

MRC

Medical
Research
Council

MRC Annual Report and Accounts

09/10

Medical Research Council

Annual Report and Accounts 2009/10

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Foreword

from the Chief Executive and Chairman

This has been another excellent year of achievement for the MRC and the scientists we support. We have made good progress in implementing our Strategic Plan for 2009-2014, instituted an innovative evaluation scheme, built stronger links with our partners, played a full role in meeting urgent public health challenges, and celebrated another Nobel prize for one of our scientists. Quite a year.

Credit for our success is, of course, due to our grantholders and staff throughout the organisation, but I would especially mention Sir Leszek Borysiewicz, chief executive of the MRC until September 2010. I would like to take this opportunity, on behalf of all members of the MRC's Council, to thank him for three years of outstanding leadership. Sir Leszek oversaw the restructuring of our research boards – the main mechanism by which we fund scientists – and introduced a strategy board to develop, implement and evaluate the MRC's research strategy. He strengthened the MRC's relationships with the UK Health Departments and worked through the Office for Strategic Coordination of Health Research (OSCHR) in particular to promote translational research.

Robust internal structures and strong partnerships across government, industry and academia are key to the MRC's success in funding significant, long-term research, translating scientific findings into public benefits, and responding to emerging biomedical issues such as the influenza outbreak in April 2009. While the H1N1 virus turned out to be much less virulent than was feared and caused nothing like the millions of deaths during the 1918 'Spanish flu' pandemic, the situation highlighted the central role of UK scientists in international health research. Existing MRC-funded research programmes – such as FluWatch – meant we were able to put into action well-laid plans for analysing the new virus. We were also well-positioned to release further funding quickly, along with various partners, for specific new projects to monitor and understand the pandemic. Although 'swine flu' has now all but disappeared from the headlines, our research programmes continue to monitor identified cases, analyse the virus and its continuing potential to threaten health around the globe, and produce findings that should help us be even better prepared for future outbreaks.

Less fraught than the flu pandemic was the success of Dr Venkatraman Ramakrishnan, of the MRC Laboratory of Molecular Biology (LMB) in Cambridge, who was jointly awarded the 2009 Nobel Prize in Chemistry for groundbreaking work on the structure and function of the ribosome. While firmly at the 'basic' end of the research spectrum – ribosomes are the cellular machinery for making proteins from the instructions encoded in DNA – Venki's work has already shown potential in the development of new antibiotics that target differences between bacterial and human ribosomes. Venki's Nobel is the MRC's 29th, and the 14th for LMB alone: a remarkable record that demonstrates the strength of the UK science base, particularly in medical research. That so many Nobel laureates have been funded by the MRC is testament to our long-term commitment to excellent science with the potential to make a significant contribution to our health and economy.

To help maintain and improve this enviable record of supporting the best science, we published a new strategic plan in 2009 entitled *Research Changes Lives*, in which we set out the MRC's priorities up to 2014, including a number of specific and accountable objectives. This Annual Report complements the structure of the Strategic Plan, reporting on one year's progress towards achieving our aims. In order to monitor progress, we have developed MRC e-Val, a sophisticated survey to measure the impact of MRC-funded research. For example, for the first time we have been able to look at the extent to which funding British science pulls further investment into the UK: research groups funded by the MRC secured an additional £550 million from the private sector and non-UK agencies between 2006 and 2009. Moreover, between 2006 and 2009, MRC-funded research led directly to the creation or growth of more than 30 spin-out companies, more than 200 patents being granted, and 24 new products and interventions being launched onto the market, including monoclonal antibody therapies for conditions such as rheumatoid arthritis.

This level of impact cannot be achieved without significant, productive partnerships with the industrial sector, government bodies, universities, charities and other research funders. Working with the Office for Life Sciences and the Technology Strategy Board, we have strengthened our links with industry this year. The MRC has enhanced and extended the routes by which our scientists can forge links with industry, supporting the translation of research into benefits for patients and the population as a whole. We have also continued to develop our relationship with the National Institute for Health Research (NIHR) and the devolved administrations coordinated through OSCHR. This is working well. The MRC takes the lead for OSCHR partners on a number of key areas in medical research, including stratified medicine, mental health, addiction and global health trials, ensuring a strategic approach is adopted across all funders.

Working in partnership with other key institutions is critical for us to obtain the maximum possible leverage from the research we fund. That is why we have chosen to base the renewal of the National Institute for Medical Research (which formed the core of the MRC when it was founded nearly 100 years ago) on a partnership with the Wellcome Trust, Cancer Research UK and University College London to build the UK Centre for Medical Research and Innovation in central London.

The MRC continues to enjoy a strong relationship with the other research councils, coordinated through Research Councils UK. Together, we have identified significant challenges for UK scientists where multidisciplinary approaches are crucial to the advances necessary for a safe and secure future. For example, the MRC leads the cross-research council initiative in Lifelong Health and Wellbeing, pulling together the research interests of several research councils and the UK Health Departments in order to address the growing challenges and opportunities of an ageing population. On behalf of all the research councils, Sir Leszek has championed the interests of the whole British scientific community through a number of international roles, including vice president of the European Heads of Research Councils (EuroHORCS) and chair of the International Stem Cell Forum. He also led the MRC's commitment to the Global Alliance for Chronic Diseases, established this year to coordinate efforts by the world's biggest funders of medical research to combat chronic non-communicable diseases such as cancer and heart disease in low and middle income countries.

Sir Leszek took up the reins at a moment of challenge for the MRC with new directions and partnerships to be forged. He leaves with our reputation and international standing strengthened. We stand ready to work with his successor to meet the ongoing challenges of providing the best environment for medical research in the UK, setting priorities and shaping the international research agenda, and working with others to translate the achievements of our excellent scientists to bring real benefits to society at large.

Sir John Chisholm, Chairman

Sir Leszek adds:

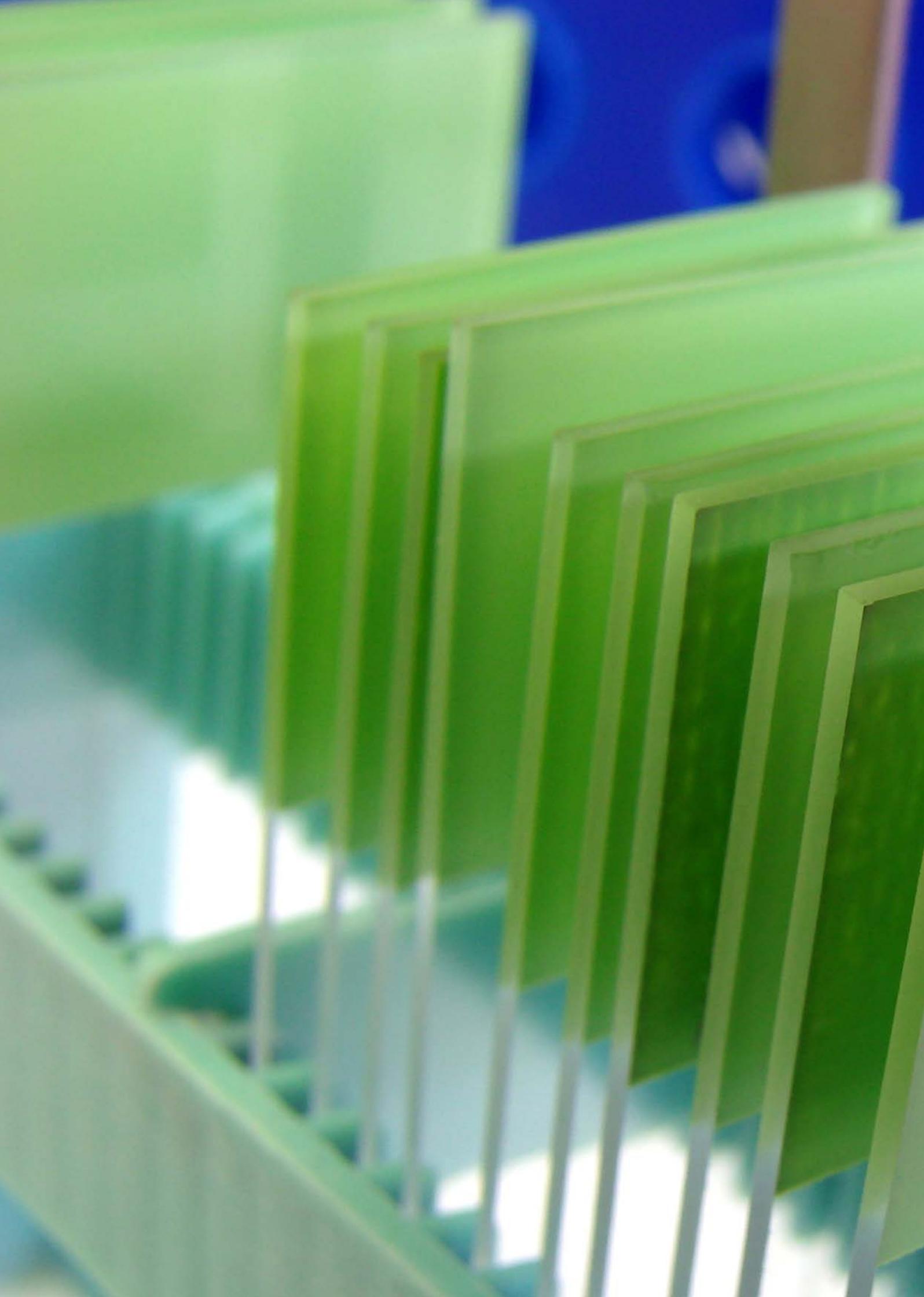
I firmly believe this is a golden age for science, even despite the uncertainties that accompany our recovery from a severe global recession. The burden of disease and ill health pays no respect to the economic climate. The MRC's work supporting research into the causes and risk factors of diseases and how to treat and prevent them will always be an essential contribution to the continuing wellbeing of everyone in the UK and beyond.

In the last three years, the MRC has raised translational research further up the agenda for British science. This is not to diminish the importance of basic science: rather, the aim is to ensure that the fruits of biomedical research are identified and exploited as quickly and effectively as possible in order to realise its huge potential. We must embed at every stage of research – whether basic or applied – the vision, the desire and the means to translate new scientific knowledge into new products and practice. Our progress towards this end is a significant achievement and one of which I am especially proud.

I am immensely grateful to the Chairman, Council and everyone at the MRC for making my time here productive and enjoyable. Thanks in no small part to its dedicated, resourceful and imaginative staff, the MRC is in a strong position to continue delivering innovation and excellence in research and medicine, ultimately benefiting both the health and wealth of the nation.

Sir Leszek Borysiewicz
Chief Executive

*Sir Leszek Borysiewicz was MRC Chief Executive from October 2007 until September 2010.
Professor Sir John Savill took up the position of MRC CEO in October 2010.*



Introduction

The MRC's mission: Leading science for better health

The MRC is a publicly funded organisation dedicated to improving human health. We support research across the entire spectrum of medical sciences, in universities and hospitals, in our own units and institutes in the UK, and in our units in Africa.

The heart of our mission is to improve human health through world-class medical research. To achieve this we support research across the biomedical spectrum, from fundamental laboratory-based science to clinical trials, in all major disease areas. We work closely with key stakeholders and research funders in the UK and internationally to deliver our mission, giving a high priority to research that is likely to make a real difference to clinical practice and the health of the population. Our stakeholders include the UK Health Departments and other government departments and agencies, the six other research councils, industry, and the academic and charity sectors.

Established in 1913 and incorporated by Royal Charter in 1920, the MRC's mission is to:

- Encourage and support research to improve human health.
- Produce skilled researchers.
- Advance and disseminate knowledge and technology to improve the quality of life and economic competitiveness of the UK.
- Promote dialogue with the public about medical research.

This Annual Report to Parliament describes our progress in meeting our aims and objectives between 1 April 2009 and 31 March 2010, highlights key awards and partnerships, and outlines some of our plans for the future.

We receive our core funding allocation from the Department for Business, Innovation and Skills (BIS)¹ in line with the Government's spending review cycle and receive additional funding from other partners to take forward collaborative projects and joint initiatives which increase the impact of our work and the public funding we receive. Our current allocation from BIS was agreed under the 2007 Comprehensive Spending Review (CSR2007) and our plans for allocating these resources to deliver our mission are outlined in our Delivery Plan. Achievements and activities are reported annually in our Delivery Report. These and other MRC publications are available at www.mrc.ac.uk

(1) The Department for Business, Innovation and Skills was created in June 2009. The new Department has taken on the responsibilities of the Department of Business, Enterprise and Regulatory Reform and the Department for Innovation, Universities and Skills.

Research Changes Lives

In June 2009, the MRC published its five-year Strategic Plan. Called *Research Changes Lives*, it defines the MRC's role in contributing to faster and more effective ways for medical research to flourish at all stages: from working to understand the fundamental science of how our bodies work, to tackling some of the most pressing health issues facing society.

As we approach the end of the first year of our 2009-2014 strategy, the first part of this year's Annual Report follows the structure of the Strategic Plan, setting out how we have begun to deliver against each of our strategic aims and objectives.

Strategic Aims 2009-2014

- Picking research that delivers: setting research priorities which are most likely to deliver improved health outcomes.
- Research to people: bringing the benefits of excellent research to all sections of society.
- Going global: accelerating progress in international health research.
- Supporting scientists: sustaining a robust and flourishing environment for world-class medical research.

Measuring impact

To help monitor our progress, we introduced MRC e-Val this year to allow us to track more closely the impact of MRC-funded research. MRC e-Val is a powerful online survey and was used by 3,000 of our scientists in 2009 to provide data and information on the outcomes of their work. It has enabled us to generate a more complete picture of how the science we support leads to the development of new medicines and technologies, better guidance for the research community on ethics and research governance, and improvements in clinical policies and practices.

The data also show how MRC funding supports further investment into the UK economy. MRC-funded research carried out between 2006 and 2009 led to:

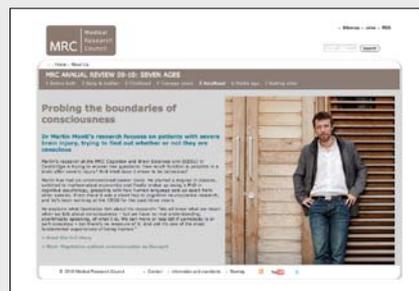
- 24 new products and interventions being launched onto the market, including monoclonal antibodies licensed for nine separate conditions;
- over 200 patents granted, discoveries from 76 of which have subsequently been licensed worldwide;
- more than 30 spin-out companies being created or expanded, creating over 100 new jobs in the UK.

Through MRC e-Val, we also know that:

- 13 per cent (more than 300) of MRC-funded researchers have productive collaborations with the private sector, involving more than 250 industry partners worldwide;
- the average citation impact of research published by MRC-funded scientists is double the world average;
- 68 per cent of MRC-funded PhD students remain in the science and engineering base, with 14 per cent joining the private sector for their first post;
- 10 per cent of staff funded through MRC grants find their next post in the private sector.

Annual Review 2009/10

Information on selected MRC research achievements from 2009/10 can be found in the 2009/10 Annual Review, available in a user-friendly interactive format on the MRC website. Taking the theme seven ages, the review highlights how MRC-funded research has affected the health and wellbeing of people at every stage of life. Read the review online at www.mrc.ac.uk/sevenages



Working in partnership

Collaboration is the cornerstone of successful science – it is also essential to processes that translate new understanding and technology into innovative products and practices that help treat patients more effectively, implement successful prevention strategies and improve the population's health.

The MRC works particularly closely with the UK's other research councils, its Health Departments, other public funding bodies and charities to support multidisciplinary collaboration between scientists. We also have strong partnerships with government bodies such as the Office for Life Sciences, Technology Strategy Board and the National Institute for Health Research, which helps strengthen public health research and ensure new knowledge is effectively transferred into practice. We have an active role in the Office for Strategic Coordination of Health Research, leading on numerous scientific areas on behalf of all its partners.

The Medical Research Foundation

We continue to work in partnership with the trustees of the MRC's independently managed charity, the Medical Research Foundation. The public make bequests and donations to the charity to support MRC research. During 2009/10, the MRC provided the trustees with peer review and administrative support, and advice on the Foundation's emerging funding strategy. With this support, the trustees were able to support 64 awards amounting to nearly £1 million in expenditure on research within the MRC's remit.

Science is international, of course, and the MRC is forging links across the globe – not just in our research units in Uganda and The Gambia, but through joint working with funding bodies throughout Europe, North America and Asia. Not only does this mean our research can reach more people worldwide, it also makes more funding available to researchers in the UK.

The MRC's work in 2009/10 has been to build on our strategic approaches to funding research, improve the infrastructure necessary for effective knowledge transfer, and support scientists and researchers in all disciplines, at all stages of research. World class biomedical research has enormous potential to improve the health and wellbeing of society – it really does change lives.

The MRC's Council membership

The MRC's Council directs and oversees corporate policy and scientific strategy, ensures the organisation is managed effectively and makes major policy and spending decisions. Council members share collective responsibility for its actions and performance. Responsibility for implementing the Council's strategy and decisions is delegated to the MRC chief executive.

Sir John Chisholm, Chairman

Professor Jeffrey Almond
Sanofi Pasteur, France

Professor Michael Arthur
University of Leeds

Mr Tony Caplin ⁽¹⁾
Northwest London Hospital NHS Trust

Professor Dame Sally Davies ⁽¹⁾
Department of Health

Dr Annette Doherty
*Pfizer Global Research and Development,
Sandwich*

Dr Richard Henderson
*MRC Laboratory of Molecular Biology,
Cambridge*

Professor Sally Macintyre
*MRC/CSO Social and Public Health Sciences Unit,
Glasgow*

Professor Sir Andrew McMichael ⁽²⁾
University of Oxford

Ms Vivienne Parry
Writer and Broadcaster, London

Naren, Lord Patel
House of Lords

Professor Michael Schneider
Imperial College London

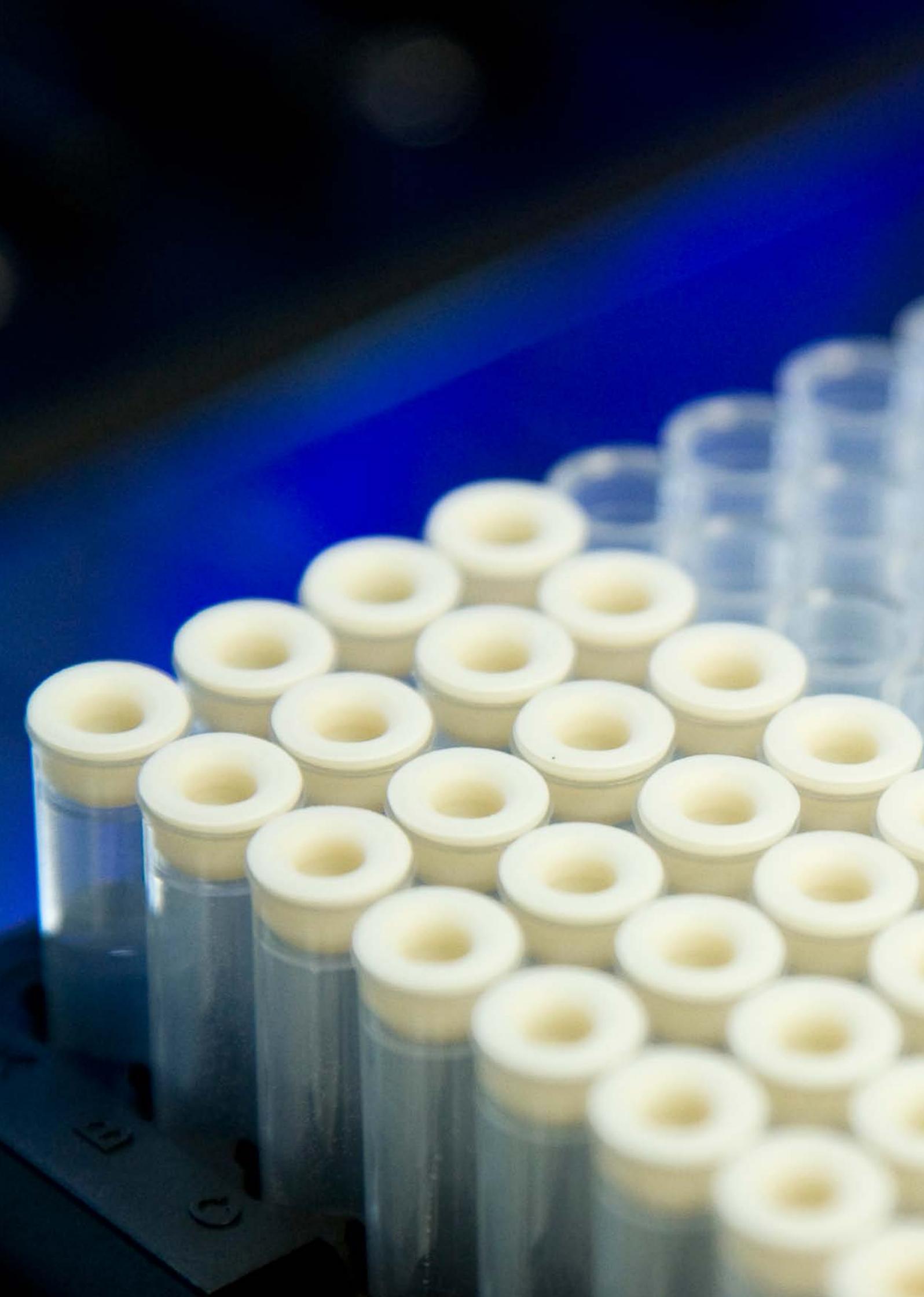
Professor Herb Sewell
University of Nottingham

Mr John Neilson, Observer
Department for Business, Innovation and Skills

(1) appointment commenced 1 July 2009

(2) appointment ended 31 March 2010

Sir Leszek Borysiewicz was MRC Chief Executive and Deputy Chairman of the MRC's Council from October 2008 until September 2010. Professor Sir John Savill took up the position of MRC CEO and Deputy Chairman in October 2010.



1

Picking research that delivers

CASE STUDY

Solving the structure of the ribosome

A fundamental part of our strategy is to select and nurture excellent research which will deliver real benefits – sometimes straight away, sometimes decades later. Dr Venki Ramakrishnan became the MRC's 29th Nobel laureate in 2009 when he won a share of the Nobel Prize in Chemistry for his research into the structure and function of the ribosome, the result of many years of painstaking research. Ribosomes are molecular machines inside cells which make proteins by following instructions from genes. Virtually everything in a cell is either made by the ribosome or made by enzymes that were themselves made by the ribosome. Dr Ramakrishnan shared the prize with Dr Thomas Steitz of Yale University and Dr Ada Yonath of the Weizmann Institute of Science in Israel. The three scientists each used a visualisation technique called X-ray crystallography to map the position of each of the hundreds of thousands of atoms that make up the ribosome. This has increased understanding not only of how the ribosome contributes to protein production but also to see directly how antibiotics bind to specific pockets in its structure. The finding could help researchers to design antibiotics to treat people infected with antibiotic-resistant strains of bacteria. Dr Ramakrishnan, of the MRC Laboratory of Molecular Biology in Cambridge, explains: "Many antibiotics work by blocking bacterial ribosomes, and this research makes it possible to understand how antibiotics interact with the ribosome, and how it might be possible to design new and better antibiotics."

Read about more MRC research highlights from 2009/10 at
www.mrc.ac.uk/sevenages

Picking research that delivers

The MRC supports research in all major disease areas across the biomedical spectrum from fundamental laboratory-based science to late-stage clinical trials. We fund researchers in universities and other research organisations, and also run our own research units and institutes.

In choosing which science to fund, excellence remains our primary criterion. This applies as much to research projects selected through our research boards as to the strategies we initiate and implement to bolster activity in certain scientific areas. The MRC's Strategic Plan lends guidance by identifying research areas with strong potential for having a positive impact on health, whether it is improved understanding of biology and disease, new drugs or other treatments, technological advances to support other research, or robust evidence to support healthcare decision-making.

While delivering impact is often taken to imply concentrating on applied research, the MRC recognises its fundamental responsibility to support the progress of scientific ideas at every stage from basic science through to clinical applications. At the MRC Laboratory of Molecular Biology in Cambridge, the work of Dr Venki Ramakrishnan, jointly awarded the 2009 Nobel Prize in Chemistry, is firmly at the basic end of the spectrum. But his work on understanding the intricate structure and workings of ribosomes in humans and other organisms has already shown great potential for developing new antibacterial drugs. The key is to nurture that potential and exploit the excellent research that has created it in the interests of improving quality of life and economic competitiveness.

This is a long-term process, so the MRC has to maintain a balance between backing basic research – which might take decades to translate into better healthcare – and responding to immediate threats to our health such as pandemic infections. The emergence of “swine flu” in 2009 showed how well the MRC is prepared to respond to this kind of issue. Existing research programmes were able to address the potential crisis immediately, and we were able to quickly release further funding for more reactive projects (see page 17).

The MRC's activities are motivated by the desire to improve human health. To achieve this aim, we pick research projects that use the best science and have the potential to generate new knowledge that can change the way we approach health and disease. Ultimately, unless the research we choose to fund is of sufficient quality and scope to deliver improvements in health, we cannot achieve our mission.

RESEARCH FACTS AND FIGURES

In 2009/10 the MRC's gross research expenditure was £758.2 million. This support for world-class medical research to improve human health and enhance the economic competitiveness of the UK included:

- £287.6m on over 1,100 grants to researchers in universities, medical schools and research institutes;
- £374.6m on over 500 programmes within the MRC's own research units and institutes;
- £78.2m on studentships and fellowships; there were 1,500 postgraduate students and 350 fellows in March 2010;
- £17.8m for international subscriptions.

An estimate of MRC research programme expenditure across different areas of science is shown in figures 1 and 2. The commitment to grants and fellowships by financial year can be found in figures 3 (page 13) and 9 (page 43) respectively.

Figure 1: estimated research programme expenditure by activity

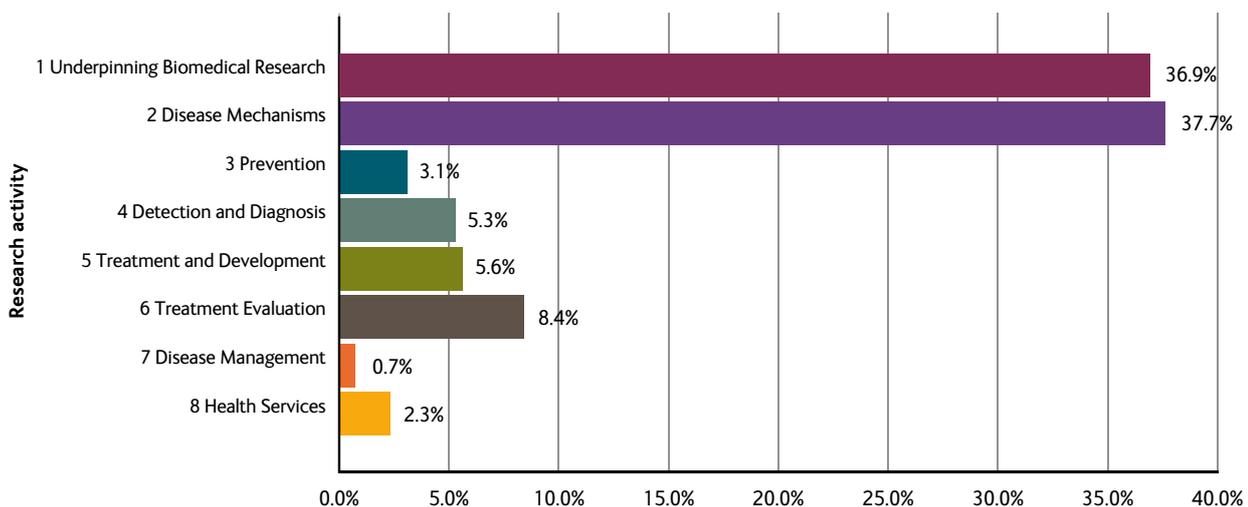


Figure 2: estimated research programme expenditure by area

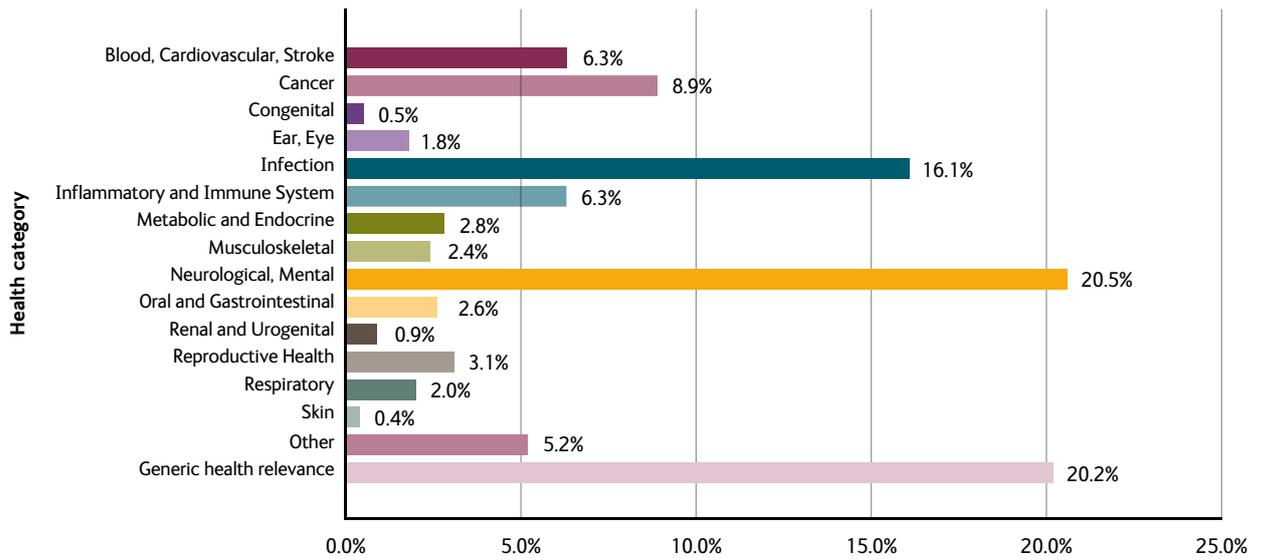


Figure 3: New grant commitment by financial year

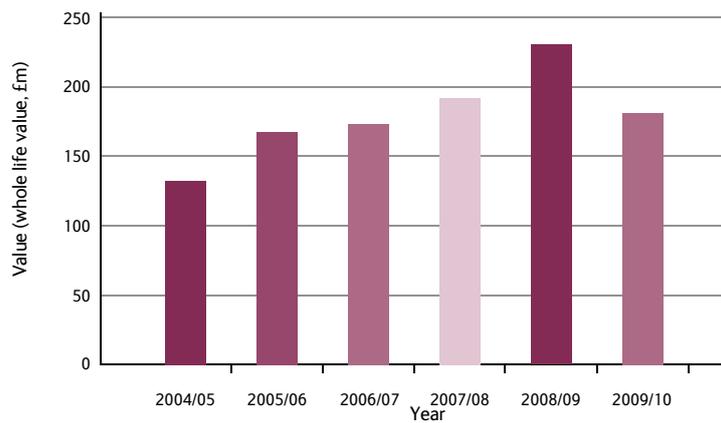
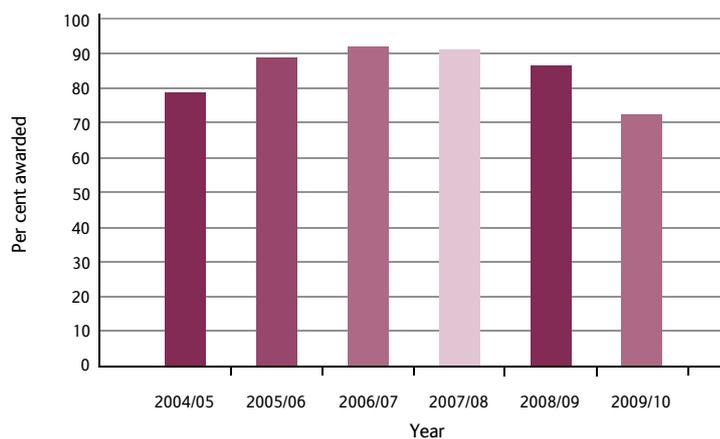


Figure 4: Success rate of internationally competitive grant applications



Institutes, units and centres

The MRC's large-scale investments include three major institutes, 28 research units (including two transferred this year to university management and two in Africa) and 28 centres. All institutes, units and centres are reviewed by the MRC every five years. During 2009/10, more emphasis was placed on addressing the wider and more strategic issues during the five-yearly reviews, implementing actions addressed in 2008/09.

A significant amount of change was initiated during 2009/10 including:

- establishing a partnership with the University of Oxford and transferring two MRC units (Human Immunology and Molecular Haematology) to the university⁽¹⁾;
- restructuring the Gambia unit;
- appointing four new unit directors to replace directors leaving or retiring (Cancer Cell Unit, Cambridge; Clinical Trials Unit, London; Toxicology Unit, Leicester and MRC/UVRI Uganda Research Unit on HIV/AIDS);
- deciding to close two units (Centre for Protein Engineering, Cambridge and Functional Genomics Unit, Oxford).

Figure 5: large-scale research investments

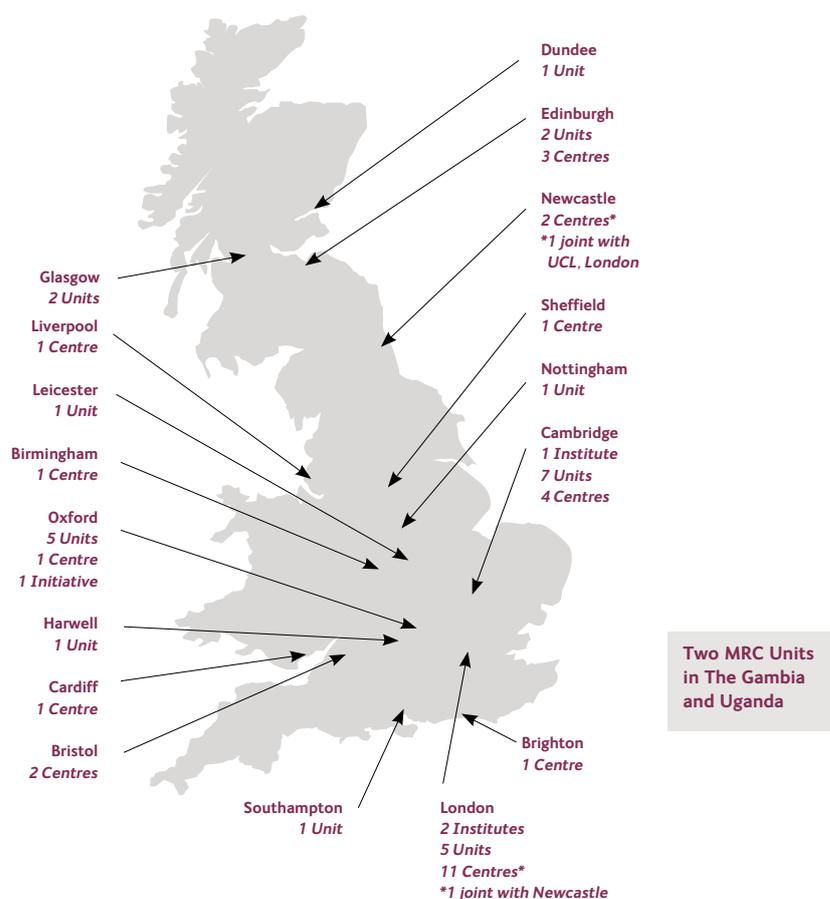


Table 1: 2009/10 reviews of large-scale research investments

	Total (on 31/3/10)	Reviewed	New Starts	Change Initiated
MRC institutes	3	0	0	0
MRC institute divisions *	11	3	0	0
MRC research units	28	11	4	5
MRC/university centres and initiatives	28	5	0	5
Total	70	19	4	10

* Owing to the breadth of science covered in MRC institutes, the science is initially reviewed by division before a strategic review of the whole institute is undertaken. A division is approximately the size of a large MRC unit.

