reciprocal visits with a partner in the UK. 48 awards were made in the first round of this scheme, including 3 awards in clinical and patient-oriented research made on behalf of the Academy of Medical Sciences.

### Newton Mobility Grants

This scheme is for scientists overseas who want to undertake a collaboration with a scientist in the UK and it offers funding for a one-off visit or bilateral travel. It is only available to scientists from Newton Fund countries. 46 awards were made in 2014/15.

### Other grants

#### Paul Instrument Fund

Two awards were made in 2014 under the Paul Instrument Fund. This scheme was established through the will of the late R W Paul to support scientists in the UK who want to design and construct a novel instrument to measure phenomena in the physical sciences.

#### Small Research Grants

The Small Research Grants scheme provides 'seed corn' funding to enable young scientists to initiate new projects. Grants are for up to £15k and permit the holder to purchase small pieces of equipment and consumables. 143 grants were awarded in 2014/15.

#### Research Grants for Research Fellows

In addition the Society provides research grants to University Research Fellows and Dorothy Hodgkin Fellows. Research Fellows in the first year of their Fellowship can apply for up to £150k over three years. 16 grants were awarded in 2014/15.

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# 32

Newton International Fellows were appointed by the Royal Society in the natural sciences and engineering in 2014/15.

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## Newton International Fellowship

Dr Stefan Pulver, Former Newton International Fellow  
(now at University of St Andrews)



The Newton International Fellowship Scheme has been running since 2008, and it is now possible to see some of the longer term benefits of the scheme by looking at the career journey for one of the former award holders.

In the US, neurophysiologist Dr Stefan Pulver was awarded his PhD at Brandeis University, Massachusetts for his work on motor control in lobsters and flies. His Newton International Fellowship was at the University of Cambridge, where he was hosted by Professor Michael Bate in the Department of Zoology from 2009 – 2011.

At Cambridge, Stefan studied the neural control of movement in the fruit fly *Drosophila melanogaster* and he views the fellowship experience as key in shaping his own professional strategy. In particular, he valued the independence afforded by the position:

“My UK host and the Newton Fellow programme gave me the freedom to chart my own course as a scientist. As a result, I was able to pursue an unconventional path that integrated research and teaching.”

After this, Stefan returned to the US to become a Junior Fellow at the Janelia Farm Research Campus of the Howard Hughes Medical Institute, complete with significant funding for his own independent research programme. Whilst in the US, Stefan was able to make use of the scheme's alumni funding to retain links with the UK.

“One thing that attracted me to the Newton Fellowship initially was the prospect of full support for two years then continued support for another ten. That unique feature really got my attention. I thought that ‘the organisation was thinking about how to support young scientists for the long haul and that this was really exceptional.’”

In Stefan's case, the Alumni Funding clearly consolidated the impact of the fellowship:

“I used the Alumni Funding scheme to reach out and build new collaborative links with researchers at the University of St Andrews. That led directly to me applying for and winning a dream job as lecturer in the School of Psychology and Neuroscience at St Andrews.”

The Newton Fellowship opened my eyes to the advantages of doing science in Great Britain.

Now I hope to settle here, contribute to UK science, and support young people keen to pursue careers in neuroscience.”



### Wolfson Laboratory Refurbishment Scheme

Funded by the Wolfson Foundation, this scheme aims to improve the existing physical infrastructure in UK university laboratories. Six awards were made under the topic “omics”, which was chosen following a consultation phase with Vice Chancellors of Russell Group universities.

### Research Fellows Career Development

The Royal Society offers learning and training opportunities to support the career development of its Research Fellows, including education outreach, communication and media skills.

The Innovation and the Business of Science course was developed by the Society in partnership with Imperial College Business School to equip researchers with leadership skills and a better understanding of scientific entrepreneurship. The course is taught across three modules by business experts and entrepreneurs with extensive experience of business, science and innovation. Over 80 Royal Society Research Fellows attended this programme across the three modules last year.

The Society also continues to develop its mentoring scheme, designed to provide career support to Research Fellows, with the help of Professor Dorothy Griffiths from Imperial Business School. In 2014, mentors were identified for 21 newly appointed Royal Society University Research Fellows, Dorothy Hodgkin Fellows and Sir Henry Dale Fellows. Feedback from mentees participating so far demonstrates that the scheme has been a source of advice for issues relating to career development and achieving career goals.

### Royal Society Publishing

Income from the Society's publishing activities has continued to grow, increasing 10% on the previous year and delivering a surplus of £3.5 million to unrestricted funds. The journals continue to see steadily increasing submissions year on year, with *Interface* and *Proceedings A* doing particularly well. The article downloads across the journals grew sharply in 2014, up 22% at over 16 million downloads.

### Open access

In 2013 the UK Government mandated that all publicly funded research should be published as open access. Since then there has been a worldwide growth in open access mandates, and the Society's publishing operation has seen a marked increase in open access.

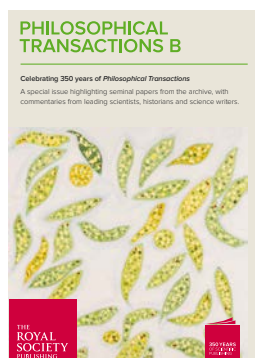
The Society now operate two fully open access journals and the remaining journals, known as hybrids, have an open access option. 19% of the articles in the hybrid journals are now published open access; considerably ahead of most of our competitors. In addition to the direct open access Article Process Charges (APC) payments we receive for articles, we also receive income from open access memberships from institutions worldwide which allow their authors a 25% discount on APCs when publishing with in a Royal Society open access journal.

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# 16 million

downloads of journal  
articles across all our  
publications.

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**Above**  
Anniversary editions of *Philosophical Transactions A* and *Philosophical Transactions B*.

### *Royal Society Open Science*

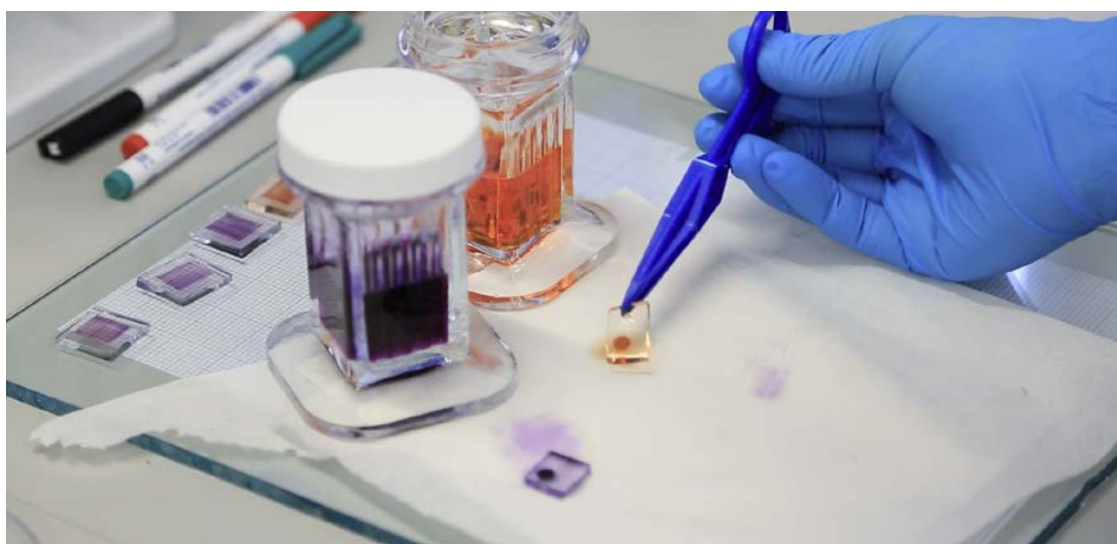
*Royal Society Open Science* opened for submissions in May 2014 and published its first issue in September. The Society's newest journal is exclusively open access and is novel in a number of ways. Covering the entire range of science, engineering and mathematics, it operates 'objective' peer review. Publishing all articles which are scientifically sound, the journal leaves any judgement of importance or potential impact to the reader. In addition, the publication process offers the option of open peer review, with the identity of reviewers being made known to the authors and their reports published alongside the article.

*Open Science* also requires authors to include their datasets in the articles and employs article level metrics, showing the number of citations, downloads and social media activity for each article. Post-publication comments on articles by readers are encouraged. The launch was a great success, with several hundred submissions received in the first few months covering a wide range of subjects. The option of open peer review has also proved to be very popular with authors and reviewers, with almost 80% choosing this approach.

### *350th anniversary of Philosophical Transactions*

6 March 2015 marked 350 years since the birth of the world's first science journal, *Philosophical Transactions*. On 6 March, the day of the anniversary, two special issues of the journal were published. These commemorative issues of *Philosophical Transactions* enabled contemporary scientists and science writers to revisit landmark papers published over the past three and a half centuries, explore the context of the work and its enduring impact on science.

Among the highlights of the special issues were science writer Philip Ball writing on Alan Turing's paper *The Chemical Basis of Morphogenesis* on the spontaneous formation of patterns in the natural world; Dr Nick Lane reflecting on Leeuwenhoek's first glance into the microscopic world of bacteria; Patricia Fara exploring Newton's 1672 paper which presented his new theory about light and colour; and Jim Al-Khalili on Faraday's *Experimental researches in electricity*.



**Right**  
A moment captured from *Sustainability*, one of the *Science Stories* films.

The anniversary was also marked by the launch of *Science stories*, a series of short films on major scientific themes which have their roots in the Society's publishing archive and remain important and relevant to this day. The films highlight the key role that the Fellowship and the Society continue to play in scientific discovery by tracing the development of major ideas from the original landmark papers and exploring their current significance. An exhibition tracing the history of scientific publishing at the Royal Society has also been launched in collaboration with researchers at St Andrews University.

As part of the anniversary programme, the Society organised a series of meetings entitled, *Future of Scholarly Scientific Communications*. Held in April and May 2015, the topics discussed included peer review, the use of impact metrics in research assessment, reproducibility, ethics and misconduct, business models and profiting from publishing.

The Society convened major stakeholders including researchers, research funders, university leaders, policy makers, publishers and data experts to discuss these areas and to debate how science might be communicated in the future.



**Left and below**  
Attendees at the *Future of Scholarly Scientific Communications* meetings.





## Providing scientific advice for policy

The Royal Society strives to ensure that policymakers have access to expert, independent, scientific advice, whilst extending the reach, impact and influence of its policy work with UK, European and international decision-makers.

### Left

Waves crashing against a breakwater, Aberdeen harbour. © abzee.

This image was used for the cover of the report, *Resilience to extreme weather*.

# Providing scientific advice for policy



**Above**  
Resilience to extreme weather.

## *Tackling the great challenges of the 21st century*

In March 2015 the Society's President Sir Paul Nurse was joined in conversation by Lord Nick Stern FBA FRS, President of the British Academy at the event, *Tackling the great challenges of the 21st century*. The two discussed the new opportunities – and need – for increased collaboration between the traditional academic disciplines to respond to the big issues of our time, further highlighting why the UK's research base is such an important national asset.

## *Resilience to extreme weather*

In November 2014, Royal Society published a new policy report: *Resilience to extreme weather*. The report examines the risks posed to people by extreme weather events across the globe, and evaluates a range of options for building resilience to them. A launch event was held at the Commonwealth Science Conference in Bangalore, with media and stakeholder briefing events also being held in the UK.

*Resilience* generated considerable interest, particularly in the risk mapping and financial reform aspects of the report. Extensive national and local media coverage (print and online newspapers, television and radio) followed the report launch, as well as international media coverage. The project webpage received almost 14,000 views and 11,000 unique views in the first three weeks alone post-launch.

Members of the project's expert working group have briefed key policymakers, including UK Chief Scientific Advisers, MEPs and European Commission staff. The Society has also used the report's findings to produce tailored submissions to the United Nations' Global Sustainable Development Report and the Sustainable Development Solutions Network consultation on indicators and monitoring for the Sustainable Development Goals.

**Below**  
Four site visits were undertaken during the project in order to gather evidence and see resilience-building in action. This photo was taken during a visit to Kabale and shows residents completing a community resource mapping exercise.



The report has also been promoted at international conferences including the UNFCCC Conference of the Parties in Lima in December 2014 and the March 2015 UN World Conference on Disaster Risk Reduction in Sendai. The Society's contribution was positively received, with the new Sendai declaration reflecting many of the recommendations in the resilience report. In particular the agreement has a strong emphasis on resilience and preventative action, emphasises the primary responsibility of national governments to reduce disaster risk and highlights the need for science and technology to inform decisions. The Sendai agreement also contains outcome and process-based targets, as recommended in the Society's report.

Work to further disseminate the report's conclusions and recommendations, thereby extending the reach, impact and influence of the Society's policy work, continues into 2015.

### **Observing the Earth**

The Government Office for Science commissioned the Society to complete a piece of work on environmental observation. The breadth of knowledge and expertise available through the Fellowship enabled the Society to swiftly gather the considered thoughts of a select group of experts, informed by consultation with key stakeholders, to give an overview of environmental observation in the UK.

Six commissioned papers form the basis for the chapters of the report and divide environmental observation across six domains; climate, air, oceans and ice, land and freshwater, natural hazards and international. Each chapter provides an overview of the issues from the perspectives of a select group of experts and is not intended to represent the consensus of the community. The current use of platforms and sensor technologies is described, as well as strengths, opportunities and challenges, where the technology is going in the next 5 – 10 years and how UK stakeholders can use these to best advantage.

### **Cybersecurity**

The Society is continuing its study on cybersecurity, engaging with experts and decision makers in academia, Government and industry from the UK and overseas, seeking their perspective on the challenges and opportunities that cybersecurity raises. The final report is due to be published early 2016.



**Above**  
*Observing the Earth* report.

**Below**  
Forest fire in California.  
© nathanphoto. This image was used in the report, *Observing the Earth*.



## Working with others

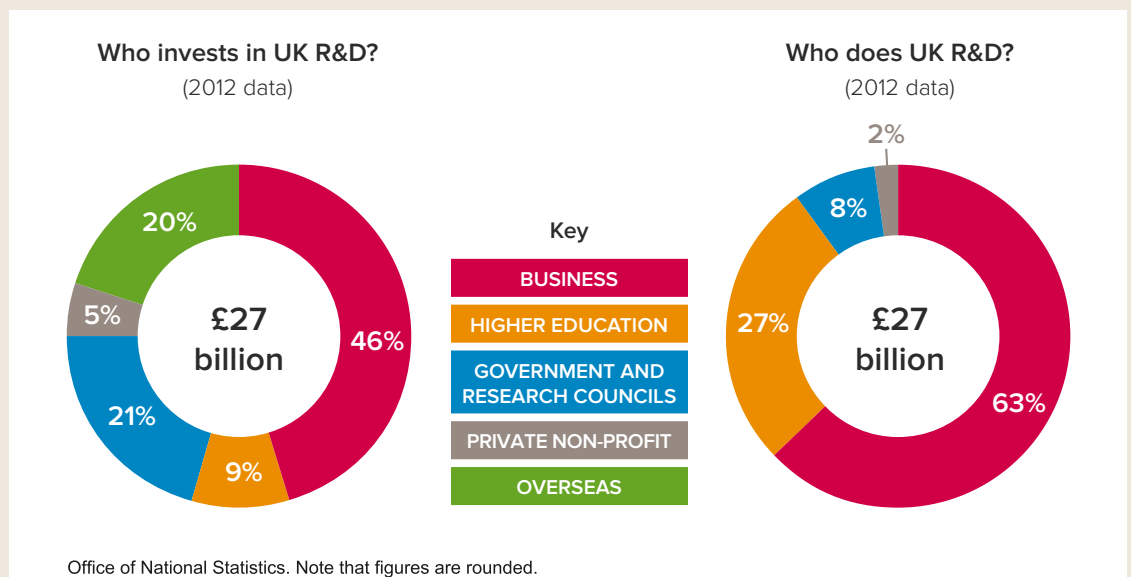
### *Building a Stronger Future*: the joint academies election statement

In February 2015 the Royal Society, together with the Academy of Medical Sciences, the British Academy and the Royal Academy of Engineering, produced the joint statement, *Building a stronger future: Research, innovation and growth*. The statement was the result of months of positive collaboration between the academies, involving Fellows, Council members and staff. Its four key priorities were:

- Place research and innovation at the heart of plans for long-term economic growth
- Secure prosperity by strengthening public investment in research and innovation
- Meet demand for research skills through a flexible and diverse workforce
- Strengthen policy by embedding expert advice across Government

The statement was timed to build upon the wide spectrum of political support for science in the UK Parliament ahead of the 2015 General Election. The Prime Minister and Shadow Minister for Business, Innovation and Skills both responded to the statement, with the Prime Minister saying that 'the joint statement was a timely contribution' and that he shared the Academies' 'desire to maintain the UK's reputation for world class research'. Engagement relating to the joint statement across Government, parties across the political spectrum and business sectors from industry to charity was found to be positive.

The combined influence of the UK Academies across the range of natural, engineering, medical and social science as well as the humanities is significant. The Society will continue to work in partnership with our sister academies in order to highlight and maintain the UK's position as a world-leading centre for all kinds of research and innovation, and to strengthen evidence based policy-making by embedding expert advice across Government.



#### Right

Figure taken from the report, *Building a stronger future*. This figure shows the UK research and development expenditure by funding and by performing section.



### Vision report

In June 2014 the Society launched its *Vision for science and mathematics education* report. This ambitious piece of work established a vision for the future of science and mathematics education for 5 – 19 year olds, looking ahead over the next two decades.

The report made 23 recommendations under six headline vision statements:

- All young people study mathematics and science up to the age of 18
- Curricula and their assessment are stabilised and support excellent teaching and learning
- Teachers have high professional status and there is a strong supply of science and mathematics specialists
- Student understand the significance of STEM through better career awareness and guidance
- The success of students, teachers and education systems is judged through appropriate and broadly based assessment and accountability measures
- Education policy and practice are better informed by evidence

The parliamentary launch event was attended by close to 300 people, including CEOs of professional bodies, teachers, students, union leaders, think tanks, business investors, awarding bodies and regulators.

*Vision* received substantial press coverage, with science and maths organisations, unions and politicians all responding positively to its content and recommendations.

### Education policy

The Society seeks to ensure that government policy for science education is informed by robust advice, working in particular with ACME and SCORE.

### Higher education

In December 2014 the Society published a set of principles and responsibilities for students, supervisory teams, higher education institutions and careers services, to help ensure that PhD students' career expectations are understood and managed effectively. The Society is working in collaboration to further promote the principles and responsibilities to universities as a basis from which to build on existing careers information and guidance practice.



**Above**  
*Vision for science and mathematics education* report.

### ACME (Advisory Committee on Mathematics Education)

The Society continues to play an active role in ACME, working to influence mathematics education strategy and policies to improve the outcomes of mathematics teaching in England.

Following six months reviewing international and English systems of initial teacher education (ITE), ACME published a 'have your say' discussion document in March 2015. The aim is to gather views from the mathematics and wider education community on the key components of initial teacher education for teachers of mathematics.

ACME has published a *Blueprint for Mathematics Education* and five *Maths Snapshots* on issues including mathematics education policy development, international comparisons and policymaking.

In partnership with the Royal Statistical Society, ACME is working on a project looking at the place and embeddedness of statistics in some new A levels (to be introduced in 2015). The report will make recommendations to the Department for Education, Ofqual and awarding organisations and is due to be published in early summer 2015.



**Right**  
Teaching maths  
© Squaredpixels.

### SCORE (Science Community representing Education)

During 2014/15, the Royal Society has continued to work collaboratively as one of the five organisations involved in SCORE.

The focus of much of the work during this period has been the proposed reforms to qualifications, in particular the assessment of practical work at GCSE and A-level.

As Ofqual press ahead with reform, SCORE organisations will continue to work with both Ofqual and awarding organisations to strive for excellence in the assessment of practical work. SCORE has also held discussions with HEI admissions officers to encourage them to request a pass in the separate practical work endorsement at A-level, which it is hoped will help to ensure that schools continue to give practical work the resources and time it needs.

SCORE responded to the Carter Review of ITE, set up by the Department for Education and also met with Ministers to discuss ITE, specifically the provision of Subject Knowledge Enhancement courses in physics and chemistry.

SCORE has also been engaged in work of a more pro-active nature, developing a position and discussion document on provision of the sciences at key stage 4 which outlines the drawbacks of the current arrangements and proposes a single route for all students in this key stage.

#### Below

Science lesson  
© Susan Chiang.





## Fostering international and global cooperation

Science is an international activity and the Royal Society is strengthening links with academies, funders and governments in Europe, the United States and beyond as well as supporting other countries who are building their own scientific strength.

**Left**

The Banaglore Glass House, one of the venues used during the Commonwealth Science Conference.

## Fostering international and global cooperation



**Above**  
Professor C N R Rao FRS (left) and Sir Paul Nurse (right) at the Commonwealth Science Conference opening ceremony.

**Below**  
Attendees at the Commonwealth Science Conference.

### Commonwealth Science Conference

Fostering international and global cooperation is one of the Royal Society's primary priorities. As part of a programme to strengthen activities with colleagues across the Commonwealth, the Society, in partnership with the Government of India, organised the first Commonwealth Science Conference in nearly 50 years in Bangalore in November 2014.

The Conference was attended by over 300 scientists who represented a broad range of scientific disciplines across 30 different Commonwealth countries.

The programme was overseen by a steering group chaired by Professor Anthony Cheetham FRS and Professor CNR Rao FRS.

The theme of the conference was 'Science for the Common Good'. Its goals were to:

- celebrate excellence in Commonwealth science
- provide opportunities for cooperation between researchers in different Commonwealth countries
- inspire young scientists
- build scientific capacity in the developing nations within the Commonwealth

Plenary lectures were given by some of the Commonwealth's most eminent scientists. There were also parallel sessions, policy discussions and a post graduate student session. The Society launched its report 'Resilience to extreme weather' at the Conference in recognition that many Commonwealth countries share common issues and can share experiences and learnings with each other.

The feedback from conference attendees was extremely positive. 95% of respondents stated that the meeting met its aims and 98% stated that they would like to see the Society organise a further conference.

Following the conference, the Society invited delegates to apply for follow-on grants to continue to foster collaborations between Commonwealth countries. To date, 20 delegates have applied for grants and a further round is underway.

As well as considering the potential for a further Commonwealth Science Conference, the Society is developing a programme of follow up work which aims to raise the profile of science within the Commonwealth. This includes helping to ensure that science is considered at high level meetings as well as fostering scientific collaborations between Commonwealth states.



### Co-operation and international partnership

The Royal Society continues to demonstrate international leadership in science and science policy, through its membership of multilateral organisations, its central role in their governance and its participation in international meetings.

#### India: *Frontiers of Science*

Frontiers of Science meetings are interdisciplinary scientific meetings which bring together early career scientists to develop or maintain bilateral scientific relationships between nations. The Royal Society organized a second Frontiers of Science meeting with India's Department of Science and Technology in Khandala, India, in October 2014. The UK delegation was led by Professor Rajesh Thakkar FMedSci FRS and comprised 24 early career scientists.

Kate Hendry, a University Research Fellow, said of the meeting "Bringing together people who don't normally talk to each other is key: you have no idea until you talk to them that there are other scientists out there who, for example, have developed a method that does exactly what you want to do, but in a different context. Or, equally, would benefit from your analytical method or computational model. It's also just plain refreshing to hear about subjects that you don't study, and how different people tackle problems".

### Europe

The Society welcomed Carlos Moedas, the European Commissioner for Research, Science and Innovation on his first visit to the UK since being appointed. While at the Society, Commissioner Moedas delivered a public lecture, jointly organised by the Academy of Medical Sciences, the British Academy, the Royal Academy of Engineering, the Royal Society and the Royal Society of Edinburgh.

The Commissioner spoke about 'science without borders', and the role of science as open, collaborative and a tool for diplomacy. He opened his speech by strongly supporting science and innovation, citing it as the biggest driver for prosperity and the best investment for growth. He highlighted diversity both of people and talent, as Europe's biggest asset.

This speech comes at an important time for European science, when questions are being asked about the future of scientific advice in the EU, and concerns have been raised over proposed cuts to EU investment in research and innovation.

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"Bringing together people who don't normally talk to each other is key."

Kate Hendry, University Research Fellow, following the *Frontiers of Science* meeting.

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#### Below

European Commissioner Carlos Moedas (left) with Dame Jocelyn Bell Burnell DBE FRS (right).



### European Academies Science Advisory Council

Membership of the European Academies Science Advisory Council (EASAC) is based on the national science academies of the European Union member states together with Switzerland and Norway. In March 2015, the Royal Society organised a joint briefing with EASAC in the European Parliament *Be Prepared: Reducing the impact of extreme weather on people's lives*. The event was hosted by Theresa Griffin MEP, and attendees included representatives from the European Commission, the European Parliament and non-governmental organisations.

### International Scientific Seminar Scheme

The International Scientific Seminar scheme allows Royal Society Research Fellows to organize a small two-day scientific seminar at the Kavli Royal Society International Centre. Four awards were made in 2014/15.

### India-UK scientific seminars

The scheme is a result of a longstanding partnership between the Department for Science and Technology (DST) in India and the Department for Business, Innovation and Skills (BIS) in the UK. It funds the organisation of small three day scientific meetings that bring together groups of early to mid-career scientists from India and the UK for the purpose of scientific discussion. These meetings take place in either India or the UK and promote collaboration and knowledge transfer by encouraging interaction within the wider research community. The Royal Society and the DST made 18 jointly-funded awards in 2014/15.

### South Africa-UK scientific seminars

This scheme is administered by the Society on behalf of BIS and jointly run with the South African National Research Foundation (NRF). It funds the organisation of small three day scientific meetings that bring together groups of early to mid-career scientists from South Africa and the UK for the purpose of scientific discussion. These meetings take place in either South Africa or the UK and promote collaboration and knowledge transfer by encouraging interaction within the wider research community. The Royal Society and the NRF made 13 jointly-funded awards in 2014/15.

### Capacity strengthening in sub-Saharan Africa Leverhulme Royal Society Africa Awards

This year, six final awards were made under the Leverhulme Royal Society Africa Awards. The Society is grateful to the Leverhulme Trust for their generous support of this scheme.

### Royal Society-DFID Africa Capacity Building Initiative

Support from the Department for International Development (DFID) has enabled the Society to set up this programme, aimed at strengthening research and training capacity across sub-Saharan Africa by creating sustainable scientific networks. DFID are providing £15.3 million towards the two phases of awards. The first phase consisted of Network Grants to facilitate the assembly of research consortia; 20 awards were made in 2013. The second phase of Programme Grants, totalling over £1.2M to support consortia consisting of African groups and one UK-based laboratory, was made in 2014 and consisted of five awards.



### Sackler Forum

The Sackler Forum exists to support the ongoing productive partnership between the scientific communities of the United Kingdom and United States to investigate pressing topics of worldwide concern. The 2014 Sackler Forum Cybersecurity Dilemmas: Technology, Policy, and Incentives was held on 8 – 9 December 2014 at the headquarters of the US National Academy of Sciences (NAS) in Washington, DC. The forum was organised jointly by the Royal Society and the NAS, with the guidance of a steering committee of distinguished researchers from the United States and United Kingdom.

More than 60 participants from academia, government, industry, philanthropy, and non-governmental organizations came together to discuss cybersecurity and international relations; the viability of notice and consent and issues of privacy in the use of personal data; incentivizing rational cybersecurity systems; and examining progress in cybersecurity policy. A summary reflecting these discussions is currently being developed and will be published in 2015.

### South Korea

In October 2014, the Royal Society sent a high-level delegation to Seoul for the first of two conferences with the Institute for Basic Science (IBS), led by Treasurer and Vice-President Professor Anthony Cheetham FRS. The objectives of the conference were to promote networking and explore opportunities for collaboration between leading UK scientists and their counterparts from one of the world's rapidly emerging scientific powers.

In the most recent UNESCO Science Report (2010), South Korea was described as “probably the world's most committed country to science, technology and innovation”. It has seen the fastest growth in R&D expenditure among OECD countries in the last decade, spends the largest percentage of GDP on R&D of any country, and is the world's fifth largest R&D investor. While most of Korea's R&D is undertaken by industry (74%), the government is making significant investments in basic science, most notably with the establishment of the Institute for Basic Science (IBS), the aim of which is to make the country a guiding force in developing new technologies. The IBS was inaugurated in May 2012 and awarded US\$3bn between 2012 and 2017 to establish 50 new institutes based loosely on the model used by the Max Planck institutes in Germany.

The conference included a wide range of talks from eminent scientists from both countries, including recently awarded Nobel Laureate Professor John O'Keefe FMedSci FRS; Ryong Roo, Distinguished Professor at Korea Advanced Institute for Science and Technology (KAIST); Professor Gabriel Aeppli FRS, one of the world's leading condensed matter physicists; and Dr Sungwoo Hwang, Senior Vice President, Samsung Advanced Institute of Technology (SAIT). The themes of the conference, materials science and biological sciences, covered a wide range of different research topics, including physics, chemistry, cell biology, nanotechnology and neuroscience. The second conference will take place in the UK in 2015.

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[South Korea is]  
“probably the  
world's most  
committed  
country to  
science,  
technology  
and innovation”

UNESCO Science Report  
(2010).

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**Right**

Sir Martyn Poliakoff meets Chancellor Angela Merkel at the G7 Academies Meeting.  
© David Ausserhofer for the Leopoldina.

**North Korea**

In March 2015, the Royal Society hosted its first ever visit from scientists from the Democratic People's Republic of Korea (North Korea). The purpose of their visit was to present the results of joint research with UK scientists on the volcanology of Mount Paektu, a volcano on the DPRK's border with China. Paektu's eruption around 1,000 years ago was one of the largest in recorded history and, following recent seismic activity, it is becoming increasingly important to understand its dynamics. This is part of a project which has been running since 2013 and is supported by the Royal Society, the American Association for the Advancement of Science, the Earthquake Bureau of the DPRK, the Pyongyang International Information Centre of New Technology and Economy (PINTEC), the Environmental Education Media Project (EEMP) in Beijing, and the Richard Lounsbery Foundation.

**China**

The Royal Society's engagement with China continues to grow, supported by the Newton Fund. The Society has also received visits from Professor Bai Chunli, President of Chinese Academy of Sciences (CAS) in July 2014, and Yang Wei, President of the National Natural Science Foundation of China (NNSFC) in September 2014. Professor Bai Chunli was also elected to the Society's Fellowship in 2014.

### International Council for Science

In August 2014 a delegation representing the Royal Society attended the General Assembly of the International Council for Science (ICSU) in New Zealand. They attended pre-meetings on Science Diplomacy organized by Sir Peter Gluckman KNZM FMedSci FRS, the New Zealand Chief Scientific Advisor, and a meeting of governmental scientific advisers including Sir Mark Walport FRS, UK Chief Scientific Advisor, and Anne Glover, then Chief Scientific Advisor to EU Commission President Barroso.

This has since led to the formation of the International Network for Government Science Advice (INGSA) which will operate under the aegis of the International Council for Science. The General Assembly meeting discussed how ICSU might serve to provide a global voice for science. The Executive Director of the Society also hosted a lunch for Royal Society Fellows based in New Zealand.

### Newton Fund

The Newton Fund is a £375 million fund available from the Department of Business, Innovation and Skills (BIS) over 5 years. One of the commitments involved in programme activities is the promotion of economic development and social welfare in partner countries.

As one of several delivery partners, the Royal Society has been given a grant of £25m over the next five years. The Society's aim through the programme is to develop science and innovation partnerships between the UK and Newton fund countries, on the basis that through training and collaboration we can support the development of well-trained research community with the ability to conduct high quality research. This in turn will promote the economic development and welfare of developing countries.

To deliver this grant, the Royal Society has negotiated with funding agencies overseas to secure partners that can provide a matched level of funding, which will further facilitate collaboration. The Society has reached agreements with the following partners:

- Natural science Foundation of China and Chinese Academy of Science (China)
- CONFAP (The Brazilian Council of State Funding Agencies)
- National Research Foundation (South Africa)
- Mexican Academy of Sciences (Mexico)
- TUBITAK (Scientific and Technological Research Council of Turkey)

Through the Newton Fund, the Royal Society has made awards in three schemes, which are described on page 39.

The Society is in discussion with additional partners as the scheme continues to develop.



The Newton Fund aims to develop science and innovation partnerships that promote economic development and the welfare of developing countries.



## Education and public engagement

The Royal Society is committed to ensuring that everyone has the opportunity to appreciate the value of and engage with science, whether through top quality formal education or through other events and resources

**Left**

The Royal Society  
Summer Science  
Exhibition 2014.

# Education and public engagement

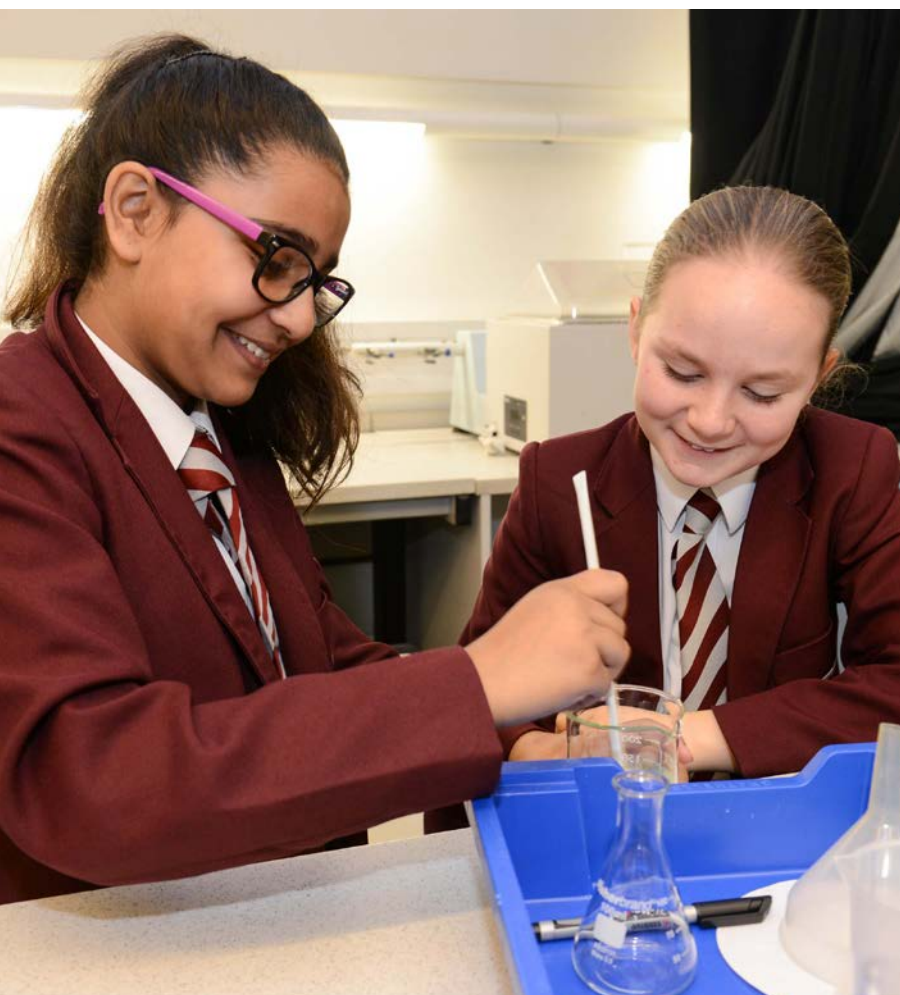
## Public engagement strategy

In 2014, the Royal Society started the implementation of its new public engagement strategy, as overseen by the Public Engagement Committee, which is chaired by Professor Russell Foster CBE FRS. The strategy has four aims:

- To promote science as a key element in the cultural and economic life of the nation
- To ensure that evidence-based (science) policy topics are discussed with the public and integrated into the national framework
- To provide a forum to ensure that key areas of public engagement strategy are coordinated across the nation
- To ensure that science inspires the nation

### Below

Students at the Newcastle Centre for Life, taking part in an event for the Young Peoples Book Prize.