(1) Effective date 1 April 2010

Grant funding

Around 1,475 grant applications had a final funding decision during 2009/10, 279 awards were made, committing £181.0m. During 2009/10 all applications submitted to the MRC were acknowledged and applicants were provided with guidance on the timetable for consideration; 100 per cent of applications submitted were considered by the MRC's peer review process within 26 weeks of submission. Feedback was provided to 93 per cent of grant applicants within seven working days of a decision being made.

Table 2: response mode application and success rate in 2009/10 (with 2008/09 figures for comparison)

Grant type	Number of applications (2008/09 figures)	Per cent success rate (2008/09 figures)	Amount awarded (whole life value) (£m)
Centre Grants ¹	5 (5)	100 (80)	10.7
Collaboration Grants	2 (10)	50 (20)	0.2
Discipline Hopping Awards	76 (87)	24 (22)	1.6
LINK Grants	2 (2)	0 (50)	-
New Investigator Research Grants	146 (154)	17 (20)	10.9
Programme Grant ^{2,3}	53	32	52.2
Research Grants	1,190 (1,655)	17 (20)	104.2
Trial Grants ²	1 (11)	100 (64)	1.2
Grant Total	1,475 (1,924)	19 (21)	181.0

(1) Renewals and invited full proposals only

(2) Full proposals after outline stage

(3) Programme Grants were included in Research Grants in 2008/09

Table 3: Targeted calls for proposals 2009/10

Call applications	Number of applications	Number of awards	Amount awarded (whole life value £m)
British Heart Foundation Strategic Stem Cells	3	1	1.2
Translational Stem Cell Research Commitment	17	12	6.6
Infections and Immunity Board Pilot			
Industrial Collaboration Awards (PICA)	8	4	1.0
Lifelong Health and Wellbeing Phase 2			
Collaborative Grants	22	3	4.7
Developmental Pathway Funding Scheme	48	18	9.1
Developmental Clinical Studies	10	3	5.3
National Prevention Research Institute (NPRI)			
Phase 3	31	16	10.3
A*STAR / MRC Infectious Disease 2009	44	6	0.9
Addictions and Substance Misuse Research			
Strategy	11	4	4.1
Environmental and Social Ecology of Human			
Infectious Diseases	47	12	0.6
Methodology Research Panel (Investigator led)	42	12	4.5
Methodology Research Panel (Needs led)	31	11	3.0
PET Imaging call for Proposals 2009	7	3	1.6
Motor Neurone Disease Association joint call	9	1	1.1
Discipline Hopping	81	18	1.6
MRC Industrial Collaboration Awards (MICA)	45	15	9.9
Total	456	139	65.5

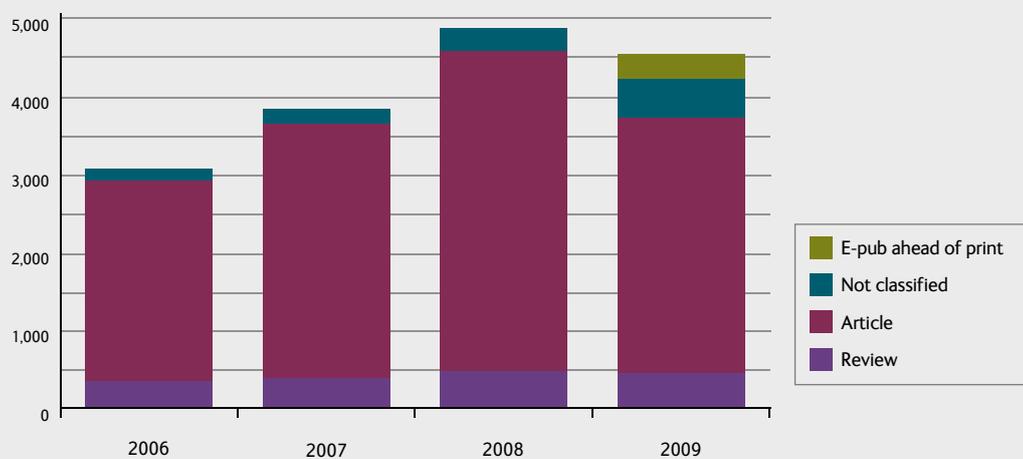
Research publications

One of the most widely used quantitative measures to estimate the value or impact of research is publications: the number of publications and their citations can be used as an indicative measure of impact.

A recent study commissioned by the Department for Business, Innovation and Skills (BIS) on the *International Comparative Performance of the UK Research Base* (July 2009, Evidence, Thomson Reuters UK) showed that the UK's relative research output in terms of its share of indexed publications is very strong in medical sciences. The UK share of publications is approximately 8.7 per cent in clinical sciences and 10.6 per cent in health sciences, ranking second in the world behind the USA in each category. The UK has over 14 per cent of the world's top 1 per cent of most highly cited papers, and is ranked first in the G8 on publication productivity with almost 32 papers per \$billion GDP.

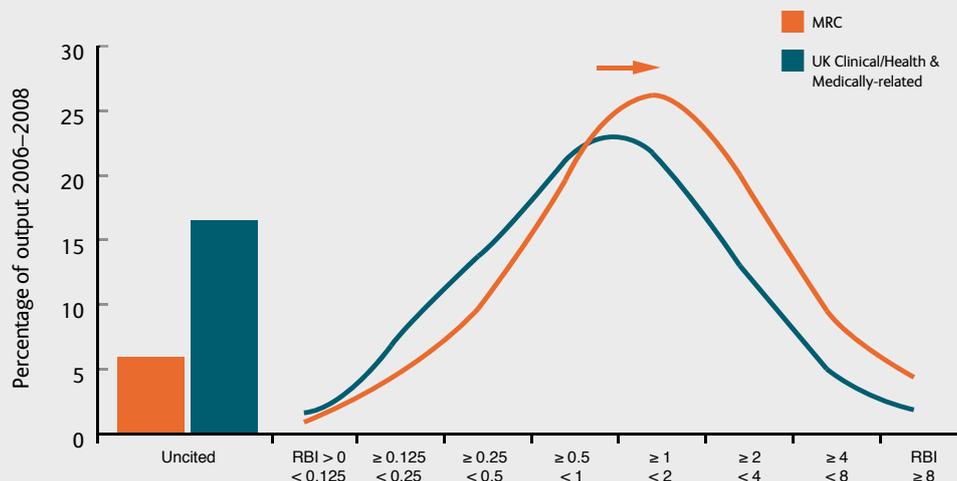
The MRC now collects publication data across grants, fellowships and unit and institute programmes through MRC e-Val. The introduction of this system means that the MRC has a more complete picture of the publications arising from MRC funding.

Figure 6: publications from MRC-funded research



The MRC also uses citation scores normalised to the world average (RBI – rebased impact) for all reported publications to look at how MRC-attributed publications are performing. Using the publications reported in MRC e-Val for 2006 to 2008 and the normalised citations taken at the end of 2009, these MRC-attributed publications have an average citation impact of approximately twice the world average. The citation profile for the MRC, below, includes an analysis of the performance of the rest of the UK's publications in the fields of Biological Sciences and Clinical/Health and Medically-related research (Data & analysis: Evidence, Thomson Reuters UK).

Figure 7: citation scores for publications from MRC-funded research



RESILIENCE, REPAIR AND REPLACEMENT

Scientific discoveries have opened up new opportunities for intervention in many diseases such as cancer, dementia, heart disease and restricted mobility through bone and joint disease. Understanding more about the mechanisms of resilience, repair and replacement will help channel discoveries towards preventing and treating disease.

Natural protection

The human immune system protects the body throughout life, providing innate resilience to disease and degeneration. Understanding this – and how resilience breaks down with age or disease – is critical for developing new therapeutic advances for transplantation and the treatment of infectious diseases, autoimmune diseases and allergy.

The MRC's National Institute for Medical Research (NIMR) is home to one of the World Health Organization's four **Collaborating Centres for Reference and Research on Influenza**, which played a prominent role in the early days of the 2009 'swine flu' pandemic and continue to study the influenza A (H1N1) virus. The Collaborating Centre at NIMR has to date identified more than 3,500 clinical specimens and virus isolates from 55 countries.

In November 2009, leading UK research funders – the MRC, the Wellcome Trust and the Biotechnology and Biological Sciences Research Council (BBSRC) – together with the Department of Health (DH) and the Department for Environment, Food and Rural Affairs (DEFRA), announced £7.5 million of funding for a series of projects aimed at understanding the development and spread of influenza A (H1N1).

The existing **FluWatch** surveillance programme (see Box) received £2.1m from the MRC and the Wellcome Trust to extend its scope to include H1N1. The study is following a cohort of 10,000 individuals from 4,000 households to look at duration and severity of symptoms, access to care and treatment, effectiveness of antivirals, uptake and effectiveness of the pandemic vaccine delivered through the NHS and population behaviour changes throughout the pandemic and during illness.

MOSAIC (Mechanisms of Severe Acute Influenza Consortium), a collaboration of several internationally renowned teams of scientists in England and Scotland, was given £2.7m by the Wellcome Trust and the MRC for an intensive study of up to 500 people hospitalised with flu during the pandemic. The consortium is examining which factors contributed to the severity of the disease. Understanding why some people became very sick with flu will help improve future policies for vaccination and antiviral drug use. It is the first time such a large-scale cooperative project has ever been attempted for pandemic influenza.

FluWatch

The FluWatch research project is a collaboration between the University College London (UCL) Centre for Infectious Disease Epidemiology, the MRC Human Immunology Unit, the MRC General Practice Research Framework and the Health Protection Agency. The project, led by Dr Andrew Hayward at UCL, started in 2006 and examines flu transmission within households in England.

In the event of a pandemic, volunteers in this study will help map the potential spread of the illness before researchers have time to recruit similar cohorts. Once more volunteers are recruited, comparison with the original FluWatch cohort will provide a unique opportunity to assess whether immune responses to previous influenza strains has offered protection against symptoms in those infected with the new H1N1 strain.

While recent events have brought acute infectious diseases like influenza to the fore, viruses are also important as causes of serious diseases such as liver failure or cancer following lifelong chronic infection. Following a strategic review of virology funding, the MRC has committed to invest £28.0m over five years in a partnership with the University of Glasgow to fund a new **multidisciplinary centre of excellence in virology** research. The University has agreed to contribute an additional £10.0m.

Major British funders of infection research came together in 2009/10 under the auspices of the UK Clinical Research Collaboration (UKCRC) to launch the second phase of the UKCRC **Translational Infection Research Initiative**, aiming to commit up to £8.0m in funding. This joint initiative is establishing a number of consortia: multidisciplinary research groups focused on high-quality collaborative work addressing national research priorities

in the field of microbiology and infectious diseases. The aims are to boost capacity for translational research and for applied research in clinical and public health contexts, develop research leadership, encourage collaboration, communication and training, and facilitate a strengthening of research activity across this field.

Tissue disease and degeneration

As the proportion of older people in the population increases, we need new approaches to unravel the complex biology of ageing and to understand its links with frailty and disease. Throughout life, cells and tissues are subject to attack from long-term biological processes such as chronic inflammation. These cause serious tissue deterioration, which can be responsible for symptoms ranging from breathlessness in asthma to degeneration of the brain and nervous system.

The DH and the MRC co-hosted a **National Dementia Summit** in July 2009 to follow up publication of the DH National Dementia Strategy. The summit brought together a wide range of experts to help identify gaps in existing knowledge and to prioritise new areas for research investment that could build upon and enhance current activity.

The MRC **Strategic Review of Neurodegeneration**, published in 2008, made three key recommendations: strengthen biological research into disease origins and mechanisms, improve training and critical mass, and establish a strategic coordinated network to address the main barriers to progress in the field. To help meet these aims, the MRC joined forces with the Wellcome Trust and issued a joint call for innovative, cross-institutional programmes addressing the **mechanisms underlying neurodegenerative disorders**. The call focused on Alzheimer's disease, Parkinson's disease and motor neuron disease. Three major collaborative awards were made in November 2009 totalling more than £16.0m, of which the MRC contributed £5.3m. This investment in interdisciplinary, cutting-edge projects will provide further momentum to our efforts to make a real impact in developing new treatments for these incurable and debilitating diseases.

In 2008 the European Commission proposed the concept of '**Joint Programming**' to improve cooperation between nationally funded bodies such as the MRC and our counterparts across Europe. The first pilot Joint Programme was launched in 2009, aiming to combat neurodegenerative diseases, and Alzheimer's disease in particular. In addition, an international cluster of centres of excellence is being established to tackle neurodegenerative disease (see page 37).

Partnership with charities

As part of an ongoing partnership, the MRC made a major joint award co-funded by the Motor Neurone Disease Association (in cooperation with the Heaton-Ellis Trust) and the MRC's own charity, the Medical Research Foundation, to Professor Christopher Shaw at the MRC Centre for Neurodegeneration, King's College London. The award of £1.63m over five years will enable researchers to employ new methods to find genes associated with Amyotrophic Lateral Sclerosis, a form of motor neuron disease.

Mental health and wellbeing

At any one time, nearly one in six UK adults has a common mental disorder such as depression, which is the leading global contributor to years lived with disability and is associated with increased future risk of heart disease. In addition to the need to address the burden of mental ill health, there is a need for research that tackles questions concerning the relationship between optimal wellbeing and mental and physical health.

Mental health is one of the public health priorities for which the MRC has lead responsibility within the Office for Strategic Coordination of Health Research (OSCHR). In 2009, the MRC undertook a major and **wide-ranging review** of the field across the remit of all the OSCHR partners (the National Institute for Health Research (NIHR), UK Government and devolved administrations), including reference to the role of social sciences. Our review identified a number of research strengths that can be used to advance mental health research by embracing current scientific opportunities. The resulting recommendations to develop strategic approaches to preventive strategies and to developing therapies, will be implemented in 2010.

The MRC is also leading the **addiction research strategy** in association with OSCHR partners and the Economic and Social Research Council (ESRC). Awards representing an MRC contribution of £6.0m have been made to fund proof-of-concept research, the establishment of 11 addiction clusters and four research programmes within the clusters.

These **addiction research clusters** are expected to support interdisciplinary research and build capacity and critical mass in priority areas of addiction and alcohol research. The four recently funded programmes will collect and analyse data to inform policy on alcohol, enhance our knowledge of how many people are involved in serious drug taking, develop understanding of the biological processes that underlie addiction behaviour and develop drugs that might be used to counter addiction.

Repair and replacement

Regenerative medicine is set to transform opportunities for cell- and tissue-based therapies. Scientists are pursuing both replacement and regeneration techniques for repairing human tissue, combining the principles of engineering, physical science and medicine.

The MRC's **Translational Stem Cell Research Committee** (TSCRC) was established to fund research that will drive stem cells towards application, both clinically and in disease modelling and drug discovery. The TSCRC awarded £15.0m in 2009/10 through a combination of response mode funding and targeted initiatives.

Among these awards, the committee funded four early-phase **clinical trials** involving adult stem cells, two using stem cell transplantation to address blindness and bone repair, one activating dormant stem cells in the body to treat Addison's disease, and another targeting cancerous stem cells in chronic myeloid leukaemia. The TSCRC also made 10 awards totalling £3.5m under a targeted call for proposals addressing preclinical barriers that exist towards the therapeutic use of stem cells.

In 2009, the MRC and the British Heart Foundation launched a joint call for strategic development grants to undertake stem cell research applicable to cardiovascular repair and regeneration. The objective is to catalyse the formation of high-quality collaborative research programmes with the potential to make an international impact in this area. The first award, around £1.0m (£0.6m from the MRC), was awarded to a team at Imperial College London in February 2010.

Early in 2009, the MRC and the Californian Institute of Regenerative Medicine (CIRM) launched a new joint call to support academic-industry collaborations, capable of addressing issues of production and regulatory approval, to progress preclinical stem cell research into clinical testing. The MRC provided £4.7m to two UK-US collaborations. More details about these projects are on page 37.

To help build capacity in preparation for the growth in clinical testing of stem cell therapies, around £1m was provided to fund further MRC Clinical Training Research Fellowships in stem cell research during 2009/10. We also provided new resources to help researchers navigate the complex regulatory framework relating to stem cells (see page 30).

The MRC, along with the BBSRC, the Engineering and Physical Sciences Research Council and the ESRC, is partnering with the Government's Technology Strategy Board (TSB) in its £18.0m programme in **regenerative medicine**, launched in summer 2009. The MRC has agreed to contribute £2.5m to the later stages of the 'tools and technologies' theme in 2010/11.

LIVING A LONG AND HEALTHY LIFE

Health professionals, policy-makers and individuals can potentially improve the chances of having a healthier life by addressing the complex interplay between genetics, development, and life events or lifestyles. In the fields of genetics and genomics, population sciences, and in tailoring treatments to individual needs, there are opportunities for research aimed at determining how these factors influence the quality and length of life.

Genetics and disease

We are beginning to understand the link between genetics and disease. The challenge now is to determine the biological relevance and mechanism of action of genes, and to develop this knowledge for clinical application. Scientists are developing new biological markers for determining disease subtype, predicting risk or response to treatment, and using insights into disease mechanisms to develop new drugs.

The **MRC Centre for Neuropsychiatric Genetics and Genomics** at Cardiff University was established in July 2009. Directed by Professor Mike Owen, it is the first UK facility dedicated to harnessing the genetics revolution for research into mental disorders. The centre will house scientists and postgraduate students undertaking research to understand mental illnesses like schizophrenia and bipolar disorder, neurodegenerative diseases like Alzheimer's, Huntington's and Parkinson's, and developmental disorders like dyslexia and childhood depression. The centre builds on Cardiff's strength as a world leader in neuropsychiatric science and is supported

through co-funding from the Wales Office of Research and Development (WORD) and Cardiff University. The centre will receive £2.0m from the MRC over five years to add impact to existing MRC grants held by members of the centre.

The MRC renewed its investment in the **UKDNA Banking Network**, which manages the centralised storage and distribution of large DNA collections and associated data from a number of important human diseases. The network, which received a further £1.0m, provides a valuable resource to support genetic epidemiology in post-genomic translational research.

Studying mouse genetics offers huge opportunities for furthering our understanding of the role of genes in human health and disease. The MRC has been working with international partners to scope the development of a large, **international consortium** that aims to determine the phenotype of mouse mutants in which each gene has been systematically deleted. The UK is at the international leading edge of mouse genetics and we will explore opportunities to maximise the impact of significant strategic investments in mouse genetics at the Research Complex at Harwell and how it might contribute to international activities.

Life course perspective

Life expectancy continues to increase in much of the developed world. As we take forward results from basic research into health benefits for society, it is important that we study diseases in the context of the entire age spectrum from birth to adulthood.

Average life expectancy in the UK has risen from 47 years in 1900 to around 80 years today. A consequence of more people living longer is that a larger proportion of the population is made up of older people. Longevity, health and wellbeing are the consequence of a complex mix of genetic, environmental, behavioural, cultural and socio-economic elements. This means many ageing-related challenges cut across different disciplines and benefit from bringing together a range of expertise to tackle them collectively. The MRC is coordinating the development of a **strategy for ageing research** in the UK. The strategy will identify opportunities to build on existing strengths and add value through collaborative working and multi-sector approaches to address complex research challenges.

The **Lifelong Health and Wellbeing** (LLHW) programme is a cross-research council initiative in partnership with the UK Health Departments and is led by the MRC. LLHW builds on the research councils' long-standing commitment to supporting ageing research by funding multidisciplinary research addressing factors throughout life that influence healthy ageing and wellbeing in older age.

The aims of LLHW are to:

- Target factors that may be major determinants of health and wellbeing in later life.
- Identify and develop effective interventions that lead to improved health and quality of life in older age.
- Inform policy and practice including the development of services and technologies to support independent living.
- Increase capacity and capability in ageing-related research.

The LLHW programme has committed around £16.0m of joint funds in its first two phases. In each phase of funding, emphasis is placed on supporting multidisciplinary research, national and international collaborations, engagement with stakeholders and the public, research capacity building and effective knowledge transfer. This approach is designed to build and sustain existing and emerging areas of ageing-related research and strengthen the UK ageing research community.

In 2009/10, £4.5m was awarded to three major LLHW Research Collaboratives to develop interventions for self-management of chronic pain, independence during rehabilitation, and promoting health and wellbeing post-retirement. Ten LLHW Collaborative Development Networks were also funded – short-term, capacity-building networks with the aim of creating new multidisciplinary teams working in highlighted priority research areas. This followed the 2008 investment of £11.0m to establish three LLHW Centres around the UK focused on research into quality of life, frailty and the ageing brain. Phase three of LLHW, to fund pilot studies and research grants, was launched in May 2010.

Lifestyles affecting health

Over recent decades, researchers tackling behaviour related to health have studied ways to change lifestyles at an individual level. While some initiatives have been successful, we need to develop more effective strategies with a greater focus on community or multi-level interventions, taking into account the social factors that play important roles in behaviour and lifestyle.

The MRC leads the **National Prevention Research Initiative** (NPRI) on behalf of 16 funding partners including government departments, research councils and medical charities. The initiative supports research on health behaviours associated with significant risks to health – such as poor diet, physical inactivity, smoking and alcohol consumption – and on environmental factors that influence those behaviours. Following a third call for applications, the NPRI portfolio increased in 2009/10 to more than 50 awards valued at approximately £21.0m over 10 years.

Alcohol marketing

The health and social costs of British drinking have become increasingly prominent in recent years, and important policy steps have been taken in response. The direction of policy has varied within the UK, with the Westminster Government adopting a focused approach addressing the minority, misuse problem, and Scotland trying to address the relationship that the population as a whole has with alcohol. Central to the debate is alcohol marketing, estimated to be worth £800 million each year.

Professor Gerard Hastings at the University of Stirling was funded by the NPRI to study the complex relationship between drinking and marketing, and specifically to determine whether advertising encourages consumption. To do this, nearly a thousand teenagers in the west of Scotland were interviewed when they were 13 years old and then again two years later.

The MRC awarded further funding of £1.0m over five years to the **MRC Population Health Sciences Research Network** (PHSRN). Established in 2005, PHSRN is a network of 12 MRC units and centres working in the population health sciences and the funding aims to encourage collaborative working.

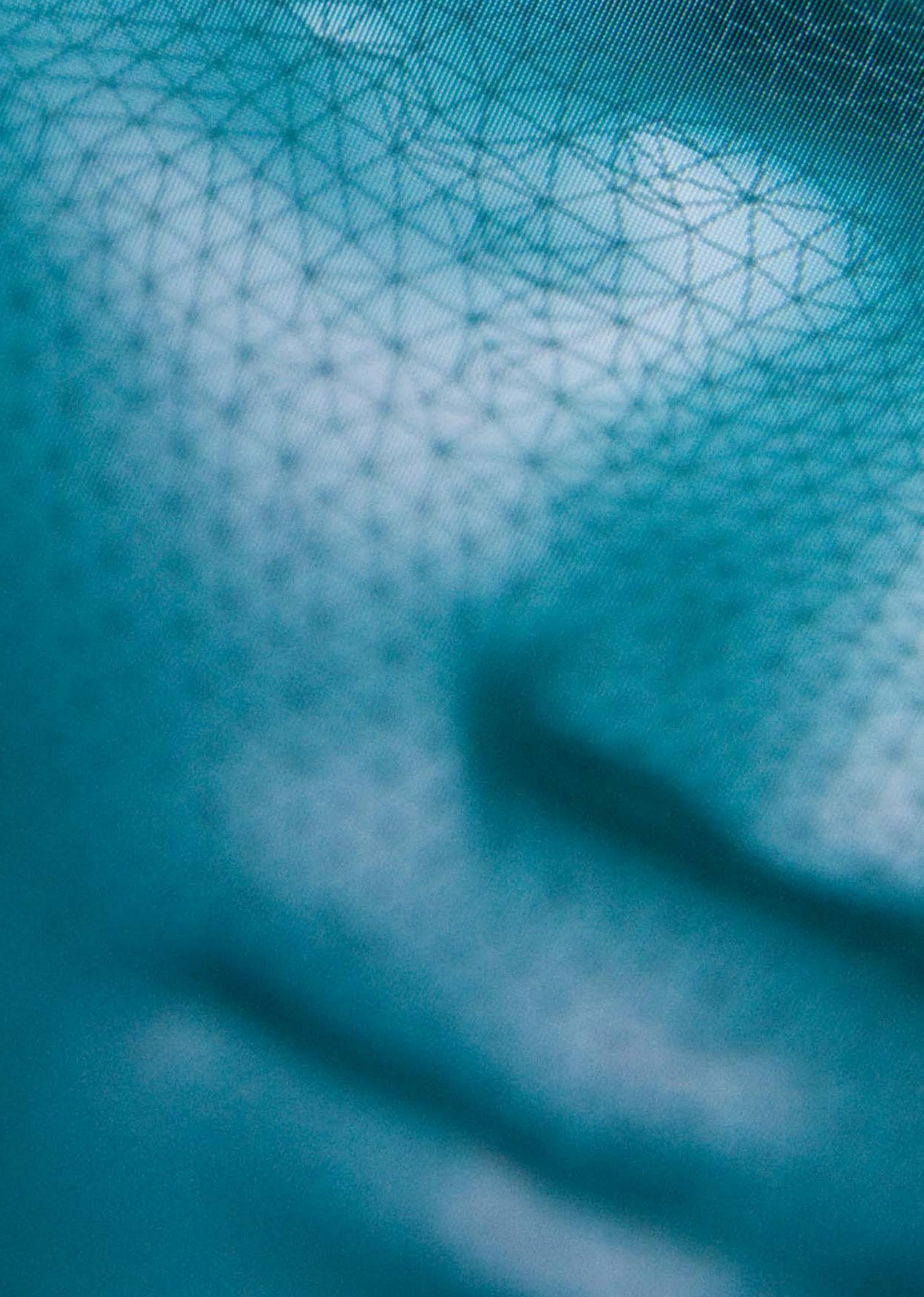
The MRC and the Chief Scientist Office (CSO) of the Scottish Government jointly awarded £19.0m to the **MRC/CSO Social and Public Health Sciences Unit** (SPHSU) at the University of Glasgow this year (£15.5m from the MRC and £3.5m from the CSO over five years). Research at the unit plays an important role in providing information to policy-makers in Scotland, the UK and internationally.

The MRC and the UK's Health Departments have set up a group to look at the achievements in this area over the last ten years, to ensure that their respective public health research strategies are aligned and that any remaining gaps are addressed.

Environment and health

Under the cross-research council partnership **Living With Environmental Change** (LWEC), a strategic partnership has been developed between the MRC, the Natural Environment Research Council (NERC), DH, ESRC and DEFRA, providing up to £10.0m to support innovative, interdisciplinary and integrative proposals that are aligned with policy needs and address the relationship between environmental pollutants and stressors and human health. The MRC has allocated £3.0m to this initiative, building on our £3.0m investment in the MRC-HPA (Health Protection Agency) Centre for Environment and Health, which opened in June 2009.

Also within the LWEC partnership is an initiative to study the **Environmental and Social Ecology of Human Infectious Diseases** (ESEI). Important new insights into the drivers and control of infectious diseases in human populations can only be achieved by taking a holistic systems approach which takes into account the ways in which the natural and social environments affect the emergence and spread of infectious disease. The MRC is contributing £4.2m to the ESEI initiative, with the other partners – NERC, ESRC and BBSRC – bringing the total to approximately £10.0m, with potential for further joint funding. Phase I of the initiative, to stimulate the establishment of interdisciplinary groups and the development of innovative research ideas, was launched in September 2009 and will be followed by the launch of phase II to support large Research Consortium grants.



2

Research to people

CASE STUDY

Screening halves aneurysm deaths

MRC-funded research benefits people. Abdominal aortic aneurysm (AAA) is a dangerous bulge in the lower part of the aorta, one of the major arteries which carries blood away from the heart. If an AAA ruptures it can be deadly. It's estimated that around 1 in 25 men aged between 65 and 74 in England have an AAA, so early detection could save lives. Results from a 10-year clinical trial has shown that screening men for AAA using ultrasound could prevent about half of all aneurysm-related deaths if screening were to be rolled out nationally. The study compared 67,770 men aged 65 to 74, half of whom were invited to a one-off ultrasound screening. The other half, the controls, were not offered screening. If the screening picked up an AAA, the affected men were monitored and were offered surgery if they met pre-defined criteria. Results showed that screening significantly cut the risk of death from AAA in the long term, and that this benefit was maintained for up to 10 years. There were 155 AAA-related deaths in the screened group and 296 deaths in the control group. The screening programme was also shown to be highly cost-effective. Professor Simon Thompson, director of the MRC Biostatistics Unit in Cambridge, who led the research, said: "As a result of these findings and the trial's follow-up, a national screening programme for men aged 65 in the UK began in spring 2009, which should achieve full coverage of the country over the next few years."

Read about more MRC research highlights from 2009/10 at
www.mrc.ac.uk/sevenages

Research to people

The MRC works with public and private sector researchers, regulators, and a broad range of stakeholder communities to ensure research of the highest quality is translated into tangible benefits for society as a whole.

TRANSLATIONAL RESEARCH

We are driving the translation of discoveries from basic laboratory and clinical science into benefits for human health. Using these insights, we are further enhancing our knowledge of the fundamental pathways in health and disease. An essential component of this bidirectional process is sustaining strong support of the basic science that underpins it.

Working through partnerships

The MRC's translational research strategy, developed in partnership with MRC Technology (MRCT – see page 25), the National Institute for Health Research (NIHR), other partners in the Office for Strategic Coordination of Health Research (OSCHR) and other organisations, is designed to increase the scale and speed of progress from scientific discovery to clinical benefit. As well as providing input to the strategy, our partners are vital in enabling the MRC to implement it.

Technology Strategy Board

The Government's **Technology Strategy Board** (TSB) is a crucial partner in this area and we have continued to work together to ensure alignment and to identify value-adding collaborations. Joint work continued on two key areas in 2009/10: regenerative medicine, where the MRC is a partner in TSB's £18.0 million initiative to help companies exploit emerging scientific opportunities (see page 19), and stratified medicine.

The targeting of medicines to patients who are most likely to benefit and least likely to suffer harm is a constant challenge and a critical part of the healthcare delivery process. Nevertheless, despite careful evaluation and close regulatory oversight, most existing medicines are only effective in 30 to 70 per cent of the patients for whom they are prescribed. **Stratified medicine** represents a new approach to healthcare, which involves a deeper understanding of disease, to the extent that better medicines can be developed for, and used by, the most appropriate patient subgroups. It is an area of huge potential for the UK's pharmaceutical, diagnostics and devices sectors.

TSB and the MRC (the OSCHR lead on stratified medicine) are working together with Health Departments and charities to coordinate efforts to develop the research, regulatory and fiscal environment in which stratified medicine can flourish.

Industry

Robust links with industry are essential to informing and delivering our strategy. The MRC Pharma Forum was established in 2008 to provide a platform for consistent and effective engagement between the MRC and industry, and to oversee all aspects of strategic interaction with the healthcare industry. A number of initiatives to which the Forum contributed were implemented in 2009/10. Examples include the Immunology and Inflammation Initiative and increasing engagement with small and medium-sized enterprises in the MRC's Industrial CASE studentship scheme (see Boxes). In support of cross-council initiatives, the MRC also led a senior-level meeting between research council chief executives and representatives from the life science industry to engage on the future direction of research underpinning pharmaceutical innovation in the UK.

Immunology and Inflammation Initiative

To improve strategic alignment, the MRC and the Association of the British Pharmaceutical Industry (ABPI) have been working together to promote better interaction between academics and the pharmaceutical industry. As part of this strategy, and building on discussions within the Pharma Forum, the MRC and ABPI held a workshop in July 2009 to develop a new initiative in immunology and inflammation. This has led to two disease-focused funding workshops: one in chronic obstructive pulmonary disease (COPD) and the other in rheumatoid arthritis and other inflammatory joint diseases.

Each workshop brought together key experts from a range of sectors to identify clinical and preclinical research priorities in areas such as biomarkers, disease stratification, models and imaging. £15.0m has been earmarked for high-quality research proposals arising from this initiative, which will be extended to other disease areas later this year and next year. This activity is part of the delivery of the Office of Life Sciences (OLS) Blueprint, and in particular the concept of Therapeutic Capability Clusters.

Collaborative training

Collaborative Industrial CASE (iCASE) PhD studentships provide students with not only a challenging research project, but also first-rate training involving intellectual and technical collaboration between scientists in industry and academia. Recognising the benefits of the scheme for students, companies and academics, the MRC has increased support for iCASE awards by 40 per cent, committing £2.5m in 2009/10.

We also worked closely with the Association of the British Pharmaceutical Industry and the BioIndustry Association to raise their members' awareness of the scheme, especially among small and medium-sized enterprises (SMEs). The quality and demand for the iCASE competition in 2009/10 were unprecedented and we awarded studentships to 34 outstanding projects, involving 20 UK-based companies including seven SMEs. The successful proposals cover a range of translational research projects, from drug discovery to development of advanced surgical devices, providing trainees with a diversity of skills and experimental approaches across two research cultures.

The MRC continues to work with industry partners to build a shared vision for developing the nation's biomedical research leaders of the future. In response to recent rapid changes in the UK and global economies, the **MRC Skills Gap Award** scheme was introduced as an interim measure to ensure that high quality scientific or research support skills within industry were retained in the UK through recruitment to UK academic research organisations. The scheme provided fast-track start-up funding for appointments relevant to biomedical or biotechnology research addressing important UK skills needs. Our £2.5m commitment through the scheme resulted in 10 new appointments in vital areas such as animal pathology, imaging, neurodegeneration and translational drug discovery.