## Promoting science in the cultural and economic life of the nation

### Meet the scientists

The Society organises a programme of science events around the country aimed at a public audience. This includes events at leading Science and Literary Festivals as well as at the Society's Carlton House Terrace office. The programmes range from café scientifiques to panel events to talks. The Society's focus with its public engagement programme is to encourage scientists to discuss their work with members of the public and to encourage more of the scientists it funds to get involved.

In 2014, the Royal Society launched a programme to help and support Research Fellows who want to engage more with schools and the general public. Entitled *Meet the scientists*, the programme offers training, opportunities, advice and recognition for Research Fellows who wish to engage, inform or inspire the public about their research. The programme was launched in October 2014 at the Manchester Museum of Science and Industry and was attended by 50 Research Fellows, who were given the chance to explore the Manchester Science Festival. In addition, a two day pilot education outreach training scheme was attended by 38 Research Fellows at different stages in their career. They learned the basic principles of public engagement with schools and had the opportunity to develop their own activities with course providers based on their research.

In 2015, the programme will be developed further, with additions including training to facilitate public engagement for adult audiences and access to special grants for public engagement. Research Fellows will also participate in a special Royal Society Science Museum Lates event, *The Next Big Thing*, to be held in June 2015.

### Book Prizes

The Royal Society Winton Prize for Science Books award event hosted a panel of authors including Mark Miodownik, Philip Ball, Mary Roach and Lord Browne. The judging panel included renowned author Michael Frayn, Professor Nicola Clayton FRS and Emma Read of the BBC.

The Young People's Book Prize was awarded to children's author Clive Gifford in partnership with scientist Anil Seth. The winner was selected by 91 judging panels of young people from all across the UK. The award ceremony was held at the Newcastle Centre for Life and included workshops for 150 young people with all 6 shortlisted authors.



### History of Science Programme

In 2014, the Society launched a series of evening history of science events, replacing the former lunchtime lectures. As part of this programme, the Society held a Drawing Science event in October as part of the *Big Draw*, which aims to raise the profile of visual literacy and drawing as a tool for thought, creativity, and social and cultural engagement. 155 people attended the event, which included workshop and activities for children and families.



In October 2014, the Royal Society opened its new reading room at its building in Carlton House Terrace. Facilities in the new space enable greater control over the conditions in which collections are displayed, including different levels of lighting and a fully air conditioned space in which to read. These improvements will support the preservation of the Society's collections into the future, as well as providing benefits to readers who visit the reading room. New readers are welcome at any time during office hours Monday to Friday.

Left and above left  
The Big Draw.

Climate change in  
60 seconds has  
reached over

**850,000**

people.

### Ensuring discussion of evidence-based science policy topics with the public

The Society has started to undertake more public engagement around its policy work. This may involve listening to public views in order to inform policy work, involving targeted public audiences in developing policy work or communicating scientific evidence to a public audience. The nature of the engagement will depend on the topic and its levels of public awareness.

One example is the follow up to the Society's joint statement on climate science with the US National Academy of Sciences. The Society produced a 60-second animation to explain climate science with a short guide to make the longer report more accessible to the general public. The guide and animation were developed under the oversight of leading climate scientists and together seek to provide a robust summary of the science and to answer the questions commonly raised by discussions of climate science whilst avoiding oversimplification. The simple animation and messages proved very popular and sharable on social media and reached over 850,000 people.

### Ensuring that key areas of public engagement strategy are coordinated across the nation

The Royal Society is a member of the National Forum for Public Engagement in science, technology, engineering and maths (STEM). This group aims to bring together key funders and organisations involved in setting the national agenda for public engagement in STEM which have a shared interest in improving collaboration, co-operation and learning. One of the activities undertaken during the umbrella of this group is a survey on the factors affecting public engagement with research. This survey, which is partly a revisiting of the 2006 Royal Society Survey on Factors affecting Science Communication, will be published in autumn 2015.

#### Below left and right

Still frames from *Climate change in 60 seconds*.





## Inspiring the nation

### Professor of Public Engagement

In January 2015, the Royal Society announced that Professor Brian Cox had been selected to be its first Professor for Public Engagement. This appointment is part of a wider grass roots programme to involve the UK's best scientists in getting the public excited about science.

Professor Cox will be leading a number of new initiatives for the Society including how the Royal Society can help to provide inspiration for teachers and students and to give them a flavour of the fun that can be had bringing science to life. As part of the programme the Society will work with partners from across science and with organisations such as the BBC.



## Summer Science Exhibition

Over 14,000 people, including 2,800 students and teachers, attended the Society's flagship public event in 2014, the Summer Science Exhibition, meeting the scientists behind 21 interactive cutting-edge science exhibits.

The researchers were joined this year by students from Lockerbie Academy (funded by a Royal Society Partnership Grant) and an art-science exhibit on crystallography, created as part of an ongoing collaboration between crystallographer Professor Brian Sutton of King's College London and glass artist Shelley James.



Left and above  
The Summer Science  
Exhibition 2014.

## Partnership Grants in action

### Highfield School

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Nine and ten year-old students from Highfield School worked with Dr Noel Healy and Mr Shen Li from the Optoelectronics Research Centre at the University of Southampton to investigate lasers and their properties. They initially visited the University to learn about lasers through the Light Express roadshow. This was followed up by a series of workshops in the school where students made predictions based on their observations and then tested them, learning more about lasers and their applications in communications.

Students shared their learning with their peers and parents, demonstrating good understanding of the principles. Students commented that “I really enjoyed making sound sensors with the fibre optic cables” and “It was a great opportunity to use real life equipment we wouldn't usually use”.



**Right**  
Students at Highfield School.

## Partnership Grants in action

### Liverpool UTC

Professor David Hornby from the Department of Molecular Biology and Biotechnology at the University of Sheffield worked with students from year 10 – year 13 to investigate insects through breeding a colony of meal worms. Students were able to observe the meal worms and then extract proteins from the larvae, separating them by chromatography. This gave the students the opportunity to use equipment they would not typically find in schools and to conduct their own experiments, with one saying that “getting hands on experience with different machines and equipment” was the best part of the project.

The students and Professor Hornby are preparing a paper together for the Open Biology journal, a fitting part of their experience as research scientists. Students have appreciated the benefits of taking part in research-style laboratory work saying “It gave me insight into laboratory work which is a career I may wish to pursue in the future” and “it helps me understand the days of a scientist”. They also appreciated the opportunity to take ownership of a project with some students’ best parts being “having something I could say was mine’ and ‘it has taught me to be independent”.

[doing these experiments] “opened my eyes about the different aspects of science.”

Feedback from a Liverpool UTC student.



Left  
Students at Liverpool UTC.

The Royal Society website received

**4.1**  
**million**

page views.

### Education outreach

The Society's Education outreach programme has been updated to support both the Society's public engagement and new education strategies. Its aims include enabling young people to understand what it is to be a scientist, engineer, computer scientist or mathematician and to encourage practical work and problem solving.

### Partnership Grants

The annual Partnership Grants scheme provides grants of up to £3,000 for science, engineering or mathematics projects run at a primary or secondary school or college in partnership with a STEM (science, technology, engineering and mathematics) professional. These grants aim to give young people the authentic experience of doing science, encouraging a greater appreciation of the role of critical thinking, experimentation and the scientific method in decision making. It also gives young people exposure to role models in STEM, as recommended in the Society's *Vision* report.

This year the Royal Society funded projects in areas of science such as solar physics, renewable energy, conservation and plant science, awarding 28 grants to schools across the UK totalling £58,947.

### Digital communications

The Royal Society's website and other digital communications are the principal means through which audiences around the world engage with the Society. The website received 1.7 million visits and 4.1 million page views in the 2014/15 year. Following extensive research with users, the Society's website is being redeveloped, with a key focus on improving access to content across key areas. For the first time, profiles of all the Society's Fellows will be available on the site, and policy topics grouped together to emphasise the collaborative nature of the Society's work. The design of the Society's journals have also been updated ahead of the changes underway on the main website. The work will also improve search capabilities and accessibility to the site on mobile and tablet devices. The new site will launch during summer 2015.

The Society has approximately 71,000 fans on Facebook (gaining on average 450 followers a week), and 91,000 on Twitter (gaining on average 650 followers a week). In November, under the hashtag '#RSresilience', the global launch of the Society's Resilience report on extreme weather during the Commonwealth Science Conference reached nearly 500,000 people.



Left and Below  
The Summer Science  
Exhibition 2014.





# Fundraising and development: support for the Royal Society

**Left**

Sir Paul Nurse (right) and David Harding CEO of Winton (left) with Mark Miodownik (centre), winner of the 2014 Royal Society Winton Prize for Science Books. The Royal Society would like to thank Winton for their generosity in sponsoring the Royal Society Winton Prize for Science Books.

## Fundraising and development: support for the Royal Society

Philanthropic support from trusts and foundations, companies and individuals is hugely important in helping the Royal Society to sustain its aim of recognising, promoting and supporting excellence in science. In particular it helps to ensure that the Society maintains independence.

For over 350 years the Society has relied on the generosity of philanthropists to continue its work. Gifts allow the Society to support science, technology, and innovation in the UK and around the globe. This year we have received gifts in excess of £11 million, making this the most successful year since the 350th campaign with thanks to the support of long standing pledges, new relationships and the continued giving of valued friends of the Royal Society. A small selection of these donors is listed on the following pages and a full list is available on our website. We would also like to extend our gratitude to all donors who may not be listed and those who have chosen to remain anonymous.

**Below (left to right)**

Sir Paul Nurse; Professor Ruth Arnon, President of the Israel Academy; Lady Kohn and Sir Ralph Kohn.

**Sir Ralph Kohn FRS**

Sir Ralph Kohn FRS, who was elected as an Honorary Fellow in 2006, is a long standing supporter of the Society. Sir Ralph first provided his support in 1997 through the creation of the Kohn Centre, which has been used for such events as the Society's annual Summer Science Exhibition, the L'Oréal-UNESCO For Women in Science awards and the Beagle 2 Mars update to the media. Sir Ralph has also supported Science in the Society and helped to fund the Science Policy Centre to conduct work on climate change. From 2005 to 2013 he supported the Royal Society Kohn Award, created for early career scientists who had undertaken high quality and impact public engagement activities.





Sir Ralph recently pledged his support to a new partnership with the Israel Academy of Sciences and Humanities. The partnership, which is part of the Society's Newton International Fellowship Scheme, will link outstanding scientists in the United Kingdom and in Israel for the benefit of scientific community. This five-year programme will build networks and understanding between scientists at a variety of levels in the two countries. This will include research workshops, short visits of leading scientists to promote collaboration and stimulate academic co-operation and five fellowship opportunities. Sir Ralph's support continues to make a huge difference to the Society's work, in this case helping to foster international collaborations between exceptional scientists.

### SABMiller plc

SABMiller plc, the world's second largest brewer with significant operations in Africa, has a history of supporting research and capacity building within Africa. In 2014, we were delighted when the company chose to pledge their support to the SABMiller Royal Society Exchange Programme in Africa.

The five-year programme, launched on 28 January 2015, will target fields of science identified by African scientists in sub-Saharan Africa, mutually agreed by SABMiller and the Royal Society. The programme will provide awards for African scientists to partner with UK based laboratories, stimulating learning and allowing for collaboration between home and host universities.

### Below

Representatives of SABMiller and the Royal Society at the launch of the SABMiller Royal Society Exchange Programme in January 2015.



### International Support

The American Friends of the Royal Society (AFRS) once again chose to commit a substantial sum to the Society in 2014/15. This will support the Society's science policy work in the field of climate change. We would like to extend our thanks to the members of the AFRS board for their generosity.

### Legacy donors

**Professor Sir Kenneth Murray FMedSci FRS  
and Professor Lady Noreen Murray CBE FRS**

The Society continues to receive valuable support from the bequests of a number of Fellows and Foreign Members.

Last year Sir Kenneth Murray FMedSci FRS, a long standing supporter of the Society, bequeathed £2,000,000 to the Society in his will for the endowment of a Royal Society Professorship. This builds upon the support that Lady Noreen Murray bequeathed in her will and takes the overall sum of the couple's support to over £4,000,000.

Sir Kenneth, elected as a Fellow to the Society in 1979, was a celebrated scientist, having helped to develop the first vaccine against viral hepatitis B and co-founding the first European Biotechnology company, Biogen. Lady Noreen, also elected as a Fellow of the Society in 1982, gained a reputation as one of the world's most influential molecular geneticists. The Society remains grateful to the Murrays for their support, which will enable the Society to achieve its growing ambitions in the future.

## Working with others

### K C Wong Education Foundation

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The Society's partnership with the K C Wong Education Foundation began in 1987 with the establishment of the Royal Society K C Wong Fellowships, which later became Royal Society K C Wong Post-Doctoral Fellowships. Almost 30 years on, the purpose of the Fellowships remains the same: to enable outstanding Chinese scientists to undertake periods of research in British universities, laboratories and research institutions in collaboration with British colleagues.

The Foundation funds two early career post-doctoral researchers to work at UK research institutions for a period of two years. The Foundation's support has enabled the Society to recognise the calibre and support the development of these early career scientists, who now have the opportunity to broaden their horizons in their chosen scientific field.

The Society's longstanding relationship with the Foundation fosters a successful partnership and outstanding scientific achievements in the tri-relationship with Hong Kong, China and the United Kingdom. The Society is extremely grateful to the Foundation for their part in this.

2015 marks the 30th Anniversary of the K C Wong Education Foundation, and the Royal Society takes great pleasure in congratulating the Foundation on this delightful occasion. Not only is it a special milestone for the Foundation, it also marks another year of a close and successful partnership between our two organisations, and we hope to see this continue for years to come.

## Working with others

### Winton

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The relationship between the Royal Society and Winton Capital Management began in 2010 when David Harding, CEO of Winton Capital Management, and his wife Claudia generously supported the redevelopment of the Kavli Royal Society International Centre at Chicheley Hall and The Royal Society Enterprise Fund.

In February 2011 Winton chose to sponsor the longstanding Royal Society Prize for Science Books, which had been at risk of closing after more than 20 years.

Today, the Royal Society Winton Prize for Science Books is hailed as the UK's most prestigious science book prize. It celebrates outstanding popular science books from around the world and is open to all books written for a non-specialist audience. The books represent the growing body of truly exquisite science writing that is published each year across a wide variety of scientific fields.

The support of Winton Capital Management has meant that exceptional books such as Mark Miodownik's *Stuff Matters*, the 2014 winner of the prize, is now able to reach a wider and more diverse audience. Through Winton's sponsorship, awareness of the Prize and the general readership of the shortlisted books has continued to grow.

The announcement of the next Royal Society Winton Prize for Science Books winner is due to be made in September 2015.

### Thank You

The Society is truly grateful for the outstanding level of support from all our donors listed below and those who have chosen to remain anonymous over the last financial year. The generosity of our donors has allowed us to expand our international reach and enabled individuals to further enhance their scientific knowledge.

### President's Circle Members

The EPA Cephalosporin Research Fund  
 The Daiwa Anglo-Japanese Foundation  
 The Queen Elizabeth Diamond Jubilee Trust  
 ERA Foundation  
 GlaxoSmithKline (GSK)  
 The Gatsby Charitable Foundation  
 The Kavli Foundation  
 Sir Ralph Kohn FRS  
 The Leverhulme Trust  
 Pfizer Inc  
 Rolls-Royce Group Plc  
 SABMiller Plc  
 Winton Capital Management  
 The Wolfson Foundation  
 K.C. Wong Education Foundation  
 The Worshipful Company of Actuaries

### Fellows and Foreign Members

Sir Geoffrey Allen FREng FRS  
 Professor Grigory Barenblatt ForMemRS  
 Sir Walter Bodmer FMedSci FRS  
 Sir Tom Blundell FMedSci FRS  
 Professor Harry Bryden FRS  
 Sir John Enderby CBE FRS  
 Sir James Gowans CBE FMedSci FRS  
 Professor Ian Grant FRS  
 Professor Antony Hewish FRS  
 Professor Veronica Van Heyningen CBE

FMedSci FRS  
 Professor Bruce Joyce FRS  
 Professor Steven Ley CBE FMedSci FRS  
 Professor Robert Lloyd FRS  
 Sir Ravinder Maini FMedSci FRS  
 Professor Jeremiah Ostriker ForMemRS  
 Professor Susan Rees FRS  
 Professor Ian Smith FRS  
 Professor Angela Vincent FMedSci FRS  
 Dr Ian Young OBE FREng FRS

### Individuals

Mrs Judith Gibson  
 Dr Malcolm Gray  
 Mr Charles Hoare  
 Mr Hugh Hunt  
 Mrs Tracey Olsen  
 Mrs Helen Paige  
 Dr Anne Silk Hon DSc  
 Mr Reinalt Vaughan-Williams  
 Lady Fiona Wilson

### Companies

SABMiller PLC

### Trusts and Foundations

The Grantham Foundation for the Protection of the Environment  
 The Lord Leonard and Lady Estelle Wolfson Foundation  
 Institute of Mathematics & its Applications  
 Society of Chemical Industry

### Legacies

The Society is grateful for the following bequests and for donations received in memory of others.  
 Professor Sir Kenneth Murray FMedSci FRS  
 Professor Lady Noreen Murray CBE FRS



# Financial review

**Left**

The Royal Society  
Summer Science  
Exhibition 2014.