Building on the success of the Skills Gap Awards, in late 2009 the MRC launched the new **People Exchange Programme – Research Leader Fellowship** scheme. This highly flexible scheme, which will be expanded in 2010/11, enables experienced, research-active scientists to exchange knowledge and forge successful long-term partnerships between industry and academia.

The Office for Life Sciences Blueprint published in July 2009 highlighted the critical need for **clinical pharmacology and pathology** skills to underpin the development of safe and effective treatments. However, these skills are in sharp decline in the UK. To help address this critical gap, the MRC awarded £3.7m to two ambitious, collaborative proposals for research fellowship training programmes in clinical pharmacology and pathology in March 2010. They promise to boost the number of clinicians able to develop and apply advanced skills in clinical pharmacology or pathology to world-class fundamental, translational and clinical research.

As a result of the 2007 Comprehensive Spending Review, MRC training and careers benefited from a two-year £28m supplement, which funded about 300 additional individual fellowships and studentships awarded between 2008 and 2010. A proportion of the supplementary funding was used to support strategic skill gap areas such as biomedical informatics, biostatistics and methodology research as well as the clinical pharmacology and pathology programmes described above.

In 2009/10 the MRC, the Biotechnology and Biological Sciences Research Council (BBSRC) and the British Pharmacological Society built on their existing partnership to introduce **Strategic Skill Awards** for *in vivo* animal science. The awards supplement MRC- and BBSRC-funded PhD studentships that involve a substantial component of expensive and advanced *in vivo* technologies. The scheme was recognised by the Office for Life Sciences as a helpful response to a shortage of research skills that had been highlighted by academia and industry.

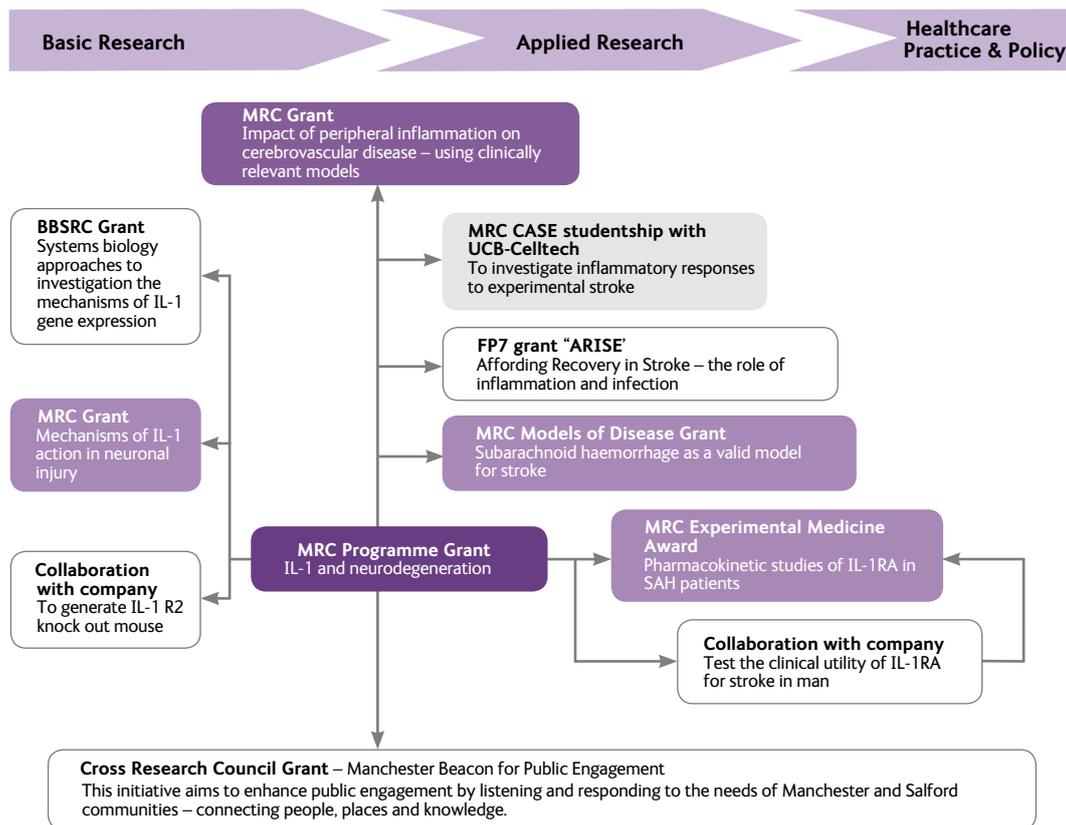
MRC Technology

MRC Technology (MRCT) is a key partner in our translational strategy. MRCT works to translate cutting-edge scientific discoveries into commercial products, focusing on intellectual property (IP) from research in the MRC's units and institutes. In 2009/10, licensing income receipts from all sources reached £66.2m during the year (2008/09: £66.4m).

SUPPORTING PROJECTS FROM BENCH TO BEDSIDE

As clearly stated in our strategy, we want to make certain that research of the highest quality is translated into benefit for society. Our range of translational funding schemes ensures that promising projects are pulled through proof of concept and preclinical phases, to experimental medicine and beyond. The diagram below illustrates how work generated in an MRC programme grant has been developed through further support from the MRC and other bodies.

Figure 8: Development of a project on interleukins in stroke



This diagram shows how MRC funding for a research programme created opportunities for further funding from the MRC and other agencies to support the long-term process of translation from basic research into a range of outcomes, including the possibility of improved treatment for stroke patients. Studying the role of inflammation in brain damage following stroke, the researchers focused on one protein and the use of a naturally occurring antagonist as a potential therapeutic. In addition to the scientific and clinical outcomes listed below, the principal investigator's contribution was recognised through a number of high-profile appointments.

Outcomes

- Understanding the role of inflammation and Interleukin-1 (IL-1) in ischaemic brain damage.
- Funding won for several new branches of exploratory research into the role of IL-1 in various disease mechanisms: for example, in subarachnoid haemorrhage (SAH: bleeding between two of the layers of membrane between the brain and skull), and into relevant in vivo models.
- US patent protection covering the blocking of IL-1 action to treat neurological conditions.
- Validation of two new entities – an antibody binding to IL-1, and a new IL-1 receptor antagonist (IL-1RA) – as potential agents in collaboration with two separate companies.
- Clinical phase II studies showing that IL-1RA has therapeutic potential for acute stroke and finding the optimal dose.
- Phase II trial (IL-1RA vs placebo) underway in SAH patients to determine the effect of the drug on biomarkers of inflammation in the cerebrospinal fluid.

Clinical benefits

MRC e-Val reported that MRC research has led to at least 24 new products/interventions reaching the market over the period 2006–2009. These include 10 new drugs with a further 12 in Phase II trials, including monoclonal antibodies for multiple sclerosis, type 1 diabetes, asthma, and psoriasis. Through our current translational projects, over 2,500 patients will be recruited to clinical trials, nearly 9,000 involved in biomarker studies and over 7,000 individuals will be members of patient cohorts.

Supporting translational research

In 2008, the MRC introduced a 'managed programme' of funding for translational research, available to researchers at universities as well as within our units. The managed programme consists of two schemes. First, the **Developmental Pathway Funding Scheme** (DPFS), which supports preclinical development of novel therapies, interventions and diagnostics, and any necessary research tools for development of therapeutics.

Second, the **Developmental Clinical Studies** (DCS) scheme, which covers exploratory clinical research as far as phase I and II trials, the natural next stage in development. The managed programme supports goal-orientated, structured development, giving priority to research that will lead directly to new treatments, and providing specialist advice and access to high-cost facilities. This scheme complements the general support for exploratory experimental medicine research into treatments already available in Grants and Fellowships.

There is a deliberate overlap between DPFS and DCS to seamlessly support the development of new therapeutics and diagnostics from the fundamental discovery stage through preclinical development to first-in-man clinical trials. In both schemes, projects are based on scientific milestones, with decisions on progression taken on the likelihood of success at each milestone with the possibility of termination if the research results or project progress are unlikely to achieve the planned objectives.

Improved method for detecting cervical cancer

Magnetic resonance imaging (MRI) is currently the gold standard for assessing the neck of the womb and surrounding tissues in cases of cervical or suspected cervical cancer. Researchers at the Institute of Cancer Research and Royal Marsden NHS Foundation Trust, led by Professor Nadita deSouza, have been granted a DPFS award (£163,000, 24 months), to increase the resolution of current MRI images. Professor deSouza and colleagues plan to develop an endovaginal receiver probe for use at 3.0T field strengths. This probe, which will be placed close to the cervix, will help maximise image signal and reduce noise, thereby helping clinicians better distinguish healthy and diseased tissue. This will enable the earlier detection of disease and reduce the impact of surgical interventions.

Between them, DPFS and DCS have already supported 68 projects, including 46 therapeutic interventions, 13 diagnostics and nine research tools – a total commitment of more than £22.0m. As potential new treatments and diagnostic techniques develop within these schemes, they look to take later-stage support from the MRC-funded Efficacy and Mechanism Evaluation (EME) scheme. This initiative, managed by the NIHR for MRC, supports the evaluation of innovative treatments in large-scale, multi-centre clinical trials.

Experimental Medicine

Experimental medicine is a core element of the MRC's overarching translational research strategy. The MRC is the lead public sector organisation for Experimental Medicine on behalf of OSCHR, and also coordinates the UK Clinical Research Collaboration (UKCRC) Experimental Medicine Funders Group, which draws together the interests and strengths of key partners to ensure that the UK maintains an attractive international profile in the area.

Through the Experimental Medicine funding call, the MRC has supported development of a project that is developing technology to protect newborns. At the MRC Clinical Sciences Centre in London, Professor David Edwards and collaborators have shown that controlled cooling of the brain – 'hypothermic neural rescue therapy' – reduces the risks of death and disability in infants suffering birth asphyxia and reduces cases of cerebral palsy in survivors. This is the first practical and cost-effective treatment for this serious condition, providing not only a clinical therapy but also proof of principle that neural rescue is possible. The National Institute for Health and Clinical Excellence (NICE) has already given preliminary guidance that the treatment should become part of normal NHS practice.

Translational projects from earlier Experimental Medicine calls for proposals are now coming to fruition: the MRC is working with the grant holders to provide advice and connections, ensuring that the successful projects can progress through to patient benefit either in partnership with the commercial sector or with further public funding. This scheme has involved nearly 2,500 patients and volunteers who took part in early stage clinical trials to test new therapeutic agents, vaccines and psychological interventions.

Investing in translational infrastructure

The MRC's translational initiatives also include investments in improving the infrastructure and skills needed for translation. With extra funding as part of the MRC's translational strategy, MRCT built on the success of the Drug Discovery Group in working with intramural scientists to create the **MRCT Centre for Therapeutics Discovery** (CTD), which is accessible by the broader academic community. It provides specialist translational infrastructure and expertise to support small molecule and antibody based therapy development for university projects funded by the DPFS grant scheme and other sources. The CTD increased its capacity for taking on projects by about 65 per cent this year, coupled with a major 'Call for Targets' campaign and a significant number of visits to high profile institutes and universities to encourage academics to collaborate with the CTD.

Drug discovery

The MRCT Centre for Therapeutics Discovery has undertaken a major collaboration with GlaxoSmithKline (GSK) and DiscoverX to identify ligands for up to 90 orphan G protein-coupled receptors (GPCRs). Lack of a ligand has proved a stumbling block in the efforts to associate a function, and thus understand the potential role in disease, to a given GPCR. The aim of this venture is to identify ligands for some of the orphan GPCRs and associate them with diseases to assist future drug discovery programmes.

Enabling research activity

In our training programmes, the MRC has supported a higher proportion of early career clinical researchers to engage in more complex patient-based research projects, and strengthened skills in clinical pharmacology and pathology, methodology, quantitative sciences and informatics, imaging and *in vivo* research. There is more information about our investment in capacity building in chapter 4 (page 42).

The MRC has identified toxicology and methodology research to be critical areas where efforts are required in order to speed progress from scientific discovery to clinical benefit.

A new director, Professor Anne Willis, was appointed to lead the **MRC Toxicology Unit** and reinvigorate its activities in mechanistic toxicology and networking with key stakeholders, including industry and the regulatory communities. The unit's new vision aims to use systems-based approaches to determine how gene expression is regulated during toxic stress induced by a range of different agents, including those with chemotherapeutic potential.

Future support through the unit will build on the existing **Integrative Toxicology Training Partnership** which links academia, industry and government to build expertise in toxicology and related disciplines through studentships and fellowships. The partnership supports the safe and effective development of drugs, chemicals and consumer products, and provides better assessment of risk deriving from environmental exposure. Five PhD studentships were supported in 2009/10.

The MRC also supported several grants in toxicology and nanotoxicology in 2009/10 in partnership with the Department of Health and the Natural Environment Research Council. The MRC continues to prioritise research into the possible health impact of human exposure to nanoparticles, particularly work addressing the mechanisms of toxicity.

The MRC works with the NIHR to jointly deliver a coordinated programme of **methodology research**. This stream of activity aims to strengthen the tools, theories and disciplines that underpin health research, and is another important component of the MRC's translational strategy. The Methodology Research Panel supports research that is investigator-initiated, and also supports projects that arise from identified priorities. To help improve the way clinical trials are conducted, the MRC awarded over £16.0m to establish seven **Hubs for Trials Methodology Research** (HTMR) through the enhancement of MRC units or university-led trials units with existing critical mass. The HTMR initiative aims to establish regional hubs for high-quality, cutting-edge methodology research in clinical trials, linking innovation in trials methodology and conduct with trials activity. The hubs have established a network to boost collaborative working across the HTMR and add value to the MRC's investment. During the next year the HTMR network will pilot its 'advisory function' to registered UK clinical trials units, organise the first UK trial methodology conference and issue small funding awards to boost collaborative working in trials methodology in the UK.

The need to improve the methodology underpinning appraisals by the **National Institute for Health and Clinical Excellence** (NICE) was highlighted in the 2006 Cooksey report, which referred to the need for research into indirect comparisons between treatment options, economic evaluations and appraisal of evidence derived from clinical trials. Following a scoping study, the MRC funded seven research projects at a total cost of £1.8m. The MRC will continue to work with NICE to identify beneficial ways of working together in the future.

REGULATION, ETHICS, GOVERNANCE AND WORKING WITH DECISION-MAKERS

The MRC aims to provide leadership in the governance of research, ensuring that the research we support is conducted to the highest standard and that it respects the wishes and integrity of any patients and volunteers involved.

Influencing legislation and setting standards

During 2009/10 the MRC played a key role in providing input to the revision of European Directive 86/609 which covers the **use of animals in scientific research**. The revision aims to harmonise implementation across member states, accommodate updates in technology and improve animal welfare. We have worked to ensure that the directive reflects current scientific developments as well as best practice in animal welfare, while ensuring that the competitiveness of European science is not compromised. Working closely with the Bioscience Sector consortium, which comprises representatives from industry, academia, science funding organisations and breeders, we have provided a single, powerful voice to the European legislators.

We have also been working to influence the revision of the **EU Clinical Trials Directive**, implemented in the UK as the Medicines for Human Use (Clinical Trials) Regulations 2004. These regulations have had significant impact on the conduct of clinical trials in the UK and across Europe. They have provided some benefit in harmonising requirements, but have added greatly to the resources required to gain approval for, and to conduct, a clinical trial. The MRC has responded to the initial consultation from the European Commission in relation to possible amendments to the framework for regulation of clinical trials in Europe. The MRC is also actively engaged with academic and commercial partners in the UK to ensure a coherent approach across the UK to this matter.

Alongside our efforts to ensure that new or revised legislation is not detrimental to the MRC's activities, we help our researchers navigate the relevant regulatory frameworks. The **MRC Regulatory Support Centre** (RSC) in Edinburgh and Glasgow provides direct support to medical researchers, providing advice and developing resources to support our scientists and the wider community. The RSC addresses all aspects of research governance and regulation and works with UK regulatory and governance agencies, and with the research community, to share and develop practical tools in the complex area of research involving human participants, their tissue or data.

When the **Human Tissue Act** came into force in 2006, the RSC established a programme of well-attended question-and-answer sessions where bespoke face to face advice on compliance with the Act is provided. The RSC has also launched an enhanced training programme which includes a very popular e-learning module.

One particularly complex environment is that surrounding potential therapies derived from **stem cells**. It encompasses statutory requirements relating to embryo derivation, human tissues and clinical trials. In addition, consideration of genetic modification or animal research requires further approvals. There was a high risk that this complexity would delay or even inhibit research in this area. To mitigate this risk the MRC, through the RSC, has been involved in a project to develop a toolkit guiding researchers through the steps required for approvals in this area. An added benefit of the work has been close engagement with all the relevant regulators who have established much closer working arrangements to deal with such studies. Sponsored by the Department of Health, Medicines and Healthcare products Regulatory Agency (MHRA) and the MRC, the toolkit was launched in 2009/10 and is available online.

Research ethics in China and the UK

As biomedical scientific research continues to develop and grow in China, there is an increasing appetite for collaboration between British and Chinese scientists. This has created a need to understand and reconcile two apparently differing traditions of research ethics. The MRC established the China–UK Research Ethics Committee (CURE) with the aim of making recommendations for the management of MRC-funded collaborations between Chinese and UK researchers and help develop a mutual understanding in research ethics.

In its 2009 report, the CURE committee made several recommendations to the MRC, including seeking to establish relationships with centres of excellence in China and engaging with Chinese partners in discussions about topics of mutual concern, building on the relationships that have been established by CURE. The report also included a toolkit with guidance for British researchers considering collaboration with Chinese scientists.

Engagement with the devolved administrations

Following changes in the composition of the MRC's Council, the chief executive made a commitment to ensure continued strategic engagement with the devolved nations. This has been facilitated by representatives of each nation now being members of OSCHR. The CEO has continued to visit each nation on a formal basis annually to discuss research strategy and opportunities for joint working. The MRC's Council has embarked on a series of open Council meetings in each of the UK regions, the first of which was in Edinburgh in December 2009.

Governance

In accordance with changes in governance, the MRC implemented a new reporting structure for unit directors. Rather than reporting to the chief executive, the majority now report to one of the board chairs. Institute directors and the directors of the units in Africa continue to report to the chief executive.

A new Council committee was set up this year. The Nominations committee will advise on recruitment to Council and the posts of chief executive and chief operating officer.

In September 2009 the MRC became a Public Records Body, formalising an agreement with The National Archives that had been in place for many years and provides public access to historical corporate records.

Open access

The MRC strongly supports the open access model of publishing, which allows the outcomes of research to be freely accessible and helps support and advance biomedical research worldwide. Papers published in open access may be copied and repurposed, and new technologies such as text mining can be applied to their content.

It is MRC policy that peer-reviewed primary research papers resulting from any MRC funding must be freely available electronically from UK PubMed Central (UKPMC) within six months of initial publication. Over the last year, the MRC has been working closely with other research funders and research organisations to find ways of facilitating the process of publishing in open access. We are actively working towards the harmonisation of the open access mandate across all UK research councils. New agreements have been reached with publishers to secure suitable open access options and discussions will carry on for those journals which still do not offer such an option. Better collaboration between funders and recipient institutions has been established in order to facilitate payment of open access fees where necessary.

UKPMC is being developed further by the MRC in collaboration with seven other funders, including the Wellcome Trust, the British Heart Foundation and the National Institute for Health Research. The project is managed by a consortium led by the British Library, including the University of Manchester and the European Bioinformatics Institute, and in collaboration with National Center for Biotechnology Information at the US National Library of Medicine (NCBI/NLM).

COMMUNICATION

The MRC is funded by the UK taxpayer. A fundamental part of our mission is to inform the public, policy-makers and our partners about our work, and to involve them with it. Through our initiatives, many of which involve MRC-funded scientists, we develop effective relationships with a range of audiences.

Communicating within the MRC

In an organisation as disparate as the MRC, improving and maintaining positive engagement with our staff is key. This year we have begun to develop new communication tools to address this priority. The Team Briefing Initiative, piloted in 2009, is being rolled out in all MRC units with the aim of providing a mechanism for the multi-way flow of information across the organisation, updating and supporting managers and staff during a period of significant change within the MRC. This work is supported by *News@MRC*, our monthly e-newsletter that goes out to MRC staff and scientists across the UK.

In 2009/10 we held two well-attended and well-received Directors' Meetings. The meetings aim to provide an opportunity for MRC institute, unit and centre directors to meet and network with each other, the CEO and other senior staff. To ensure engagement and participation, directors contribute to the meeting programmes, which include discussion sessions on MRC-related topics plus talks from high-profile scientific speakers.

Public engagement

Building on the success of previous years, the variety and quality of public engagement activities grew significantly in 2009/10. Nearly two hundred MRC-funded scientists from across the organisation participated in the UK's foremost science festivals in Edinburgh, Cambridge, Cheltenham, Brighton and Oxford. The MRC's profile reached new heights through the development and sponsorship of research-themed events, more face-to-face engagement and amplified networking with festival partners.

We continued to promote the MRC Science Café series, with well-attended events on cancer, neurodegenerative diseases and genetics. Scientists from units and centres across the country got involved in National Science and Engineering Week by holding open days, visiting schools and taking part in science fairs. We partnered the UK Brain Banks Network to highlight Brain Awareness Week, supported Darwin200 and hosted visits from various Women's Institute groups.

Supporting our scientists

Our scientists are our greatest advocates and our programme of science communication and media training continues to be in high demand. Training is based on need and application: be that public engagement tuition ahead of a science festival, where scientists will be communicating with a diverse audience, or as preparation ahead of a significant publication which might attract media interest. Through objectives set out in MRC unit and centre communication plans, all scientists are encouraged to use and share the communication skills they develop as part of their professional training.

This year, 50 scientists had media training and a further 96 participated in public engagement communication training ahead of events and festivals. Feedback has been extremely positive with many going on to use their skills at other MRC events such as cafés scientifiques, press conferences, science fairs and schools talks.

The annual MRC Max Perutz Science Writing Award competition recognises and encourages outstanding written communication skills in our young researchers and there was no let-up in the quality and creativity of submissions this year. With topics from deafness and cancer to research ethics and brain function, ten finalists further developed their talents by taking part in a science writing masterclass with professional science writers and journalists.

Partnership with the media

Skilled management of high profile issues such as H1N1 influenza, the latest MRC Nobel laureate and research ethics kept the MRC well represented in the national media throughout the year. The MRC featured in more than 240 UK national newspaper articles. Our global health research programme got a boost following proactive press work on the results of the MRC-funded Development of Anti-Retroviral Therapy in Africa (DART) clinical trial (see page 39). Coverage of the DART findings featured in the national press, online and on television. A film of the DART project, commissioned by the MRC, has been shown across Uganda twice and on BBC World.

Other well-covered MRC discoveries and achievements in 2009/10 included the discovery of a method of communication for a patient in a persistent vegetative state (see Box); the 20th anniversary of the HIV/AIDS Unit in Uganda; the discovery of new genetic links for Alzheimer's; first evidence of a genetic link to schizophrenia; and the results of the largest international clinical trial to date into a preventive HIV gel.

We work closely with the Science Media Centre, providing reactive comments on scientific stories in the news, and partner with the Wellcome Trust organising an annual conference for biomedical and science press officers, strengthening relationships with colleagues across the research community. The MRC was also represented at the 6th World Conference on Science Journalism in San Diego.

A simple 'yes' or 'no'

MRC research hit headlines across the world in February 2010 when a paper was published in the *New England Journal of Medicine* showing that a patient presumed to be in a vegetative state could indicate 'yes' and 'no' using just his thoughts.

Dr Adrian Owen of the MRC Cognition and Brain Sciences Unit, Cambridge, has carried out extensive research using functional magnetic resonance imaging (fMRI) to test for signs of awareness in persistent vegetative state (PVS) patients. In the study published in February, Dr Owen and international collaborators had scanned 23 PVS patients using fMRI. They detected signs of awareness in four cases. One man, who had sustained a severe traumatic brain injury in a road traffic accident, was able to answer 'yes' and 'no' questions by wilfully changing his brain activity. To indicate 'yes', he imagined himself playing tennis; to say 'no', he imagined moving around his home. In healthy volunteers, these two states were distinguishable in 100 per cent of cases using fMRI.

The MRC press office worked closely with Dr Owen to handle the story in a responsible manner, and nearly all the British national press covered the news, from the *Financial Times* to *The Sun*, along with the BBC, several radio stations and *Nature* and *Science* magazines. The story caught the imagination of people across the world, prompting extensive commentary and articles in the *New York Times*, *Washington Post* and *Time* magazine, not least because it raised serious questions about the status of PVS patients and choices made relating to their care. The scientists are clear, however, that their research is at a very early stage, and there are many ethical and medical issues to be addressed before fMRI can be used to communicate with PVS patients.

Web and social media

This year, the MRC's **corporate website**, which supports communication activities with all our audiences, has continued to adapt and develop to meet the changing needs of its users. The Achievements and Impact section, launched in 2009, was expanded to demonstrate more clearly the impact of MRC discoveries. In addition, landing pages have been created in the Our Research section for priority initiatives such as Lifelong Health and Wellbeing, autism and chronic fatigue syndrome, providing a one-stop shop for members of the research community wanting information on a specific health issue.

The website underwent user testing by the research community last summer. This testing has helped us to understand how scientific users search for and utilise information on the website and this has led to content streamlining and changes to our funding pages.

We have begun to explore the opportunities that **social networking** sites provide for communicating with new audiences. 'MRCcomms' on Twitter now has more than 500 followers while YouTube has enabled us to show the DART report and our new film about magnetic resonance imaging (MRI) to more than 2,000 people.

Public perspectives

The **MRC Public Panel** is a group of lay people that provides a diverse range of opinion, experience and expertise on different aspects of the MRC's work. The panel's contribution is invaluable in providing a public perspective on specific research areas, ensuring that our work reflects public acceptance in biomedical research.

Over the past year, the panel has provided input on the content and design of the new 'Key Facts' booklet series, assessed funding applications to the Lifelong Health and Wellbeing initiative, reviewed how we might improve public and patient involvement in our Efficacy and Mechanism Evaluation programme, and explored non-academic participation in the peer review process. A member of our Public Panel also joined the Steering Committee of the Human Developmental Biology Resource, a unique national tissue bank funded by the MRC and the Wellcome Trust since 1999.

The **Genetic Interest Group** is a national alliance of patient organisations which supports children, families

and individuals affected by genetic disorders, with which the MRC continues to work and support. The MRC renewed its partnership with the group in 2010 with the aim of increasing the public/government profile of genetic conditions and the importance of continued research investment in this area.

Publications

Combining strong design with engaging text, MRC publications continue to be a cornerstone of communications activities with key audiences, from MRC staff to researchers to members of the public. These activities use innovative mechanisms to increase readership and circulation, aiming to provide information the audience want in the most appropriate format, with an increasing emphasis on online and multimedia channels.

The MRC's bi-monthly magazine, *Network*, provides quick, easy-to-read summaries of MRC activities, signposting to more in-depth information. The 2008/09 Annual Review used the engaging 'day in the life' format to allow the reader to catch a glimpse of a typical day of MRC scientists at work, using bold design and stunning photography.

Millennium Medal

In 2009, the MRC reintroduced the Millennium Medal, first awarded in 2000, for outstanding research that has made a major contribution to our mission to improve health, quality of life and wealth creation. The 2009 MRC Millennium Medal was awarded to Professor Sir Peter Mansfield on 30 November, in recognition of his pioneering contributions to the development of magnetic resonance imaging (MRI) for both research and clinical applications.

To help celebrate Sir Peter's achievement, the MRC Communications team developed a new exhibition on the power of MRI to give us insights into the workings of the human brain. Part of the exhibition is a film about MRI that can be viewed on the MRC's YouTube channel. As well as going on display at the Millennium Medal event in Nottingham, the exhibition is touring the UK's science festivals in 2010.

We also published a new booklet called *The Brain* to accompany the exhibition. The booklet details the MRC's neuroscience portfolio and we have distributed in excess of 5,000 hard copies.

Informing Parliament

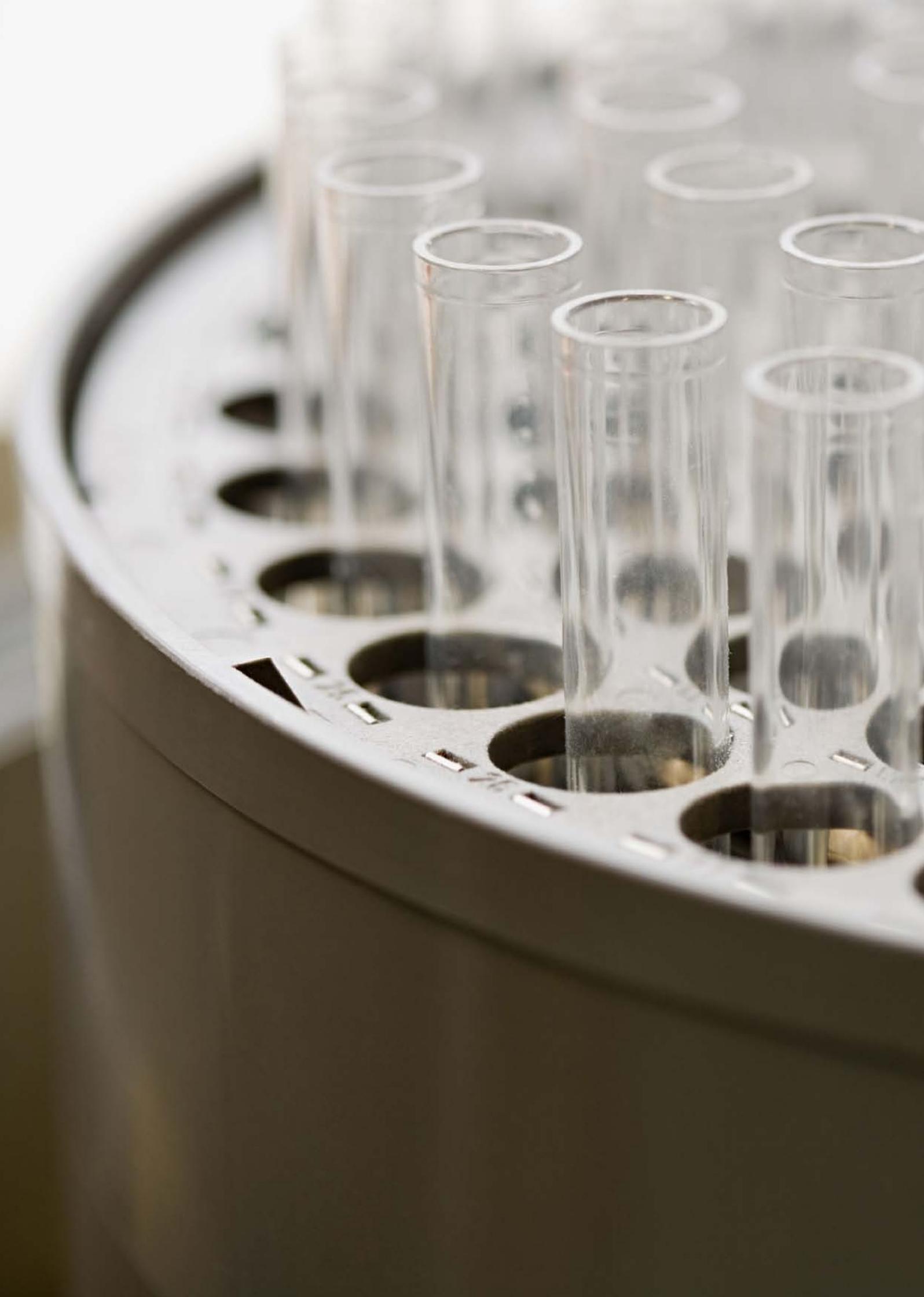
Building relationships with parliamentarians in order to promote the MRC's research priorities and inform policy decisions is a key part of the work of the Communications team. This year, events organised for MPs and Peers included the Regenerative Medicine Parliamentary Reception and a breakfast briefing on mental health. A policy briefing document was produced for the DART trial (see page 39) and launched at an event in Westminster.

During 2009/10 the MRC contributed to 41 **consultations and inquiries** led by Parliament, government departments and regulatory agencies, and other stakeholders. By participating in this way, the MRC can inform debate and shape policy, supporting evidence-based policy and decision-making. Of our submissions, 63 per cent were made in partnership with other biomedical research funders and representative bodies such as the Wellcome Trust and the Academy of Medical Sciences, or with the other UK research councils. Copies of submissions are available on our website.

As chief executive Sir Leszek Borysiewicz gave evidence to the House of Lords Science and Technology Select Committee inquiry *Setting Science and Technology Research Funding Priorities*, and Dr Tony Peatfield, director of corporate affairs, gave evidence to the House of Commons Science and Technology Select Committee *Inquiry into the impact of spending cuts on science and scientific research*.

Table 4: Consultation and inquiry submissions 2009/10

Body	Number of submissions
Government departments and agencies	16
Parliamentary Select Committees	10
Regulatory bodies	1
International bodies	2
Other bodies	12
Total	41





3

Going global

CASE STUDY

Simple solution to prevent malaria

Although the number of cases of malaria is falling, it remains one of the world's greatest childhood killers. Through our support for global health research, we aim to tackle this problem at its root. At the MRC Unit in The Gambia, scientists work on understanding the molecular basis of malaria and immune responses to it, and carry out field trials to test new ways of treating and preventing the disease. These can be new drugs and vaccines, but also include less technological approaches. Dr David Conway and colleagues in a research team led by Professor Steven Lindsay (now based at the London School of Hygiene and Tropical Medicine) showed that house screening was an effective barrier to the mosquitoes that carry the malaria-causing parasite. Screening either the ceiling or the whole house led to fewer children with anaemia, one effect of malaria infection in rural areas. Dr Conway said: "Malaria is on the decline in some parts of Africa where prevention is available through insecticide-treated bednets and artemisinin-based treatments. However, we need more ways of tackling it. This research showed that house screening by local workmen reduced malaria transmission – more work is needed to see if it is a sustainable and cost-effective way to reduce the burden of malaria."

Read about more MRC research highlights from 2009/10 at
www.mrc.ac.uk/sevenages

Going global

We use our experience, expertise and resources to encourage partnership working in the international community to tackle important and challenging research goals.

PARTNERSHIPS AND SHAPING THE AGENDA

The MRC is committed to developing strategic partnerships which enhance the global competitiveness of the UK knowledge and health base. We have created opportunities for UK researchers to address research questions of major international concern in collaboration with the best researchers overseas. By developing links with overseas partner agencies we have influenced the international research agenda to ensure that the UK is well-placed to contribute to and benefit the European and global research landscape.