# Financial review

## Income

The Royal Society's income grew in the year from £70.6m in 2014 to £75.1m in 2015, an increase of 6%. The Department for Business, Innovation and Skills (BIS) core grant continues to provide the majority of our income, accounting for £46.8m of grant funding towards our activities. In addition to this, the Society received income from BIS of £2.3m in support of the Newton Fund Academies' Programme which aims to promote research and innovation in countries eligible for ODA funding.

Voluntary income grew by 50% from £2.8m to £4.2m, chiefly due to a new permanent endowment from the EP Abraham Cephalosporin Fund of £3.5m to support a research professorship in the biological and medical sciences.

Trading subsidiary income improved significantly during the year, increasing by 78% from £0.9m in 2014 to £1.6m in 2015. Trading in furtherance of charitable objectives performed consistently with the prior year, earning the Society income of £9.3m in 2015 (2014:£8.9m).

## Expenditure

Expenditure was broadly in line with the prior year, increasing from £70.1m in 2014 to £71.3m in 2015. Expenditure on charitable activities increased slightly from £66.6m to £67.1m, and remains around 94% of total expenditure. The majority of the Society's charitable expenditure is grant awards, which this year accounted for £50.1m (2014: £48.4m).

## Grants

The grants made by the Society fall into two broad classes: (1) Fellowships and (2) research grants. They can be further classified into: (1) early-career Fellowships, Professorships and Senior Fellowships, and support for innovation and (2) research grants, collaboration and travel grants, capacity-building grants, and education-related grants. Grants applications are assessed by means of a peer-review process and consideration by a panel of experts comprising Fellows of the Royal Society and other senior scientists. Each panel is chaired by a Fellow of the Society. Further information is available at [royalsociety.org/grants/applications](http://royalsociety.org/grants/applications). The primary purposes of the Society's grant-giving activities are to support the work of outstanding individual scientists at various stages of their careers, primarily in the UK, and to encourage collaborations between UK scientists and scientists throughout the world.

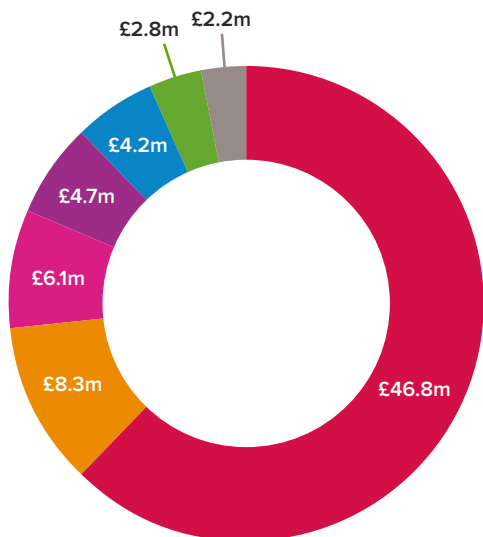
## Chicheley Hall

### Royal Society Trading Limited

The Society acquired Chicheley Hall in 2008 with the aim of operating the property as a centre for scientific and academic conferences. In addition to holding mission related activities, the Hall is available for conferences and other events, and Royal Society Trading Limited was established to process the activities of the Hall. Since February 2013, the management of the property has been outsourced to De Vere Venues, with the objective of breaking even after three years. Income increased in the period by £0.7m to £1.6m (2014: £0.9m), and the subsidiary ended the year with a loss of £55k (2014: £408k).



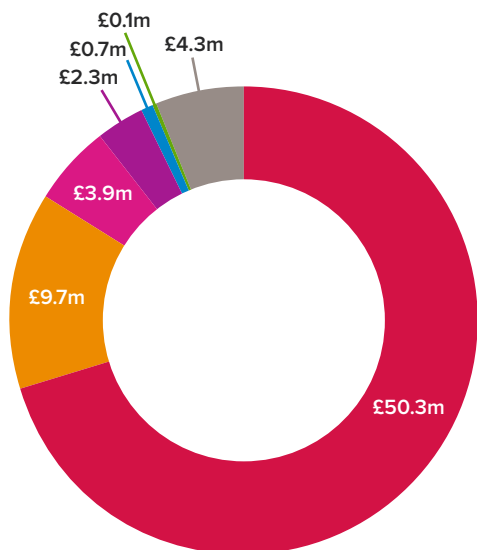
**TOTAL INCOME**



**Total Income £75.1m**  
(2014: £70.6m)

- Core BIS grant
- Grant income
- Publishing income
- Investment income
- Donation income
- Conferencing income
- Trading and other income

**TOTAL EXPENDITURE**



**Expenditure £71.3m**  
(2014: £70.1m)

- Supporting outstanding science
- Fostering international cooperation
- Education and public engagement
- Providing scientific advice
- Promoting science
- Recognising excellence in science
- Other

### **Pension and Life Assurance Plan of the Royal Society**

The Society operates a defined benefit pension scheme which was closed to new members in 2014. The valuation of the scheme at 31 March 2015 showed a deficit of £10.7m (2014: £7.1m). This represents the difference between the assets and the obligations of the fund rather than an immediate cash liability. In accordance with FRS17, the actuarial losses on the scheme of £6.2m (2014: gain of £5.7m) have been charged to unrestricted funds. The Society will make deficit contributions to the pension scheme of £1m during the next financial year, and the current budget and forecasts indicate that the Society will be able to meet these contributions as they arise.

### **Investment Policy and Performance**

The Society's investment portfolio grew from £196.8m to £211.8m between 2014 and 2015 including unrealised gains of £13.1m (2014: £8.7m). Income from investments in the year was £4.7m (2014: £4.6m), an increase of 2% on the prior year.

The Society's investment policy is to hold assets to maximise overall return with an appropriate level of risk, when considered alongside the Society's strategic plan and its level of reserves.

The Society maintains an investment portfolio in order to:

- provide long-term growth in the Society's endowment in excess of underlying inflation;
- provide a source of cash and liquidity to support the Society's operations to an appropriate sustainable level.

The Society makes investment decisions under the advice of the Investment Committee, chaired by the Treasurer, whose members have investment or commercial background and experience.

The Society expects a balance between capital growth and income to further its charitable work. It seeks to grow the basic value of its investments in real terms, both in dividends and in capital. The Society also holds expendable funds within the portfolio, all of which will be expended over time, and other permanently endowed funds.

The Society expects investments in the portfolio normally to comprise leading UK and international companies, Unit and Investment Trusts including those investing in major international markets, fixed interest, venture capital, hedge funds, private equity funds, and property funds. A broad asset allocation of 80% equities, 20% fixed interest is a default position with variation as advised and monitored by the Investment Committee. Investment managers have a general discretion over asset allocation and selection. The Society is an ethical investor and judges its investments appropriately. Such judgements will be consistent with the Trustees' powers and fiduciary responsibilities and with the Society's charitable objects. The Society's Enterprise Fund invests directly in innovative early-stage businesses emerging from the science base in the UK and elsewhere.

### Enterprise Fund

The Enterprise Fund was established in 2008 from restricted donations to the Society. The purpose of the Fund is to become a financially successful contributor to early-stage science-based companies and a role model for the translation of excellent science for commercial and social benefit. On 7 August 2014, Council agreed to transfer the management and administration of the fund to Amadeus Capital Partners Limited, an investment manager with experience of commercial venture funds with investment policies in close alignment to that of the Enterprise Fund. The Society and Amadeus signed a Limited Partnership Agreement to govern Amadeus RSEF LP. During the year, the costs of establishing and managing the Limited Partnership exceeded the gains of the fund, leading to a reduction in the value of the fund of £0.2m.

Dr Hermann Hauser joined Council on 1 December 2014, having been elected by the Fellowship. Dr Hermann Hauser is a partner of Amadeus Capital Partners Limited.

### Reserves

The total funds of the Society increased by £11.5m to £265.3m, due to increases in restricted and endowment funds. During the year unrestricted reserves fell from £86.8m to £84.2m in line with the Society's plan to reduce reserves.

The Society holds free reserves so that it can respond to unforeseen charitable opportunities and continue to honour existing commitments in the event of a shortfall of income. The Society's policy is to review its income streams and expenditure commitments on an annual basis, assess the main financial risks faced by the Society and their associated likelihood in order to develop a risk based reserves level. The Society has calculated a target free reserves level of £11.0m.

Freely available reserves are calculated by taking total unrestricted funds and deducting unrestricted tangible fixed assets and the heritage assets. At the balance sheet date the value of the Society's free reserves was £18.3m (2014: £22.5m), which was above the target level. The Society continues to develop longer term strategies to increase its charitable activities in a sustainable way which will reduce the reserves level in line with the target.

# Governance

The Society was founded in 1660 and incorporated by Royal Charter. The governing body of the Society is its Council, whose members are elected by and from the Fellowship. Under the Society's Charters, the Council 'shall and may have full authority, power, and faculty from time to time to draw up, constitute, ordain, make, and establish such laws, statutes, acts, ordinances, and constitutions as shall seem to them, or to the major part of them, to be good, wholesome, useful, honourable, and necessary, according to their sound discretions, for the better government, regulation, and direction of the Royal Society aforesaid, and of every Member of the same, and to do and perform all things belonging to the government, matters, goods, faculties, rents, lands, tenements, hereditaments, and affairs of the Royal Society aforesaid.'

Council may have between 20 and 24 members, and there were 23 in the year. Council is chaired by the President of the Society, and among its members are four Officers: the Biological Secretary, the Foreign Secretary, the Physical Secretary, and the Treasurer. The President and the Officers serve five-year terms. In July 2012, in the first change to the Society's governing documents since the 1660s, the Society was granted a Supplemental Charter by Her Majesty the Queen. The Society had petitioned for that Charter as part of a programme to modernise and improve its governance arrangements. One important change effected by the new Charter was that the term of Council membership for the members other than the President and the Officers is now three years, rather than the one or two years specified in the original Charters.

The Society is a registered charity and Council is the trustee body under charity law. Fellows are not remunerated for serving as trustees. Council has complied with its duty to have due regard to the Charity Commission's public benefit guidance when exercising any powers or duties to which that guidance is relevant. Information about the public benefit provided by the Society is presented in this Report. Changes in the membership of Council took place as usual on 30 November (Anniversary Day), and shortly afterwards the new members attended a bespoke induction session at which the Internal Audit Engagement Partner and the Executive Director, who was a professor of law and is a barrister, gave presentations on trustee duties in general and on membership of Council in particular. Relevant training was also provided to trustees during the year in the context of their consideration of specific matters.

Council is supported by a range of committees, whose memberships include Fellows, other scientists, and others with relevant expertise. Among the committees that report directly to Council are the following.

- Audit Committee examines the Society's arrangements for governance, risk management, internal control, and value for money, and advises Council on the adequacy and effectiveness of those arrangements.
- The Board comprises the President and the Officers. Its duties include guiding and overseeing implementation of Council decisions, considering matters that require urgent attention between Council meetings or that do not fall within the remit of any other committee, and providing advice and guidance to the Executive Director.

- Diversity Committee advises Council on diversity matters and oversees the Society's activities in diversity.
- Education Committee advises Council on the Society's strategy in relation to education and skills and oversees implementation of associated programmes.
- Finance Committee advises Council on financial matters generally. Its remit includes financial strategy, revenue and capital budgets and performance against them, and oversight of financial aspects of the Society's trading operations and subsidiaries.
- Investment Committee advises Council on investment policy and investment objectives, determines investment strategy, takes certain decisions in consultation with the Society's investment managers, and determines benchmarks and reviews performance against them.
- Nominations Committee advises Council on the strongest candidates for election as members of Council and for appointment as chairs of committees and as members of Sectional Committees (see below).
- Public Engagement Committee advises Council on the Society's public engagement strategy and oversees its activities in that field.
- Science, Industry, and Translation Committee advises Council on the Society's strategy and activities concerned with science, industry, and translation.
- Science Policy Advisory Group advises Council on the work programme of the Science Policy Centre.
- The Sectional Committees, of which there are ten spanning the scientific disciplines, determine shortlists of candidates for election to the Fellowship and the Foreign Membership for consideration by Council.

As of 31 March 2015, the Society had 156 staff. Council delegates responsibility for day-to-day management of the Society to the Executive Director. The Society's staff are organised into groups of sections concerned with communications, conferencing, development, diversity, facilities, Fellowship and governance, finance, grants, history of science, human resources, industry, information technology, international affairs, marketing and public engagement, publishing, science policy, and scientific programme.

**Statement of Trustees' responsibilities**

The Council members (who are the trustees of the Society) are responsible for preparing the trustees' annual report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

Charity law requires Council to prepare financial statements for each financial year that give a true and fair view of the state of affairs of the group and the parent charity and of the incoming resources and application of resources of the group for the year. In preparing those financial statements the trustees are required to:

- select suitable accounting policies and then apply them consistently
- observe the methods and principles in the Charities SORP
- make judgements and accounting estimates that are reasonable and prudent
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

Council is responsible for keeping accounting records that are sufficient to show and explain the charity's transactions and disclose with reasonable accuracy at any time the financial position of the group and parent charity and enable them to ensure that the financial statements comply with the Charities Act 2011 and regulations made thereunder. Council is also responsible for safeguarding the assets of the group and the parent charity, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Council is responsible for the maintenance and integrity of the financial information included on the charity's website. Legislation in the United Kingdom governing the preparation and dissemination of the financial statements and other information included in annual reports may differ from legislation in other jurisdictions.

### Risk assessment

Council is responsible for ensuring that proper arrangements are in place for risk management. Council relies principally on Audit Committee, supported by the Internal Auditors, to assess those arrangements and to advise it accordingly. During the year, Audit Committee received and considered regular reports on risk management systems and management of major risks. Council received regular reports from Audit Committee and reviewed management of major risks, including using its own risk register. The risk registers of the Society's sections were also updated and used to monitor management of risks.

Work during the year to address major risks, including risks related to strategy and activities, Fellowship and governance, and finance and operations, included:

- continuous engagement with the Society's principal funder, the Department for Business, Innovation, and Skills, about the Society's work
- planning for a possible increase or reduction in the Society's main grant following the next Comprehensive Spending Review
- a programme to strengthen the Society's fund-raising capabilities and activities
- early stages of preparation for Sir Venki Ramakrishnan to succeed Sir Paul Nurse as President of the Society on 30 November 2015
- careful preparation and review of all of the Society scientific reports to ensure their accuracy and so conserve the Society's reputation
- execution of a major programme of activities to help the Society determine future plans for its journal publishing business in light of major developments in publishing generally
- a series of activities intended to increase the Society's net income from its other primary purpose trading activity of hosting events at its premises in Carlton House Terrace
- continued close interaction with De Vere Venues in relation to the management contract for Chicheley Hall
- the signing of an agreement with Amadeus Capital Partners in relation to the Society's Enterprise Fund
- closure of the defined benefit Pension and Life Assurance Plan of the Royal Society to new members and other changes to pension arrangements
- further strengthening of the Society's organisational capacity and management structure
- continuation of a major programme of activities to improve HR policies and procedures and to provide appropriate guidance and training for members of staff
- continuation of a major programme of investment in IT infrastructure and systems.

*Paul Nurse*

Paul Nurse  
President of the Royal Society

# Independent auditors report to the Trustees of the Royal Society

We have audited the financial statements of The Royal Society of London for Improving Natural Knowledge, commonly known as the Royal Society, for the year ended 31 March 2015 which comprise the Consolidated Statement of Financial Activities, the Consolidated and Charity Balance Sheets, the Consolidated Cash Flow Statement, the Accounting Policies and the related notes 1 to 24. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

This report is made solely to the charity's trustees, as a body, in accordance with section 144 of the Charities Act 2011 and regulations made under section 154 of that Act. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's trustees as a body, for our audit work, for this report, or for the opinions we have formed.

## **Respective responsibilities of trustees and auditor**

As explained more fully in the Trustees' Responsibilities Statement, the trustees are responsible for the preparation of the financial statements which give a true and fair view.

We have been appointed as auditor under section 144 of the Charities Act 2011 and report in accordance with regulations made under section 154 of that Act. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

## **Scope of the audit of the financial statements**

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the group's and the parent charity's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the trustees; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.



**Opinion on financial statements**

In our opinion the financial statements:

- give a true and fair view of the state of the group's and of the parent charity's affairs as at 31 March 2015, and of the group's incoming resources and application of resources, for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

**Opinion on other matter as required by BIS grant letter**

In our opinion, in all material aspects, the core grant payments received from the Department for Business, Innovation and Skills (BIS) has been applied for the purposes set out in the Grant Letter and in accordance with the terms and conditions of the core grant.

**Matters on which we are required to report by exception**

We have nothing to report in respect of the following matters where the Charities Act 2011 requires us to report to you if, in our opinion:

- the information given in the Trustees' Annual Report is inconsistent in any material respect with the financial statements; or
- sufficient accounting records have not been kept by the parent charity; or
- the parent charity financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

**Deloitte LLP**

Chartered Accountants and Statutory Auditor  
Reading  
1 July 2015

Deloitte LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006 and consequently to act as the auditor of a registered charity.

# Consolidated statement of financial activities

For the year ended 31 March 2015

	Notes	Unrestricted Funds £'000	Restricted Funds £'000	Expendable Endowment Funds £'000	Permanent Endowment Funds £'000	2015 Total Funds £'000	2014 Total Funds £'000
<b>Incoming resources</b>							
<b>Incoming resources from generated funds</b>							
Voluntary income	1	337	205	–	3,696	4,238	2,816
Investment income	2	1,317	3,420	–	–	4,737	4,552
Trading through subsidiary	3	1,635	–	–	–	1,635	910
		<b>3,289</b>	<b>3,625</b>	<b>–</b>	<b>3,696</b>	<b>10,610</b>	<b>8,278</b>
<b>Incoming resources from charitable activities</b>							
Grants for charitable activities	4	992	54,119	–	–	55,111	53,356
Trading in furtherance of charitable objectives	3	8,942	330	–	–	9,272	8,891
		<b>9,934</b>	<b>54,449</b>	<b>–</b>	<b>–</b>	<b>64,383</b>	<b>62,247</b>
Other income		3	76	–	–	79	52
<b>Total incoming resources</b>		<b>13,226</b>	<b>58,150</b>	<b>–</b>	<b>3,696</b>	<b>75,072</b>	<b>70,557</b>
<b>Resources expended</b>							
<b>Costs of generating funds</b>							
Costs of generating voluntary income		457	–	–	–	457	324
Investment management costs	16	109	568	68	236	981	501
Trading through Subsidiary	3	2,141	–	–	–	2,141	1,743
<b>Total costs of generating funds</b>		<b>2,707</b>	<b>568</b>	<b>68</b>	<b>236</b>	<b>3,579</b>	<b>2,568</b>
<b>Charitable activities</b>							
Promoting science and its benefits		266	478	–	–	744	892
Recognising excellence in science		114	9	–	–	123	166
Supporting outstanding science		6,174	44,130	–	–	50,304	52,575
Providing scientific advice for policy		1,142	1,159	–	–	2,301	1,795
Fostering international and global cooperation		441	9,247	–	–	9,688	7,383
Education and public engagement		2,183	1,717	–	–	3,900	3,748
<b>Total for cost of charitable activities</b>	<b>5</b>	<b>10,320</b>	<b>56,740</b>	<b>–</b>	<b>–</b>	<b>67,060</b>	<b>66,559</b>

	Notes	Unrestricted Funds £'000	Restricted Funds £'000	Expendable Endowment Funds £'000	Permanent Endowment Funds £'000	2015 Total Funds £'000	2014 Total Funds £'000
Governance costs	8	700	1	–	–	701	959
<b>Total resources expended</b>		<b>13,727</b>	<b>57,309</b>	<b>68</b>	<b>236</b>	<b>71,340</b>	<b>70,086</b>
<b>Net (outgoing) / incoming resources before transfers</b>		<b>(501)</b>	<b>841</b>	<b>(68)</b>	<b>3,460</b>	<b>3,732</b>	<b>491</b>
Gross transfers between funds	20	739	(739)	–	–	–	–
<b>Net incoming / (outgoing) resources before other recognised gains and losses</b>		<b>238</b>	<b>102</b>	<b>(68)</b>	<b>3,460</b>	<b>3,732</b>	<b>491</b>
Net gains on investments	16	3,010	2,595	1,888	6,185	13,678	8,556
Actuarial gains / (losses) on defined benefit pension scheme	22	(6,236)	–	–	–	(6,236)	5,747
Gains on heritage assets revaluation	15	371	–	–	–	371	1,449
<b>Net movement in funds</b>		<b>(2,617)</b>	<b>2,697</b>	<b>1,820</b>	<b>9,645</b>	<b>11,545</b>	<b>16,243</b>
<b>Total funds brought forward</b>		<b>86,797</b>	<b>40,095</b>	<b>28,667</b>	<b>98,168</b>	<b>253,727</b>	<b>237,484</b>
<b>Total funds carried forward</b>		<b>84,180</b>	<b>42,792</b>	<b>30,487</b>	<b>107,813</b>	<b>265,272</b>	<b>253,727</b>

All of the above results are derived from continuing activities. There are no other gains or losses other than those stated above.

A Statement of Total Recognised Gains and Losses is not required as all gains and losses are included in the Statement of Financial Activities.

Incoming resources of the Charity during the year were £73,437,000 (2014: £72,525,000) less resources expended by the Charity at £69,199,000 (2014: £68,839,000) led to a surplus of £4,238,000 (2014: £9,736,000). All incoming resources, resources expended and resulting net movements in funds are derived from continuing activities.

# Consolidated balance sheet

As at 31 March 2015

	Notes	Group 2015 £'000	Group 2014 £'000	Charity 2015 £'000	Charity 2014 £'000
<b>Fixed Assets</b>					
Tangible assets	13	16,632	15,562	16,632	15,562
Heritage assets	15	49,206	48,720	49,206	48,720
Investments	16	211,858	196,835	211,858	196,835
		<b>277,696</b>	<b>26,117</b>	<b>277,696</b>	<b>261,117</b>
<b>Current Assets</b>					
Stocks		44	42	19	23
Debtors receivable within one year	17	5,377	7,038	5,220	7,018
Debtors receivable after one year	17	1,750	1,500	1,750	1,500
Cash at bank and in hand		2,439	1,611	1,962	1,250
		<b>9,610</b>	<b>10,191</b>	<b>8,951</b>	<b>9,791</b>
Creditors: amounts falling due in one year	18	(11,293)	(10,396)	(10,171)	(9,588)
<b>Net Current (Liabilities) / Assets</b>		<b>(1,683)</b>	<b>(205)</b>	<b>(1,220)</b>	<b>203</b>
<b>Total assets less current liabilities</b>		<b>276,013</b>	<b>260,912</b>	<b>276,476</b>	<b>261,320</b>
Creditors: amounts falling due after one year	18	(76)	(77)	(76)	(77)
<b>Net Assets before Pension Scheme liability</b>		<b>275,973</b>	<b>260,835</b>	<b>276,400</b>	<b>261,243</b>
Defined benefit pension scheme: liability	22	(10,665)	(7,108)	(10,665)	(7,108)
<b>Total Net Assets</b>		<b>265,272</b>	<b>253,727</b>	<b>265,735</b>	<b>254,135</b>
Permanent endowment funds	20	107,813	98,168	107,813	98,168
Expendable endowment funds	20	30,487	28,667	30,487	28,667
Restricted funds	20	42,792	40,095	42,792	40,095
<b>Unrestricted Funds</b>					
Revaluation reserve	20	47,856	47,485	47,856	47,485
Defined benefit pension reserve	20	(10,665)	(7,108)	(10,665)	(7,108)
Unrestricted income funds	20	46,989	46,420	47,452	46,828
		<b>265,272</b>	<b>253,727</b>	<b>265,735</b>	<b>254,135</b>

The financial statements were approved and authorised for issue by Council and signed on its behalf on 1 July 2015.



**Professor Anthony Cheetham**  
Treasurer

# Consolidated cash flow statement

For the year ended 31 March 2015

Reconciliation of net incoming resources to net cash outflow from operating activities			
	Notes	2015 £'000	2014 £'000
Net incoming resources before other recognised gains and losses		3,732	491
Investment income	2	(4,737)	(4,552)
Depreciation charges	13	1,541	1,355
Investment management fees charged to portfolio	16	981	501
(Increase) / Decrease in stocks		(2)	(11)
(Increase) / Decrease in debtors		1,411	(952)
(Increase) / Decrease in creditors		896	(1,370)
Donated heritage assets	15	(27)	–
Difference between pension charge and cash contributions	22	(2,679)	936
<b>Net cash outflow from operating activities</b>		<b>1,116</b>	<b>(3,602)</b>

Cash flow statement			
	Notes	2015 £'000	2014 £'000
Net cash outflow from operating activities		<b>1,116</b>	<b>(3,602)</b>

Returns on investments and servicing of finance			
Investment income	2	4,737	4,552
<b>Net cash inflow from returns on investments and servicing of finance</b>		<b>4,737</b>	<b>4,552</b>

Capital expenditure and financial investment			
Net purchase of tangible fixed assets	13	(2,611)	(1,189)
Purchase of heritage assets	15	(27)	(21)
Purchase of investments	16	(24,804)	(20,680)
Proceeds from sale of investments	16	22,417	17,896
Net increase in endowment investments	20	(3,392)	(1,710)
<b>Net cash outflow from capital expenditure and financial investment</b>		<b>(8,417)</b>	<b>(5,704)</b>
<b>Net cash outflow before management of liquid resources and financing</b>		<b>(2,564)</b>	<b>(4,754)</b>

Financing			
Net increase in endowment investments	20	3,392	1,710
<b>Net cash inflow from financing activities</b>		<b>3,392</b>	<b>1,710</b>
<b>Increase / (Decrease) in cash</b>		<b>828</b>	<b>(3,044)</b>
Cash at beginning of year, being net funds		1,611	4,655
Cash at end of year, being net funds		2,439	1,611

# Accounting policies

The principal accounting policies adopted in the preparation of these Financial Statements are as follows:

## **Basis of preparation**

The Financial Statements have been prepared under the historical cost convention, with the exception that certain investments are valued at mid-market prices as at the Balance Sheet date and heritage assets are valued in accordance with the heritage assets policy. They are also prepared in accordance with applicable accounting and financial reporting standards in the United Kingdom, the requirements of the Charities Act 2011 and the Statement of Recommended Practice – Accounting and Reporting by Charities (revised 2005) ('the SORP'). The financial statements are prepared on a going concern basis. The Trustees have reviewed reserve levels, budgets and cash flow forecasts for the next 12 months and believe the going concern basis to be appropriate.

## **Group Financial Statements**

The Society has three wholly owned subsidiary companies: The Royal Society Enterprise Fund Limited, Royal Society Trading Limited and Royal Society (London) Limited. The Society also owns the share capital of The Royal Society (Australia) Pty Limited which is the trustee of the Royal Society Theo Murphy (Australia) Fund.

The results of each of these subsidiary undertakings (see Note 23) have been incorporated into these consolidated Financial Statements under the heading 'Group' on a line-by-line basis, adopting uniform accounting policies. Their objectives contribute to those of the Royal Society Group strategy, and under the tests of control they are deemed to be wholly-owned subsidiaries of the Society.

No separate Statement of Financial Activities (SOFA) has been presented for the Charity alone, as permitted by paragraph 397 of the SORP.

## **Fund accounting**

Unrestricted funds comprise accumulated surpluses and deficits on general funds that are available for use at the discretion of the Trustees in furtherance of the general objectives of the Charity.

Restricted and endowment funds are subject to specific restrictions imposed by the donor.

Transfers between funds may arise when there is a charge from unrestricted funds to other funds or there is a release of restricted funds to unrestricted funds.

## **Incoming resources**

Donated goods and services are included at the value to the Society where these can be quantified. No amounts are included in these Financial Statements for the services donated by volunteers or Fellows. Income from trading in subsidiary undertakings is transferred to the Society by covenanting the profits of those undertakings. Donations are accounted for as soon as their amount and receipt is certain. Donations include Gift Aid based on amounts recoverable at the accounting date.

Legacy income is recognised on a receivable basis when there is sufficient evidence to provide necessary certainty that it will be received and the value of the incoming resources can be measured with sufficient reliability. Council has determined that it does not regard a legacy as receivable until probate has been granted in respect of the estate.

Fellows' Annual Contributions are recognised in the year in which they become due. Fellows' Annual Contributions may be compounded into a single payment which is fully recognised in the year it is paid.

Investment income and interest on deposits is recognised on an accruals basis. Investment income arising on endowment funds is credited to the appropriate fund in accordance with the prescribed conditions.

Grants are credited as income in the year in which they are receivable. Grants are recognised as receivable when all conditions for receipt have been complied with. Where donor-imposed restrictions apply to the timing of the related expenditure as a precondition of its use, the grant is treated as deferred income until those restrictions are met. Grants received for specific purposes are accounted for as restricted funds.

Grants receivable in respect of expenditure on tangible fixed assets are treated as income of either a restricted fund or an unrestricted fund as applicable.

#### **Charitable expenditure**

Charitable expenditure includes all expenditure incurred on grants awarded and on other schemes run in pursuance of the Society's objectives under its Charter, including Fellowship activities and primary purpose trading. The Society adopted a new five year strategy in 2012 and the charitable activities of The Society have been reported under the six main strategic objectives. The direct costs of supporting these activities, including staff, establishment, and other overhead costs, are separately analysed and shown as support costs under this heading. Expenditure, including irrecoverable VAT, is accounted for on an accruals basis.

Development expenses include those costs incurred in raising donations and legacies.

Governance costs are incurred in relation to the running of the Society. This includes strategic planning and attending to the Society's statutory affairs.

Expenditure on staff, establishment, and operating costs are allocated to charitable activities, governance and fundraising on the basis of the staff costs of each activity.

Grants are recognised as a liability when the Society is under a legal or constructive obligation to make a transfer to a third party. As the Society retains the discretion to terminate grants only the grant expenditure in the current financial year is recognised in the financial statements. Grant commitments in future periods are treated as liabilities of those periods and not as liabilities at the Balance Sheet date. Such grants are disclosed as future commitments.

#### **Foreign currency**

Transactions in foreign currencies are translated into sterling using a weekly rate of exchange ruling at the date of the transaction. Assets and liabilities in foreign currency are translated into sterling at the rate of exchange ruling on the Balance Sheet date.

#### **Leased assets**

All operating leases and rental expenses are charged to the SOFA as incurred over the term of the lease on a straight line basis.

### Tangible fixed assets

Expenditure on tangible fixed assets is capitalised if the cost of the total asset exceeds £5,000. Additions of smaller value may be capitalised if forming part of a larger asset. The cost of other items is written off as incurred.

Depreciation is calculated, on all assets excluding freehold land and assets under development, to write off the cost of tangible fixed assets on a straight line basis over their expected useful lives as follows:

Freehold property and improvements	20 – 50 years
Freehold fixtures and fittings	3 – 10 years
Leasehold improvements	20 – 30 years
Leasehold fixtures and fittings	3 – 10 years
Computers and AV equipment	3 – 5 years
Other equipment	10 – 20 years

Fixed assets are subject to review for impairment when there is an indication of a reduction in their carrying value. Any impairment is recognised in the SOFA in the year in which it occurs.

### Heritage assets

Heritage assets comprise:

- Printed Books
- Archives
- Pictures, Sculptures and other works of Art
- Other artefacts

Printed Books and Archives are included on the Balance Sheet at cost using a valuation performed in 2003 as a proxy for cost.

Pictures, Sculptures, and other works of Art and Other artefacts are included on the Balance Sheet on a valuation basis. The valuation reflects the fair market / replacement value and is performed every 5 years.

Impairment reviews are carried out at the end of each reporting period to ensure that the carrying value of the heritage assets reflect their carrying amounts.

Additions to heritage assets are made by purchase or donation. Purchases are initially recorded at cost and donations are recorded at a current value where available. The cost of obtaining an annual value outweighs the value of any resultant benefit. The Society holds and retains these assets as a long-term policy for use in its charitable purposes and has no intention of disposing of any of these items.

The Trustees do not consider that reliable cost or valuation information can be obtained for a large part of the archives collection and the Society does not therefore recognise these assets on its Balance Sheet. The Society was founded in 1660 and the collection has been built up throughout its existence. Reliable and relevant information on the cost of many of the assets is therefore not readily available. The number of un-capitalised assets held in the collection is extensive and their nature diverse; accordingly efforts to obtain costs or values would be prohibitively expensive compared with any benefits arising from the exercise. Added to this, there is a lack of comparable market values. Therefore any value attributed to these assets would be purely speculative and of limited practical use.



### Investments

Investments listed on a recognised stock exchange, including Investment and Unit Trusts, are stated at mid-market value at the Balance Sheet date.

Net investment gains / losses for the year are credited / charged in the Statement of Financial Activities. Unlisted investments comprise directly held investments of the Enterprise Fund and Private Equity and Venture Capital funds managed by third party investment fund managers. These investments are held at fair value (market value) in accordance with the International Private Equity and Venture Capital Valuation Guidelines. Where a reliable estimate of fair value is not available, investments are held at cost. Investments held at cost are reviewed annually for impairment. No adjustment for impairment of the value of unlisted investments was considered necessary in the year.

Investment-management fees are charged proportionately against the funds under investment.

The investments in subsidiary undertakings are held at cost on the Society's balance sheet.

### Pension costs

The Society contributes to three pension schemes on behalf of its employees: the Pension and Life Assurance Plan of the Royal Society, a defined benefit scheme, the Universities Superannuation Scheme (USS), a defined benefit scheme and the Royal Society Group Personal Pension Plan, a defined contribution scheme.

The defined contribution scheme came into existence on 1 October 2013 and is open to all employees. The pension charge in relation to this scheme is based upon employer's contributions payable in the year.

USS is a multi-employer scheme and it is not possible to identify the Society's share of the underlying assets and liabilities. Therefore, as required by Financial Reporting Standard (FRS)17, the contributions are charged directly to the income and expenditure account as if it was a defined contribution scheme.

USS is a "last man standing" scheme which means that in the event that another member institution becomes insolvent the other participating members will pick up any funding shortfall. Further details about USS, information about the latest informal valuations of the scheme and proposed rule changes can be found at [www.uss.co.uk](http://www.uss.co.uk).

The assets of the Pension and Life Assurance Plan of the Royal Society scheme are held separately from those of the Society, in separate trustee-administered funds. Pension Scheme assets are measured at fair value and liabilities on an actuarial basis using the projected unit method and discounted at a rate equivalent to the current rate of return on a high-quality corporate bond of equivalent currency and term to the Scheme liabilities. The actuarial valuations are obtained triennially and updated under FRS17 rules at each Balance Sheet date. Any surplus or deficit is shown in the Balance Sheet as an asset or liability.

The charge to the Statement of Financial Activities is calculated so as to spread the cost of pensions over employees' working lives with the Society. The charge comprises the current service cost computed by the actuary under FRS17 and gains and losses on settlements and curtailments. Past-service costs/ credits are recognised immediately if the benefits have vested. If the benefits have not vested immediately, the costs are recognised over the period until vesting occurs. The interest costs and the expected return on assets are shown as a net amount of other finance costs or credits charged or credited to the Statement of Financial Activities. Actuarial gains and losses are recognised immediately under the description 'Actuarial losses on defined benefits pension scheme'.

During the year the following changes were made to Plan benefits resulting in a past service credit:

- Normal retirement age was increased from 60 to 65 for service from 1 October 2014; and
- Pensionable Salary increases will be capped at 2% pa from 1 October 2014.
- Accrued benefits at 1 October 2014 will be subject to an underpin at the level of the deferred revaluation that would have been granted if the member left the Plan.