The MRC represents the UK on the governing bodies of a number of **international organisations** including the European Molecular Biology Conference (EMBC), the European Molecular Biology Laboratory (EMBL), the International Agency for Research on Cancer (IARC) and the Human Frontier Science Program (HFSP). These subscriptions promote the interaction and movement of researchers and provide infrastructure and mechanisms to support international collaboration.

Like all of the UK's research councils, the MRC recognises the importance of promoting and providing opportunities for UK links with **major and emerging global economies**. As well as a long-standing office in Brussels, Research Councils UK (RCUK) – the strategic partnership of all seven research councils – now has representative offices in Washington, New Delhi and Beijing which help the MRC to pursue its strategic aims abroad.

In April 2009, the MRC and Singapore's Agency for Science, Technology and Research (A*STAR) launched a £2.0 million (SG\$5m) joint call in **infectious diseases**. This resulted from a discussion in 2008, jointly hosted by the UK Science Minister and the chair of A*STAR, which identified opportunities for developing a coordinated strategic approach to stimulating closer collaboration in infectious disease research between Singapore, the UK and south-east Asia. In November, a specially convened panel of experts comprising MRC board members, A*STAR members and additional experts made six awards in areas such as tuberculosis, HIV, hepatitis and various bacterial infections. Each project is led by one principal investigator in the UK and one in Singapore, representing a mutually beneficial partnership. The initiative has set a vital precedent by successfully managing a joint call for proposals with a major player in the fast-growing Asian research community.

The MRC and the **Canadian Institutes of Health Research (CIHR)** agreed a joint initiative to exploit opportunities for collaboration between the two countries' research communities to counter the growing problem of antibiotic resistance. Resistance to antibiotics has major world health implications and working with another major funding body will maximise the existing investments of both countries. In phase I, two strategy development grants were awarded in July 2009 to underpin a second round of consortium funding in early 2011. The MRC and CIHR will contribute up to £2.0m each to support the successful research consortiums.

In the MRC's Strategic Plan, we set out the vital importance of collaborating with overseas partners in areas of cutting-edge scientific discovery such as stem cell research. As MRC chief executive Sir Leszek Borysiewicz has chaired the International Stem Cell Forum, which in 2009 convened in Beijing for its annual meeting and symposium. Following this visit, and in recognition of the importance of working with Asian economies in areas of mutual scientific interest, the MRC is investigating opportunities to pursue stem cell collaborations between UK and Chinese partners (see also CURE, page 30). Our plans for collaboration with China on stem cell research follow a very successful call for proposals with the Californian Institute for Regenerative Medicine (see box).

The MRC provides the National Contact Point service for academics participating in the Health theme in the European Union's **Framework Programme Seven (FP7)**. We took part in 10 regional or university-based events in 2009 to promote the calls launched in July. These visits not only provide opportunities to promote and provide information on existing calls for proposals, but also offer a vital link for us to consult on topics for future FP7 Health calls. We influence call content through our role leading the UK delegation on the FP7 Health Programme Management Committee, and used input from numerous stakeholders throughout the year to comment on the calls now in development for launch in summer 2010. By November 2009 the UK had received €208.0m (£175m) of funding from the FP7 Health theme, which represented approximately 17 per cent of the total available.

Collaboration with the US on stem cell therapies

The MRC and the Californian Institute of Regenerative Medicine (CIRM) have launched a new joint call to support collaborative projects capable of addressing issues of production and regulatory approval, to progress preclinical stem cell research into clinical testing. The MRC provided £4.7m to two UK–US collaborations.

The first project, led by Professor Pete Coffey at the UCL Institute of Ophthalmology and Professor Mark Humayun at the University of Southern California, concerns age-related macular degeneration, a leading cause of blindness among the elderly. They aim to use stem cells to offer an opportunity for more successful results based on a single surgical treatment, as well as a mechanism for preserving an individual's eyesight.

The second project, for acute myeloid leukaemia, will be led by Professor Paresch Vyas at the University of Oxford and Professor Irving Weissman at Stanford University. Current evidence suggests that cancer stem cells propagate the disease so the aim of this project will be to develop an antibody-mediated therapy against this cell type.

As well as considering the content of FP7 Health work programmes each year, we are closely involved in discussions about future Framework Programmes. FP7 will end in 2013 and its replacement must be well-positioned to meet the needs of excellent European researchers and enhance Europe's global competitiveness. This year we participated in discussions with the UK Department for Business, Innovation and Skills (BIS) about the future of health research in Framework Programmes, and we work with our research council colleagues through the Research Councils European Union group (RCEU) to develop joint positions on issues affecting the development of the European research base, such as infrastructure funding and promoting the mobility of European researchers.

A major emerging instrument for facilitating European research collaborations is **Joint Programming** – a concept proposed by the European Commission to enable Member States to align their national programmes to address societal challenges. The first Joint Programme to be established is in Neurodegeneration, and will focus in particular on Alzheimer's disease. The MRC has taken a leading role in the development of this programme and will be working with its European counterpart agencies to prepare a Strategic Research Agenda.

In parallel to the Joint Programming initiative, the MRC, the CIHR and the German Centre for Neurodegenerative Diseases (DZNE) are forging links between national centres of excellence in neurodegeneration research. 'Clustering' such **centres of excellence** offers stronger possibilities to enhance interdisciplinary approaches, provide access to cutting-edge technologies and accelerate progress through sharing methodologies, and attract new expertise from outside the field.

Links between industry and academia are as important to Europe's global competitiveness as they are at the UK level. One way in which the MRC encourages development of these links is through our role as National Contact Point and Member State Representative for the **Innovative Medicines Initiative (IMI)**, a funding partnership between the European Commission and the European Federation of Pharmaceutical Industries and Associations. The aim of IMI is to build up the capacity of the European pharmaceuticals sector by encouraging pre-competitive phase, cross-sectoral collaboration to address safety, efficacy, knowledge management and training issues that delay the process for bringing medicines to the market place. Results of the first call are due for publication shortly. Our experiences in the first and second calls are being used to provide input for the development of the programme to ensure that it runs in an efficient way that brings maximum benefits to industry and academic participants.

The MRC aims to develop strategic alliances with other major European national funding agencies, and a major mechanism for the development of these links is the **European Heads of Research Councils (EuroHORCS)** partnership. Sir Leszek has been a vice president of EuroHORCS, a role performed on behalf of all the UK's research councils. The MRC leads on two activity strands for EuroHORCS. We are using knowledge gained through MRC e-Val, our programme to evaluate the impacts of MRC research, to assist other EuroHORCS members in measuring the impact of their research. We have also taken on a role to enhance public-private sector interactions at a European level, taking this forward through the EuroHORCS Intellectual Property Rights Task Force, also chaired by Sir Leszek and which advises EuroHORCS members on management of IPR, particularly when undertaking European collaborative work.

We have been working with the European Medical Research Councils (a standing committee of the European Science Foundation) to roll out the UK's **Health Research Classification System (HRSC)** more widely across Europe. A number of countries had already expressed interest in adopting the scheme for their own classification and the intention is to ensure that all countries adopt the same methodology so that future analysis of European health research can be carried out using common classification criteria.

The MRC has contributed to an arrangement between Health and Social Care, Northern Ireland, Ireland's Health Research Board and the National Institutes of Health in the US. Two projects – one on cystic fibrosis and one on diabetic nephritis – have been successfully reviewed by NIH and received funding. The MRC is supporting the Northern Ireland-based parts of these projects, which involve collaborators from both parts of Ireland as well as the US.

GLOBAL HEALTH

The MRC has a commitment to support global health research that addresses inequalities in health that arise particularly in developing countries. This year we continued to develop existing strengths and investments, and launched several new initiatives which will diversify and complement our global health portfolio.

Working in partnership

In our Strategic Plan for 2009-2014, the MRC set out plans to develop a global alliance to identify opportunities for research leading to affordable strategies for the prevention and treatment of non-communicable diseases in low and middle income settings. In June 2009, six of the world's health research agencies, including the MRC, who collectively manage an estimated 80 per cent of all public health research funding, announced the formation of a landmark **Global Alliance for Chronic Diseases** (GACD). The alliance will collaborate in the critical battle against chronic non-communicable diseases: cardiovascular diseases, cancers where lifestyle is a risk factor, chronic respiratory conditions and type 2 diabetes.

At the GACD's first scientific meeting in November in New Delhi, India, experts from a range of disciplines and locations discussed the current state of the research area and where future global research priorities might lie. Lowering hypertension and reducing tobacco use and indoor air pollution were chosen as initial priorities. Future work will include obesity, diabetes and cardiovascular disease, as well as a programme to identify the world's 'Grand Challenges in Mental Health'. The MRC's first activity under the GACD will be to fund work jointly with the **Indian Council for Medical Research** (ICMR). A framework has been developed for joint UK-India research activities with a view to developing a joint call for proposals.

Developing the African research base

The MRC has a long history of supporting research to prevent and treat **HIV and AIDS** in developing countries. Conducting large-scale interventions trials is a vital component in ensuring that the results of our investment can be translated into practice and have an impact on health in low income settings. Work of this nature is expensive and there remains much uncertainty around which prevention and treatment methodologies are likely to yield the most effective results. In December 2009 we held a workshop to identify priority areas for funding to ensure delivery of health improvements. The resulting recommendations will provide strategic direction for future MRC applicants and members of MRC decision-making panels.

In March 2010 we launched a new scheme to support **African research leaders**. The aim is to strengthen research leadership and capacity across sub-Saharan Africa through a highly prestigious award jointly funded by the MRC and the UK's Department for International Development (DfID) for non-clinical and clinical researchers of exceptional ability.

This year the MRC unit in **The Gambia** outlined its plans for the next five years, focusing its science on three new themed areas: child survival, disease control and elimination, and vaccines. The plan has been put together in the context of the MRC's overall global health strategy, recognising that research across the world is changing due to large investments in science and innovation in developing economies. New health research centres in West Africa have been established, along with new funding opportunities from organisations such as the Global Health Fund and the Gates Foundation.

Clinical trials

The future organisation of MRC (UK) The Gambia will be built around a core set of well-funded strategic resources, capabilities and infrastructure, and a set of independently-led science programmes which will be largely externally funded. The unit's new strategy and new way of operating will ensure that it continues to play to its strengths and provide a unique contribution to medical research in the sub-region. Implementation of the plan will change how and where the MRC spreads its investments and activities across the West African sub-region in the coming years. It is expected that the same level of investment in global health research will be retained.

The **European and Developing Countries Clinical Trials Partnership** (EDCTP) is a €400.0m (£350.0m) joint programme initiated in 2003 between 18 European countries and most countries in sub-Saharan Africa, aiming to accelerate the development of new treatments for HIV, tuberculosis and malaria, largely through phase II and III clinical trials. A key objective is to strengthen African research capacity and networking in these areas. To date, the MRC and DfID have contributed just over £20.0m co-funding to support research, capacity building and networking activities. In the last year this has resulted in the co-funding of nine major projects, with a further 11 under consideration.

EDCTP partners are in the process of developing plans for a second phase of EDCTP, and during 2009 the MRC has consulted widely with the scientific community and other stakeholders to help shape the new direction of EDCTP. It is currently anticipated that the European Commission will consider proposals for the next phase of EDCTP within a year.

Outside EDCTP, the MRC is working closely with **DfID and other partners such as the Wellcome Trust** to support clinical trials to address significant global health needs. Three examples are the DART, Jinja and MDP 301 trials:

Development of Anti-Retroviral Therapy in Africa (DART) trial

The Development of Anti-Retroviral Therapy in Africa (DART) clinical trial, the largest ever trial of anti-retroviral therapy (ART) for people with HIV infection in Africa, found that regular laboratory tests to monitor the effects of ART offered little additional benefit to populations when compared to careful clinical monitoring. The results suggest that many more people with HIV could be treated for the same amount of money currently spent if lab tests were not routinely used. DART was sponsored and funded by the MRC, with further funding from DfID and the Rockefeller Foundation. Organisations in the UK and Africa partnered to coordinate the trial, sharing vision, expertise and resources. DART built up research capacity in Africa and many of the African researchers are now considered experts in this area. The paper in which the DART researchers published their findings was voted second out of eight nominations for *The Lancet's* paper of the year award in 2009. The competition celebrates research in any journal that will effectively inform research, clinical practice and health policy.

Jinja trial

A study of HIV patients in south-west Uganda found that lay workers trained to deliver ART to people in their own homes were as effective as healthcare workers based in clinics. The Jinja trial, funded by the MRC, DfID and the US Centres for Disease Control and Prevention, followed 1,453 people with HIV over four years. Delivery of ART through the home-based care model was no more expensive than centralised clinic-based delivery and the cost to patients was considerably less. The findings could have major implications for reducing the devastating effect of the epidemic in resource-poor settings such as sub-Saharan Africa.

Microbicides Development Programme (MDP)

The largest international clinical trial to date into a preventive HIV gel found no evidence that the vaginal microbicide PRO 2000 reduces the risk of HIV infection in women. This placebo-controlled trial involved 9,385 women at six research centres in four African countries and found that the risk of HIV infection in women who were supplied with PRO 2000 gel was not significantly different than in women supplied with placebo gel. The results have shown the importance of undertaking trials which are large enough to provide definitive evidence and will enable us to focus our efforts on other potential solutions. The trial, known as MDP 301, was carried out by the Microbicides Development Programme (MDP), a not-for-profit partnership of 16 African and European research institutions. It was funded by DfID in partnership with the MRC.



Small, clear plastic bag with a white label. The label contains faint, illegible text, possibly a date or a small number.

4

Supporting scientists

CASE STUDY

Predicting Alzheimer's disease

Part of the MRC's support for scientists includes training future research leaders across a range of biomedical, clinical and health disciplines. At any one time, the MRC supports around 1,650 PhD students and 200 postdoctoral fellows. MRC Senior Fellow Professor Nick Fox has used techniques he developed for measuring brain cell loss to predict whether people with mild cognitive impairment will go on to develop Alzheimer's disease. Using a series of Magnetic Resonance Images of patients created over time, Nick and his team at the Institute Of Neurology at University College London have shown that rates of brain loss correlated with clinical decline in these patients. People with higher rates of loss were shown to be more likely to suffer a decline in cognitive ability and to be diagnosed with Alzheimer's disease over the following year or two. The technique is now also being used to monitor the progression of brain loss in trials of potential treatments. Nick explains: "Healthy brains are very different from each other in terms of size and shape. However, increased losses over time appear to be a diagnostic marker of the onset and evolution of a neurodegenerative process such as Alzheimer's disease. The key to sensitive detection of these losses is to match each person's serial scans precisely. We hope that these techniques may help in the search for therapies which slow the disease's progression. Ultimately we'll need markers that can diagnose Alzheimer's as early as possible so that we can treat the disease in its earliest stages."

Read about more MRC research highlights from 2009/10 at
www.mrc.ac.uk/sevenages

Supporting scientists

The MRC aims to strengthen the UK research base to enable the scientific community to respond effectively to current and future challenges in medical research. We help to maintain the UK's excellent infrastructure for scientific research, providing resources to train the next generation of medical researchers, support new and developing areas of research, and build research environments across the country that encourage innovation and deliver world-class science.

CAPACITY

The MRC has a leading national role in training future research leaders across a range of basic science and clinical disciplines.

The MRC's investment in research training and careers follows three principles:

- Train and develop the next generation of research leaders.
- Support excellent individuals at critical points of their careers.
- Help address national strategic research skills needs identified with partners.

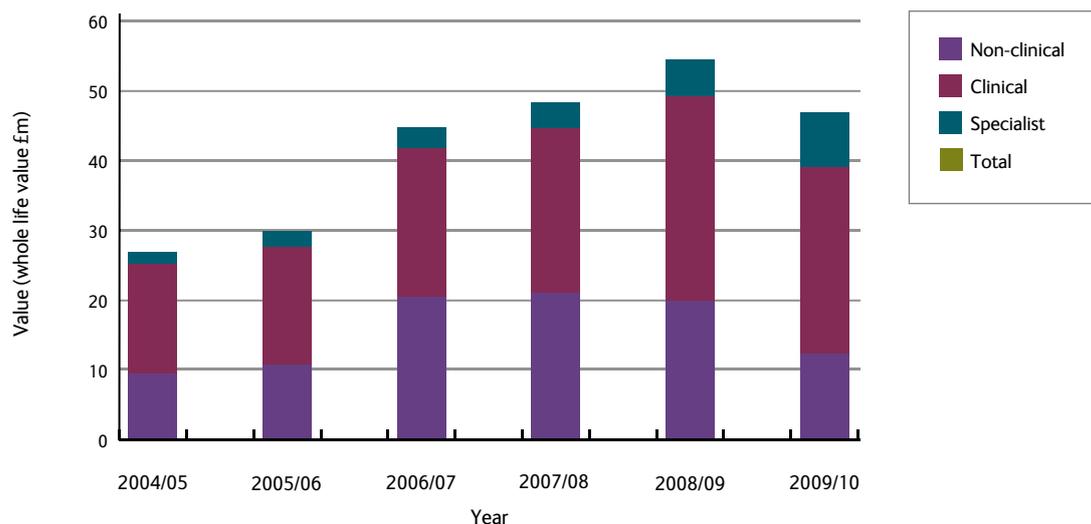
MRC studentship and fellowship awards are targeted to outstanding individuals undertaking challenging projects in excellent research and training environments. The MRC works with its partners to provide targeted programmes supporting the needs of researchers at critical stages of their careers. Around 426 fellowship applications had a final decision made during 2009/10 and 103 awards were made, committing around £47.0 million. Table 5 shows a summary of the targeted calls for training proposals in 2009/10. Figure 9 shows the increase in the MRC's commitment for fellowships since 2004/05. Following a peak in 2008/09, a steady level of funding has now been reached.

Table 5: Outcome of targeted calls for training proposals

Fellowship type	Number of applications	Number of awards	Amount awarded (whole life value) (£m)
Biomedical/Non-Clinical			
Career Development Awards	99	10	9.2
Senior Non-Clinical Fellowships	23	3	5.1
Clinical			
Clinical Research Training Fellowships	211	51	10.6
Clinician Scientist Fellowships	50	10	8.4
Senior Clinical Fellowships	16	3	4.4
Strategic Skills & Capacity Development			
Clinical Pharmacology and Pathology Fellowship Programmes	10 ⁽¹⁾	2	3.5
Population Health Scientist Fellowship	29	10	3.4
Methodology Research Fellowships	12	4	1.5
Biostatistics Fellowships	5	2	0.5
Biomedical Informatics Fellowships	19	4	1.2
Health Economics Fellowship (co-funded with ESRC and NIHR)	11	5	0.9
Total	485	104	£48.7

⁽¹⁾ Including outline and full proposals

Figure 9: New fellowship commitment by financial year



Innovating in clinical research training

In 2009, to help coordinate our investment in human capital, the five partners in the Office for Strategic Coordination of Health Research (OSCHR), working with seven other funders, put together a UK-wide survey of health research fellowships funded by the 12 organisations. Coordinated by the MRC, the survey is a valuable evidence base that has been made available online to a wide audience. The survey shows that **academic clinical training paths** have been significantly strengthened in recent times, with new funding to provide many clinicians with opportunities to experience and develop research skills during medical specialty training. It shows that the MRC now funds some 30 per cent of all research-intensive training fellowships in England and that the many organisations with a stake in clinical training still have important work to do to promote and sustain clinical academic careers.

The MRC will work with selected medical schools during 2010/11 to develop a programme to enhance **clinical PhD training**. One focus will be on better enabling outstanding clinical PhD graduates to sustain their development as researchers while balancing the pressures that their clinical training commitments bring.

Outstanding training environments

Maintaining a cadre of highly skilled biomedical researchers underpins the UK's leading role in health and biomedical research. Over the last six years, the MRC's investment in basic **PhD studentships** has risen significantly such that in December 2009 the MRC was funding more than 1,500 PhD studentships. Most were located within the MRC's units, institutes and centres, but more than a third were awarded directly to our higher education institution partners, 40 per cent of which were funded through block Doctoral Training Grants (DTG).

When the DTG scheme was introduced in 2004, it was allocated to research organisations automatically, according to the scale of their grant funding. Following a review of the DTG scheme in 2008, research organisations whose grant funding was high enough to warrant three or more studentships continued to receive DTG proportional to their overall MRC funding. But those that historically had received lower levels of DTG funds were invited to compete for a more substantial allocation. To deliver better support for research and training excellence, eight organisations received three studentships each, instead of more organisations receiving funds for just one or two.

To further align MRC and research organisation priorities in PhD training, and improve reporting and evaluation of the MRC's investment in studentships, we will pilot up to five MRC-Research Organisation Studentship Portfolio Agreements during 2010. Each portfolio will encompass not just block DTG allocations, but also Industrial CASE studentships (see page 25), MRC centre grants and other MRC studentships.

Throughout 2009/10 we met MRC fellows and students in a range of research organisations to gain insight into how we could most effectively improve communication and connectivity with MRC-funded trainees. Informed by this feedback, we held the first annual MRC Fellows' Symposium and Dinner in March 2010, where senior fellows were given the opportunity to meet, question and network with senior MRC staff, including the chief executive and members of the MRC's Council, boards and panels. The event was highly successful and we will build on it in 2010/11, introducing a variety of communication tools to support interaction with our students and early career postdoctoral scientists as well.

USE OF POPULATION-BASED DATA

Data are at the centre of the MRC's ability to improve the understanding of human health. To maximise the exploitation of MRC datasets, it is important that we display leadership in the development of informatics and infrastructure that enables the effective use and analysis of data.

The UK has a unique and internationally renowned collection of **birth cohort studies** spanning more than 60 years, including several funded by the MRC. In 2008/09, the MRC and the Economic and Social Research Council began an initiative to establish a new '2012 birth cohort' and resources to enhance research across the existing cohorts and counterparts in other countries. A scientific leadership team for the new cohort has now been put in place and full funding for the study has been requested from the Government's Large Facilities Capital Fund.

UK Biobank

By the end of March 2010, 448,000 people aged 40 to 69 from across the UK had been recruited to UK Biobank, the largest ever resource for the study of genetic and environmental causes of disease. Blood and urine samples, a health questionnaire and measurements including height, weight and blood pressure have been taken from each participant to build a research resource to improve the future prevention, diagnosis and treatment of a range of serious and life-threatening illnesses, including cancer, heart disease and some forms of dementia.

This year, a number of enhancements were funded by the MRC, Wellcome Trust, the Department of Health and, for the first time, the British Heart Foundation. The MRC's contribution was £1.8m. The extension will enable the collection of more detailed eye measurements from the participants as well as further information on other lifestyle factors such as diet and fitness.

Recent infrastructure developments by the UK Health Departments will soon allow unprecedented access to a range of **clinical and health-related data sources** for research purposes, while taking account of strict information governance requirements that respect patient confidentiality. The MRC is working with other major UK research funders to realise the research opportunities offered by these initiatives and to build on the UK's strengths in data linkage and health informatics.

A Strategic Coordination Group of research councils, major charities, UK Health Departments and industry has developed a Strategic Framework for Health Informatics in Support of Research. In order to inform implementation of the framework, the MRC is leading a review to examine the current capability in **e-health**-related research in the UK to assess the requirements for creating a sustainable research base in the future. The funders will use outcomes from this assessment to develop short and longer term actions aimed at supporting health informatics research capacity and funding in the UK.

Launched in March 2009, the MRC's **Data Support Service** project aims to enable population health scientists to make the best possible use of MRC datasets for valuable new research through collaborations and easier access to research data. This two-year development phase of the service is being led by the Science and Technology Facilities Council (STFC), supported by a team from University College London (UCL) and another from the University of Oxford. The project team is working closely with scientists and data managers from five MRC longitudinal cohort studies.

During 2009/10, the UCL team began to document how researchers from each study work with complex datasets – in particular how they **share data** with external scientists. Over the next year, the team will help the cohort study researchers develop their strategies for sharing and preservation. The work will cover governance processes, informatics and data management, data security and research ethics.

With STFC, the Oxford team is developing a prototype web-based gateway to a searchable directory of MRC-funded population studies and good practice resources. Work to understand how potential new users make use of such a directory to search for studies of particular but diverse interests will inform its design principles. The project will also provide important information on the more immediate benefits and costs of supporting data sharing and preservation. The team will also survey relevant developments in cohort-based research, informatics, e-science and e-health. These outputs will inform the MRC's strategy for research based on 'big data' and the development of the Data Support Service.

RESEARCH ENVIRONMENT

We support top research centres and technology facilities to accelerate progress in research and to attract and retain world-leading scientists in the UK. Working across disciplines is key to achieving the best results with new and emerging technologies.

The new **Research Complex at Harwell (RCaH)** opened at the beginning of 2010. Managed by the MRC on behalf of its stakeholders – the Biotechnology and Biological Sciences Research Council (BBSRC), the Engineering and Physical Sciences Research Council (EPSRC), the Natural Environment Research Council (NERC), the Science and Technology Facilities Council (STFC) and Diamond Light Source Ltd – the complex is located near to cutting-edge technologies at the Diamond synchrotron, ISIS neutron source and Central Laser Facility. RCaH provides laboratories for scientists in the life and physical sciences to undertake research across the disciplines and encourages synergy between areas of UK excellence. The facilities are particularly valuable for determining the detailed structure of biological machinery, providing important insights into how they function and opportunities for the development of new therapeutics through structure-based drug design.

The MRC supports a strong structural studies portfolio with an additional 11 grants awarded in 2009/10, totalling £10.0m and a significant portfolio supported through the Laboratory of Molecular Biology and the National Institute for Medical Research. Of the £10.0m investment in structural biology in 2009/10, £6.8m will fund projects based at RCaH.

At the world-renowned **MRC Laboratory of Molecular Biology (LMB)** in Cambridge, work began on site in April 2009 on a £212.0m project to construct a new state-of-the-art laboratory. The renewal project involves the construction of a replacement building to provide up to date, internationally competitive facilities for the LMB. In 2008/09, Government approved the budget for the new building, including £67.0m from the Large Facilities Capital Fund. The University of Cambridge will contribute at least £7.5m in return for lease of space to accommodate University researchers, and the remainder will be provided by the MRC, including capital generated as a result of the commercialisation of discoveries made at LMB. Work on the construction is planned for completion in January 2012.

LMB construction site, March 2010.



Construction work started on the new '**L Block**' at the **MRC Clinical Science Centre** in London in September 2009, a collaboration with Imperial College London in which the MRC is investing £11.0m in return for space in the building. Completion is planned for July 2011 and the facility should be in use by December 2011.

In 2007 the MRC, Cancer Research UK, the Wellcome Trust and University College London (UCL) formed a consortium to set up a new joint research institute in central London: the **UK Centre for Medical Research and Innovation** (UKCMRI). Its aim is to discover and develop a new understanding of, and treatments for, the illnesses which affect all families, such as cancer, heart disease, stroke and influenza. UKCMRI will be constructed on 3.6 acres of land, to the north of the British Library in the St Pancras and Somers Town area of north London. In 2009/10, an outline business case received approval from HM Treasury's Major Projects Review Group.

A new management structure for the programme was agreed by the Steering Group, including the creation of a 'designate' executive team to better aid the decision-making process. During the year, a further £4.5m was spent by the MRC on the project, bringing the total capital spend (including land) to £57.0m at 31 March 2010. A planning application is scheduled to be submitted in 2010 and construction work is planned to start in early 2011/12.

Entrance atrium, view from Eurostar Terminal, Midland Road



Photography: Justin Piperger / Rendering: Wadsworth3d

The entrance atrium looking east



Rendering: Wadsworth3d

MRC University Unit – a new research model

The University of Oxford and the MRC have entered a Strategic Alliance to support the further development of the Weatherall Institute for Molecular Medicine (WIMM) as an internationally competitive institute of translational medicine over the next decade.

This new alliance aims to enhance the status of the WIMM and better align its strategic position to the MRC, the university, the NHS and UK science. A stronger MRC-linked identity for the WIMM will be created and the MRC will invest £10.0m to enhance translational programmes and new fellowships. As part of the newly integrated institute, two MRC units – the MRC Human Immunology Unit and the MRC Molecular Haematology Unit – will from April 2010 be transferred to Oxford University administration, creating two MRC ‘university units’ within the WIMM.

This ‘university unit’ concept will provide new funding avenues for the scientific community and the MRC where there are opportunities for unit-level investment in HEIs, in partnerships over 10 to 15 years with significant investment from both sides. Future university units might evolve from MRC units or centres, or be specially created.

Some key principles underlying the university unit concept are:

- Unit directors retain direct responsibility for the scientific vision and operational management of their units.
- Appointment to the positions of unit directors will be via joint MRC-HEI panels but directors and staff will be university employees.
- The same five-yearly review mechanism will apply to university units as for MRC units to assess scientific excellence, strategic need for such a large investment and value for money.

Resources for scientists

Advances in DNA sequencing technologies offer huge opportunities to further our understanding of how the genome specifies all the different cell types and their function, for individuals and in populations, in both health and disease. In 2009/10 the MRC built on its earlier investments in **high-throughput sequencing** in Scotland, the North of England and the East of England by funding a fourth centre of excellence in Oxford, taking total investment to £9.1m.

The large and complex data sets that emerge from these kinds of sequencing programmes pose substantial challenges for data analysis and data interpretation. To sustain the UK’s international leadership in genetics and genomics and to maximise the potential from this cutting-edge technology, the MRC invested £2.5m to increase training and capacity in computational genomics. The MRC and BBSRC have also each set aside funds to support networking between our investments in these areas.

The MRC is leading the implementation of a strategy to establish a national network of brain banks on behalf of the UK Clinical Research Collaboration and in June 2009 the MRC appointed Professor James Ironside as director of the new **UK Brain Bank Network**. The availability of post mortem brain tissue is an essential resource for research aimed at improving our understanding of the processes by which neurodegenerative disorders develop and progress.

The UK Brain Banking Network will coordinate the provision of brain tissue and help tackle the shortage of samples available for research into Alzheimer’s disease, Parkinson’s disease, schizophrenia, autism and other conditions affecting the brain. It will streamline and strengthen ‘gold standards’ for many aspects of brain banking, such as donation, access and availability, protocols and procedures. The MRC has also launched a call for proposals to establish a bank for control samples to support the network’s aim to increase the availability of both healthy and diseased brain tissue for research. Initially the network will connect MRC-funded brain banks; later the plan is for it to expand to include important brain banks supported by charity funding.

M-Pl 10x/23

A close-up, shallow depth-of-field photograph of several camera lenses. The lenses are dark, likely black or dark grey, and are arranged in a row, slightly overlapping. The background is a soft, out-of-focus blue and grey gradient. The lighting is dramatic, highlighting the textures and reflections on the lens elements.

5

**Efficiency and
effectiveness**

Efficiency and effectiveness

In the pursuit of our strategic aims, the MRC relies on the services and support of its staff. The year ahead holds many challenges, not least the move of MRC Head Office to two new sites. High quality people and systems mean we are well-placed to manage these challenges while maintaining the support our scientific staff and grantholders require.

EFFICIENCY GAINS

Included below are the MRC's plans for efficiency savings. The research councils collectively have been set targets for savings and the MRC is committed to working with Research Councils UK (RCUK) to determine and deliver its share of the total efficiency savings. In its Delivery Plan, RCUK has included plans to run a new cross-council efficiency delivery programme to collectively deliver at least 3 per cent cashable savings per annum on programme expenditure and at least 3 per cent cashable savings per annum on administration expenditure.

This year the MRC delivered efficiency savings worth £44.6 million against a target of £44.3m. We did this by reducing the proportion that we spend on administration, reprioritising programme spend, through more co-funding of research with industrial and other partners, and by increasing efficiency within MRC research units and institutes. The value of savings delivered through different strategies was:

- Reprioritisation of funded programmes generated savings of £12.3m.
- Proportional reduction of administration costs led to savings of £1.0m.
- Increased efficiency of our sponsored institutes, including procurement, generated savings of £14.8m.
- Increases in joint-funding and partnerships, generated savings of £16.5m.

Efficiency Gains

Forecast gains across the 2007 Comprehensive Spending Review (CSR) are detailed in the table below:

	2008/09	2009/10	2010/11
	Actuals	Actuals	Target
Reducing the proportion of Research Council Expenditure attributable to administration costs	1.8	1.0	0.5
Demonstrating Effective Reprioritisation of Programme spend	10.8	12.3	25.7
Increasing the Efficiency of Research Council Institutes	16.7	14.8	23.1
Growing the Level of Co-funding of Research	6.2	16.5	17.0
Growing the costs of research	-	-	6.2
Total Forecast Savings	35.5	44.6	72.5

The target for 2010/11 is in addition to those announced by the Government as part of public sector spending reductions in May 2010. Across the Research Councils this amounted to £10.9m with MRC's share being £4.0m. The MRC will meet this by freezing pay for 2010/11 (£1.5m) and reducing Head Office and Corporate Services budgets (£2.5m).

RCUK SHARED SERVICES CENTRE LTD

The seven research councils, working together as RCUK, have now established a Shared Services Centre (SSC), RCUK SSC Ltd, based in Swindon. The research councils have set up the SSC with the aim of reducing spending through sharing and standardising processes, including more efficient procurement.

During the year, the MRC successfully transferred its grants, HR, finance and procurement operations using the current SAP platform to the new company, which is now running the full range of frontline services for the

MRC, as well as driving strategic procurement activity. As well as the MRC's transition, significant milestones achieved across RCUK include implementing the new HR systems for four research councils, and transitioning to the finance system for the Economic and Social Research Council, the Engineering and Physical Sciences Research Council and SSC Ltd itself.

Transition for the MRC to the new cross-research council Oracle platform is planned during 2010/11, as well as the move to the cross-research council grants application process (Je-S) and new back-office processes which commences in the autumn.

The cross-research council strategic procurement service has been focusing on delivering savings through strategic sourcing, improved supplier management and driving supply chain efficiencies. During 2009/10 RCUK SSC Ltd reported confirmed savings for the MRC of £2.6m and has a target of £6.26m for 2010/11.

The research councils have agreed to share the costs of establishing RCUK SSC Ltd and the MRC's agreed share is 26.98 per cent. Those costs have been accounted for in the MRC's books as £8.4m for 2009/10; £2.7m (2008/09 £5.9m) as assets in the course of construction and £5.7m (2008/09 £5.3m) as expenses. The transition to the SSC is regarded as a business critical project and is referred to in our Statement on Internal Control.

HEAD OFFICE RELOCATION

The lease on the existing Head Office building at 20 Park Crescent expires at the end of 2010. The MRC had a business case approved by BIS to retain a smaller office in London for up to 90 staff, with the remaining 135 to 150 posts relocating to Swindon accommodation shared with the other research councils. A property in London has been identified from Government stock and lease negotiations are in progress for moves during 2010.

SUPPORTING PEOPLE

Continued progress in improving human health depends on creating and maintaining a diverse community of scientists and support staff able to respond effectively to new scientific opportunities and health needs. We employ more than 4,000 staff in our units and institutes in the UK and in Africa. Our training and capacity-building programmes provide fundamental research training and aim to increase the number of scientists in key and evolving disciplines.

MRC HR activities during 2009/10 included:

- Joint working on the RCUK SSC project. Work continues to ensure the MRC receives appropriate communication and change activities to support a successful completion to the project.
- The launch of a further 14 new and revised HR policies: developed through a robust consultation process, these policies form part of the MRC's continued commitment to ensure policies are compliant with current employment legislation and fully aligned with business needs.
- The development and successful implementation of a new appraisal process for Unit Directors.
- Improved efficiency in personal development reviews.
- Continuing work on reviewing the reward and remuneration systems, working closely with the trade union side and making significant progress.
- Significant work undertaken to develop, consult, and implement a new MRC expenses policy.
- Launch of the Cycle to Work scheme.

In addition, the introduction of changes to Points Based Immigration posed a particular challenge over the past 12 months for the MRC, which hosts a range of visiting scientists and students at its units and institutes. With help from staff at the Shared Services Centre and officers from the Immigration Service, the team has developed procedures which comply with the new legal framework.

During the year a number of projects to better understand, develop and improve on current practices for selecting and recruiting staff to join the MRC have been undertaken. A key example of this is the MRC's new Recruitment and Selection Policy which provides clear guidance on the approach and support recruiting managers can receive to aid in the selection of first-rate people.

Although our reward and remuneration systems are currently under review, the MRC offers a wide range of benefits including entry to an excellent pension scheme, family-friendly policies and other employee initiatives such as the Cycle to Work scheme.

Equality and diversity

Awareness-raising

Equality and Diversity Awareness provision at the MRC was formally reviewed during the year and, as a consequence, a new programme of face-to-face learning was launched in April 2009, followed in November by the launch of an updated Bullying and Harassment Awareness training programme. The sessions were well attended and received good feedback.

The provision of Equality and Diversity training within the MRC will continue to be developed in 2010 with the provision of e-learning under consideration as a useful means of rapid dissemination of learning.

Women in science

The MRC relaunched its Women in Science Network during the year, which has the aim of keeping all those interested in the issue throughout the MRC in contact with each other. This included a successful seminar on Women in Science best practice which was held at the MRC in November 2009, jointly run with the Biotechnology and Biological Sciences Research Council and UK Resource Centre for Women in Science, Engineering and Technology (UKRC), and attended by delegates from the research councils, RCUK and higher education institutes. Topics included returning to work after career breaks and coaching and mentoring schemes. Successful and well-attended Women in Science events were also held during the year in the Cambridge and Oxford regions.

The Athena/Swan Charter is a well respected benchmark established by the UKRC. It signifies that an organisation has good employment practice with regard to women in science. It would represent a robust and proactive way of implementing best practice across the MRC, so the MRC has engaged in discussion with the organisers about allowing entry into the scheme, which is currently reserved for higher education institutes only.

Equality Act

The Equality Act became law in 2010, and the MRC has been preparing for its impact. It is due to impose a new 'Equality Duty' on public bodies, replacing the current race, disability and gender duties. The new duty will cover not only those three areas, but also gender reassignment, age, sexual orientation, religion and belief. The duty is likely to have impact in terms of requiring an evidence-based approach to all the equality areas. Employer engagement on issues such as the impact of religion or sexual orientation will no longer be optional or just a question of 'good practice', but will require a more strategic and systematic approach. The Act also has implications in terms of procurement and positive action.

Equality Schemes Report and Review of Disability Equality Scheme

As required by legislation, progress reports of the MRC's Equality Schemes have been produced. The MRC's Disability Equality Scheme has been reviewed and the 2010 Scheme has been published on the MRC website.

Equal Pay Audit

An Equal Pay Audit was carried out by an external pay specialist in spring 2009. This was in line with the Gender Equality Duty, and the project was run in conjunction with the MRC trade unions. The audit concluded that there were no widespread pay inequalities in the MRC on the grounds of age, gender, race or disability.

Equality and Diversity, Bullying and Harassment Policies and Key Messages document

New Employee Equality and Diversity and Bullying and Harassment policies were drafted, agreed with the trade unions and implemented across the MRC. A Key Messages document was communicated to all staff through the MRC intranet.

Mediation project

Workplace mediation receives widespread support as an efficient and cost-effective way of resolving workplace disputes as they occur – with the intention of avoiding a formal process where appropriate. A joint trade union and Human Resources internal mediation project was prepared in 2009 and launched in early 2010, with the first Accredited Workplace Mediators appointed at the end of the year. Provided that the initial trial is successful, the project will be expanded across the MRC.

Table 6: MRC employees analysis⁽¹⁾ (for employees in post as at 31/03/09)

Gender	No of employees	%
Female	1,935	53.76
Male	1,664	46.24
Total	3,599	

Ethnic Group	No of Employees	%
BME ⁽²⁾	444	12.34
Non BME ⁽²⁾	2,747	76.33
Not Disclosed	347	9.64
Other Ethnic Group	61	1.69
Total	3,599	

Disability	No of Employees	%
No	3,559	98.89
Yes	40	1.11
Total	3,599	

⁽¹⁾ Does not include locally employed staff

⁽²⁾ (Black and minority ethnic) means groups 04 to 15 in MRC Equalities Monitoring Form

Table 7: Sickness absence 2009/10

Sickness absence 2009/10	
Total number of staff as at 31 March 2010	3,599
Total days lost of sickness	14,687
Average working days lost	4.08

POLICY AND BEST PRACTICE

Environmental policy

The MRC is committed to the continual improvement of our environmental performance. Sustainability issues are addressed in all projects relating to the new buildings currently under design or construction. For example, the new building for the MRC Laboratory of Molecular Biology has been designed with sustainability in mind, the building for the new UK Centre for Medical Research and Innovation will be designed to meet the BREEAM 'excellent' standard, and the Research Complex at Harwell employs an 'earth tube' solution to reduce energy demands and thus running costs.

During 2008/09 and 2009/10 the MRC participated in the Office of Government Commerce (OGC) benchmarking exercises for office buildings and is currently working with OGC, the Department for Business, Innovation and Skills and other parties to devise workable methodology for the benchmarking of laboratory buildings. The MRC will participate in new Government initiatives such as the Carbon Reduction Commitment (CRC) and the Sustainability of the Government Estate (SOGE). The MRC's environmental policy is currently being refreshed to bring it into line with these new sustainability challenges.

Each of the MRC's units and institutes is also required to have a local environmental policy and action plan. The main focus of initiatives has been to reduce utilities costs wherever possible and promote reduction of unnecessary or wasteful consumption.

Freedom of Information

The MRC managed 41 Freedom of Information requests during 2009/10; we responded to 93 per cent of these requests either within the deadline of 20 working days or within an agreed deadline with the requestor as defined by the Act. These requests, which last year came from a wide range of requesters, can help us develop the information we make available on our website and in publications.

Table 8: Freedom of information requests 2009/10 – type of request

Request	Number of requests
Contracts	3
Corporate strategy, policy and governance	20
Funding applications – subject access requests	0
Outputs	3
Personal information	1
Research funding	12
Research strategy, policy and governance	2
Total	41

Table 9: Freedom of information requests 2009/10 – requester

Request	Number of requests
Academic/HEI	1
Charities and Interest Groups	3
Media	17
Parliament	2
Private sector	3
Public	14
Public sector	0
Research council staff	1
Total	41

Health, safety and security

In line with the Government's policy on health and safety performance, we continue to strive for the MRC to be an exemplar of best practice. Our strategy for health, safety and security is based on business needs and takes a holistic view of health and safety management with annual priority objectives agreed by the MRC's Council.

The MRC's own research units and institutes remain competitively benchmarked in health and safety, personnel security and business continuity planning. The overall number of accidents reported for 2009 remained similar to the previous year. The calendar year 2009 saw total accident numbers of 170 compared to 162 for 2008. The rate calculated for RIDDOR reportable accidents and dangerous occurrences fell slightly to 0.83 per 1,000 employees (0.88 in 2008). This compared well to 1.19 per 1,000 employees for the research and development sector as a whole during 2008/09 (HSE statistics).

During 2009/10 we audited units on their management of sealed radioactive sources. There were no significant regulatory infringements reported. To help the MRC comply with the Government's Baseline Security Standard on pre-employment screening, we undertook to audit temporary and contract staff suppliers to Council. Thirty five agencies were interviewed regarding their background checks on the staff they provide and on their office and information security systems. Almost every agency was found wanting. The results of the audit were used to

inform future contract conditions specified by the SSC procurement team.

The MC40 cyclotron housed at Hammersmith Hospital has been successfully decommissioned. The project was brought in on time and within the £2.5m budget. Approximately 75 per cent of the activated material from the cyclotron vault and associated electronic equipment was either re-used or recycled.

Further recycling of radioactive material was achieved in December 2009 when a blood irradiator was decommissioned and its Cs137 source successfully transported to Germany.

The corporate Health and Safety team continue to contribute to international agreements on Biorisk and biosafety officer competence, as well as national strategy for high containment facilities.

Risk and audit management

As a non-departmental public body, the MRC is required to set a policy and framework for the management of risk and audit, so that the chief executive (also the Accounting Officer) can give assurance on the systems of internal control that support the achievement of the MRC's objectives. Building on improvements in recent years, we have continued our strong emphasis on risk management during 2009/10. Improvements introduced this year included the increasing use of risk data and reporting to aid decision making, improving the quality of risk information, the introduction of risk champions and workshops for staff focusing on how risks are identified and managed.

We have also been working to increase the value added by audit activities. During 2009/10 we created a three-year audit programme based on risk, and also developed a more effective system for following up audit recommendations.

Further detailed information relating to risk and audit management is in the Statement on Internal Control (page 74).

Information systems and security

Our successful partnership with Logica, who support the MRC's corporate IT needs, has now entered its sixth year with all service targets fully met or exceeded over the year.

One major development project undertaken and completed during the year on time and to budget was a system to automate the Medical Subject Heading Indexing system (MeSH) for all our supported science. This system will become fully operational once the new RCUK grants system has gone live.

We have continued our ongoing support of the development of the RCUK SSC Ltd Oracle systems, participating in data migration and developing appropriate interfaces.

There continues to be a great deal of activity in the area of information security, much of it Government-mandated. In addition to managing the IT side, which has ensured encryption for all portable devices, in 2009/10 the MRC focused on the 'people' and 'processes' elements. This has led to a number of initiatives, such as finalising a comprehensive set of policies; induction and refresher training for all employees; and enhanced communication with government, other research councils, units and employees. In all of these areas, we have worked closely with the other research councils to ensure a consistent approach.



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Management commentary

THE MRC IN 2009/10

The MRC's mission is to improve human health through world-class research.

In 2009 the MRC published a new strategic plan, *Research Changes Lives*, setting out the MRC's strategic aims and priorities up to 2014. To help us track the output and impact of MRC-funded research and monitor our progress in delivering the strategy, we also launched MRC e-Val. This is a powerful online survey tool which was used by 3,000 MRC scientists in 2009 to provide data and information on the outcomes of their work. It has provided us with a more complete picture of the new knowledge generated by the research we support and how this leads to the development of new treatments, diagnostic technologies, research tools and techniques, patents, and improvement in clinical guidance and public policy.

During 2009/10 we have been able to maintain our strong investment in fundamental science and consolidate our increased investment in research which helps translate scientific discoveries into new products and services and improved healthcare. The MRC continues to develop its relationship with the National Institute for Health Research, the devolved administrations and the Technology Strategy Board, coordinated through the Office for Strategic Coordination of Health Research (OSCHR). In this context, the MRC has taken the lead for OSCHR partners on a number of key areas in medical research, including stratified medicine, mental health, addiction and global health trials, ensuring a strategic approach is adopted across all funders.

The MRC has also continued to enjoy a strong relationship with the other research councils and our umbrella body, Research Councils UK (RCUK), and has contributed to a number of cross-council initiatives where multidisciplinary approaches are crucial to address significant challenges for our society. The MRC leads the cross-research council initiative in Lifelong Health and Wellbeing, pulling together the research interests of several research councils and the UK Health Departments in order to address the growing challenges and opportunities of an ageing population. The MRC has close ties with the academic sector and other funding bodies, exemplified by our partnership to build the UK Centre for Medical Research and Innovation in London, and by the partnership with the University of Oxford to create our first two University Units at the Weatherall Institute of Molecular Medicine in Oxford.

Structural changes to the MRC's boards and governance that were made in 2008/09 have been consolidated, and we have initiated the relocation of our Head Office to two new sites – smaller premises in London and a site in Swindon – in line with the Lyons Review recommendation. We have also transferred our grants, HR, finance and procurement operations from the MRC Shared Service Centre to the RCUK Shared Services Centre Ltd. Details on the efficiency savings associated with these changes can be found on page 50.

The MRC's Delivery Plan for 2008/09 to 2010/11 outlines investment plans and priorities for the Comprehensive Spending Review 2007 period in detail. The delivery plan reports progress against a scorecard and is reviewed each year to reflect changing priorities: the refreshed plan for 2010/11 was published on 1 April 2010. Additional information on the MRC's role in maintaining a healthy science and engineering base and in improving the exploitation of research is published in the Economic Impact Reporting Framework.

The Annual Report provides details of major awards reflecting the MRC's priorities for 2009/10, information on success rates and the value of awards made. Information on individual research programmes supported by the MRC can be found in our online Research Portfolio at www.mrc.ac.uk/researchportfolio. The MRC's Annual Review also provides information on the broader impact of MRC research. The 2009/10 review, *Seven Ages* offers an in-depth look at achievements in a number of key priority areas.

All of the publications mentioned here are available on the website at www.mrc.ac.uk

INFORMATION ASSURANCE

The MRC continues to monitor and assess information risk, and to enhance systems and processes and address any areas for improvement. During 2009/10, building on earlier work in the area of information assurance awareness, a programme of annual refresher training was developed for employees at MRC Head Office and the Shared Service Centre. The programme will be introduced over the coming year with the first round of training involving 400 staff.

Other measures taken in 2009/10 included the implementation of an Information Asset Register for Head Office, an audit of Information Security Management Systems across research units based on the ISO 27001 standard, and enhanced, regular communication with all stakeholders – all designed to foster a culture of Information Assurance within the organisation.

During 2009/10, there were no incidents of personal data loss that required notification to the Information Commissioner's Office (ICO). A summary of other protected personal data related incidents is shown in table 10 below.

The table also includes incidents deemed by the Data Controller not to fall within the criteria for report to the ICO but recorded centrally within the MRC. Small, localised incidents are not cited in these figures.

Table 10: Summary of other protected personal data related incidents in 2009/10

Category and nature of incident	Total
I. Loss of inadequately protected electronic equipment, devices or paper documents from secured MRC premises	NIL
II. Loss of inadequately protected electronic equipment, devices or paper documents from outside secured MRC premises	TWO
III. Insecure disposal of inadequately protected electronic equipment, devices or paper documents	NIL
IV. Unauthorised disclosure	TWO
V. Other	NIL

Public information holder

The MRC does not sell public sector information. Therefore the MRC has no statement to make in relation to compliance with cost allocation and charging requirements as set out in guidance from HM Treasury and the Office of Public Sector Information.

FINANCIAL RESULTS

The MRC has produced group financial statements for 2009/10, which include the results of MRCT as a subsidiary. The group accounts do not form part of the financial results discussed in the commentary below, which deal solely with the MRC results.

A summary of the MRC's financial results for 2009/10 and the preceding two years is shown in the tables below. Table 11 shows results using the accounting conventions required for reporting to central government. This form of accounting differs in a number of significant ways from that required for our formal audited accounts. A reconciliation between the two sets of accounts is shown at Table 12.

Each year we receive a budgetary allocation from the Department for Business, Innovation and Skills (BIS) in the form of a Departmental Expenditure Limit (DEL). The DEL is the primary mechanism in resource accounting and budgeting and is split into a number of categories with rules placing certain restrictions on the use of each type. The main subdivisions are Resource DEL and Capital DEL. Resource DEL is further divided into Near-Cash DEL and Non-Cash DEL; Near-Cash DEL may be used for Non-Cash and Capital Expenditure, but other types of DEL may not be used for Near Cash Resource Expenditure.

In any one year, we normally expect to spend our DEL allocation. However, some flexibility is allowed in practice, in the form of a carry forward of previous years' underspends. These underspends may be called upon to supplement our annual DEL through End of Year Flexibility (EYF), subject to agreement by BIS and HM Treasury in any given year.

Major projects

UK Centre for Medical Research and Innovation

In 2007 the MRC joined with Cancer Research UK, the Wellcome Trust and University College London (UCL) to form a consortium to set up a new joint research institute in Central London – the UK Centre for Medical Research and Innovation (UKCMRI).

During the year the project underwent its second major projects review (MPR) and, subject to some minor comments (which are in the process of being incorporated), was received positively. In January 2010 the partners signed the agreed Heads of Terms which will form the basis of the Joint Venture Agreement for UKCMRI Ltd (a charity company that will build/run the Centre). The Full Business Case is being prepared for submission to BIS in December 2010. During the year, a further £4.5 million was spent by the MRC on the project, bringing the total capital spend (including land) to £57.0m at 31 March 2010, recognised as an asset in the course of construction within tangible fixed assets.

Renewal of the Laboratory of Molecular Biology

The MRC Laboratory of Molecular Biology (LMB) in Cambridge is currently housed in a 50-year old building. The renewal project involves the construction of a replacement building to provide up to date, internationally competitive facilities for the LMB. BIS approved the MRC Business Case for this project for a total development cost of £212.0m in February 2009, £67.0m of which has been approved from the Large Facilities Capital Fund (LFCF). During 2009/10, work on the construction of the new building began, and it is expected that the new building will be occupied during financial year 2012/13. Capital spend during 2009/10 amounted to £42.7m bringing the total capital spend to £81.1m, recognised as an asset in the course of construction within tangible fixed assets.

RCUK Shared Services Centre Ltd

The seven research councils, working together as Research Councils UK (RCUK), have now established a Shared Services Centre (SSC), RCUK SSC Ltd, based in Swindon. The research councils have set up the SSC with the aim of reducing spending through sharing and standardising processes, including more efficient procurement.

During the year, the MRC successfully transferred its grants, HR, finance and procurement operations using the current SAP platform to the new company, which is now running the full range of frontline services for the MRC, as well as driving strategic procurement activity. As well as the MRC's transition, significant milestones achieved across RCUK include implementing the new HR systems for four research councils, and transitioning to the finance system for the Engineering and Physical Sciences Research Council, the Economic and Social Research Council and SSC Ltd itself.

Transition for the MRC to the new cross-research council Oracle platform is planned during 2010/11, as well as the move to the cross-research council grants application process (Je-S) and new back-office processes which commences in the autumn.

The cross-research council strategic procurement service has been focusing on delivering savings through strategic sourcing, improved supplier management and driving supply chain efficiencies. During 2009/10 RCUK SSC Ltd reported confirmed savings for the MRC of £2.61m and has a target of £6.26m for 2010/11.

The research councils have agreed to share the costs of establishing RCUK SSC Ltd and the MRC's agreed share is 26.98 per cent. Those costs have been accounted for in the MRC's books as £8.4m for 2009/10; £2.7m (2008/09 £5.9m) as assets in the course of construction and £5.7m (2008/09 £5.3m) as expenses. The transition to the SSC is regarded as a business critical project and is referred to in our Statement on Internal Control.

Head Office relocation

The lease on the existing Head Office building at 20 Park Crescent expires at the end of 2010. The MRC had a business case approved by BIS to retain a smaller office in London for up to 90 staff, with the remaining 135 to 150 posts relocating to Swindon in accommodation shared with the other research councils. A property in London has been identified from Government stock and lease negotiations are in progress for moves during autumn 2010. Costs of £5.5m were recognised during the year including restructuring costs of £3.4m, dilapidation costs of £1.5m and £0.6m other.

REVIEW OF THE YEAR

The MRC is required to control budgets within DEL under the Resource Accounting and Budgeting regime. 2009/10 has been a very successful year, with net expenditure coming in very close to expectation. The Resource outturn of £609.1m was broadly in line with the February forecast of £608.0m (as reported to the MRC's Council in March 2010). Capital expenditure charged to DEL at £113.4m was £5.3m greater than our Capital DEL of £108.1m, leaving a carry-forward underspend of £84.6m. The majority of this money is earmarked for the new major builds of the LMB in Cambridge & UKCMRI in London.

Non cash costs were £54.6m (including those costs associated with Technology Transfer intangible assets of £24.3m).

International Financial Reporting Standards (IFRS)

2009/10 is the first reporting year when the Accounts have been prepared under the IFRS regulatory regime. While there is no material difference to DEL results under this regime compared to UKGAAP (Generally Accepted Accounting Principles in the UK), there are important changes in disclosures and terminology. This is disclosed more fully in the Annual Accounts (Note 1).

Accounting for income and grant-in-aid

Income and expenditure are recognised in the Operating Cost Statement on an accruals basis (ie when the recipient has fulfilled its obligations, such as carried out a period of research). Grant-in-aid income and external income of a collaborative nature is credited to reserves, to better reflect the financing of our activities.

Note 26 of the Accounts shows capital commitments of £177.7m (2008/09 £217.0m) and forward commitments on research awards to Higher Education Research Institutes of £913.9m (2008/09 £573.1m).

These commitments fall due in future years which, to the extent that they are not to be met from the MRC's other resources of income, may only be met by future grant-in-aid from BIS. This is because, under the normal conventions applying to parliamentary control over income and expenditure, such grants may not be issued in advance of need.

The balance sheet as at 31 March 2010 shows a pension asset of £61.9m (2008/09 £15.0m). This is the measure of the surplus in the pension scheme as valued at balance sheet date under IAS 19 – Employee Benefits. Full disclosure is given at Note 8 in the Annual Accounts. This was helped by a strong performance in share assets which increased by £233.6m, offset by a corresponding decrease of £156.7m.

Grant-in-aid for 2009/10, taking into account the amounts required to meet the MRC's liabilities falling due in that year, has already been included in the department's estimates, which have been approved by Parliament.

The figures shown in the financial summary at Table 11 are those after adjusting for the difference between statutory presentation and those scoring under DEL. Table 12 shows the reconciliation of the finance tables to the Annual Accounts.

Table 11: Summary of financial return for 2009/10

Resource	Financial Year	2009/10	2008/09	2007/08
		£000	£000	£000
External Income		(94,950)	(80,102)	(88,055)
Income from Commercial Activities		(66,170)	(66,423)	(49,009)
Amount payable to BIS		14,988	17,639	-
Total Income		(146,132)	(128,886)	(137,064)
Pay and Operating Costs		355,261	336,739	302,686
Depreciation		21,119	22,017	19,744
Amortisation of Intangible Fixed assets		19,348	21,561	23,098
Cost of Capital		14,303	14,429	15,317
Impairment of Tangible Fixed Asset		-	1,317	-
Provision movement		(1,909)	(3,657)	(3,012)
Unwinding of the discount		199	469	-
Research grants		329,164	301,580	242,340
International Subscriptions		17,812	15,316	11,015
Total Expenditure		755,297	709,771	611,188
Net Income and Expenditure		609,165	580,885	474,124
Less Commercial Fund Non-cash costs		-	(27,889)	(31,801)
Adjusted net income and expenditure		609,079	552,996	442,323
DEL		(612,975)	(548,098)	(490,040)
(Underspend)/overspend		(3,810)	4,898	(47,717)
(Underspend)/overspend brought forward		(14,523)	(13,875)	1,704
Transfer from Commercial Fund		-	-	(14,000)
Other adjustments		(3,111)	(5,546)	10,262
Transfer to capital		-	-	35,876
(Underspend)/overspend carried forward, Near-Cash, Non-Cash		(21,444)	(14,523)	(13,875)
Near-Cash		(12,760)	(6,634)	(13,055)
Non-Cash		(8,684)	(7,888)	(820)

Capital

	Financial Year	2009/10	2008/09	2007/08
		£000	£000	£000
Direct Capital		76,771	67,133	53,799
Capital Grants to the private sector		36,650	32,734	22,186
Total Expenditure		113,421	99,867	75,985
Capital DEL		(108,132)	(69,110)	(62,168)
Overspend		5,289	30,757	13,817
Underspend brought forward		(89,877)	(129,172)	(13,433)
Adjustment brought forward		-	8,538	(93,680)
Transfer from Near-Cash		-	-	(35,876)
Underspend carried forward		(84,588)	(89,877)	(129,172)

Table 12: Reconciliation of financial return to the Annual Account

	Notes	2009/10 £000
External Income		
Contributions from other government departments	4	(17,823)
Contributions and grants from other bodies	5	(60,249)
Other Income	6	(16,854)
Interest Receivable	7	(24)
External Income per Finance Table		(94,950)
Pay and Operating Costs		
Annual Account		
Staff costs	8	176,688
Less IAS19 current service costs		1,980
Less Increase in Provision	22	(845)
Plus Release of Provision	22	2,754
Other operating costs	9	145,898
Less contribution for Licence Fees	Cashflow	(300)
Commercial Activities	OCS	29,086
Pay and operating costs per finance table		355,261
Depreciation		
Depreciation	OCS	21,345
Less release from Donated Asset Reserve	OCS	(226)
Depreciation per finance table		21,119
Cost of capital		
Cost of capital	OCS	14,303
Cost of capital per finance table		14,303
Provision Movement		
Amount provided in year	22	845
Less Amount expended in year	22	(2,754)
Provision movement per finance table		(1,909)
Research Grants		
Annual Account		
Research Grants	10	249,275
Less capital grants to private sector		(36,650)
Other Research	11	38,340
Postgraduate training awards	12	78,199
Research grants per finance table		329,164

(continues)

	Notes	2009/10 £000
International Subscriptions		
Annual Account		
International Subscriptions	13	17,812
International subscriptions per finance table		17,812
Capital Expenditure		
Direct Capital		
Fixed Asset additions per Annual Account		
	17	77,872
Less Donated Asset	Changes in Taxpayers' Equity	(293)
Intangible Asset additions per annual account	16	58
Less proceeds from sale of Fixed Assets	Cashflow	(866)
Direct capital per finance table		76,771
Capital Grants to private sector		
Capital grants included in Research Grants		36,650
Capital Grants to private sector per finance table		36,650

MRC financial results for the year

- The operating cost statement records a net expenditure of £727.7m (2008/09 = £687.1m).
- The parliamentary grant-in-aid totalled £631.1m (2008/09 = £643.0m).
- Total income amounted to £83.3m (2008/09 = £79.5m), staff costs totalled £177.7m (2008/09 = £169.0m), other operating costs excluding depreciation totalled £145.9m (2008/09 = £135.9m) and expenditure on research grants totalled £249.3m (2008/09 = £229.5m).
- Total asset (Non-current assets and Current assets) values decreased by £18.0m (2008/09 = £60.1m increase), while creditors increased by £25.6m (2008/09 = £7.0m increase).
- Reserves, excluding the general reserve, showed a net increase of £11.0m (2008/09 = decrease £137.2m).
- General reserves increased by £22.2m (2008/09 = £57.6m increase).
- Total government funds at 31 March 2010 stood at £462.7m (31 March 2009 = £429.5m) (Statement for Changes in Equity).
- Amounts payable to the Department for Business Innovation and Skills during the year were £15.0m (2008/09 = £17.6m).

MRC creditor payment policy

The MRC observes the Confederation of British Industry's Code of Practice. It adheres to the principles of the Prompt Payers Code and makes every effort to comply with the agreed terms of payment of creditors' invoices, endeavouring to settle invoices within 10 days of receiving them or earlier if supplier terms dictate. In 2009/10 the MRC paid 72 per cent (2008/09 = 70 per cent) of invoices within supplier terms. The Prompt Payers Code can be found at www.payontime.co.uk.

Audit Committee

The MRC's Council has established the Audit Committee to monitor and advise it on appropriate standards for risk management, internal control, financial propriety and anti-fraud policy and to review matters connected with audit and the provision of internal controls assurance. The Chief Executive, as the Accounting Officer, has responsibility under the terms of the Council Management Statement and Financial Memorandum for the provision of adequate internal controls and will take into account the advice of the Audit Committee as appropriate. The Committee, chaired by Mr Tony Caplin (an MRC Council member), meets at least four times a year to review internal and external audit matters and the MRC's accounts.

Auditors

The MRC's accounts are audited by the Comptroller and Auditor General under the terms of paragraph 3(3) of Schedule 1 of the Science and Technology Act 1965. The audit fee covering 2009/10 was £75,800 which included £60,000 for the audit of the year end financial statements and £15,800 for the audit of the IFRS adjusted shadow accounts.

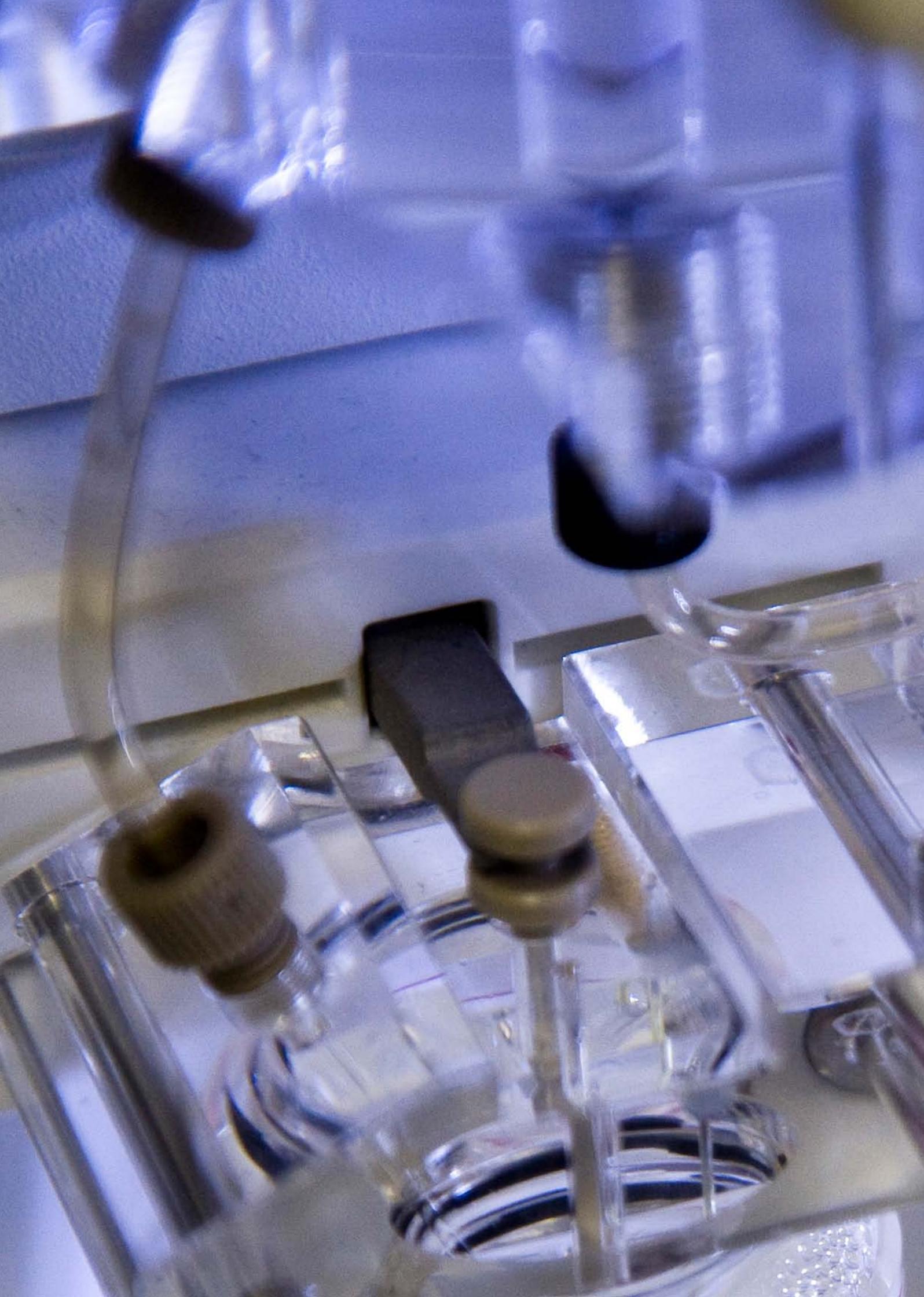
So far as the Accounting Officer is aware, there is no relevant audit information of which the MRC's auditors are unaware. The Accounting Officer has taken all the steps that he ought to have taken to make himself aware of any relevant audit information and to establish that the MRC's auditors are aware of that information.

Sir John Savill

Chief Executive and Accounting Officer

Date: 2 March 2011

Sir John Savill took up the position of MRC Chief Executive in October 2010



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Remuneration Report 2009/10



REMUNERATION SUBCOMMITTEE

(unaudited information)

Remuneration of the Head Office directors and the heads of the MRC's units and institutes is reviewed annually by the MRC Council Remuneration Subcommittee, the membership of which during 2009/10 was:

- Sir John Chisholm, MRC Chairman
- Sir Leszek Borysiewicz, MRC Chief Executive
- Professor Carol Dezateux, University College London; chair of the MRC Training and Careers Group and Strategy Board member
- Professor Herb Sewell, University of Nottingham; MRC Council member
- Professor Michael Arthur, University of Leeds; MRC Council member
- Professor Paul Luzio, University of Cambridge; chair of the MRC Molecular and Cellular Medicine Board and Strategy Board member
- Professor Stephen Holgate, University of Southampton; chair of the MRC Population and Systems Medicine Board and Strategy Board member
- Professor Deborah Smith, University of York; chair of the MRC Infections and Immunity Board and Strategy Board member
- Professor Chris Kennard, University of Oxford; chair of the MRC Neurosciences and Mental Health Board and Strategy Board member
- Professor Richard Henderson, MRC Laboratory of Molecular Biology; MRC Council member

John Jeans (MRC Chief Operating Officer and Deputy Chief Executive), Ted Smith (Human Resources Director) and Mark Brooks (Head of Compensation and Benefits) provided advice to the subcommittee but were not present during the discussions about their own terms and conditions of service.

REMUNERATION POLICY

(unaudited information)

No formal pay scale exists for the MRC's senior staff. Pay for this group is based on the concept of 'personal pay' and is reviewed annually by the Remuneration Subcommittee.

In determining appropriate pay levels for this group, the Remuneration Subcommittee pays reference to the pay remit set for all other staff in the MRC; the individual's appraisal against annual or three- to five-year objectives; the scientific (or other) performance of a unit or group; the breadth of responsibilities as reflected in staffing, budgetary and other resource management issues; contributions to the delivery of wider corporate objectives (for example, in areas of ethics, corporate governance, public communication, strategic partnerships); and external market data. Market data are used to inform the competitiveness of remuneration packages in order to secure or retain world-class scientists as a corporate and national asset.