#### **Taxation**

The Society is a Registered Charity and as such is entitled to certain tax exemptions on income and profit from investments and surpluses on any trading activities carried out in furtherance of the Charity's primary objectives. These profits are applied solely for charitable purposes.

# Notes to the financial statements

For the year ended 31 March 2015

1. Voluntary income						
	Unrestricted Funds £'000	Restricted Funds £'000	Expendable Endowment Funds £'000	Permanent Endowment Funds £'000	2015 Total Funds £'000	2014 Total Funds £'000
Gifts and Donations	98	205	–	3,500	3,803	559
Legacies	–	–	–	196	196	2,041
Fellows' Contributions	239	–	–	–	239	216
<b>Total</b>	<b>337</b>	<b>205</b>	<b>–</b>	<b>3,696</b>	<b>4,238</b>	<b>2,186</b>

2. Investment income						
	Unrestricted Funds £'000	Restricted Funds £'000	Expendable Endowment Funds £'000	Permanent Endowment Funds £'000	2015 Total Funds £'000	2014 Total Funds £'000
Dividends – UK Equities	865	2,273	–	–	3,138	3,077
Dividends – Overseas Equities	351	922	–	–	1,273	1,102
Interest – UK fixed interest securities	24	64	–	–	88	1
Interest – Overseas fixed interest securities	55	144	–	–	199	312
Bank deposit interest	22	17	–	–	39	40
Other gains and loan interest	–	–	–	–	–	20
<b>Total</b>	<b>1,317</b>	<b>3,420</b>	<b>–</b>	<b>–</b>	<b>4,737</b>	<b>4,552</b>

3. Trading								
	2015				2014			
	External Income £'000	Recharged Internal lettings £'000	Gross Expenditure £'000	2015 Net Surplus/ (deficit) £'000	External Income £'000	Recharged Internal lettings £'000	Gross Expenditure £'000	2014 Net Surplus/ (deficit) £'000
<b>Incoming resources from generated funds</b>								
Lettings through Subsidiary – Kavli Royal Society International Centre	1,635	451	(2,141)	(55)	910	421	(1,743)	(412)
<b>Trading in furtherance of charitable activities</b>								
Publishing	6,070	–	(2,568)	3,502	5,672	–	(3,064)	2,608
Lettings in furtherance of objectives – Carlton House Terrace	2,837	1,108	(2,518)	1,427	2,840	1,209	(3,003)	1,046
Lettings in furtherance of objectives – Kavli Royal Society International Centre	4	–	(9)	(5)	4	–	8	12
Other	361	1	–	362	375	–	–	375
	<b>9,272</b>	<b>1,109</b>	<b>(5,095)</b>	<b>5,286</b>	<b>8,891</b>	<b>1,209</b>	<b>(6,059)</b>	<b>4,041</b>
<b>Total</b>	<b>10,907</b>	<b>1,560</b>	<b>(7,236)</b>	<b>5,231</b>	<b>9,801</b>	<b>1,630</b>	<b>(7,802)</b>	<b>3,629</b>

The costs of the Society's publishing operation and the costs associated with the lettings in furtherance of charitable objects are included in "Supporting outstanding science" on the face of the SOFA. The costs of lettings through the Subsidiary are included in the costs of generating funds.

The Society was exempt from income tax, corporation tax and capital gains tax on income derived from its primary purpose trading and charitable activities.

4. Grants for activities							
	Unrestricted Funds £'000	Restricted Funds £'000	Expendable Endowment Funds £'000	Permanent Endowment Funds £'000	2015 Total Funds £'000	2014 Total Funds £'000	
<b>From Government and other public bodies:</b>							
Core grant from the Department of Business, Innovation and Skills	992	45,809	–	–	46,801	47,101	
Other grants from government and public bodies	–	4,136	–	–	4,136	2,051	
<b>From other external bodies</b>							
Contribution to charitable activities	–	4,174	–	–	4,174	4,204	
<b>Total</b>	<b>992</b>	<b>54,119</b>	<b>–</b>	<b>–</b>	<b>55,111</b>	<b>53,356</b>	

Details of the income to and movement of individual funds are disclosed in note 20.

## 5. Analysis of costs of charitable activities

	Staff Costs £'000	Grant Costs £'000 (Note 9)	Other direct costs £'000	Support Costs £'000 (Note 6)	2015 Total £'000	2014 Total £'000
<b>Charitable activities</b>						
Promoting science and its benefits	93	319	217	115	744	892
Recognising excellence in science	4	–	114	5	123	166
Supporting outstanding science	2,109	41,777	3,807	2,611	50,304	52,575
Providing scientific advice for policy	923	3	233	1,142	2,301	1,795
Fostering international and global cooperation	356	7,681	1,210	441	9,688	7,383
Education and public engagement	1,157	331	979	1,433	3,900	3,748
<b>Total for costs of charitable activities</b>	<b>4,642</b>	<b>50,111</b>	<b>6,560</b>	<b>5,747</b>	<b>67,060</b>	<b>66,559</b>

## 6. Support costs

	Media relations and public engagement £'000	Facilities and building management £'000	Support services £'000	2015 Total £'000	2014 Total £'000
Costs of generating funds	11	76	126	213	145
<b>Charitable activities</b>					
Promoting science and its benefits	6	41	68	115	209
Recognising excellence in science	–	2	3	5	10
Supporting outstanding science	129	930	1,552	2,611	3,069
Providing scientific advice for policy	57	407	678	1,142	906
Fostering international and global cooperation	22	157	262	441	409
Education and public engagement	71	511	851	1,433	1,396
	<b>285</b>	<b>2,048</b>	<b>3,414</b>	<b>5,747</b>	<b>5,999</b>
Governance	6	46	76	128	112
<b>Total support costs</b>	<b>302</b>	<b>2,170</b>	<b>3,616</b>	<b>6,088</b>	<b>6,256</b>

Facilities and building management comprises the rent and running costs (depreciation, insurance, cleaning and security) of Carlton House Terrace.

Support services comprise finance, IT, HR, pension costs and corporate management.

Support costs are allocated using departmental salary costs as a base.

<b>7. Staff costs</b>		
	2015 £'000	2014 £'000
Salaries	6,685	6,298
Social Security costs	606	569
Pension costs	(1,978)	1,556
<b>Total</b>	<b>5,313</b>	<b>8,423</b>

**The following numbers of employees of the Royal Society received total emoluments within the bands shown.**

	2015	2014
Number of employees earning £60,000 pa or more:		
£60,001 – £70,000	6	4
£70,001 – £80,000	2	4
£80,001 – £90,000	–	1
£90,001 – £100,000	4	2
£100,001 – £110,000	–	1
£110,001 – £120,000	1	–
£120,001 – £130,000	–	1
£140,001 – £150,000	1	–
£160,001 – £170,000	–	1
£200,001 – £210,000	1	1
£230,001 – £240,000	1	–

Of the 16 (2014:15) employees above, 14 (2014: 13) are accruing benefits under a defined benefits pension scheme and 1 employee (2014: 1) is accruing benefits under a defined contribution pension scheme.

The total amount of employer contributions paid in respect of the above employees into a defined benefit scheme was £196,292 (2014: £182,482). The total amount of employer contributions paid in respect of the above employee into a defined contribution pension scheme was £16,800 (2014: £7,000).

**The following numbers of employees of the Royal Society Enterprise Fund Limited received total emoluments within the bands shown.**

	2015	2014
Number of employees earning £60,000 pa or more:		
£70,001 – £80,000	–	1
£150,001 – £160,000	–	–
£430,001 – £440,000	–	1

Of the 0 (2014: 2) employees above, 0 (2014: 1) are accruing benefits under a defined benefits pension scheme.

The total amount of employer contributions paid in respect of the above employee into a defined benefit scheme was £0 (2014: £7,140).

Of the employees above redundancy payments were made to 0 (2014: 2) employees. Total redundancy payments in respect of the above employees was £0 (2014: £304,843).

**7. Staff costs (continued)**

The average number of employees, analysed by function, was:

	2015	2014
Generating funds	4	2
Charitable activities	102	94
Support & Governance	45	43
Royal Society Enterprise Fund Limited	–	2
<b>Total</b>	<b>151</b>	<b>141</b>

Of which the average full time equivalent was 150 (2014: 138)

**8. Governance costs**

	2015 Total £'000	2014 Total £'000
Fellowship costs	113	127
Council and committee expenses	41	64

**Auditor's remuneration:**

Audit fee	49	33
Audit fee – (over) / under provision prior year	(12)	(2)
Non audit services	–	5
Internal audit	66	121
Legal and professional fees	213	423
Staff costs	103	76
Allocated support costs	128	112
<b>Total</b>	<b>701</b>	<b>959</b>

<b>9. Grants</b>				
	Grants to Institutions £'000	Grants to Individuals £'000	2015 Total £'000	2014 Total £'000
<b>Fellowships</b>				
University Research Fellowships	–	27,004	27,004	25,671
Dorothy Hodgkin Fellowships	–	2,481	2,481	2,357
Newton Advanced Fellowships	–	1,558	1,558	–
Newton International Fellowships	–	2,228	2,228	2,109
Professorship of Public Engagement	–	21	21	–
Wolfson Research Merit Award	3,307	–	3,307	3,116
Leverhulme Trust Senior Research Fellowships	–	298	298	114
Royal Society Research Professorships	–	2,405	2,405	6,680
Industry Fellowships	–	1,756	1,756	1,693
International Fellowship Grants	–	192	192	183
Sir Henry Dale Fellowships	–	1,680	1,680	1,008
<b>Education Schemes</b>				
Education Research Fellowships	–	135	135	212
Partnership grants scheme	55	–	55	87
Other Education grants	–	67	67	78
<b>Other Grant Programmes</b>				
Brian Mercer Awards	–	319	319	336
Commonwealth Science	–	188	188	–
Paul Instrument Fund	–	247	247	393
Research Grants	–	2,187	2,187	–
Awards & prizes	–	251	251	201
Leverhulme Royal Society Africa Awards	–	919	919	591
Mullard	–	2	2	–
Newton International Exchanges	–	500	500	–
India-UK Scientific Seminars	–	79	79	80
International Exchanges	–	1,314	1,314	2,021
DFID Africa Awards	–	444	444	546
Athena SWAN	25	–	25	21
DAIWA joint projects	–	66	66	14
Foundation for Science and Technology	–	–	–	25
International Council for Scientific Unions	36	–	36	6
South Africa Seminars	–	68	68	(28)
Kavli Scientific	–	–	–	75
Wolfson Laboratory Refurbishment Grants	279	–	279	763
<b>Total</b>	<b>3,702</b>	<b>46,409</b>	<b>50,111</b>	<b>48,352</b>



<b>9. Grants (continued)</b>			
	Number	2015 Total £'000	2014 Total £'000
<b>Recipients of institutional grants</b>			
Swansea University	4	53	293
University of Oxford	24	319	286
Imperial College London	21	242	279
University of Southampton	16	147	278
University College London	20	227	248
King's College London	4	55	234
University of Bristol	18	164	198
University of Glasgow	14	175	195
University of Bath	8	76	146
University of Cambridge	12	170	137
University of Warwick	14	154	120
University of Leicester	7	108	105
University of Edinburgh	10	112	100
University of Leeds	10	105	89
University of York	6	94	86
University of St Andrews	11	96	79
University of Manchester	11	80	73
University of Nottingham	6	60	65
University of Exeter	8	84	61
Aston University	2	26	59
University of Surrey	5	63	51
University of Strathclyde	4	51	50
Other organisations	62	1,041	786
<b>Total</b>	<b>297</b>	<b>3,702</b>	<b>4,018</b>

Grants are generally awarded to particular individuals, although the actual award is made to the host organisation.

Details of individual grants awarded during the year analysed by organisation are available from the finance department on request.

	2015 Total £'000	2014 Total £'000
<b>Reconciliation of Grants payable</b>		
Liability at 1 April	1,278	1,155
New grants awarded in year	51,743	50,045
Grants paid in year	(50,060)	(48,230)
Grants refunded to the Society	(1,638)	(1,692)
<b>Liability at 31 March</b>	<b>1,323</b>	<b>1,278</b>

All grants payable fall due within one year.

10. Payments to Trustees		
	2015 Total £'000	2014 Total £'000
Remuneration	–	–
<b>Expenses: travel &amp; subsistence</b>	<b>111</b>	<b>95</b>

Expenses were reimbursed to or paid on behalf of 25 Trustees (2014: 27 Trustees).

\*2014 figures have been restated (from £41k) to include amounts disbursed by the Society on behalf of trustees in addition to amounts reimbursed directly to trustees.

#### Indemnity Insurance

With the consent of the Charity Commission, the Society has taken out Trustees' indemnity insurance.

The cost of this insurance for the year was £2,500 (2014: £2,500). No claims have been made under this policy.

#### Grants and Awards

Professor Michael Cates is a holder of a Royal Society Research Professorship. The amount paid to the University of Edinburgh in respect of the award in the year was £166,000.

Professor Carlos Frenk is a holder of a Newton Advanced Fellowship with Dr Liang Gao. The amount paid to the University of Durham is £37,000.

Dame Wendy Hall is a holder of a Newton Advanced Fellowship with Dr Jie Tang. The amount paid to the University of Southampton is £37,000.

Professor John Wood is a holder of a Wolfson Research Merit Award. The amount paid to the University College London in respect of the award in the year was £25,000.

#### Other

Sir Paul Nurse, President of the Royal Society, has use of the President's flat at Carlton House Terrace.

#### Related Party Transactions

Dr Hermann Hauser is a partner of Amadeus Capital Partners Limited. During the year, the Society entered into a Limited Partnership Agreement with Amadeus to manage and administer the Enterprise Fund, a restricted fund of the Society which invests in early-stage science-based companies. Amadeus Capital Partners received £355,000 in 2014/15 in relation to the establishment and operation of the fund.

**11. Total resources expended include the following amounts**

	2015 Total £'000	2014 Total £'000
<b>Operating lease rentals</b>		
Plant and machinery	46	46
Rent	490	490
	<b>536</b>	<b>536</b>
<b>Fees payable to the charity's auditors for:</b>		
The audit of the Charity and Group accounts	41	26
The audit of the Charity's subsidiaries accounts pursuant to legislation	8	7
Audit fee – (over) / under provision for the prior year	(12)	(2)
<b>Audit fees to current auditors</b>	<b>37</b>	<b>31</b>
<b>Charges on owned assets</b>		
Depreciation	1,350	1,355
Impairment – revaluation of Chicheley Hall	191	-00
	<b>1,541</b>	<b>1,355</b>
<b>Trustees' expenses</b>		
Trustee travel and other expenses	111	95
	<b>111</b>	<b>95</b>

## 12. Financial Memorandum with the Department of Business, Innovation and Skills and Department for International Development

	2015 Total £'000	2014 Total £'000
<b>Department for Business, Innovation and Skills Grant</b>		
Income	46,801	47,101
Expenditure	(46,801)	(47,096)
	<b>–</b>	<b>5</b>
<b>Department for International Development Grant</b>		
Income	733	862
Expenditure	(733)	(862)
	<b>–</b>	<b>–</b>

## 13. Tangible fixed assets – Group and Charity

	Chicheley Hall freehold property and improvements £'000	Chicheley Hall computers and other equipment £'000	Leasehold improvements £'000	Computers and other equipment £'000	Assets under development £'000	2015 Total £'000	2014 Total £'000
<b>Cost:</b>							
At 1 April	17,403	754	16,920	4,106	583	39,766	38,577
Additions	86	15	1,991	128	724	2,944	1,189
Disposals	(1)	(88)	(244)	–	–	(333)	–
<b>At 31 March 2015</b>	<b>17,488</b>	<b>681</b>	<b>18,667</b>	<b>4,234</b>	<b>1,307</b>	<b>42,377</b>	<b>39,766</b>
<b>Depreciation:</b>							
At 1 April	13,650	365	6,412	3,777	–	24,204	22,849
Charge for year	66	50	1,062	172	–	1,350	1,355
Revaluation	191	–	–	–	–	191	–
<b>At 31 March 2015</b>	<b>13,907</b>	<b>415</b>	<b>7,474</b>	<b>3,949</b>	<b>–</b>	<b>25,745</b>	<b>24,204</b>
<b>Net book value at 31 March 2015</b>	<b>3,581</b>	<b>266</b>	<b>11,193</b>	<b>285</b>	<b>1,307</b>	<b>16,632</b>	<b>15,562</b>
Net book value at 31 March 2014	3,752	388	10,510	329	583	15,562	–

All tangible fixed assets are used for the support of charitable activities within the Society.

A revaluation of Chicheley Hall was conducted on 21 October 2014 by an external RICS registered valuer (Savills), who valued the property on a market value basis at £3,581,000. This has resulted in an impairment charge of £191,000 being recognised as accelerated depreciation in the year.

The Group and the charity have freehold property with a net book value of £3,582,000 (2014: £3,752,000).

**14. Capital commitments – Group and Charity**

	2015 £'000	2014 £'000
Authorised and contracted for	106	80
Authorised but not contracted for	1,755	2,590
<b>Total commitment</b>	<b>1,861</b>	<b>2,670</b>

At the balance sheet date, £622,000 of capital commitments were authorised for refurbishment of 6–9 Carlton House Terrace, of which £100,000 has been contracted for by the year end. A further £1,140,000 had been authorised on IT projects, of which £6,000 had been contracted for by the year end. £100,000 had been authorised for the historic maintenance of Chicheley Hall. No contracts for this expenditure had been signed by the year end.

**15. Heritage assets – Group and Charity**

The Society holds an extensive collection of heritage assets relating to the history of the Society itself and the wider history of scientific endeavour. The collection has four main components:

**Printed works:** The Library contains over 70,000 titles, published from the 1470s to the present day. The main strength of the collections is in the 17th and 18th centuries: from the 1680s to the mid-19th century, the policy of the Library was to acquire every important scientific publication.