Remuneration is subject to a minimum acceptable level of performance. Pay adjustments are informed by both the general pay award rate and the provisions of the Additional Salary Reward scheme, which allows for a maximum 10 per cent of annual salary payment for exceptional employee contributions, paid either as a one-off bonus or consolidated base-pay component.

Senior scientific staff are appointed on open-ended contracts until normal retirement age, subject to five-yearly review in accordance with the MRC's scientific peer review system. Notice periods in the event of redundancy are a minimum of six months. Termination payments are in accordance with the MRC's Early Severance and Compensation Scheme.

Basic salaries for MRC scientific staff have fallen behind rates paid in other academic institutions in the UK in the past few years. A report from Towers Perrin estimated the gap at approximately 19 per cent in 2009. With current pay restraint it will be difficult to redress this imbalance in the near future, but discussions have started with the trade unions about a new scientific grading structure and the possibility of aligning the structure more closely with that of the other research councils.

SENIOR STAFF REMUNERATION

(audited information)

The following section provides details of the remuneration and pension interests of the chief executive, the Management Board and Council members. A summary of the level of remuneration for the MRC's Management Board is shown in table 13. The levels of honoraria for MRC Council members is shown in table 14. During the year, an appointment was made to the post of Director of Human Resources. This replaced the interim Director who left at the end of October 2009. Costs of interim services provided during the year amounted to £171,661.

Chief executive

The performance management and remuneration arrangements for the chief executive are established and managed by the Department for Business, Innovation and Skills (BIS) as the MRC's sponsor department. Research council chief executives are paid both a basic salary and performance pay comprising an annual and an appointment term bonus. The MRC's chief executive also receives a Clinical Excellence Award.

At the beginning of each year, the Director General of Science and Research (DGSR) and the Council chairman agree with the chief executive a set of performance objectives for the year. In addition, a set of appointment term objectives are agreed early in the appointment and are reviewed annually. At the end of the year, the chairman, the chief executive and an independent Council member write an assessment of performance over the year. The DGSR, with advice from colleagues, agrees the assessment of overall performance and specific achievements against objectives for annual and appointment term objectives.

A Remuneration Committee comprising the DGSR, the chairs of all the research councils and two independent members then meets to review chief executives' performance and agree pay recommendations, taking the assessments into account the assessments and any comments in the papers. These recommendations are subject to ratification by the Permanent Secretary of BIS.

The appointment term bonus is assessed each year and the amounts agreed are retained and paid out at the end of the appointment term. If the chief executive leaves early, the Remuneration Committee may recommend a reduced bonus to be paid depending on the circumstances.

The chief executive is an ordinary member of the MRC's pension scheme. Entitlements under conditions of service are the same as those for other members of staff.

Salary including performance-related pay

Salary, including performance-related pay, covers both pensionable and non-pensionable amounts and includes gross salaries, performance pay or bonuses and allowances. It does not include amounts made to reimburse expenses directly incurred in the performance of an individual's duties.

Cash Equivalent Transfer Values

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme.

A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. They also include any additional pension benefit accrued to the member as a result of their purchasing additional years of pension service in the scheme at their own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries.

Real increase in Cash Equivalent Transfer Values

This reflects the increase in the CETV and takes account of the increase in accrued pension, contributions paid by the employer and contributions paid by the employee, which includes the voluntary purchase of additional years of pensionable service and the value of any benefits transferred from another pension scheme or arrangement.

Table 13: Management Board remuneration (audited information)

	Chief Executive	Chief Operating Officer & Deputy Chief Executive	Director of Corporate Affairs	Director of Finance Group	Director of Research and Training	Director of Strategy	Director of Human Resources	Director of Major Projects
	Sir Leszek Borysiewicz ¹	Mr J Jeans	Dr AC Peatfield	Mr NW Watts	Dr D Mulkeen	Dr W Ewart	Mr T Smith ²	Mr A Bulger ³
	Age ⁴	60	57	51	46	57	46	55
Salary, including performance related pay, from 1 April 2009 to 31 March 2010 ⁵	£275,703	£152,040	£93,954	£103,113	£91,039	£111,519	£77,790	£101,005
Salary, including performance related pay, from 1 April 2008 to 31 March 2009 ⁶	£264,262	£35,906 ⁷	£34,084 ⁸	£104,781	£89,824	£70,427 ⁹	-	-
Real increase in pension at age 60 ¹⁰	£0-5,000	£0-5,000	£5,000-10,000	£0-5,000	£0-5,000	£0-5,000	£0-5,000	£0-5,000
Total accrued pension at age 60 at 31 March 2009 ¹¹	£5,000-10,000	£0-5,000	£25,000-30,000	£5,000-10,000	£25,000-30,000	£0-5,000	£0-5,000	£0-5,000
Cash equivalent transfer value at 1 April 2009 ¹²	£61,287	£7,303	£302,039	£75,966	£315,945	£13,343	-	-
Cash equivalent transfer value at 31 March 2010	£116,982	£40,151	£446,440	£95,759	£347,161	£35,926	£10,642	£18,163
Real increase in cash equivalent transfer value	£55,695	£32,848	£144,401	£19,793	£31,216	£22,583	£10,642	£18,163

¹ Sir Leszek's salary includes an NHS distinction award equivalent to £75,481 (2008/09 £74,768)

² Mr Smith's appointment commenced on 12 October 2009

³ Mr Bulger's appointment commenced on 8 June 2009

⁴ As at 31 March 2010

⁵ Total emolument paid including non-taxable income

⁶ Total emolument paid including non-taxable income

⁷ Mr Jeans' appointment commenced on 5 January 2009

⁸ Dr Peatfield was appointed as Acting Director of Corporate Affairs on 1 November 2008 and he was formally appointed as Director of Corporate Affairs on 1 April 2009

⁹ Dr Ewart's appointment commenced on 11 August 2008

¹⁰ Or on retirement age

¹¹ Details of the MRC Pension Scheme appear in note 8d of the Annual Accounts

¹² Or date of joining if later

COUNCIL MEMBERS

(audited information)

MRC Council members are appointed by the Secretary of State for Business, Innovation and Skills in accordance with the code of practice of the Office of the Commissioner for Public Appointments (OCPA). The normal period of appointment is four years, and members may be re-appointed for one further four-year term.

During 2009/10 the BIS Secretary appointed two new Council members, both of whom took up their appointment on 1 July 2009.

The positions of Council members are non-pensionable and there is no entitlement to compensation for loss of office. Emolument comprises an honorarium, set annually by BIS; enhanced honoraria are paid to some members, such as Council subcommittee chairs, to reflect additional responsibilities. Details of amounts paid to each member during the year are shown in table 14 below;

Sir John Chisholm and Dr Annette Doherty have chosen not to draw their honorarium. Dr Richard Henderson, as a member of MRC staff, and Dame Sally Davies, as an employee of the Department of Health, are not entitled to receive honoraria. As an *ex officio* observer for the Secretary of State for Business, Innovation, and Skills, Mr John Neilson did not receive an honorarium.

Table 14: Council honoraria 2009/10

Name	Position/affiliation	Emolument
Sir John Chisholm	Chairman	£ —
Professor Jeffrey Almond	Sanofi Pasteur, France	£6,795
Professor Michael Arthur	University of Leeds	£6,795
Mr Tony Caplin	Northwest London Hospital NHS Trust (appointment commenced 01 July)	£6,798
Professor Dame Sally Davies	Department of Health (appointment commenced 01 July)	£ —
Dr Annette Doherty	Pfizer Global Research and Development, Sandwich	£ —
Dr Richard Henderson	MRC Laboratory of Molecular Biology, Cambridge	£ —
Professor Sally Macintyre	MRC/CSO Social and Public Health Sciences Unit, Glasgow	£6,795
Professor Sir Andrew McMichael	University of Oxford (appointment ended 31 March 2010)	£6,995
Ms Vivienne Parry	Writer and broadcaster, London	£6,795
Naren, Lord Patel	House of Lords	£6,795
Professor Michael Schneider	Imperial College London	£6,795
Professor Herb Sewell	University of Nottingham	£6,795

Declared interests

In common with others who serve the public, individuals working with the MRC observe the Seven Principles of Public Life as set out by the Committee on Standards in Public Life. Members of the MRC's Council, boards and subcommittees are required to declare any private, professional or commercial interests that might, or might be perceived to, conflict with the MRC's interests, and these declarations are published on the MRC website.

Senior MRC staff are required under the staff Code of Conduct to declare details of any company directorships and other significant interests which might conflict with their management responsibilities. John Jeans declared that he was a non executive director for Myconostica Ltd until December 2009, is currently a Trustee of the charity The Claire Foundation and is an advisor to the University of Manchester Venture Capital Fund. Ted Smith is a Trustee of HCS Group Charity (and a director of its subsidiary companies, all publicly-funded careers service providers). Dr Wendy Ewart is a Trustee of the Alexander Ewart Fund for Nepal.

Sir John Savill

Chief Executive and Accounting Officer

Date: 8 March 2011



8

Financial Statements 2009/10



Statement of the Council and Chief Executive's responsibilities with respect to the financial statements

The financial statements presented are the consolidated accounts of the MRC Group incorporating MRC Technology (MRCT). This Statement of Control relates to the MRC only, as MRCT is governed by its Trustees separately. However, MRCT governance arrangements are noted on page 78.

Under paragraph 3 of Schedule 1 of the Science and Technology Act 1965 the Council is required to prepare a statement of accounts for each financial year in the form and on the basis directed by the Secretary of State for Business, Innovation and Skills (BIS) with approval of HM Treasury. The accounts are prepared on an accruals basis and must give a true and fair view of the Council's state of affairs at the year end of its income and expenditure, changes in taxpayers' equity and cash flows for the financial year.

In preparing the accounts, the Accounting Officer is required to comply with the requirements of the *Government Financial Reporting Manual* and in particular to:

- observe the Accounts direction issued by the Secretary of State for Business, Innovation and Skills, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards as set out in the *Government Financial Reporting Manual* have been followed and disclosed and explain any material departures in the financial statements;
- prepare the financial statements on a going concern basis.

The Department for Business, Innovation and Skills has appointed the Chief Executive as Accounting Officer of the MRC. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding the MRC's assets, are set out in the Accounting Officers' Memorandum, issued by HM Treasury and published in *Managing Public Money (The Stationery Office)*.

Statement on internal control

Scope of responsibility

As Accounting Officer, I have responsibility for maintaining a sound system of internal control that supports the achievement of the MRC's policies, aims and objectives, whilst safeguarding the public funds and departmental assets for which I am personally responsible, in accordance with the responsibilities assigned to me in *Managing Public Money*.

I regularly discuss significant risks to the MRC with BIS. In addition the MRC has four bodies to support it in discharging its responsibilities relating to internal control:

- i) the MRC Management Board;
- ii) the MRC Operations Board;
- iii) the Council Audit Committee;
- iv) the Risk Management Committee.

The purpose of the system of internal control

The system of internal control is designed to manage risk to a reasonable level rather than to eliminate all risk of failure to achieve policies, aims and objectives; it can therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify and prioritise the risks to the achievement of departmental policies, aims and objectives, to evaluate the likelihood of those risks being realised and the impact should they be realised, and to manage them efficiently, effectively and economically. The system of internal control has been in place in the MRC for the year ended 31 March 2010

and up to the date of approval of the Annual Report and Accounts, and accords with HM Treasury guidance.

Capacity to handle risk

Leadership

Leadership on risk management is provided by senior managers across the MRC. Specific expertise is provided by the MRC's corporate Risk Management Team.

Staff training

There is a diverse programme of training available to all staff and managers across the MRC. The risk survey confirmed that the current training programme is reaching the relevant staff. To increase the availability of expert advice across the organisation an additional 10 staff attended the Office of Government Commerce (OGC) accredited M_o_R (Management of Risk) training this year. These managers have specific responsibility to act as risk champions for their areas.

Risk management training is integrated into the overall training programme and additional training sessions are arranged for specific groups as required.

The risk and control framework

The MRC's risk management policy is regularly reviewed and approved by Council. The policy is supported by a standard operating procedure for risk identification. All managers are responsible for ensuring that significant risks are identified, that appropriate mitigating action is implemented, and all information is recorded and risks and actions are updated in the MRC's risk management software. The software enables risks to be reviewed and monitored. Reports from the software are discussed at Management Board and other key management forums across the MRC.

Integration of Risk Management and Audit has continued during the year ensuring an integrated approach to both disciplines.

Risk Management is embedded within the MRC by:

- each Council meeting including a presentation of one or more risks on the corporate risk register together with a formal report of the Audit Committee (which receives and reviews reports on risk management);
- a network of risk champions in place across the MRC to provide local support;
- all management reports to key meetings including Council and Management Board being required to include a section on risk;
- all projects having a risk register which is reviewed at every project board meeting;
- a full review of risk management in each of the MRC units being carried out during the year by the risk team. The results of this review being discussed at Operations Board;
- a risk management survey which showed that risk management is continuing to become embedded and managers are more aware of and have better understanding of risks in their area with risk a regular item at management meetings;
- regular regional risk management sessions being held to improve risk management processes within all regions, including identifying risk themes;
- a formal process for following up audit recommendations to ensure they have been actioned with progress monitored by the Operations Board and the Council Audit Committee;
- risk management being a regular agenda item at key meetings across the MRC;
- risk workshops being held with senior management teams within corporate directorates. These workshops have focused on having a shared understanding of risk management in the MRC, identifying risks and establishing risk management processes within the directorates;
- the Head of Risk Management regularly reviewing the risk management approach within all major projects and providing assurance on the process with recommendations for improvement as appropriate.

Information risk

The management of information risks is fully integrated within the risk management process, with the Chief Operating Officer/Deputy Chief Executive as the MRC's Senior Information Risk Owner. Every MRC unit and institute undergoes an annual review of information security management systems. This process evaluates compliance to MRC standards in 12 areas, including management and policy, identification and authentication, personnel procedures and physical security. The MRC standards are based on industry standards. In 2009/10, the Research Councils' Internal Audit Service accompanied the Corporate Information Security team on six visits, and found that the review process provided "substantial assurance" to the MRC.

The Corporate Information Security team have created an IT Security forum which involves security representatives from each MRC unit and institute. Both government and local policies and guidelines are discussed as well as ongoing issues. Information risk is considered and included in all projects the MRC is undertaking. Access rights to corporate systems, as recorded in the Information Asset Register, are agreed and documented ensuring full audit capability. In 2009/10, the team created an Information Asset Register at Head Office to capture assets containing protected personal information and put in place appropriate controls.

Plans for 2010/11 include extending the information security management system review to the research centres, as well as following up progress with the units and institutes. The Information Asset Register will be extended to the units and institutes, ensuring that the MRC continues to improve its information risk profile.

Assurance requirements/map

During the year the MRC has developed a detailed statement of the areas in which it requires assurance. This document details the areas of assurance, types of assurance, how assurance is provided (for example, self assessment or internal audit), frequency of assurance, results of assurance and planned audits. The map is reviewed by the Operations Board and Council Audit Committee. The work of developing the assurance requirements has confirmed the need to move away from auditing individual units to auditing end to end processes. This has been reflected in the audit programme which was developed from the assurance map and the Corporate Risk Register.

These assurance requirements were mapped against policies to identify gaps and/or out of date policies which has resulted in a prioritised list of corporate policies to be developed or updated during 2010/11.

It is intended to improve the assurance map by cross referencing against the Corporate Risk Register with the addition of colour coding to indicate overall level of assurance for each area. The assurance map will be maintained and reviewed by the Operations Board and Council Audit Committee at least annually.

Fraud risk assessment

The MRC has undertaken a review of possible fraud risks and established a fraud risk register, excluding scientific fraud, that is monitored by the Management Board and Council Audit Committee.

Risk appetite

It is not possible to set an overall appetite for the MRC. The appetite is reflected in the Impact thresholds for the different aspects of the MRC: i.e. different impact and description for research units and major projects. As a general rule any risk with an overall rating of "very high" is judged to be above the risk appetite for that organisational level and must be escalated to the next level in the organisation hierarchy. In addition the risk management software sends an automatic alert to the Head of Risk Management whenever a risk is added or changed to "very high".

Review of effectiveness

As Accounting Officer, I have responsibility for reviewing the effectiveness of the system of internal control. My review is informed by the work of the internal auditors and the executive managers within the MRC who have responsibility for the development and maintenance of the internal control framework, and comments made by the external auditors in their management letter and other reports. I have been advised on the implications of the result of my review of the effectiveness of the system of internal control by the Management Board, the Council Audit Committee and Risk Management Committee, and have developed plans to address weaknesses and ensure continuous improvement of the system is in place.

In 2007 the MRC adopted the “Risk Management Assessment Framework” – a risk management assessment tool – to benchmark the MRC’s risk management activities and measure progress. The review, in March 2010, showed that risk management has maintained its quality and continued to improve in all areas at a steady pace with the management of Partnership risks making the most improvement. Considerable progress has been made towards the target for March 2011 which was set for a two-year period in 2008/09.

A survey of staff using the risk management software included a number of general questions on risk management. The survey revealed that risk management as a process is becoming embedded within the MRC. Thus, 88 per cent of respondents revealed that risk is on the managerial agenda and is discussed on a regular basis. The survey also established that risk management has facilitated increased risk awareness and better understanding of the management of risk.

MRC Management Board

The Management Board, comprising the Chief Executive, the Chief Operating Officer/Deputy Chief Executive, and Head Office directors, is the executive body for the MRC, providing top-level leadership and guidance on risk management issues. The Management Board regularly considers risk matters and reviews the Corporate Risk Register on a quarterly basis.

MRC Operations Board

The Operations Board reviews all major projects including receiving a summary of the top risks for each project and a report on how well risk management is being applied within each project. The board receives six-monthly updates on top risks from each corporate directorate and each region. As part of the risk appetite process, any new risks that have been rated “very high” are brought to the board’s attention. The board receives quarterly updates on main themes arising from audits together with progress on implementing action plans arising from audit reports.

Council Audit Committee

The Audit Committee is chaired by a member of Council; its membership includes two other Council members and a number of lay members. A report from each meeting is presented to the Council.

As part of its role in providing assurance on controls the committee:

- reviews assurance requirements/map;
- agrees the annual audit programme;
- reviews all audit reports;
- monitors progress on implementing audit recommendations;
- reviews the Corporate Risk Register;
- receives updates on all major projects;
- reviews results from the Directors Annual Statement on Internal Control;
- receives reports and presentations on key risk areas;
- reviews MRC information security audit result;
- receives notification of suspected frauds and reviews results of fraud investigations.

Risk Management Committee

The Risk Management Committee reports to the Management Board. It provides leadership and direction to support the embedding of risk management across the MRC.

The Risk Management Team for the MRC comprises two risk management experts, who provide leadership, advice and support across the MRC. Expert professional groups such as Senior Finance Managers and HR Business Partners are consulted to review risks and provide guidance on risks relevant to their area of expertise.

Institutes and units

The director of each MRC institute and unit is responsible for the management of risk for that establishment. Each unit and institute director is required to submit an Annual Statement on Internal Control which is then reviewed by the Operations Board and Council Audit Committee. Where significant risks or weaknesses in controls are highlighted these are included within the risk register and appropriate action plan identified.

Audit

The Head of Internal Audit has provided a “positive reasonable assurance” concerning the adequacy of the risk management, control and governance systems established by MRC Management and has confirmed that he has not found any fundamental control weaknesses that undermine the general framework of control within the MRC in the areas examined.

Internal audit

The Research Councils’ Internal Audit Service (RCIAS) provides the internal audit function for the MRC. They work closely with the MRC Risk Management Team to ensure that there is a robust audit programme focused on the appropriate risks and key control processes across the MRC.

The Research Councils UK (RCUK) Research Funding Assurance Programme (FAP) annual report conducted in conjunction with other research councils provides assurance on the funding of research projects at UK universities and research organisations. The overall assessment provides satisfactory assurance.

Audit programme

To enhance the value of audits, all scopes of individual audits are now being approved by either the Management Board or Operations Board in addition to the audit sponsor.

MRC Technology (MRCT)

MRCT is part of the MRC Group Financial statement; it has its own governance structure, with its own Board of Trustees. The chairman of the board is the MRC Deputy Chief Executive and other MRC senior managers are members of the board. MRCT has its own Internal Control arrangements, including its own Audit and Risk Committee reporting to the board and separate auditors.

Significant risks

The Corporate Risk Register is a dynamic document that is reviewed by the Management Board every quarter. The most significant risks for the past year and going forward are covered below.

1. RCUK Shared Services Centre (SSC) Ltd

Risk

- **Project cost** – There is a risk that the RCUK SSC project cost will continue to increase
- **Operational cost** – There is a risk that the future operational costs are higher than current
- **Operational effectiveness** – There is a risk that the final solution will not be as effective for operational activities which support research

The RCUK Shared Services Centre implementation is a business critical project that is intended to deliver a single organisation administrative support service for all UK research councils. This includes main administrative activities in Human Resources, Payroll, Finance and Procurement, IT and Grants Processing. Governance and risk management of the implementation project is provided by the RCUK SSC Project Board on behalf of the research councils. An RCUK SSC Project Audit Committee comprising representatives from each research council’s Audit Committee operates to provide oversight on risk management and control of the project. During 2009/10 considerable effort has been expended in establishing the security and controls framework now operating in the RCUK SSC. Internal audit assurance has been provided on the RCUK SSC Ltd business operations (supporting the company’s annual Statement on Internal Control), the readiness of each research council to transfer to SSC live operations and independent assurance on project delivery. A comprehensive internal audit strategy relating to the RCUK SSC project and operations for 2010/11 and beyond has been developed. A feature of this strategy is that the control framework operating within the ERP platform and the interfaces with the respective research councils will be tested end to end post implementation of the solution. Other project management assurance has been provided through external consultants, and the project is subject to OGC Gateway independent review.

As a stakeholder in the project, the MRC has its own governance structure led by a programme board, which manages its participation and associated risks in the project. The high-level risks and mitigation strategies have been regularly scrutinised by MRC's Management Board and Operations Board. The MRC Council receives updates at each of its meetings. Governance arrangements are regularly monitored by the MRC Audit Committee. In March 2010, RCIAS conducted the second of four reviews of the MRC elements of the transition, reporting substantial assurance.

The uncertain and challenging nature of this project has resulted in three continuing corporate risks of significance around cost, effectiveness and efficiency of future operations. Over the past year the MRC has successfully transferred both grants operations and most of its current service centre functions to SSC Ltd, to mitigate risks on system transition and operational stability alongside the Head Office relocation.

2. Renewal of the MRC Laboratory of Molecular Biology (LMB)

Risk – *Failure to build facility of required size and quality within approved budget*

The project involves the construction of a replacement building to provide up to date, internationally competitive facilities for the LMB in Cambridge. The new building will be on a site adjacent to Addenbrooke's Hospital. The project is managed by a project board with a BIS representative sitting on the board.

A re-tendering exercise during 2009 yielded cost savings in the order of £5 million, which has been set aside as contingency to fund any necessary changes or unexpected cost increases. Construction work is in progress with part of the building weather-tight and internal fit out in progress. Forecast completion is about two to three weeks late, but delays are the contractor's responsibility and the forecast final cost of the new building remains £212.0m.

Risks are regularly assessed and are reviewed by the Project Steering Group. The risk profile is showing a positive trend and is included in monthly reports on the project to the Project Board.

3. The UK Centre for Medical Research and Innovation (UKCMRI)

Risk – *If the UKCMRI project fails then the MRC will not be able to maximise the value of its largest intramural investment*

The programme to develop the UK Centre for Medical Research and Innovation (UKCMRI) aims to establish a new, world class research centre in St Pancras, London.

The construction project, which has a budget of £626.0m, is sponsored by a consortium involving the MRC (providing 48 per cent of the cost), Cancer Research UK (26 per cent), the Wellcome Trust (19 per cent) and University College London (7 per cent); the new centre will be operated by a Joint Venture set up by the consortium as a charity.

The project is overseen by a Steering Group comprising the Chief Executive Officers (or equivalent) of the four consortium partners and is managed by a Designate UKCMRI Executive Team. The Programme Delivery Committee continues to provide oversight until the formal Joint Venture Agreement is signed. An Institute Director is to be appointed by the end of 2010; all other key posts in the Executive Team have been filled.

A Construction Project Board with members from each of the partners oversees the construction project.

Internally, the project is shadowed by an MRC Monitoring Committee, with senior representatives from Head Office and the National Institute for Medical Research. Progress is regularly reported to Council. MRC/NIMR also has representation at each level of the UKCMRI governance structure and takes a leadership position on some working groups. Agreed Heads of Terms were signed in February 2010 by all the founding partners and UKCMRI.

A Major Projects Review Group (MPRG) review was conducted during 2009 and an Final Outline Business Case was approved by BIS/HMT in December 09. A second MPRG review was conducted early in 2010, which was timed to align with the development of the Joint Venture Agreement. The project was one of many selected for review by the new Coalition Government to assess if any savings could be achieved, but only minor reductions were recommended and the project was allowed to proceed without change. The Full Business Case for approval to commit funds will be submitted later this financial year for approval in 2011.

A full Planning Application has been submitted to London Borough of Camden and determination is anticipated in mid December 2010. Main contractors have received Invitations to Tender and an appointment for the first stage of the construction work is planned in January 2011. Construction will start on site in April 2011, provided Planning Approval is received in the time allowed.

In addition to the corporate risk there is a detailed MRC risks register for the project which is reviewed each month at the MRC monitoring committee.

Control issues

2008/09

In the previous Statement on Internal Control, a number of control issues were reported. These have all been addressed.

Delegated Authority and Estates audits

Both received. Actions have been taken to address all issues raised in both areas. These will be audited during 2010/11 Audit Programme.

Severance procedure

A number of compromise agreements had been signed during 2008/09 without the formal approval of extra-contractual payments by BIS as per the terms of our Financial Memorandum. Retrospective approval was subsequently granted by HM Treasury, and the MRC commissioned an external review of its HR policies, processes and practices in relation to handling capability and redundancy issues by Grant Thornton. The report was received on 17 June 2010 and is listed for review by the MRC Audit Committee. Grant Thornton gave assurance that the procedures and processes had been amended following the issue coming to light and that the cases they audited were in line with these policies.

Fraud

2008/09 – A suspected procurement fraud in the MRC's unit in The Gambia was investigated by independent auditors. Fraud was not proved but control weaknesses were identified and processes have since been tightened up. Two instances of suspected cash imprest fraud were reported from outstations in Uganda. These were subsequently confirmed by independent auditors and management action instigated to dismiss the staff involved. In the past, overseas units have been subject to internal audit on an approximately five yearly basis. In the light of recent experience we have now engaged audit firms with local offices in both countries to conduct annual internal audits. A fraud workshop has recently been conducted to identify key risks and mitigating actions.

2009/10 – There have been two frauds identified in The Gambia and Uganda involving cash payment and reimbursement. These are being investigated and appropriate action plans will be put in place, including detailed review of cash management controls. The MRC is strengthening the financial management and auditing of the units in Africa.

In the view of the MRC the amounts themselves are not material, although there is a risk to the MRC's reputation locally. Nevertheless the frauds are regarded seriously.

Conclusion

As the new Accounting Officer I have been briefed on all areas of the MRC. I had a formal hand over with Sir Leszek Borysiewicz, the former Accounting Officer, this included the areas covered by this statement.

In conclusion I am satisfied that the MRC has robust internal controls which permit both proactive management of risk and effective oversight by the Council's governance processes. It will be necessary to continue the active development of efficient internal controls as we face the challenges of a more complex external environment and reduced Governmental funding.

Sir John Savill

Chief Executive and Accounting Officer

Date: 2 March 2011

Sir John Savill took up the position of MRC Chief Executive in October 2010

The Medical Research Council

The Certificate and Report of the Comptroller and Auditor General to the Houses of Parliament

I certify that I have audited the financial statements of the Medical Research Council for the year ended 31 March 2010 under the Science and Technology Act 1965. These comprise the Group Operating Cost Statement, Group and MRC Statement of Financial Position, Group and MRC Statement of Cash flows, the Group and MRC Statement of Changes in taxpayers' Equity and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

Respective responsibilities of the Accounting Officer and Auditor

As explained more fully in the Statement of Accounting Officer's responsibilities, the Accounting Officer is responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require me and my staff 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 Medical Research Council and the group's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Medical Research Council; and the overall presentation of the financial statements.

In addition, I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

Opinion on Regularity

In my opinion, in all material respects the expenditure and income have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them.

Opinion on financial statements

In my opinion:

- the financial statements give a true and fair view of the state of Medical Research Council and the group's affairs as at 31 March 2010 and of the Medical Research Council and the group's net expenditure, changes in taxpayers' equity and cash flows for the year then ended; and
- the financial statements have been properly prepared in accordance with the Science and Technology Act 1965 and Secretary of State directions issued thereunder with the approval of Treasury.

Opinion on other matters

In my opinion:

- the part of the Remuneration Report to be audited has been properly prepared in accordance with the Secretary of State directions issued under the Science and Technology Act 1965 with the approval of Treasury; and
- the information given in the section of the annual report entitled Efficiency and Effectiveness and in the Management Commentary for the financial year for which the financial statements are prepared is consistent with the financial statements.

Matters on which I report by exception

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records or returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Statement on Internal Control does not reflect compliance with HM Treasury's guidance.

Report

I have no observations to make on these financial statements.

Amyas C E Morse

Comptroller and Auditor General

*National Audit Office
157–197 Buckingham Palace Road
Victoria
London
SW1W 9SP*

Date: 15 March 2011

Group Operating Cost Statement

For the year ended 31 March 2010

	Notes	GROUP		MRC	
		2009/10 £000	2008/09 £000	2009/10 £000	2008/09 £000
Expenditure					
Staff costs	8	182,512	174,257	176,688	169,008
Other operating costs	9	150,865	140,598	145,898	135,893
Research grants	10	246,483	222,453	249,275	229,481
Other research	11	38,340	36,887	38,340	36,887
Postgraduate/training awards	12	78,199	67,946	78,199	67,946
International subscriptions	13	17,812	15,316	17,812	15,316
Commercial activities	14	29,086	31,517	29,086	31,517
Amortisation of intangible assets	16	24,534	29,901	19,348	21,802
Depreciation of property, plant and equipment	17	22,435	22,894	21,345	21,927
Impairment of property, plant and equipment	17	-	10,837	-	10,837
Total operating expenditure		790,266	752,606	775,991	740,614
Income					
Release of deferred income on donated asset		226	151	226	151
Commercial activities	14	81,114	78,441	66,170	66,423
Other income	6	17,979	15,756	16,854	12,972
Grant income		-	2	-	-
Total operating income		(99,319)	(94,350)	(83,250)	(79,546)
Net operating expenditure		690,947	658,256	692,741	661,068
Interest receivable	7	(24)	(472)	(24)	(472)
Notional cost of capital	1n	14,303	14,429	14,303	14,429
Amount payable to the Department for Business, Innovation and Skills	15	14,988	17,639	14,988	17,639
Other finance cost/(income)	8e	4,230	(6,935)	4,230	(6,935)
Unwinding of discount on provisions		199	469	199	469
Loss on disposal of property, plant and equipment		(21)	1,629	714	879
Share of losses of joint venture		504	-	504	-
Minority Interest		49	(13)	-	-
Net expenditure for the year		725,175	685,002	727,655	687,077
Reversal of notional cost of capital		(14,303)	(14,429)	(14,303)	(14,429)
Net expenditure for the year after reversal of notional cost of capital		710,872	670,573	713,352	672,648

All activities are continuing.

The notes at pages 90-133 form part of these accounts.

Group Statement of Financial Position

For the year ended 31 March 2010

		2010	2009	1 April 2008
	Notes	£000	£000	£000
Non-current assets				
Intangible assets	16	163,913	227,642	194,930
Property, plant and equipment	17	428,249	397,267	358,409
Investment in Joint Ventures	18	1,627	2,131	-
Financial assets		4,675	3,129	4,383
Total non-current assets		598,464	630,169	557,722
Current assets				
Inventories	19	2,435	2,687	2,351
Trade and other receivables	20	62,026	65,271	44,142
Cash and cash equivalents	24	45,079	53,243	40,960
Total current assets		109,540	121,201	87,453
Total assets		708,004	751,370	645,175
Current liabilities				
Trade and other payables	21	(235,840)	(215,673)	(207,443)
Provisions falling due within a year	22	(1,471)	(1,765)	(2,444)
Total current liabilities		(237,311)	(217,438)	(209,887)
Total assets less current liabilities		470,693	533,932	435,288
Non-current liabilities				
Provisions	22	(4,485)	(6,100)	(11,095)
Pension asset / (liability)	8e	61,923	(15,005)	117,808
Total non-current assets / (liabilities)		57,438	(21,105)	106,713
Assets less liabilities		528,131	512,827	542,001
Equity				
Revaluation reserve		41,933	69,952	70,622
Intellectual property reserve		163,835	227,422	194,551
Pension reserve		61,923	(15,005)	117,808
Donated asset reserve		833	766	760
Charitable funds		34,092	26,426	12,532
Minority interests		227	178	191
General reserve		225,288	203,088	145,537
Total government funds		528,131	512,827	542,001

Sir John Savill

Chief Executive and Accounting Officer

Date: 2 March 2011

The notes at pages 90-133 form part of these accounts.

MRC Statement of Financial Position

For the year ended 31 March 2010

		2010	2009	1 April 2008
	Notes	£000	£000	£000
Non-current assets				
Intangible assets	16	132,799	170,949	174,877
Property, plant and equipment	17	420,395	389,574	353,363
Investment in Joint Ventures	18	1,627	2,131	-
Financial assets		1,514	919	1,446
Total non-current assets		556,335	563,573	529,686
Current assets				
Inventories	19	2,435	2,687	2,351
Trade and other receivables	20	60,962	61,145	40,555
Cash and cash equivalents	24	30,439	40,805	35,543
Total current assets		93,836	104,637	78,449
Total assets		650,171	668,210	608,135
Current liabilities				
Trade and other payables	21	(243,440)	(215,810)	(203,179)
Provisions falling due within a year	22	(1,471)	(1,765)	(2,444)
Total current liabilities		(244,911)	(217,575)	(205,623)
Total assets less current liabilities		405,260	450,635	402,512
Non-current liabilities				
Provisions	22	(4,485)	(6,100)	(11,095)
Pension asset / (liability)	8e	61,923	(15,005)	117,808
Total non-current assets / (liabilities)		57,438	(21,105)	106,713
Assets less liabilities		462,698	429,530	509,225
Equity				
Revaluation reserve		41,933	69,952	70,622
Intellectual property reserve		132,721	170,729	174,498
Pension reserve		61,923	(15,005)	117,808
Donated asset reserve		833	766	760
General reserve		225,288	203,088	145,537
Total government funds		462,698	429,530	509,225

Sir John Savill

Chief Executive and Accounting Officer

Date: 2 March 2011

The notes at pages 90-133 form part of these accounts.

Group Statement of Cash Flows

For the year ended 31 March 2010

	2009/10	2008/09
Notes	£000	£000
Cash flow from operating activities		
Net operating expenditure	(690,946)	(658,256)
Depreciation charge	22,435	22,894
Amortisation charge	24,534	29,901
Impairment of property, plant and equipment	-	10,837
Other non-cash items – IAS 19 pension costs	(1,980)	826
Unwinding of discount provisions	(199)	(469)
Release of deferred income	(226)	(151)
Decrease in provision for liabilities and charges	(1,909)	(3,657)
Decrease / (increase) in inventories	252	(336)
Decrease / (increase) in trade and other receivables	3,252	(19,826)
Increase in trade and other payables	(5,461)	29,524
Taxation	(6)	6
Net cash outflow from operating activities	(650,254)	(588,707)
Cash flow from investing activities		
Interest received	7	472
Payments to the Department for Business, Innovation and Skills	15	(417)
Payments to acquire property, plant and equipment and investments	(71,231)	(110,380)
Receipts from sale of tangible fixed assets	866	168
Receipts from disposal of investments	2,709	1,163
Net cash outflow from investing activities	(67,652)	(108,994)
Net cash outflow before financing	(717,906)	(697,701)
Cash flows from financing activities		
Grant-in-aid received	3	631,077
Other capital funding received	293	157
Contributions from other government departments	4	17,823
Contributions from grants from other bodies	5	60,249
Contribution for licence fees	3	170
Net cash inflow from financing activities	709,742	709,985
(Decrease) / increase in cash and cash equivalents	24	12,284
Cash and cash equivalents at the beginning of the period	24	53,243
Cash and cash equivalents at the end of the period	24	45,079

The notes at pages 90-133 form part of these accounts.

MRC Statement of Cash Flows

For the year ended 31 March 2010

	Notes	2009/10 £000	2008/09 £000
Cash flow from operating activities			
Net operating expenditure		(692,630)	(661,068)
Depreciation charge		21,345	21,927
Amortisation charge		19,348	21,802
Impairment of property, plant and equipment		-	10,837
Other non-cash items – IAS 19 pension costs		(1,980)	826
Unwinding of discount provisions		(199)	(469)
Release of deferred income		(226)	(151)
Decrease in provision for liabilities and charges		(1,909)	(3,657)
Decrease / (increase) in inventories		252	(336)
Decrease / (increase) in trade and other receivables		183	(20,590)
Increase in trade and other payables		1,884	33,938
Net cash outflow from operating activities		(653,932)	(596,941)
Cash flow from investing activities			
Interest received	7	24	472
Payments to the Department for Business, Innovation and Skills	15	(20)	(417)
Receipts from sale of tangible fixed assets		866	168
Payments to acquire property, plant and equipment and investments		(67,046)	(108,005)
Net cash outflow from investing activities		(66,176)	(107,782)
Net cash outflow before financing		(720,108)	(704,723)
Cash flows from financing activities			
Grant-in-aid received	3	631,077	643,000
Other capital funding received		293	157
Contributions from other government departments	4	17,823	16,242
Contributions from grants from other bodies	5	60,249	50,416
Contribution for licence fees	3	300	170
Net cash inflow from financing activities		709,742	709,985
(Decrease) / increase in cash and cash equivalents	24	(10,366)	5,262
Cash and cash equivalents at the beginning of the period	24	40,805	35,543
Cash and cash equivalents at the end of the period	24	30,439	40,805

The notes at pages 90-133 form part of these accounts.

Group Statement of Changes in Taxpayers' Equity

At 31 March 2010

	Revaluation reserve	Intellectual property reserve	Donated asset reserve	Charitable Funds	Minority Interest	Pension reserve	General reserve	Total government funds
	£000	£000	£000	£000	£000	£000	£000	£000
Balance at 1 April 2008	70,622	194,551	760	12,532	191	117,808	145,537	542,001
Other capital funding received	-	-	157	-	-	-	-	157
Grant-in-aid financing received in year (note 3)	-	-	-	-	-	-	643,000	643,000
Contributions from other government departments (note 4)	-	-	-	-	-	-	16,242	16,242
Contributions and grants from other bodies (note 5)	-	-	-	-	-	-	50,416	50,416
Contribution for licence fees (note 3)	-	-	-	-	-	-	170	170
Released to operating cost statement	-	-	(151)	-	-	-	-	(151)
Net gain on revaluation of property, plant and equipment	4,249	-	-	-	-	-	-	4,249
Net gain on revaluation of intangible assets	-	62,531	-	-	-	-	-	62,531
Actuarial loss in the pension scheme (note 8e)	-	-	-	-	-	(138,922)	-	(138,922)
Transfers between reserves	(4,919)	(29,660)	-	-	-	6,109	20,371	(8,099)
Net expenditure for the year	-	-	-	13,894	(13)	-	(687,077)	(673,196)
Reversal of notional costs of capital	-	-	-	-	-	-	14,429	14,429
At 31 March 2009	69,952	227,422	766	26,426	178	(15,005)	203,088	512,827
Balance at 1 April 2009	69,952	227,422	766	26,426	178	(15,005)	203,088	512,827
Other capital funding received	-	-	293	-	-	-	-	293
Grant-in-aid financing received in year (note 3)	-	-	-	-	-	-	631,077	631,077
Contributions from other government departments (note 4)	-	-	-	-	-	-	17,823	17,823
Contributions and grants from other bodies (note 5)	-	-	-	-	-	-	60,249	60,249
Contribution for licence fees (note 3)	-	-	-	-	-	-	304	304
Released to operating cost statement	-	-	(226)	-	-	-	-	(226)
Net loss on revaluation of property, plant and equipment	(23,269)	-	-	-	-	-	-	(23,269)
Net loss on revaluation of intangible assets	-	(39,253)	-	-	-	-	-	(39,253)
Actuarial gain in the pension scheme (note 8e)	-	-	-	-	-	79,178	-	79,178
Transfers between reserves	(4,750)	(24,334)	-	-	-	(2,250)	31,334	-
Net expenditure for the year	-	-	-	7,666	49	-	(732,890)	(725,175)
Reversal of notional costs of capital	-	-	-	-	-	-	14,303	14,303
At 31 March 2010	41,933	163,835	833	34,092	227	61,923	225,288	528,131

The notes at pages 90-133 form part of these accounts.

MRC Statement of Changes in Taxpayers' Equity

At 31 March 2010

	Revaluation reserve	Intellectual property reserve	Donated asset reserve	Pension reserve	General reserve	Total government funds
	£000	£000	£000	£000	£000	£000
Balance at 1 April 2008	70,622	174,498	760	117,808	145,537	509,225
Other capital funding received	-	-	157	-	-	157
Grant-in-aid financing received in year (note 3)	-	-	-	-	643,000	643,000
Contributions from other government departments (note 4)	-	-	-	-	16,242	16,242
Contributions and grants from other bodies (note 5)	-	-	-	-	50,416	50,416
Contribution for licence fees (note 3)	-	-	-	-	170	170
Released to operating cost statement	-	-	(151)	-	-	(151)
Net gain on revaluation of property, plant and equipment	4,249	-	-	-	-	4,249
Net gain on revaluation of intangible assets	-	17,792	-	-	-	17,792
Actuarial loss in the pension scheme (note 8e)	(4,919)	(21,561)	-	(138,922)	-	(138,922)
Transfers between reserves	-	-	-	6,109	20,371	-
Net expenditure for the year	-	-	-	-	(687,077)	(687,077)
Reversal of notional costs of capital	-	-	-	-	14,429	14,429
At 31 March 2009	69,952	170,729	766	(15,005)	203,088	429,530
Balance at 1 April 2009	69,952	170,729	766	(15,005)	203,088	429,530
Other capital funding received	-	-	293	-	-	293
Grant-in-aid financing received in year (note 3)	-	-	-	-	631,077	631,077
Contributions from other government departments (note 4)	-	-	-	-	17,823	17,823
Contributions and grants from other bodies (note 5)	-	-	-	-	60,249	60,249
Contribution for licence fees (note 3)	-	-	-	-	300	300
Released to operating cost statement	-	-	(226)	-	-	(226)
Net loss on revaluation of property, plant and equipment	(23,314)	-	-	-	-	(23,314)
Net loss on revaluation of intangible assets	-	(18,860)	-	-	-	(18,860)
Actuarial gain in the pension scheme (note 8e)	-	-	-	79,178	-	79,178
Transfers between reserves	(4,705)	(19,148)	-	(2,250)	26,103	-
Net expenditure for the year	-	-	-	-	(727,655)	(727,655)
Reversal of notional costs of capital	-	-	-	-	14,303	14,303
At 31 March 2010	41,933	132,721	833	61,923	225,288	462,698

The notes at pages 90-133 form part of these accounts.

1 Statement of Accounting Policies

a. Basis of accounting

These financial statements have been prepared in accordance with the 2009-10 Government Financial Reporting Manual (FRoM) issued by HM Treasury. The accounting policies contained in the FRoM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector context. Where the FRoM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of the Group for the purpose of giving a true and fair view has been selected. The particular policies adopted by the Group are described below. They have been applied consistently in dealing with items that are considered material to the accounts.

b. Transition to IFRS

The group has applied IFRS 1 in preparing these financial statements. The group's transition date is 1 April 2008. The group prepared its opening IFRS statement of financial position at that date.

The group prepared its financial statements for the year ended 31 March 2010 as its first full financial statements under IFRS. As a result the 31 March 2009 financial statements have been converted from UK GAAP to IFRS.

The statement of financial position was previously prepared in accordance with the generally accepted accounting principles in the United Kingdom (UK GAAP) until 31 March 2008. UK GAAP differs in some areas from IFRS as adopted by the EU. In preparing the statement of financial position under IFRS, management has amended certain accounting and valuations applied in the previous GAAP financial statements to comply with IFRS. The differences between preparing the accounts under IFRS and UK GAAP is shown in Note 23.

Adoption of standards effective in 2009/10

The following revised standards and interpretations have been applied by the group from 1 April 2009:

International Financial Reporting Standards (IFRS/IAS)		Effective date
IFRS 7	Amendments to IAS 39 and IFRS 7: reclassification of financial assets	1 July 2008
IFRS 7	Update to amendments to IAS 39 and IFRS 7: reclassification of financial assets	1 July 2008
IFRS 7	Amendment to IFRS 7 – improving disclosures about financial instruments	1 January 2009
IFRS 8	Operating Segments	1 January 2009
IAS 23	Borrowing Costs	1 January 2009
IAS 1	Presentation of Financial Statements	1 January 2009
IFRS 1	Amendments to IFRS 1: First-time adoption of IFRS and IAS 27: Consolidated and Separate Financial Statements	1 January 2009

IFRS effective in 2009/10 but not relevant

The following amendments were mandatory for accounting periods beginning on or after 1 April 2009 but were not relevant to the operations of the group.

International Financial Reporting Standards (IFRS/IAS)		Effective date
IFRS 2	Share-based Payment (amendment)	1 July 2009
IAS 32	IAS 32 Financial Instruments Presentation and IAS 1 Financial Instruments Presentation Amendments – Puttable Financial Instruments and Obligations Arising on Liquidation	1 July 2009

International Financial Reporting Interpretations Committee (IFRIC)**Effective date**

IFRIC 15	IFRIC 15: Agreements for the construction of Real Estate	1 January 2009
IFRIC 16	IFRIC 16: Hedges of a Net Investment in a Foreign operation	1 October 2008

Standards, interpretations and amendments to published standards which are not yet effective

The IASB and IFRIC issued the following standards and interpretations with an effective date after the date of these financial statements. They have not been adopted early by the group and the group does not anticipate that the adoption of these standards and interpretations will have a material impact on the group's reported income or net assets in the period of adoption.

Effective for the Group for the financial year beginning 1 April 2009:

International Financial Reporting Standards (IFRS/IAS)**Effective date**

IAS 39	Amendments to IFRIC 9 and IAS 39: Embedded derivatives	30 June 2009
IFRS 1	Revised version of IFRS 1 with improved structure	1 July 2009
IFRS 3	Business Combinations	1 July 2009
IAS 27	Consolidated and Separate Financial Statements	1 July 2009
IAS 39	Amendment to IAS 39 Financial Instruments: Eligible hedged items	1 July 2009

International Financial Reporting Interpretations Committee (IFRIC)**Effective date**

IFRIC 17	IFRIC 17 Distribution of Non-Cash Assets to Owners	1 July 2009
IFRIC 18	IFRIC 18 Transfers of Assets from Customers	1 July 2009

Effective for the Group in future years:

International Financial Reporting Standards (IFRS/IAS)**Effective date**

IFRS 1	Amendment to IFRS 1 – additional exemptions for first-time adopters	1 October 2010
IFRS 2	Amendment to IFRS 2 – group cash-settled share-based payment transactions	1 October 2010

c. Accounting convention

These financial statements should be prepared under the historical cost convention, modified by the revaluation of fixed assets, and, where material, current asset investments and inventory to fair value as determined by the relevant accounting standard. This is in accordance with the 2009-10 *Government Financial Reporting Manual* (FRM) issued by HM Treasury. The accounting policies contained in the FRM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector context. Where the FRM permits a choice of accounting policy, the accounting policy which is judged to be most appropriate to the particular circumstances of the group for the purpose of giving a true and fair view has been selected. The particular policies adopted by the group are described below. They have been applied consistently in dealing with items that are considered material to the accounts.

These financial statements are presented in Sterling, group's functional currency and all amounts have been rounded to the nearest thousands.

d. Basis of consolidation

These accounts consolidate the accounts of MRC and its subsidiary the Medical Research Council Technology (MRCT). MRCT is a company limited by guarantee with charitable status (Reg no. 2698321). The results of MRCT have not previously been consolidated into those of the MRC due to it being insignificant in the overall MRC position. As the income and assets of MRCT have become significant to the overall MRC group position, the accounts of MRCT have been consolidated.

Two other companies, UK Biobank Limited and Markready Limited have not been consolidated within these financial statements as they are not considered to be subsidiaries of MRC. As MRC is one of nine trustees that manage Biobank, the MRC is not able to exert any control and so the company is not consolidated in the MRC Account. Markready Ltd is a company limited by guarantee, of which MRC are one of four members the others being the Wellcome Trust, Oxford and Cambridge Universities.

e. Property, Plant and Equipment and depreciation

Expenditure on property, plant and equipment includes the purchase of land, buildings and equipment costing £3,000 or more. Property, plant and equipment are included at valuation being its fair value at the date of revaluation less any subsequent accumulated depreciation and impairment losses if any. Equipment, excluding computers and software, is revalued annually using appropriate indices. Land and buildings are professionally revalued every five years and in the intervening period relevant indices are used. The basis of valuation for land and buildings is open market value for existing use where this can be established. However, because of the specialised nature of the group's properties, most valuations are on a depreciated replacement cost basis. Any surplus or temporary deficit on revaluation is taken to a revaluation reserve. Any permanent impairments in value are charged to the Operating Cost Statement in the year in which they arise.

Increased depreciation charges arising from revaluations are matched by transfers from the revaluation reserve to the general reserve. On disposal of a revalued asset, the resulting element of the revaluation reserve that is realised is transferred directly to the general reserve.

Provision is made for depreciation on all property, plant and equipment at rates calculated to write off each asset evenly to its residual value over its expected useful life, as follows:

Freehold land	Not depreciated
Leasehold land	Up to 60 years (subject to length of the lease)
Freehold buildings	Up to 60 years
Leasehold buildings	Up to 60 years (subject to length of the lease)
Leasehold buildings (buy-back)	Up to 60 years
Major facilities (items costing over £50,000)	11 years
Other scientific equipment	5 to 15 years
Computers and software	3 years
Engineering, office and catering equipment	8 years
Motor vehicles	5 years
Assets under construction	Not depreciated until brought into use

Depreciation is charged from the date the property, plant and equipment are available for use.

MRCT use a different capitalisation threshold of £2,000, however except for this, their plant, property and equipment and depreciation policies are in line with those of the group. The difference due to this policy divergence is not considered material and therefore no adjustment has been made for this.

Donated assets are capitalised at their current value upon receipt and this value is credited to the donated asset reserve. Donated assets are valued and depreciated in the same manner as purchased assets described above. Gains and losses on valuation are also taken to the donated asset reserve and, each year, an amount equal to the depreciation charge on the asset is released from the donated asset reserve to the general reserve. Similarly, any impairment of donated assets charged to the Operating Cost Statement is matched by a transfer from the donated asset reserve. On disposal of donated assets, the net book value of the donated asset is transferred from the donated asset reserve to the general reserve.

f. Intangible assets and amortisation

The values of patents, licences and royalties held by the group are capitalised as intangible assets based on their expected income streams. Income from these patents, licences and royalties is generated from agreements between the MRC and companies engaged in the commercial exploitation of MRC inventions and research. The values of these intangible assets are amortised over the period these agreements are in force, including a full year's amortisation charge in the year of valuation. For most cases this is between seven and 15 years, and such assets are not capitalised until the income stream is reasonably certain. Income streams are reviewed each year. Any surplus or deficit on valuations following such reviews is taken to the intellectual property reserve.

Software costing £3,000 or more are included in intangibles and are stated at fair value and amortised from the date they are available for use over their useful lives estimated at three years.

g. Ownership of equipment purchased with group research grants

Equipment purchased by an institution with research grant funds supplied by the group belongs to the institution and is not included in group's property, plant and equipment. Through the Conditions of Grant applied to funded institutions, the group reserves the right to determine the disposal of such equipment and of the proceeds of any sale.

h. Grant-in-aid

Grant-in-aid is treated as financing, rather than income. Grant-in-aid for the purpose of land is credited to the general reserve and not to the capital land reserve.

Grant-in-aid for revenue purposes and for the purchase of non current assets in general is credited to general reserve in the year in which it is received. Capital grant-in-aid, granted for a specific project(s), is credited to a government grant reserve and released to the Operating Cost Statement over the estimated operational lives of the related assets.

i. Impairment

The carrying amounts of the group's assets are reviewed at each statement of financial position date to determine whether there is any indication of impairment: a financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset. If any such indication exists, the asset's recoverable amount is estimated.

An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the Operating Cost Statement.

j. Other income

Other income is shown net of trade discount, Value Added Tax and other taxes. Contributions for licence fees, contributions from other government bodies and contributions and grants from other bodies (see note 3, 4 and 5) are treated as financing and credited to general reserve, in the same way as grant-in-aid referred to in 1g. Income is recognised in accordance with IAS 18.

k. Investments

Listed investments are shown at market value. Unrealised gains or losses arising as a result are included in the Statement of Change in Taxpayers Equity. Realised gains or losses are included in the Operating Cost Statement. Any investments the Directors intend to dispose within 12 months are included in current assets. Unlisted investments are shown at cost. Any surplus or temporary deficit on revaluation is taken to a revaluation reserve. Any permanent impairment in value is charged to the Operating Cost Statement in the year in which it arises.

l. Inventories

Livestock and consumable stores are included in the balance sheet at lower of cost or net realisable value.

m. Research and development

As a research organisation, all of the group's research and development expenditure is charged to the Operating Cost Statement when it is incurred.

n. Notional costs

In line with HM Treasury requirements, a notional interest charge is included in the accounts to reflect a charge for the use of capital in the business in the year, as the group has no specific interest bearing debt. In accordance with Treasury guidance, the calculation is based on a 3.5 per cent rate of return on average net assets employed (2008/09 = 3.5 per cent). Notional cost of capital charged during the period was £14,303,000 (2008/09 = £14,429,000).

o. Cash and cash equivalents

Cash and cash equivalents comprise cash balances and deposits which are repayable on demand.

p. Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated at the rates of exchange ruling at the balance sheet date. Transactions in foreign currencies are recorded at the rate ruling at the time of the transaction. All exchange differences are taken to the Operating Cost Statement.

q. Value Added Tax (VAT)

As the group is partially exempt for VAT purposes, all expenditure and fixed asset purchases are shown inclusive of VAT where applicable. Residual input tax reclaimable by the application of the partial exemption formula is taken to that Operating Cost Statement as a reduction of expenditure.

r. Pension costs

Employer superannuation costs are based on an actuarially derived calculation under IAS 19. See note 8d. The defined benefit plan requires contributions to be made to separately administered funds. The cost of providing benefits under the defined benefit plan is determined using the projected unit credit actuarial valuation method. Actuarial gains and losses are recognised as income or expense when the net cumulative unrecognised actuarial gains and losses at the end of the previous reporting year exceeded 10 per cent of the higher of the defined benefit obligation and the fair value of plan assets at that date. These gains or losses are recognised over the expected average remaining working lives of the employees participating in the plan.

The past service cost is recognised as an expense on a straight-line basis over the average period until the benefits become vested. If the benefits are already vested immediately following the introduction of, or changes to, a pension plan, past service cost is recognised immediately.

The defined benefit liability is the aggregate of the present value of the defined benefit obligation and actuarial gains and losses not recognised reduced by past service cost not yet recognised and the fair value of plan assets out of which the obligations are to be settled directly. If such aggregate is negative, the asset is measured at the lower of such aggregate or the aggregate of cumulative unrecognised net actuarial losses and past service cost and the present value of any economic benefits available in the form of refunds from the plan or reductions in the future contributions to the plan.

s. Early retirement costs

Compensation payments are provided for in the Operating Cost Statement. Obligations relating to those former members of staff aged 50 or over are provided for until their normal date of retirement.

Unwinding of discount: the provision for early retirement costs is discounted at 1.8 per cent (2008/09 2.2 per cent). The unwinding of the discount has been charged to the Operating Cost Statement.

t. Operating leases

Operating lease charges are recognised in the Operating Cost Statement on a straight line basis over the term of the lease.

u. Provisions

Provisions have been made in accordance with IAS 37 for MRC redundancy, decommissioning costs and system termination fees arising from the transition to the Shared Services Centre.

Provisions are recognised when it is probable that group will be required to settle a present obligation and a reliable estimate can be made of that obligation. The obligation is normally the amount that group would rationally pay to settle the obligation at the statement of financial position date or to transfer it to a third party at that time.

This may require estimating the future cash flows in current-year prices (i.e. at the price level prevailing in and, where the time value of money is material, discounting them at the standard public sector real rate set by HM Treasury).

v. Derivatives and other financial instruments

Due to the non-trading nature of its activities and the way in which the group is financed, the group is not exposed to the degree of financial risk faced by non-public sector entities. Moreover, financial instruments play a much more limited role in creating or changing risk than would be typical of the listed companies to which IAS 32, 39 and IFRS 7, mainly apply. The group has very limited powers to borrow or invest surplus funds and financial assets and liabilities are generated by day to day operational activities and are not held to change the risks facing the group in undertaking its activities.

Trade receivables are recognised and carried at original invoice amount less an allowance for any uncollective amounts. Provision is made when there is objective evidence that the group will not be able to collect certain debts. Bad debts are written off when identified. The amount of provision is the difference between the carrying amount and the recoverable amount and is recognised in the Operating Cost Statement.

Trade and other payables are recognised in the period in which related money, goods, or services are received or when a legally enforceable claim against the MRC is established or when the corresponding assets or expenses are recognised.

Receivables and payables which mature or become payable within 12 months from the balance sheet date have been omitted from the currency profile.

w. Grants payable

Research grants and fellowships are recognised in line with a schedule of pre-agreed payment profiles over the period of the grant duration and to the period which they relate.

x. Employee benefits

Short term employee benefits are recognised by group when an employee has rendered service in exchange for those benefits. Included in the financial statements is an accrual for the outstanding paid holiday entitlement at 31 March 2010 on a non-discounted basis.

y. Operating segments

An operating segment is a component of an entity that:

- engages in activities from which it may earn revenues or incur expenses (including revenues and expenses incurred internally),
- whose operating results are regularly reviewed by the entities' 'chief operating decision maker' to make decisions about resource allocation to the segment and to assess its performance, and
- for which discrete financial information is available.

Segments are reported if they exceed 10% of the thresholds of revenue, net expenditure level or assets.

z. Charitable funds

Included within reserves for 2009/10 are Charitable Funds. These have been included due to the consolidation of MRCT, which holds these funds. These funds are either subject to restrictions by the donor on their use or at the discretion of the Trustees of MRCT for the furtherance of the general objectives of the charity. They have been separately disclosed due to the restrictions over their use and they are therefore cannot be transferred for use by MRC.

aa. Significant estimation uncertainty

The preparation of the financial statements requires management to make estimates and assumptions that affect the application of policies and reported amounts. Estimates are continually evaluated and are based on historical experience and other factors including expectations of future events that are believed to be reasonable under the circumstances. Actual results may differ from these estimates. The estimates and assumptions which have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities are discussed below.

Deferred Income

The group receives funding for mainly collaborative projects to support the group's research. The majority of such funding is received from the UK public sector, medical charities, and from overseas via the European Commission (EC). Some of the funding may involve payment for the collaboration a number of years in advance of the accounting period to which it relates; such as is common with the EC. Where there is a variance between work done in the accounting period and received funding, income will be deferred.

Pension Costs

The determination of the pension cost and defined benefit obligation (liabilities) of the employer's pension scheme depends on the selection of certain assumptions which include the discount rate, inflation rate, salary growth, mortality rates and expected rate of return. See Note 8 for further details.

Property, Plant and Equipment

Property, plant and equipment lives have been estimated by management. Much of the asset stock is of a specialised nature, scientific equipment and buildings; lives have been based on managements' experience of productive use and these are sometimes at odds with the actual useful lives with the assets. Where there are material differences in the estimated lives of the assets, the assets are re-lived and accounted for accordingly.

ab. Judgements made in the process of applying accounting policies

The group's significant accounting policies are stated above. Not all of these policies require management to make difficult subjective or complex judgements. Those that follow are intended to provide an understanding of the policies that management consider critical because of the level of complexity and judgement involved in their application and their impact on the financial statements.

Intangible assets

Based on future discounted royalty income streams, estimates are subject to business uncertainty in terms of sales and the fluctuation of exchange rates, the most significant being sales in US dollars. Significant judgement has been required in assessing the impact of these variables. The policy has been judged to be compliant with IAS 38.

Investments

Management believe that adoption of IFRS does not change the boundary of its reporting relationship with subsidiary and joint venture investments detailed in Note 18 and that these correctly follow IAS 27 – subsidiaries, IAS 28 Associates and IAS 31 Joint Ventures.

Provisions for liabilities and charges

Estimates are subject to uncertainty regarding timing or amounts of obligations (legal or constructive) due by the group. Significant judgements are made regarding probability and measurement of obligations. These include redundancy and restructuring costs: timing, implementation; and disposal of (sealed) radioactive sources requiring the removal of radioactive substances by specialist suppliers.

Impairment of assets

Property, plant and equipment are included at recoverable amounts. Management assess whether assets retain their recoverable amount or whether the asset is impaired, suffering a permanent diminution in value. Judgements are made on obsolescence, damage and loss resulting from normal business operations, and changes in value as part of the annual review of property, plant and equipment.

Further details are given in Note 17.

Where those assets concern investments in joint ventures, consideration has also been given to the impact on service potential as a means of determining valuation detailed in Note 18.

2 Segmental information

Analysis of Group Net Expenditure by Business Segments

	Intramural	Extramural	Corporate	Technology transfer	Total
	2009/10	2009/10	2009/10	2009/10	2009/10
	£000	£000	£000	£000	£000
Expenditure					
Staff costs	148,221	2,700	25,767	5,824	182,512
Other operating costs	112,545	5,714	27,639	4,967	150,865
Research grants	540	245,943	-	-	246,483
Other research	-	38,340	-	-	38,340
Postgraduate/training awards	8,819	69,380	-	-	78,199
International subscriptions	-	17,812	-	-	17,812
Commercial activities	-	-	-	29,086	29,086
Amortisation of intangible assets	-	-	-	24,534	24,534
Depreciation of property, plant and equipment	21,243	-	102	1,090	22,435
Total operating expenditure	291,368	379,889	53,508	65,501	790,266
Income					
Release of deferred income on donated assets	(226)	-	-	-	(226)
Commercial activities	-	-	-	(81,114)	(81,114)
Other income	(14,151)	(2,703)	-	(1,125)	(17,979)
Total operating income	(14,377)	(2,703)	-	(82,239)	(99,319)
Net operating expenditure	276,991	377,186	53,508	(16,738)	690,947

2 Segmental information (continued)

Analysis of MRC Net Expenditure by Business Segments

	Intramural	Extramural	Corporate	Technology transfer	Total
	2009/10	2009/10	2009/10	2009/10	2009/10
	£000	£000	£000	£000	£000
Expenditure					
Staff costs	148,221	2,700	25,767	-	176,688
Other operating costs	112,545	5,714	27,639	-	145,898
Research grants	540	248,735	-	-	249,275
Other research	-	38,340	-	-	38,340
Postgraduate/training awards	8,819	69,380	-	-	78,199
International subscriptions	-	17,812	-	-	17,812
Commercial activities	-	-	-	29,086	29,086
Amortisation of intangible assets	-	-	-	19,348	19,348
Depreciation of property, plant and equipment	21,243	-	102	-	21,345
Total operating expenditure	291,368	382,681	53,508	48,434	775,991
Income					
Release of deferred income on donated assets	(226)	-	-	-	(226)
Commercial activities	-	-	-	(66,170)	(66,170)
Other income	(14,151)	(2,703)	-	-	(16,854)
Total operating income	(14,377)	(2,703)	-	(66,170)	(83,250)
Net operating expenditure	276,991	379,978	53,508	(17,736)	692,741

2 Segmental information (continued)

Analysis of Group Net Expenditure by Business Segments

	Intramural	Extramural	Corporate	Technology transfer	Total
	2008/09	2008/09	2008/09	2008/09	2008/09
	£000	£000	£000	£000	£000
Expenditure					
Staff costs	146,565	2,504	19,939	5,249	174,257
Other operating costs	110,452	3,660	21,781	4,705	140,598
Research grants	175	222,278	-	-	222,453
Other research	1	36,886	-	-	36,887
Postgraduate/training awards	8,297	59,649	-	-	67,946
International subscriptions	-	15,316	-	-	15,316
Commercial activities	-	-	-	31,517	31,517
Amortisation of intangible assets	-	-	-	29,901	29,901
Depreciation of property, plant and equipment	20,777	-	1,150	967	22,894
Impairment of tangible fixed asset	-	-	10,837	-	10,837
Total operating expenditure	286,267	340,293	53,707	72,339	752,606
Income					
Release of deferred income on donated assets	(151)	-	-	-	(151)
Commercial activities	-	-	-	(78,441)	(78,441)
Other income	(11,398)	(1,574)	-	(2,784)	(15,756)
Grant income	-	-	-	(2)	(2)
Total operating income	(11,549)	(1,574)	-	(81,227)	(94,350)
Net operating expenditure	274,718	338,719	53,707	(8,888)	658,256

Analysis of MRC Net Expenditure by Business Segments

	Intramural	Extramural	Corporate	Technology transfer	Total
	2008/09	2008/09	2008/09	2008/09	2008/09
	£000	£000	£000	£000	£000
Expenditure					
Staff costs	146,565	2,504	19,939	-	169,008
Other operating costs	110,452	3,660	21,781	-	135,893
Research grants	175	229,306	-	-	229,481
Other research	1	36,886	-	-	36,887
Postgraduate/training awards	8,297	59,649	-	-	67,946
International subscriptions	-	15,316	-	-	15,316
Commercial activities	-	-	-	31,517	31,517
Amortisation of intangible assets	-	-	-	21,802	21,802
Depreciation of property, plant and equipment	20,777	-	1,150	-	21,927
Impairment of property	-	-	10,837	-	10,837
Total operating expenditure	286,267	347,321	53,707	53,319	740,614

2 Segmental information (continued)

Analysis of MRC Net Expenditure by Business Segments (continued)

Income					
Release of deferred income on donated assets	(151)	-	-	-	(151)
Commercial activities	-	-	-	(66,423)	(66,423)
Other income	(11,398)	(1,574)	-	-	(12,972)
Total operating income	(11,549)	(1,574)	-	(66,423)	(79,546)
Net operating expenditure	274,718	345,747	53,707	(13,104)	661,068

Net expenditure by business segment is detailed above, these are the critical operating segments, consistent with International Financial Reporting Standard 8 (IFRS 8) – Operating Segment. The report mirrors the budgetary and operating components of management information used to make decisions about operating matters. Information regarding operating segments is provided as part of the monthly reporting information to senior management.

Intramural is defined as the group's own research units and institutes. Extramural comprises all research and special contribution grant support to higher education institutes and NHS trusts. Corporate comprises the group's Head Office and administrative functions outside of the intramural programme including all other non-capital expenditure which does not belong to any of the other segments. Technology transfer are activities devoted to the exploitation of the group's intellectual property.

Operating segments are detailed at a net expenditure level. Asset information is not routinely analysed at an operating segment level, but considered for the MRC as a whole. This is consistent with budgetary management.

3 Parliamentary grant-in-aid and contribution to licence fees

The grant-in-aid and contributions in respect of (Animal) Licence Fees of £300,000 are provided by BIS for the financial year 2009/10 (2008/09 £170,000). Grant-in-aid and animal licence fees received are treated as financing and credited directly to reserves.

	2009/10	2008/09
	£000	£000
Grant allocation received and credited to general reserve	631,077	643,000

4 Contributions from other government departments

GROUP AND MRC	2009/10	2008/09
	£000	£000
Department of Health	4,354	6,617
Department for International Development	6,000	6,281
NHS Executive	1,216	220
Foods Standards Agency	321	215
Scottish Government Health Directorates	404	546
Other	5,528	2,363
Total	17,823	16,242

5 Contributions and grants from other bodies

GROUP AND MRC	2009/10	2008/09
	£000	£000
Other research councils	9,645	5,876
Charities	14,869	14,865
Collaboration with industry	13,170	11,914
European Commission	7,152	7,357
World Health Organization	55	19
Human Frontiers Science Program	21	152
Health Authorities and NHS Trusts	4,447	1,753
Universities	1,988	8,480
Other	8,902	-
Total	60,249	50,416

6 Other income

	2009/10	2008/09	2009/10	2008/09
	£000	£000	£000	£000
	GROUP		MRC	
Sales and other income	17,979	15,756	16,854	12,972

The group's sales income is derived from laboratory and library services, as well as proceeds from sales of radioisotopes and other items.