**Archives:** These comprise an extraordinary and unrivalled record of the development of science that spans nearly 350 years. The archive collection is a unique resource for historians, particularly historians of science, containing over 250,000 items.

**Pictures, sculptures, and other works of Art:** The collection includes over 6,000 photographs, engravings, and paintings of past and present Fellows.

**Other artefacts:** The collection comprises approximately 150 items and includes scientific instruments, furniture and furnishings, and the Society's Charter Book.

The collections are accessible to scholars and the wider public through the Royal Society's History of Science Centre, which includes a reference library and an extensive on-line presence, including fully searchable catalogue and image library.

**15. Heritage Assets – Group and Charity (continued)**

	2015 £'000	2014 £'000
<b>Heritage assets</b>		
Items included at valuation at 1 April	12,622	11,173
Items included at cost at 1 April	36,098	36,077
Revaluation of assets during the year	371	1,449
Additions at valuation	88	–
Additions at cost	27	21
<b>Valuation or cost at 31 March</b>	<b>49,206</b>	<b>48,720</b>
<b>The heritage assets comprise:</b>		
Printed books	13,249	13,242
Archives	22,873	22,856
Pictures, Sculptures and other works of Art	9,314	8,850
Other artefacts	3,770	3,772
	<b>49,206</b>	<b>48,720</b>

The Printed Books and Archives were valued in August 2003 by Roger Gaskell, a rare book dealer and the pictures and other artefacts by Weller King, Fine Art Dealers, in May 2004. The valuations are on a fair market / replacement basis on those parts of the collection where it is felt such a valuation can be reasonably made.

The paintings and furniture at Chicheley Hall were valued in March 2015 by Weller King, Fine Art Dealers. The valuations are on a fair market / replacement basis on those parts of the collection where it is felt such a valuation can be reasonably made. The trustees consider there to be no material impairment on the present market values / replacement values compared to those stated.

**Five year financial summary of heritage asset transactions:**

	2014/15 £000	2013/14 £000	2012/13 £000	2011/12 £000	2010/11 £000
<b>Purchases / donations</b>					
Printed books	3	3	1	4	1
Archives	–	–	30	18	84
Pictures, Sculptures and other works of Art	–	19	–	7	70
Other artefacts	111	–	–	–	10
<b>Total Purchases / donations</b>	<b>114</b>	<b>22</b>	<b>31</b>	<b>29</b>	<b>165</b>

In 2010/11 the Society recognised £145,000 of donated heritage assets that it had received over the past five years. These assets had not previously been accounted for as only a small amount was received each year. The full amount was recognised in 2010/11. In subsequent years donations have been recognised in the year they were received.

There have been no disposals of heritage assets within the last five years.

**Preservation and Management**

Expenditure which in the trustees' view is required to preserve or clearly prevent further deterioration of individual collection items is recognised in the Income and Expenditure account when it is incurred.

The Society has an on-going cataloguing project.

The Society's major strategic facilities for the long-term preservation of its historic archives, manuscripts and printed books are environmentally-controlled store-rooms (conforming to British Standard 5454 ("Preservation of archival documents")).

The Society's modern records have been subject to a full audit, completed in April 2011. This process enabled the full-life management, destruction and permanent archiving of pertinent files. Conservation of damaged items is now underway, as is a more detailed cataloguing of individual collection elements.

Each of the Society's major collections (archives, modern records, printed books, pictures, journals, objects) has a designated member of curatorial staff and exhibited materials are looked after by an exhibitions manager. Collections are managed and recorded in discrete databases and according to the prevailing standard in each area (for example, ISAD for archival cataloguing, SPECTRUM for museum standards and picture control).

<b>16. Investments</b>		
	2015 Total £'000	2014 Total £'000
Valuation at 1 April	196,835	185,996
Additions of investments	20,687	19,745
Disposal of investments	(20,164)	(20,733)
Net change in cash invested for trades within portfolio	4,117	935
Investment management costs	(981)	(501)
Net cash (removed from) / added to portfolio	(1,500)	3,382
Net unrealised gain on valuation at 31 March	13,117	8,745
Exchange rate loss on valuation at 31 March	(253)	(734)
<b>Valuation at 31 March 2015</b>	<b>211,858</b>	<b>196,834</b>
Total historical cost at the end of the year	154,288	145,283
	2015 £'000	2014 £'000

**The valuation at 31 March 2015 comprises:**

Investments listed on a recognised stock exchange including investments and unit trusts:		
UK	116,314	115,196
Overseas	71,314	64,657
<b>Other Unlisted Securities:</b>		
UK	3,683	3,761
Overseas	9,631	8,742
<b>Cash:</b>		
UK	7,412	1,157
Overseas	3,504	3,322
	<b>211,858</b>	<b>196,834</b>



**16. Investments** (continued)

Overseas investments comprise equities, unit/investment trusts and fixed interest funds.

At 31 March 2015 no single equity investment exceeded 5% by value of the invested portfolio (2014: nil)

The Society owns 100% of the issued share capital of The Royal Society Enterprise Fund Limited (note 23).

The principal activity of the company is providing advice to the Society in its application of the Enterprise Fund.

No activity was conducted during the year.

The Society owns 100% of the issued share capital of Royal Society Trading Limited (note 23).

The principal activity of the company is processing the activities that occur at Chicheley Hall.

The Society owns 100% of the issued share capital of Royal Society (London) Ltd (note 23).

No business activity was undertaken from the date of incorporation to 31 March 2015

The Society owns 100% of the issued share capital of Basfor Ltd (note 23).

	2015 Total £'000	2014 Total £'000
<b>Funds are invested:</b>		
Specific investments – Enterprise Fund	2,235	2,638
Specific investments – Amadeus RSEF	4,965	–
Specific investments – Theo Murphy Australia Fund	3,482	3,528
Pooled investments	201,176	190,669
<b>Total</b>	<b>211,858</b>	<b>196,835</b>
<b>Reconciliation of investment gains</b>		
Unrealised gains	13,119	8,745
Realised gains	753	545
Exchange rate loss on valuation	(194)	(734)
<b>Net gains on investments as per SOFA</b>	<b>13,678</b>	<b>8,556</b>

<b>17. Debtors</b>				
	2015 Receivable within one year £'000	2015 Receivable after one year £'000	2014 Receivable within one year £'000	2014 Receivable after one year £'000
Trade debtors	2,018	–	1,157	–
Grants receivable	500	1,750	500	1,500
Legacy receivable	1,446	–	4,600	–
Other debtors	178	–	99	–
Accrued income	983	–	491	–
Prepayments	252	–	191	–
	<b>5,377</b>	<b>1,750</b>	<b>7,038</b>	<b>1,500</b>

Included in the Group debtors are debtors of £183,000, (2014: £150,000) belonging to Royal Society Trading Ltd. All other debtors relate to the Charity.

The Charity holds a loan in respect of the Royal Society Trading Ltd of £436,000 (2014: £130,000).

<b>18. Creditors</b>				
	2015 Due within one year £'000	2015 Due after one year £'000	2014 Due within one year £'000	2014 Due after one year £'000
Trade creditors	246	–	623	–
Publications advanced sales	3,109	–	2,913	–
Chicheley advanced sales	228	–	192	–
Grants payable	1,323	–	1,278	–
Other creditors	965	76	662	77
Accruals	1,128	–	883	–
Deferred income	4,294	–	3,845	–
	<b>11,293</b>	<b>76</b>	<b>10,396</b>	<b>77</b>

Included in the Group creditors are creditors of £706,000 (2014: £808,000) relating to Royal Society Trading Ltd. All other creditors relate to the Charity. As at 31 March 2015, Royal Society Trading held the charity as a debtor of £58,000.

	2015 £'000	2014 £'000
<b>Reconciliation of deferred income</b>		
Deferred income brought forward	3,845	4,459
Amount released from previous year	(3,845)	(4,459)
Incoming resources deferred in the year	4,294	3,845
	<b>4,294</b>	<b>3,845</b>

**19. Analysis of net assets between funds – Group**

	Unrestricted Funds £'000	Restricted Funds £'000	Expendable Endowment Funds £'000	Permanent Endowment Funds £'000	2015 Total Funds £'000	2014 Total Funds £'000
<b>Funds' balances at 31 March 2015 are represented by:</b>						
Tangible fixed assets	16,632	–	–	–	16,632	15,562
Heritage assets	49,206	–	–	–	49,206	48,720
Investments	30,766	42,792	30,487	107,813	211,858	196,835
Net current (liabilities) / assets	(1,683)	–	–	–	(1,683)	(205)
Creditors: Due after one year	(76)	–	–	–	(76)	(77)
Defined benefit pension scheme liability	(10,665)	–	–	–	(10,665)	(7,108)
<b>Net assets</b>	<b>84,180</b>	<b>42,792</b>	<b>30,487</b>	<b>107,813</b>	<b>265,272</b>	<b>253,727</b>

The net current liabilities in 2015 are funded by investments, which could be realised to meet the net liabilities as they fall due.

**20. Movements on Trust and Specific Funds in year – Group**

	B/Fwd @ 01/04/14 £000	Income £000	Expenditure £000	Transfers £000	Investment and actuarial gain/(loss) £000	C/Fwd @ 31/03/15 £000
<b>Permanent Endowment Funds</b>						
General Trust Fund	2,434	–	(6)	(498)	162	2,092
International Fund	1,297	–	(3)	–	86	1,380
Life Sciences Fund	11,871	–	(29)	–	791	12,633
Mathematics and Physical Sciences Fund	10,890	–	(27)	–	725	11,588
RW Paul Instrument Fund	11,677	–	(29)	–	778	12,426
The Crowley-Milling Fund	1,110	196	(3)	498	74	1,875
Other	6	–	–	–	–	6
Theo Murphy UK Fund	55,968	–	(139)	–	3,729	59,558
Theo Murphy Australia Fund	2,745	–	–	–	(171)	2,574
RS Pensioners Fund	170	–	–	–	11	181
EPA Cephalosporin Research Fund		3,500	–	–	–	3,500
<b>Total Permanent Endowment Funds</b>	<b>98,168</b>	<b>3,696</b>	<b>(236)</b>	<b>–</b>	<b>6,185</b>	<b>107,813</b>
<b>Expendable Endowment Funds</b>						
General Trust Fund	10,949	–	(27)	–	729	11,651
International Fund	311	–	(1)	–	21	331
Life Sciences Fund	6,958	–	(17)	–	463	7,404
Mathematics and Physical Sciences Fund	3,789	–	(9)	–	252	4,032
Science Policy	2,202	–	(5)	–	147	2,344
Kenneth Murray Fund	2,000	–	(2)	–	111	2,109
Education Policy	1,258	–	(3)	–	84	1,339
GSK Endowment	1,200	–	(4)	–	81	1,277
<b>Total Expendable Endowment Funds</b>	<b>28,667</b>	<b>–</b>	<b>(68)</b>	<b>–</b>	<b>1,888</b>	<b>30,487</b>

**20. Movements on Trust and Specific Funds in year – Group (continued)**

	B/Fwd @ 01/04/14 £000	Income £000	Expenditure £000	Transfers £000	Investment and actuarial gain/(loss) £000	C/Fwd @ 31/03/15 £000
<b>Restricted Funds</b>						
International Fund	1,053	60	(104)	17	69	1,095
Life Sciences Fund	8,596	623	(716)	(53)	570	9,020
Mathematics and Physical Sciences Fund	7,545	497	(638)	(44)	496	7,856
Science Policy	2	49	(80)	(5)	(1)	(35)
Education Policy	4	28	(40)	(3)	–	(11)
GSK Endowment	45	28	–	(3)	4	74
RW Paul Instrument Fund	160	267	(252)	(34)	10	151
The Crowley-Milling Fund	32	26	–	(3)	3	58
RS Pensioners fund	28	4	–	–	2	34
Enterprise Fund	7,526	45	(534)	(18)	327	7,346
Andrew Fund	1,614	36	(4)	(4)	108	1,750
Noreen Murray Fund	2,383	53	(125)	(6)	157	2,462
Forrest fund	1,832	59	(14)	(15)	406	2,268
Nutrition in old age fund	4,392	98	(11)	(10)	294	4,763
Project Funds						–
DFID Africa Awards and Grants	–	733	(625)	(108)	–	–
Industry Programme	–	819	(1,765)	945	–	(1)
Leverhulme Africa Awards	–	1,468	(1,015)	(16)	–	437
Wolfson Research Merit Grants	–	1,307	(3,307)	2,000	–	–
Other	1,806	2,255	(2,887)	287	–	1,461
BIS Science & Research grant	6	45,809	(42,285)	(3,524)	–	6
BIS Newton Fund	–	2,247	(2,233)	–	–	14
Theo Murphy UK Fund	863	1,359	(545)	(128)	71	1,620
Theo Murphy Australia Fund	1,023	240	(126)	(9)	–	1,128
The Wolfson Research Professorship of the Royal Society	1,185	26	(3)	(3)	79	1,284
Kenneth Murray Fund		14	–	(2)	–	12
<b>Total Restricted Funds</b>	<b>40,095</b>	<b>58,150</b>	<b>(57,309)</b>	<b>(793)</b>	<b>2,595</b>	<b>42,792</b>
<b>Unrestricted Funds</b>						
General Trust Fund	12,920	606	(435)	(64)	863	13,890
BIS Science & Research	–	992	(992)	–	–	–
Revaluation Reserve	47,485	–	–	–	371	47,856
Defined Benefit Pension	(7,108)	–	2,679	–	(6,236)	(10,665)
Other	–	–	–	–	–	–
General Purposes	33,500	13,188	(16,539)	803	2,147	33,099
<b>Total Unrestricted Funds</b>	<b>86,797</b>	<b>14,786</b>	<b>(15,287)</b>	<b>739</b>	<b>(2,855)</b>	<b>84,180</b>

**20. Movements on Trust and Specific Funds in year – Group** (continued)

	B/Fwd @ 01/04/14 £000	Income £000	Expenditure £000	Transfers £000	Investment and actuarial gain/(loss) £000	C/Fwd @ 31/03/15 £000
<b>Total for all trusts</b>						
General Trust Fund	26,303	606	(468)	(562)	1,754	27,633
International Fund	2,661	60	(108)	17	176	2,806
Life Sciences Fund	27,425	623	(762)	(53)	1,824	29,057
Mathematics and Physical Sciences Fund	22,224	497	(674)	(44)	1,473	23,476
RW Paul Instrument Fund	11,837	267	(281)	(34)	788	12,577
The Crowley-Milling Fund	1,142	222	(3)	495	77	1,933
RS Pensioners Fund	198	4	–	–	13	215
Science Policy	2,204	49	(85)	(5)	146	2,309
Education Policy	1,262	28	(43)	(3)	84	1,328
GSK Endowment	1,245	28	(4)	(3)	85	1,351
Enterprise Fund	7,526	45	(534)	(18)	327	7,346
Andrew Fund	1,614	36	(4)	(4)	108	1,750
Noreen Murray Fund	2,383	53	(125)	(6)	157	2,462
Ken Murray Fund	2,000	14	(2)	(2)	111	2,121
Forrest Fund	1,832	59	(14)	(15)	406	2,268
Nutrition in old age fund	4,392	98	(11)	(10)	294	4,763
EPA Cephalosporin Research Fund	–	3,500	–	–	–	3,500
<b>Project Funds</b>						
DFID Africa Awards and Grants	–	733	(625)	(108)	–	–
Industry Programme	–	819	(1,765)	945	–	(1)
Leverhulme Africa Awards	–	1,468	(1,015)	(16)	–	437
Wolfson Research Merit Grants	–	1,307	(3,307)	2,000	–	–
Other	1,812	2,255	(2,887)	287	–	1,467
BIS Science & Research	6	46,801	(43,277)	(3,524)	–	6
BIS Newton Fund	–	2,247	(2,233)	–	–	14
Theo Murphy UK Fund	56,831	1,359	(684)	(128)	3,800	61,178
Theo Murphy Australia Fund	3,768	240	(126)	(9)	(171)	3,702
The Wolfson Research Professorship of the Royal Society	1,185	26	(3)	(3)	79	1,284
Revaluation Reserve	47,485	–	–	–	371	47,856
Defined Benefit Pension	(7,108)	–	2,679	–	(6,236)	(10,665)
General Purposes	33,500	13,188	(16,539)	803	2,147	33,099
<b>Total</b>	<b>253,727</b>	<b>76,632</b>	<b>(72,900)</b>	<b>–</b>	<b>7,813</b>	<b>265,272</b>

## 20. Movements on Trust and Specific Funds in year – Group (continued)

The objects of the **General Trust Fund** are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the efficiency and effectiveness of the Royal Society and its Fellowship. This shall be done in particular by establishing, promoting, supporting and maintaining, for the general benefit of the public and the scientific community, its activities, premises, fixtures and fittings, equipment, libraries and archives, general publications and the history of science.

The objects of the **International Fund** are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community the study and investigation of, and research into all areas of science internationally. This shall be done in particular by promoting and carrying out international scientific collaboration, encouraging international interchange between scientists, advancing the engagement of the public in matters related to such international science, and providing the best possible scientific advice and information on international scientific policy.

The objects of the **Life Sciences Fund** are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the study and investigation of, and research into all areas of life sciences and other science at the interface between this area and other areas of science. This shall be done in particular by supporting scientists working in this area, advancing engagement of the public in all matters relating to such science and providing the best possible scientific advice and information to those making policy in the area of life science.

The objects of the **Mathematics and Physical Sciences Fund** are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the study and investigation of, and research into all areas of mathematics and physical sciences and other science at the interface between this area and other areas of science. This shall be done in particular by supporting scientists working in this area, advancing engagement of the public in all matters relating to such science and providing the best possible scientific advice and information to those making policy in the area of mathematics and physical science.

Following the Deed of retirement of the other trustees the property and investments of the **RW Paul Instrument Fund** were transferred to the sole remaining trustee being the Royal Society. The application of the income from the portfolio is restricted to the provision of grants under the Paul Instrument Grants Scheme.

The **Crowley-Milling Fund** has been established following a generous legacy from Gladys and Michael Crowley-Milling. The income from this fund is restricted to the promotion and encouragement of research in the physical sciences and their application especially for the support of young scientists.

The **Theo Murphy Funds** (in the UK and Australia) were created through a bequest from the estate of the late Theo Murphy. The funds "shall be used or applied to further scientific discovery in the fields of medicine, science, technology and engineering". The Australia Fund will carry out activities in Australia in accordance with the will.

The **RS Pensioners Fund** was founded in 1919. By the wish of the original donors the capital is to remain intact and the income to be applied to the payment of pensions for servants of the Society and to make lump sum payments to Royal Society pensioners in need.

The **Royal Society EPA Cephalosporin Research Fund** has been established following a generous donation from The EPA Cephalosporin Research Fund. The income from this fund will permanently endow a research professorship in the biological and medical sciences. It will be awarded every 10 years and the holder will be named the Royal Society EP Abraham Professor.

The **Science Policy Endowment** has been established following donations received from Sir Tom McKillop FRS and the Kohn Foundation to support the Science Policy Centre.

The **Kenneth Murray Fund** has been established following a generous legacy from Sir Kenneth Murray FRS to be held as an expendable endowment for a Royal Society Professorship.

The **Education Policy Endowment** has been established from a generous donation from the Gatsby Foundation to support the Society's education policy work.

## 20. Movements on Trust and Specific Funds in year – Group (continued)

The **GSK Endowment** was established from donated funds to be held as an expendable endowment for the advancement of research in the field of medical science by the establishment of a Royal Society Professorship.

The **Enterprise Fund** was created by generous donations in support of the Society in making equity investments in innovative early-stage businesses emerging from the science base in the UK and elsewhere.

The **Andrew Fund** has been established following a generous legacy from Dr Sydney Percy Smith Andrew FREng FRS to be used for the purpose of promoting and establishing research for the advancement of natural knowledge particularly in interdisciplinary fields of understanding.

The **Noreen Murray Fund** has been established following a generous legacy from Lady Noreen Murray FRS for the support of research in neurological science.

The **Forrest Fund** has been established following a generous legacy for the support of British post doctorate electrical research in memory of Professor John Samuel Forrest.

The Society has accepted a donation to be applied to the study of **nutrition in old age**.

The **DFID Africa Awards and Grants** are a programme for scientists who wish to develop collaborative research consortia between scientists in sub-Saharan Africa and a research institution in the UK.

The **Industry Programme** is for academic scientists who wish to work on a collaborative project with industry and for scientists in industry who wish to work on a collaborative project within an academic organisation.

The **Leverhulme Africa Awards** are for scientists who wish to develop a collaborative research project between the UK and research institutions in either Ghana or Tanzania.

The **Wolfson Research Merit Grants** are a scheme for outstanding scientists who would benefit from a five-year salary enhancement to help recruit them to or retain them in the UK.

**Other project funds** comprise monies received to fund separate restricted projects in line with our charitable activities and are held as separate individual funds in our accounts.

The Society receives a grant from the **Department for Business, Innovation and Skills (BIS)**. This supports work on scientific excellence and innovation, science and mathematics education, international activities and science communication activities.

Following the deed of retirement of the other trustees the investments of the **Wolfson Research Professorship of the Royal Society** were transferred to the sole remaining trustee being the Royal Society. The application of the income from the portfolio is restricted to support the Wolfson Research Professorship.

The **Revaluation Reserve** relates to the revaluation of the heritage assets.

The Transfers between projects and funds include administration charges of the investments held in the trusts, administration costs reclaimed from projects where applicable, notional interest paid to projects in respect of income held during the year and any income released to the general reserves at the end of projects (where allowed under the gift or grant agreement).

## 21. Financial commitments – Group and Charity

At 31 March 2015 the Society had the following commitments:

An annual commitment for rent under a non-cancellable operating lease in respect of occupation of 6–9 Carlton House Terrace, London. The future commitment for rent is £490,000 (2014: £490,000) per annum. The next rent review will be on 5 January 2025.

Agreements and commitments to fund research professorships / fellowships and other grants totalling £110m (2014: £102m). Of these, £42m (2014: £40m) are due in less than one year, and £67m (2014: £62m) in between two and five years. There are no grants payable in more than 5 years. As the Society retains the discretion to terminate these grants they are treated as liabilities of future periods and will be financed by specific grants or other income receivable in those periods.

The Society has entered into investment contract commitments totalling £831,000 (2014: £836,000) payable at dates yet to be agreed.

## 22. Pension obligations – Group and Charity

The Royal Society ("the Employer") operates two pension schemes and contributes to the Universities Superannuation Scheme (USS):

The Royal Society Group Personal Pension Plan is a defined contribution scheme which came into existence on 1 October 2013 and is open to all employees. During the year ended 31st March 2015 employer contributions to this scheme totalled £140,000 (2014: £15,000).

Three members of the Society's staff are members of the USS, a defined benefit scheme (2014: four members). During the year ended 31 March 2015, employer contributions to this scheme totalled £70,000 (2014: £53,000).

It is not possible to identify the Society's share of the underlying assets and liabilities of the USS and hence contributions are accounted for as if it was a defined contribution scheme. USS is a defined benefit scheme which is externally funded and contracted out of the State Second Pension (S2P) and valued every three years by professionally qualified independent actuaries using the Projected Unit Method.

The rates of contribution for the USS are determined on the advice of actuaries, the cost recognised for the year in the Statement of Financial Activities being equal to the contribution to the scheme.

The Pension and Life Assurance Plan of the Royal Society ("the Plan"), is a defined benefit scheme for all qualifying employees who joined the Society before 4 July 2013, with assets held in a separately administered fund. The scheme provides retirement benefits on the basis of members' final salary. The Plan was closed to new members on 4 July 2013, although it remains open to future benefit accrual.

The most recent valuation of the Plan under FRS17 was an approximate update carried out as at 31 March 2015. The valuation of the Plan used the projected unit method and was carried out by Barnett Waddingham LLP, professionally qualified actuaries.

The FRS17 liability does not include any allowance for discretionary benefits. The Employer expects to make contributions to the Plan during the year to 31 March 2016 of around £1,594,000.

Contributions payable by the Employer during the year were at the rate of 16.3% of Pensionable Salaries until 1 October 2014, when a revised contribution rate of 13.2% came into force. From 1 October 2014, the Society also paid £11k per month to the Plan in respect of expenses. Members' contributions were 7% of Pensionable Salaries. Additional contributions of £0.5m to reduce the deficit were paid into the Plan by the Society in April 2014 and October 2014 (December 2013: £0.2m). Life cover and dependants' pensions in respect of death in service are provided by additional insurance premiums.

During the year the following changes were made to Plan benefits, which resulted in a past service credit:

- Normal retirement age was increased from 60 to 65 for service from 1 October 2014; and
- Pensionable Salary increases will be capped at 2% pa from 1 October 2014.
- Accrued benefits at 1 October 2014 will be subject to an underpin at the level of the deferred revaluation that would have been granted if the member left the Plan.



**22. Pension obligations – Group and Charity (continued)**

The Principal assumptions used to calculate Plan liabilities include:

	2015 % pa	2014 % pa
Inflation (RPI)	3.30	3.60
Inflation (CPI)	2.30	2.70
Salary escalation	2.30	4.60
Increase to pensions in payment*		
– subject to LPI minimum 4%	4.10	4.20
– subject to LPI	3.30	3.50
Statutory revaluation	2.30	2.70
Discount rate (pre-and-post-retirement)	3.40	4.50
Pre-retirement mortality table	S1NA	S1NA
Post-retirement mortality table	S1NA	S1NA
Post-retirement mortality projection	CMI 2014 projections with LTR of 1.5% pa	CMI 2013 projections with LTR of 1.5% pa
Tax free cash	15% of pension	None
Withdrawals	None	None

\*Pensions in payment increase by the lesser of the annual increase in the retail price index or 5%. For service prior to 1 November 2001 this is subject to a minimum increase of 4%.

Under the mortality tables and projections adopted, the assumed future life expectancy at age 60 is as follows:

	2015	2014
Male currently aged 40	29.7 years	29.8 years
Female currently aged 40	32.5 years	32.4 years
Male currently aged 60	27.4 years	27.3 years
Female currently aged 60	30.1 years	29.9 years

## 22. Pension obligations – Group and Charity (continued)

The assets in the Plan and the expected rates of return were:

	Value at 31/03/2015 £'000	Long term rate of return expected at 31/03/2014* %pa	Value at 31/03/2014 £'000
<b>Plan's assets</b>		5.0%	
Equities	26,889	5.5%	23,504
Bonds	3,015	3.9%	2,971
Gilts	1,001	3.0%	1,008
Property	339	5.5%	179
Cash	1,305	0.5%	828
Annuity policies	7,584	4.5%	7,197
<b>Total market value of Plan assets</b>	<b>40,133</b>		<b>35,687</b>
Present value of scheme liabilities	(50,798)		(42,795)
<b>Deficit / Surplus in the scheme</b>	<b>(10,665)</b>		<b>(7,108)</b>

\*The expected return on assets is a weighted average of the assumed long-term returns for the various asset classes. For the year to 31/03/2016 this assumption will not be required.

The assets do not include any investment in shares of the Employer.

### Reconciliation of present value of scheme liabilities

	Value at 31/03/2015 £'000	Value at 31/03/2014 £'000
<b>1 April</b>	42,795	47,523
Current service cost	1,291	1,488
Contributions by Plan participants	235	240
Plan service credit	(2,470)	–
Interest cost	1,880	1,908
Benefits paid	(1,122)	(1,373)
Actuarial loss / (gain)	8,189	(6,991)
<b>31 March</b>	<b>50,798</b>	<b>42,795</b>

**22. Pension obligations – Group and Charity (continued)****Reconciliation of fair value of scheme assets**

	Value at 31/03/2015 £'000	Value at 31/03/2014 £'000
<b>1 April</b>	35,687	35,604
Expected return on assets	1,802	1,665
Contributions by the Employer	1,578	795
Contributions by Scheme participants	235	240
Benefits paid	(1,122)	(1,373)
Actuarial gain / (loss) on assets	1,953	(1,244)
<b>31 March</b>	<b>40,133</b>	<b>35,687</b>

The expected return on Plan assets is determined by considering the expected returns available on the assets underlying the current investment policy less an allowance for expenses. Expected yields on fixed interest investments are based on gross redemption yields as at the balance sheet date. Equity returns are based on the selection of an appropriate risk premium above the risk-free rate which is measured in accordance with the yield on government bonds.

The actual return on Plan assets in the year was £3.76m (2014: £0.42m).

**Analysis of the amount charged to the Statement of Financial Activities – operations**

	Value at 31/03/2014 £'000	Value at 31/03/2013 £'000
Current service cost	1,291	1,488
Interest cost	1,880	1,908
Expected return on assets	(1,802)	(1,665)
Past service cost	(2,470)	–
<b>Total charge</b>	<b>(1,101)</b>	<b>1,731</b>

**Actuarial gains and losses**

The cumulative amount\* of actuarial gains/ losses recognised in the SOFA is (£14,217,000) (2013: (£7,981,000))

\*Includes actuarial gains/losses since 1 April 2002

**Actuarial valuation**

The full actuarial valuation at 1 January 2013 showed an increase in the deficit from £2,791,000 to £4,744,000.

It has been agreed with the Trustees that contributions to make good the deficit will be payable as follows:

- £236,000 on or before 31 December 2013;
- £500,000 on or before each 30 April 2014, 31 October 2014, 30 April 2015 and 31 October 2015; and
- £359,000 on or before each 30 April and 31 October in the years 2016 to 2020 inclusive.

**22. Pension obligations – Group and Charity (continued)****Amounts for current and previous four periods**

	2015 £'000	2014 £'000	2013 £'000	2012 £'000	2011 £'000
Defined benefit obligation*	50,798	42,795	47,523	38,212	25,084
Plan assets*	40,133	35,687	35,604	31,089	22,795
<b>Deficit</b>	<b>(10,665)</b>	<b>(7,108)</b>	<b>(11,919)</b>	<b>(7,123)</b>	<b>(2,289)</b>
Experience adjustments on Plan assets:	1,953	(1,244)	2,948	(864)	1,212
Experience adjustments on Plan liabilities**:	(8,189)	6,991	(7,360)	(4,088)	353

\* The liability and asset values for years ending on or after 31 March 2012 include the value of annuity policies held by the Plan. These policies were not included in earlier accounting periods and these results have not been restated.

\*\* The experience adjustments on Plan liabilities includes the impact of changes in assumptions used to value Plan liabilities

**Universities Superannuation Scheme (USS)**

The latest actuarial valuation of the scheme was at 31 March 2011 using the projected unit method. The assumption and other data which have the most significant effect on the determination of the contribution levels are as follows:

	Past service	Future service
Investment returns per annum	6.10%	6.10%
Salary scale increases per annum – short term	3.65%	3.65%
Salary scale increases per annum – long term	4.40%	4.40%
Pension increases per annum – for 3 years following valuation	3.40%	3.40%
Pension increases per annum – thereafter	2.60%	2.60%
Market values of assets at last actuarial valuation date	£32,434m	
Proportion of members' accrued benefits covered by the actuarial value of assets	92.00%	
Current Employers contribution rate	16.00%	

The Society has 3 active members and 3 deferred members within the scheme and details of the scheme can be found at [www.uss.co.uk](http://www.uss.co.uk)

USS is a “last man standing” scheme which means that in the event that another member institution becomes insolvent the other participating members will pick up any funding shortfall.

An interim valuation, effective March 2014, indicated that the deficit had widened to £12.3bn.

### 23. Subsidiary undertakings

The Society owns 100% of the £1 called-up and issued share capital of Royal Society Enterprise Fund Limited. The principal activity of that company is providing advice to the Society in its application of the Enterprise Fund. The Company had no activity in the year ended 31 March 2015.

The Society also owns 100% of the £1 called-up and issued share capital of Royal Society Trading Limited. Royal Society Trading Limited company has been set up to process the activities that occur at Chicheley Hall.

The Society also owns 100% of the £1 called-up and issued share capital of The Royal Society (London) Ltd. The Royal Society (London) Ltd company was incorporated on 10 December 2013, has been set up to process certain trading activities that occur at Carlton House Terrace and has had no activity in the year.

The Society also owns 100% of the £1 called-up and issued share capital of Basfor Ltd. Basfor Ltd company was incorporated on 7 November 2014, has been set up to process certain investment transactions and has had no activity in the year.

#### Results of the Royal Society Enterprise Fund Limited Period Ended 31 March 2015:

	2015 £'000	2014 £'000
Trading income	–	1,039
Cost of sales	–	(1,039)
<b>Result for the period</b>	<b>–</b>	<b>–</b>
Total funds brought forward at 1 April	–	–
<b>Total funds carried forward at 31 March</b>	<b>–</b>	<b>–</b>

The Royal Society Enterprise Fund Limited has Called up share capital of £1.

#### Results of the Royal Society Trading Limited Period Ended 31 March 2015:

	2015 £'000	2014 £'000
Trading income	2,086	1,331
Cost of sales	(2,079)	(1,678)
<b>Gross (loss) / profit</b>	<b>7</b>	<b>(347)</b>
Administrative expenses	(50)	(51)
<b>Operating (loss) / profit</b>	<b>(43)</b>	<b>(398)</b>
Interest on loan account	(12)	(10)
Charitable donation to the Royal Society	–	–
<b>Result for the period</b>	<b>(55)</b>	<b>(408)</b>
Total funds brought forward at 1 April	(408)	–
<b>Total funds carried forward at 31 March</b>	<b>(463)</b>	<b>(408)</b>

**23. Subsidiary undertakings (continued)****Balance Sheet of the Royal Society Trading Limited Period Ended 31 March 2015:**

	2015 £'000	2014 £'000
<b>Current assets</b>		
Stock	25	19
Debtors	183	150
Cash at bank and in hand	477	361
	<b>685</b>	<b>530</b>
<b>Creditors:</b> amounts falling due within one year	(1,148)	(938)
<b>Net Current Liabilities</b>	(463)	(408)
<b>Net Liabilities</b>	<b>(463)</b>	<b>(408)</b>
<b>Capital and reserves</b>		
Called up share capital	–	–
Profit & loss reserve	(463)	(408)
<b>Shareholders' funds</b>	<b>(463)</b>	<b>(408)</b>

Royal Society Trading Limited has Called up share capital of £1.

Royal Society (Australia) Pty Limited is the Trustee of the Royal Society Theo Murphy (Australia) Fund. It is an Australian company the shares of which are owned by the Society.

**24. Other funds – Group and Charity**

	2015 Investment Market Value £'000	2014 Investment Market Value £'000
<b>The Society is the beneficiary of the following funds:</b>		
<b>Curl Fund</b> The investments for this fund are held and managed by the New Zealand Public Trust Office	115	119
<b>Horace Le Marquand and Dudley Bigg Trust</b> The investments of the permanent endowment of the Trust are held and managed by Salamanca Group Trust (Jersey) Ltd. The Trustees are Investec Trust (Jersey) Limited.	507	493

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The Royal Society is a self-governing Fellowship of many of the world's most distinguished scientists drawn from all areas of science, engineering, and medicine. The Society's fundamental purpose, as it has been since its foundation in 1660, is to recognise, promote, and support excellence in science and to encourage the development and use of science for the benefit of humanity.

The Society's strategic priorities emphasise its commitment to the highest quality science, to curiosity-driven research, and to the development and use of science for the benefit of society.

These priorities are:

- Promoting science and its benefits
- Recognising excellence in science
- Supporting outstanding science
- Providing scientific advice for policy
- Fostering international and global cooperation
- Education and public engagement

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