7 Interest receivable

GROUP AND MRC	2009/10	2008/09
	£000	£000
Interest earned on the foreign currency accounts	4	55
Interest earned on the Sterling bank balances	20	417
Total	24	472

8 Staff costs

		2009/10	2008/09	2009/10	2008/09
	Notes	£000	£000	£000	£000
		GROUP		MRC	
Employee costs	8b	180,321	174,930	174,497	169,681
Non-permanent staff		6,892	6,749	6,892	6,749
Remuneration to the group and committee members	8C	886	526	886	526
Early retirement costs		376	(339)	376	(339)
Gross staff costs		188,475	181,866	182,651	176,617
Less commercial activities	14	(5,963)	(7,609)	(5,963)	(7,609)
Staff costs for general activities		182,512	174,257	176,688	169,008

8a. Staff numbers ⁽¹⁾

The average number of employees during the year was made up as follows

	2009/10	2008/09	2009/10	2008/09
	£000	£000	£000	£000
	GROUP		MRC	
Science	1,423	1,347	1,352	1,286
Research project support	903	887	903	887
Administration	611	587	573	555
Technical services	650	627	650	627
Locally employed staff (overseas)	1,183	1,212	1,183	1,212
Total	4,770	4,660	4,661	4,567

⁽¹⁾ Staff are shown on a full time equivalent basis

8b. Employee costs

		2009/10	2008/09	2009/10	2008/09
	Notes	£000	£000	£000	£000
		GROUP		MRC	
Salaries and wages		156,622	149,979	151,781	145,504
Social security costs		11,593	12,633	11,142	12,254
Other pension costs	8d	12,106	12,318	11,574	11,923
Total		180,321	174,930	174,497	169,681

8c. Remuneration to the group and committee members

	2009/10	2008/09
	£000	£000
Fees and honoraria	756	484
Social security costs	130	42
Total	886	526

8d. Other pension costs

	2009/10	2008/09	2009/10	2008/09
	£000	£000	£000	£000
	GROUP		MRC	
Current service costs (net of employee contributions relating to MRCPS)	12,106	12,318	11,492	11,903
Other schemes	-	-	82	20
Total	12,106	12,318	11,574	11,923

8e. MRCPS

The MRC operates a funded pension scheme (MRCPS) providing benefits based on service and final pensionable pay at the normal retirement age of 65. The scheme is a defined benefit scheme that prepares its own scheme statements. Benefits accrue at the rate of 1/80th of pensionable salary for each year of service. In addition a lump sum equivalent to three years' pension is payable on retirement. Members pay contributions of six per cent pensionable earnings in the principal section. In addition to the principal section, the supplementary benefits section exists to provide additional benefits in the event of ill-health retirement or death-in-service. It is solely funded by members' contributions.

The required MRCPS contribution rate is assessed every three years in accordance with advice of the Government Actuary; the present MRCPS employers' contribution rate is 11 per cent. The latest actuarial assessment of the MRCPS was at 31 December 2007 at which the market value of the assets of the MRCPS was £869m (2004 = £890m). The actuarial value of the assets was sufficient to cover 121 per cent of the benefits that had accrued to members after allowing for expected future increases in earnings. On a minimum funding requirement basis, the scheme is more than 120 per cent funded.

The valuation used for IAS 19 disclosures has been based on the data for the most recent actuarial valuations as at 31 December 2007, and updated to take account of the requirements of IAS 19 in order to assess the liabilities of the scheme at 31 March 2010. The mortality assumptions included within the figures are that male (female) members who retire at typical ages will live to approximately age 86 (88).

Financial assumptions used to calculate scheme liabilities	2009/10	2008/09
	%	£%
Rate of increase on pensionable salaries	4.20	4.50
Rate of increase on pension payments	2.70	3.00
Discount rate	5.50	6.70
Inflation rate	2.70	3.00
Expected return on equities	6.99	6.50
Expected return on bonds	4.49	4.00
Expected return on overall fund	6.71	6.17

Analysis of actuarial gain	2009/10	2008/09
	£000	£000
Actual return less expected return on pension scheme assets	196,084	(241,357)
Experience (gain)/loss arising on the scheme liabilities	(14,835)	55,596
Changes in assumptions underlying the present value of liabilities	(102,071)	46,839
Actuarial gain/(loss)	79,178	(138,922)

Analysis of actuarial gain expressed as a percentage of the scheme's assets and liabilities at the balance sheet date

	2009/10	2008/09	2007/08	2006/07	2005/06
	%	%	%	%	%
Actual return less expected return on pension scheme assets	23.29	(39.67)	(15.54)	4.16	14.37
Experience gain/(loss) arising on the scheme liabilities	1.90	(8.92)	(1.34)	(0.28)	0.47
Actuarial gain/(loss)	10.15	(22.28)	0.85	6.03	2.51

The assets and liabilities in the scheme

	2009/10	2008/09	2007/08	2006/07	2005/06
	£000	£000	£000	£000	£000
Assets					
Equities and property	747,898	524,508	706,634	771,978	696,566
Bonds and cash	94,109	83,878	89,378	87,565	76,210
	842,007	608,386	796,012	859,543	772,776
Actuarial value of liability	(780,084)	(623,391)	(678,204)	(759,055)	(726,957)
Surplus/(deficit) in scheme	61,923	(15,005)	117,808	100,488	45,819

The movements in the scheme surplus

	2009/10	2008/09
	£000	£000
Current service costs net of employee contributions (note 8d)	(11,574)	(11,923)
Employer contributions	13,554	11,097
Other finance (cost)/income	(4,230)	6,935
Actuarial gain/(loss)	79,178	(138,922)
Surplus/(deficit) at end of year	61,923	(15,005)

Other finance income

	2009/10	2008/09
	£000	£000
Expected return on pension scheme assets	37,537	53,731
Interest on pension scheme liabilities	(41,767)	(46,796)
Net return – other finance (cost)/income	(4,230)	6,935

Other schemes

The total superannuation contributions paid and recognised as an expense by the group in 2009/10 were £81,922. These amounts represent employers' contributions at 5 per cent for a small number of long-serving members of the National Health Service Superannuation scheme (NHSS).

The NHSS is a multi employer unfunded scheme, and the group is unable to identify its share of the underlying assets and liabilities on a consistent and reasonable basis and therefore, as required by IAS 19, accounts for the Scheme as if it were a defined contribution scheme. As a result, the amount charged to the Operating Cost Statement represents the contributions payable to the scheme in respect of the accounting period.

9 Other operating costs

GROUP AND MRC	2009/10	2008/09	2009/10	2008/09
	£000	£000	£000	£000
	GROUP		MRC	
Rent and rates	5,807	5,543	5,807	5,543
General maintenance, cleaning, heating and lighting	10,859	13,603	10,859	13,603
Maintenance of buildings	10,317	9,498	10,317	9,498
Office supplies, printing and stationery	3,518	3,287	3,518	3,287
Laboratory supplies	31,424	29,153	31,424	29,153
Management consultancy and other professional fees	18,832	16,433	18,832	16,433
RCUK activities	11,931	8,032	11,931	8,032
Postage and telephone	3,047	3,329	3,047	3,329
Audit fee	100	71	100	71
Travel, subsistence and hospitality	7,613	7,173	7,613	7,173
Computing	4,902	4,585	4,902	4,585
Equipment servicing	4,928	4,923	4,928	4,923
Minor equipment	3,039	3,078	3,039	3,078
Miscellaneous	20,686	21,071	22,393	22,487
Transport costs	532	671	532	671
Exchange rate gains	(709)	(1,005)	(709)	(1,005)
Bad debts (recovered)/charge	(13)	124	(13)	124
Governance costs	1,070	1,093	-	-
Charitable activities	5,604	5,028	-	-
Scanning services	5,375	4,776	5,375	4,776
Decommissioning costs	2,003	132	2,003	132
Total	150,865	140,598	145,898	135,893

10 Research grants

GROUP AND MRC	2009/10	2008/09	2009/10	2008/09
	£000	£000	£000	£000
	GROUP		MRC	
Research Grants	173,357	158,111	176,149	165,139
Centre Grants	17,565	14,659	17,565	14,659
Collaboration Grants	19,828	18,401	19,828	18,401
Discipline Hopping Awards	1,659	1,126	1,659	1,126
Link Award	142	44	142	44
New Investigator Award	9,492	8,077	9,492	8,077
Trial Grant	16,599	14,532	16,599	14,532
Other	7,841	7,503	7,841	7,503
Total	246,483	222,453	249,275	229,481

11 Other research

GROUP AND MRC	2009/10	2008/09
	£000	£000
Contribution to special research programme	38,340	36,887

12 Postgraduate/training awards

GROUP AND MRC	2009/10	2008/09
	£000	£000
Research studentships/advanced course studentships	31,876	27,727
Post-doctoral fellowships	46,323	40,219
Total	78,199	67,946

13 International subscriptions

GROUP AND MRC	2009/10	2008/09
	£000	£000
International Agency for Research on Cancer	835	746
European Molecular Biology Conference	2,391	1,967
European Molecular Biology Laboratory	13,439	11,506
Human Frontier Science Program	939	917
European Science Foundation	208	180
Total	17,812	15,316

14 Commercial activities

Notes	2009/10	2008/09	2009/10	2008/09
	£000	£000	£000	£000
	GROUP		MRC	
Income during the year	81,114	78,441	66,170	66,423
Expenditure during the year:				
– Staff costs	8 (5,963)	(7,609)	(5,963)	(7,609)
– Other expenditure	(23,123)	(23,908)	(23,123)	(23,908)
Total expenditure	(29,086)	(31,517)	(29,086)	(31,517)
Net income for the year	52,028	46,924	37,084	34,906

The group requires a financial return from successful commercial exploitation of original MRC research. Such income arises from royalties, equity stakes and other forms of receipts as a result of licensing agreements of group inventions and know-how.

Income and expenditure relating to commercial activities is credited and charged to the Operating Cost Statement, with its cumulative balance represented within the general reserve on the balance sheet.

15 Amounts payable to the Department for Business, Innovation and Skills⁽¹⁾

GROUP AND MRC		2009/10	2008/09
	Notes	£000	£000
Interest earned on the MRC's sterling bank balances	7	20	417
Excess income earned from commercial activities		14,968	17,222
Surrenderable to the Department for Business, Innovation and Skills		14,988	17,639

Interest earned on the group's sterling bank balances, together with any underspend for licence fees payable under the Animal Licence Act 1986, are surrendered to the consolidated fund through BIS. In July 2007 DIUS⁽¹⁾ notified the group that income from commercial activities would be capped during the period of the comprehensive spending review (2008/09 – 2010/11) and for 2009/10 the cap was set at £51.2m. The group regards the arrangement as a serious dis-incentivisation to scientists in advancing and disseminating knowledge and technology to improve the quality of life and economic competitiveness of the UK, a key part of our mission.

⁽¹⁾ The responsibilities of the Department for Innovation, Universities and Skills were passed to the new Department for Business, Innovation and Skills in June 2009.

16 Intangible assets

Intangible assets include patents and licences generated by the group's research and also software licences.

GROUP	Patents and Licences	Software Licences	Total
	£000	£000	£000
At cost or valuation			
At 1 April 2009	289,726	2,393	292,119
Additions	-	58	58
Disposals	-	(503)	(503)
Revaluation	(39,253)	-	(39,253)
31 March 2010	250,473	1,948	252,421
Amortisation			
At 1 April 2009	62,304	2,173	64,477
Charge for the year	24,334	200	24,534
Disposals	-	(503)	(503)
31 March 2010	86,638	1,870	88,508
Net book value			
31 March 2010	163,835	78	163,913
At 1 April 2009	227,422	220	227,642

16 Intangible assets (continued)

GROUP	Patents and Licences	Software Licences	Total
	£000	£000	£000
At cost or valuation			
At 1 April 2008	227,195	2,311	229,506
Additions	44,739	82	44,821
Revaluation	17,792	-	17,792
31 March 2009	289,726	2,393	292,119
Amortisation			
At 1 April 2008	32,644	1,932	34,576
Charge for the year	29,660	241	29,901
31 March 2009	62,304	2,173	64,477
Net book value			
31 March 2009	227,422	220	227,642
At 1 April 2008	194,551	379	194,930

MRC	Patents and Licences	Software Licences	Total
	£000	£000	£000
At cost or valuation			
At 1 April 2009	224,934	2,393	227,327
Additions	-	58	58
Disposals	-	(503)	(503)
Revaluation	(18,860)	-	(18,860)
31 March 2010	206,074	1,948	208,022
Amortisation			
At 1 April 2009	54,205	2,173	56,378
Charge for the year	19,148	200	19,348
Disposals	-	(503)	(503)
31 March 2010	73,353	1,870	75,223
Net book value			
31 March 2010	132,721	78	132,799
At 1 April 2009	170,729	220	170,949

16 Intangible assets (continued)

MRC	Patents and Licences	Software Licences	Total
	£000	£000	£000
At cost or valuation			
At 1 April 2008	207,142	2,311	209,453
Additions	-	82	82
Revaluation	17,792	-	17,792
31 March 2009	224,934	2,393	227,327
Amortisation			
At 1 April 2008	32,644	1,932	34,576
Charge for the year	21,561	241	21,802
31 March 2009	54,205	2,173	56,378
Net book value			
31 March 2009	170,729	220	170,949
At 1 April 2008	174,498	379	174,877

17 Property, plant and equipment

GROUP	Land and Buildings ⁽¹⁾	Assets under Construction ⁽²⁾	Equipment and Vehicles	Total
	£000	£000	£000	£000
At cost or valuation				
At 1 April 2009	480,450	110,867	212,243	803,560
Additions	5,481	53,130	20,513	79,124
Reclassification	9,054	(9,290)	236	-
Disposals	(937)	-	(34,450)	(35,387)
Impairment	-	-	-	-
Revaluation	(39,990)	-	4,699	(35,291)
31 March 2010	454,058	154,707	203,241	812,006
Depreciation				
At 1 April 2009	258,235	-	148,058	406,293
Provided during the year	8,784	-	13,651	22,435
Disposals	(268)	-	(33,322)	(33,590)
Revaluation	(14,476)	-	3,094	(11,382)
31 March 2010	252,275	-	131,481	383,756
Net book value				
As at 31 March 2010	201,783	154,707	71,760	428,250
At 1 April 2009	222,215	110,867	64,185	397,267

	2010	2009
	£000	£000
The net book value of land and buildings comprises:		
Freehold	45,373	71,170
Long leasehold	129,813	131,481
Short leasehold	26,597	19,564

17 Property, plant and equipment (continued)

⁽¹⁾ Property, plant and equipment include £28,120,183 in respect of freehold land which is not depreciated.

⁽²⁾ The seven UK research councils have agreed to establish a Shared Services Centre (SSC), to be based in Swindon. EPSRC is acting as 'host' for the SSC on behalf of all councils and has contracted for the development and establishment of RCUK SSC Ltd. £12.9m (2008/09 £10.2m) has been capitalised and included in Assets Under Construction as group's contribution towards capitalised systems expenditure.

Other significant assets included in Assets Under Construction are: £57.0m (2008/09 £52.4m) contribution towards the cost of the UK Centre for Medical Research and Innovation; £81.1m (2008/09 £38.4m) for the new building for the Laboratory of Molecular Biology.

The last professional revaluation of land and buildings in the UK was performed by Powis Hughes and Associates Chartered Surveyors, an independent valuer, at 1 December 2008. Professional revaluations of land and buildings at the group's Laboratories in The Gambia were also undertaken by the same valuers. Professional revaluation of land and buildings at its research unit in Uganda, are scheduled to be undertaken in 2010/11 by East African consultants. Land and buildings were valued in accordance with the Royal Institution of Chartered Surveyors Valuation Standards (6th Edition), the "Red Book" and are prepared either on Market Evidence or a Depreciated Replacement cost basis.

GROUP	Land and Buildings ⁽¹⁾	Assets under Construction ⁽²⁾	Equipment and Vehicles	Total
	£000	£000	£000	£000
At cost or valuation				
At 1 April 2008	384,715	105,234	191,001	680,950
Additions	5,065	41,362	20,042	66,469
Reclassification	31,783	(35,729)	3,946	-
Disposals	(964)	-	(9,213)	(10,177)
Impairment	(10,837)	-	-	(10,837)
Revaluation	71,321	-	6,467	77,788
31 March 2009	481,083	110,867	212,243	804,193
Depreciation				
At 1 April 2008	187,300	-	135,241	322,541
Provided during the year	8,280	-	14,614	22,894
Disposals	(555)	-	(8,569)	(9,124)
Revaluation	63,843	-	6,772	70,615
31 March 2009	258,868	-	148,058	406,926
Net book value				
As at 31 March 2009	222,215	110,867	64,185	397,267
At 1 April 2008	197,415	105,234	55,760	358,409

	2009	2008
	£000	£000
The net book value of land and buildings comprises:		
Freehold	71,170	67,876
Long leasehold	131,481	120,972
Short leasehold	19,564	8,567

⁽¹⁾ Property, plant and equipment include £44,097,018 in respect of freehold land which is not depreciated.

⁽²⁾ The seven UK councils have agreed to establish a Shared Services Centre (SSC), to be based in Swindon. EPSRC is acting as host for the SSC on behalf of all councils and has contracted for the development and establishment of RCUK SSC Ltd. £10.2m has been capitalised and included in Assets Under Construction as group's contribution towards capitalised systems expenditure.

During the professional revaluation the value of some of our land and buildings were significantly lower than their carrying value leading to a reduction in book value of £10,836,670 which was recognised in the Operating Cost Statement as an impairment.

17 Property, plant and equipment (continued)

MRC	Land and Buildings ⁽¹⁾	Assets under Construction ⁽²⁾	Equipment and Vehicles	Total
	£000	£000	£000	£000
At cost or valuation				
At 1 April 2009	475,111	110,867	207,605	793,583
Additions	4,670	53,130	20,072	77,872
Reclassification	9,054	(9,290)	236	-
Disposals	(937)	-	(33,893)	(34,830)
Revaluation	(39,990)	-	4,699	(35,291)
31 March 2009	447,908	154,707	198,719	801,334
Depreciation				
At 1 April 2010	258,083	-	145,926	404,009
Provided during the year	8,627	-	12,718	21,345
Disposals	(268)	-	(32,765)	(33,033)
Revaluation	(14,476)	-	3,094	(11,382)
31 March 2010	251,966	-	128,973	380,939
Net book value				
As at 31 March 2010	195,942	154,707	69,746	420,395
At 1 April 2009	217,028	110,867	61,679	389,574
			2010	2009
The net book value of land and buildings comprises:			£000	£000
Freehold			45,373	71,170
Long leasehold			123,972	126,294
Short leasehold			26,597	19,564

17 Property, plant and equipment (continued)

MRC	Land and Buildings ⁽¹⁾	Assets under Construction ⁽²⁾	Equipment and Vehicles	Total
	£000	£000	£000	£000
At cost or valuation				
At 1 April 2008	380,869	105,234	186,613	672,716
Additions	5,065	41,362	18,819	65,246
Reclassification	31,783	(35,729)	3,946	-
Disposals	(695)	-	(8,240)	(8,935)
Impairment	(10,837)	-	-	(10,837)
Revaluation	68,926	-	6,467	75,393
31 March 2009	475,111	110,867	207,605	793,583
Depreciation				
At 1 April 2008	186,379	-	132,974	319,353
Provided during the year	8,142	-	13,785	21,927
Disposals	(281)	-	(7,605)	(7,886)
Revaluation	63,843	-	6,772	70,615
31 March 2009	258,083	-	145,926	404,009
Net book value				
As at 31 March 2009	217,028	110,867	61,679	389,574
At 1 April 2008	194,490	105,234	53,639	353,363
			2009	2008
The net book value of land and buildings comprises:			£000	£000
Freehold			71,170	67,876
Long leasehold			126,294	118,047
Short leasehold			19,564	8,567

18 Financial Assets

GROUP INVESTMENTS	Joint venture RCUK SSC Ltd	Other investments	Total
	£000	£000	£000
As at 1 April 2009	2,131	3,129	5,260
Additions	-	2,989	2,989
Disposals	-	(2,627)	(2,627)
Share of losses during the year	(504)	-	(504)
Revaluation	-	1,184	1,184
As at 31 March 2010	1,627	4,675	6,302
As at 1 April 2008	-	4,383	4,383
Additions	2,131	1,199	3,330
Disposals	-	(1,436)	(1,436)
Revaluation	-	(1,017)	(1,017)
As at 31 March 2009	2,131	3,129	5,260

MRC INVESTMENTS	Joint venture RCUK SSC Ltd	Other investments	Total
	£000	£000	£000
As at 1 April 2009	2,131	919	3,050
Share of losses during the year	(504)	-	(504)
Revaluation	-	595	595
As at 31 March 2010	1,627	1,514	3,141
As at 1 April 2008	-	1,446	1,446
Additions	2,131	-	2,131
Revaluation	-	(527)	(527)
As at 31 March 2009	2,131	919	3,050

18a Subsidiaries

MRC Technology Ltd

Medical Research Council Technologies (MRCT) is a company limited by guarantee with charitable status whose principal activity is the management, development and exploitation of the group's intellectual property assets, including its valuable patent rights associated with the production of monoclonal antibodies. It acts as the group's agents in these matters. The charity is governed by a board of trustees, appointments are made by the MRC. The three members are MRC officers and therefore as MRC exerts control over MRCT its results have been consolidated into those of the group.

The operating results, assets and liabilities of MRCT are reflected in MRC's financial statements in accordance with IAS 27. The aggregate amount of capital and reserves at 31 March 2010 was £34,319,000 (2009 - £26,604,000) and the profit for the year was £6,980,000 (2009 - £10,914,000).

18b Joint Ventures

RCUK Shared Services Centre Limited

The seven research councils, working together as Research Councils UK (RCUK) have agreed to establish a Shared Services Centre (SSC). Based in Swindon, RCUK Shared Services Centre Ltd will provide finance, grants, human resources, information systems, procurement and payroll operational services to each of the research councils and their institutes. The research councils are setting up the SSC with the aim of reducing spending through sharing and standardising processes.

The investment has been classified as a joint venture between the research councils with the MRC's individual shareholding being 26.98 per cent. In 2007/08, the seven research councils each acquired an A share, carrying a vote per share. B shares convey ownership rights to the holder, including any distributions or proceeds from sale of the SSC. RCUK Shared Services Centre Ltd was incorporated on 1 August 2007 and has been operating a shared service centre, delivering services to the research councils, since May 2008. For the period ending 31 March 2010, the audited financial statements for the company show a loss of £0.5m (2008/09 = £1.4m) against a turnover of £64.8m (2008/09 = £25.8m). The balance sheet total is £5.2m represented by £7.9m share capital issued to the research councils and £2.7m retained loss.

	A shares	B shares	Total
	£	£	£
As 1 April 2009	1	2,131,420	2,131,421
Share of losses during the year	1	(503,605)	(503,605)
At 31 March 2010	1	1,627,815	1,627,816
As 1 April 2008	1	-	1
Additions	-	2,131,420	2,131,420
As at 31 March 2009	1	2,131,420	2,131,421

The losses sustained by the SSC have arisen as a result of a conscious decision not to charge the research councils depreciation. MRC do not consider the service potential to be impaired as a result of this decision and have valued the shares at purchase price, this is consistent with the IAS 36 Impairment of Assets. The research councils have agreed to share the costs and the group's agreed share is 26.98 per cent. Those costs have been accounted for in the group's books as £12.9m (2008/09 = £10.2m) as assets in the course of construction and £5.7m (2008/09 = £5.6m) as expenses.

During the year to 31 March 2010, group purchased services to the value of £7.5m (2008/09 = £5.3m) from RCUK Shared Services Centre Ltd (RCUK SSC Ltd) and provided services to RCUK SSC Ltd to a value of £3.7m (2008/09 = £3.1m). As at 31 March 2010, the group was owed £1.4m and owed £4.7m to RCUK SSC Ltd.

Hammersmith Imanet Limited

The group holds 25 per cent of the ordinary shares of the company whose deficits were valued at £1,886,000 at 31 December 2009. The profit and loss account for the period then ended recorded a loss of £130,000 (2008/09 = £289,000 loss). Hammersmith Imanet Ltd was originally a joint venture with Amersham plc. In 2004, Amersham plc was acquired by the American firm General Electric (GE) and incorporated into the GE Healthcare business segment. The joint venture agreement provides for the provision of scanning services in order to support the PET imaging programmes of the MRC Clinical Sciences Centre. In consideration for this service the group agrees to pay £4,990,000 (VAT inclusive), per year, adjusted for inflation in future years, for a contract period 1 April 2006 to 31 March 2011. During the year to 31 March 2010, this amounted to £5,335,369 (2008/09 = £5,203,799).

The investment in Hammersmith Imanet Ltd is shown at nil to reflect the group's share of the company's net liabilities at 31 March 2010.

18c Other investments

	Number of shares held	Holding	Market value at 31 March 2010
		%	£000
Quoted			
Galapagos NV (Belgium)	59,919	0.47	587
Vectura (formerly Innovata plc)	58,357	0.04	27
Natus Medical Inc (USA)	7,066	0.04	74
Sangamo Biosciences Inc (USA)	165,255	0.54	589
Topo Targets A/S (Denmark)	113,916	0.28	66
Vernalis plc	310,392	0.14	171
Total			1,514

At the close of business on 31 March 2010 the price per share of group's shareholdings listed on the London stock exchange, the AIM, the Nasdaq and the Danish Stock Exchange were as follows:

Galapagos NV	€11.20
Vectura (formerly Innovata plc)	47p
Natus Medical Inc	\$15.91
Sangamo Biosciences Inc	\$5.42
Topo Targets A/S	DKK 4.93
Vernalis plc	55p

Private unquoted	Number of shares held
ASM Scientific Ltd	27,000
Anaptys Biosciences Inc.	9,000
Avidis S.A.	594
CM Therapeutics Ltd	93,600
Bicycle Therapeutics Ltd	72,059
D-Gen Ltd	13,162
Eductus Ltd	6,400
Oxxon Therapeutics Ltd	10,332
Rain Dance Technologies Inc	200,000
Senexis Ltd	10
Heptares Therapeutics Limited	609,577
RCUK Shared Services Centre Ltd A Shares (note 18a)	1
RCUK Shared Services Centre Ltd B Shares (note 18a)	2,131,420
UKCMRI Construction Limited (note 27)	1

These companies with the exception of RCUK and UKCMRI represent the group's interest in enterprises engaged in the commercial development of group inventions and know how. These equity positions were received in return for company access to the group's intellectual property.

19 Inventories

GROUP AND MRC	2010	2009	2008
	£000	£000	£000
Consumable stores and livestock	2,435	2,687	2,351

20 Trade and other receivables

GROUP	2010	2009	2008
	£000	£000	£000
Trade receivables	13,160	14,590	9,546
Less provisions for bad debts	(16)	(25)	(78)
	13,144	14,565	9,468
Other receivables	3,291	1,145	1,310
Accrued income	27,660	32,540	22,566
Prepayments	17,931	17,021	10,798
Total	62,026	65,271	44,142

MRC	2010	2009	2008
	£000	£000	£000
Trade receivables	15,297	15,546	9,731
Less provisions for bad debts	(16)	(25)	(78)
	15,281	15,521	9,653
Other receivables	3,289	1,145	1,302
Accrued income	27,660	32,540	22,566
Prepayments	14,732	11,939	7,034
Total	60,962	61,145	40,555

Intra-government balances

At the end of the year, the group had receivable balances with other government bodies totalling £684k (2008/09 = £1,768k; 2007/08 = £2,154k) comprising the following: Government Agencies £52k (2008/09 = £795k; 2007/08 = £1,349k), Local Authorities £6k (2008/09 = £0; 2007/08 = £69k), NHS Trusts and Hospitals £626k (2008/09 = £946k; 2007/08 = £736k).

21 Trade and other payables

GROUP	2010	2009	2008
	£000	£000	£000
Due within 1 year			
Trade payables	78,004	70,221	60,047
Accruals	107,674	89,898	117,092
Taxation and social security	4,486	4,064	3,514
Income received in advance	29,640	25,802	21,101
Others	16,036	25,688	5,689
Total	235,840	215,673	207,443

MRC	2010	2009	2008
	£000	£000	£000
Due within 1 year			
Trade payables	88,285	72,077	63,221
Accruals	106,044	88,194	116,302
Taxation and social security	3,435	4,049	3,322
Income received in advance	29,640	25,802	14,645
Others	16,036	25,688	5,689
Total	243,440	215,810	203,179

Intra-government balances

At the end of the year, the group had payable balances with other government bodies totalling £1k (2008/09 = £71k; 2007/08 = £94k) comprising the following: Government Agencies £0k (2008/09 = £18k; 2007/08 = £52k), NHS Trusts and Hospitals £0k (2008/09 = £2k; 2007/08 = £41k), Local Authorities £1k (2008/09 = £51k; 2007/08 = £1k).

22 Provisions for liabilities and charges

GROUP AND MRC	Early retirements compensation scheme ⁽¹⁾	Redundancy costs	Other costs	Total provisions
	£000	£000	£000	£000
At 1 April 2009	5,961	1,222	682	7,865
Amount provided in year	576	269	-	845
Amount expended in year	(1,771)	(884)	(99)	(2,754)
At 31 March 2010	4,766	607	583	5,956
Provisions due within 1 year	1,471	-	-	1,471
Provisions due between 1 and 5 years	2,881	607	583	4,071
Provisions due between 6 and 10 years	414	-	-	414
At 31 March 2010	4,766	607	583	5,956
At 1 April 2008	7,978	1,784	3,777	13,539
Amount provided in year	131	298	-	429
Amount expended in year	(2,148)	(860)	(3,095)	(6,103)
At 31 March 2009	5,961	1,222	682	7,865
Provisions due within 1 year	1,765	-	-	1,765
Provisions due between 1 and 5 years	3,612	1,222	682	5,516
Provisions due between 6 and 10 years	584	-	-	584
At 31 March 2009	5,961	1,222	682	7,865

⁽¹⁾ Early retirement represents the group's liability for compensation payments up to the year 2021. The payments previously included within payables are now re-classified as provisions.

Early retirement compensation scheme

There are two categories of early retirement: compulsory and flexible. Both are applicable to all members of staff but different terms apply depending on whether the staff member is under or over age 50. (For staff joining from April 2007 onwards minimum retirement age is 55).

Aged 50 or over: Annual compensation payments are made, equivalent to enhanced pension benefits, from the date of early retirement to normal retirement date. In the case of compulsory retirement only, there is also a lump sum compensation payment of up to six months salary.

Methods of early retirement: compulsory retirement is imposed where a redundancy situation is identified following either a management review of support services or quinquennial peer review of the science, and redeployment to other MRC work is not possible.

Flexible early retirement is voluntary and is available at the invitation of management on grounds of limited efficiency or structure.

Redundancy Costs

This is the provision for RCUK Shared Services Centre Ltd £607,091 (2008/09 = £864,513). There was also a provision for restructuring at the Clinical Sciences Centre in London of £357,000 in 2008/09.

Other

These include provisions for the disposal of High Activity Sealed Sources being used in some units, £423,000 (2008/09 = £479,000); and to the RCUK Shared Services Centre Ltd £160,276 (2008/09 = £203,359).

22 Provisions for liabilities and charges (continued)

RCUK SSC Costs

The research councils and RCUK SSC Ltd are in the process of developing a Shared Services Centre to carry out the central functions of human resources, finance, procurement and Information Technology across the councils. As a result some research councils will incur redundancy costs, particularly where existing staff live a distance away from Swindon where the SSC will be situated.

The research councils have collectively agreed that they will be jointly liable for necessary redundancies. The councils calculated their likely redundancy liabilities in order to make a 2008/09 provision which has been updated for movements during 2009/10. A funding allocation model was developed and agreed by all the research councils and this identified the proportion of SSC project spend and liability that each individual council would incur. The total provision for redundancies has been apportioned using this model. The table below shows, for each council, the amount that they need to provide for redundancies of their own staff. The MRC will incur a cost for terminating their existing systems, and these costs are also being shared. It then notes the proportion of the total liability it will incur and the amount of provision that it represents. The figure below this denotes the contributions that an individual council has from the other research councils. The bottom line shows the net provision that has been recorded in each council's accounts.

SSC redundancy cost and system termination provisions allocation

	AHRC	BBSRC	ESRC	EPSRC	MRC	NERC	STFC	SSC	Total
	£000	£000	£000	£000	£000	£000	£000	£000	£000
Opening provision required for the council's own redundancies	68	431	-	-	1,276	909	520	-	3,204
Opening provision required for system termination fee	-	-	-	-	754	-	-	-	754
Opening total provision	68	431	-	-	2,030	909	520	-	3,958
Net movement in provisions	14	23	-	-	(468)	(337)	(520)	174	(1,114)
Requested total provision before sharing	82	454	-	-	1,562	572	-	174	2,844
% of liability to be borne by each council	1.33%	20.54%	1.83%	8.24%	26.98%	20.54%	20.54%	0%	100%
Provision required to be borne by each council	39	584	52	234	767	584	584	-	2,844

23 Cash and cash equivalents

GROUP	2010	2009	2008
	£000	£000	£000
Balance at 1 April	53,243	40,959	263,492
Net change in cash and cash equivalent balances	(8,164)	12,284	(222,532)
Balance at 31 March	45,079	53,243	40,960
The following balances were held at commercial banks and cash in hand	45,079	53,243	40,960

MRC	2010	2009	2008
	£000	£000	£000
Balance at 1 April	40,805	35,543	255,574
Net change in cash and cash equivalent balances	(10,366)	5,262	(220,031)
Balance at 31 March	30,439	40,805	35,543
The following balances were held at commercial banks and cash in hand	30,439	40,805	35,543

24 Contingent liabilities

There were no contingent liabilities during the year.

25 Commitments

Capital

The group had estimated future commitments to capital expenditure, which had been contracted but not provided for at the balance sheet date of £160,368,316 (2008/09 = £217,058,385) comprising the following: MRC LMB £130,945,599, UKCMRI £18,000,000, MRC Clinical Sciences Centre £8,400,000, and RCUK Shared Services Centre £9,689,321.

Research awards

Forward commitments on research awards:	£000
2010 – 2011	317,181
2011 – 2012	251,985
2012 – 2013	166,414
2013 – 2016	178,317

26 Related party transactions

The MRC is a non-departmental public body sponsored by BIS. For the purposes of International Accounting Standard 24, BIS is regarded as a related party. During the year, the group has had various material transactions with BIS and other bodies for which BIS is regarded as the parent department; namely the Biotechnology and Biological Sciences Research Council, the Engineering and Physical Sciences Research Council, the Economic and Social Research Council and the RCUK Shared Services Centre Ltd.

The group provides administrative services to the Trustees of two registered charities, The Medical Research Foundation and The Fleming Memorial Fund for Medical Research, which are therefore regarded as related party transactions. The group provided free resources to the charities in respect of administration, to the value of to the value of £153,000. Two of the Trustees who manage the charities are nominated by the group.

During the year, the following material transactions with the group, board and committee members took place in respect of awards funded by the group.

Name	Number of awards	Value (£)	Name	Number of awards	Value (£)
Professor D Ala Aldeen	1	938,928	Professor M Leach	2	97,656
Professor R R Ali	1	537,076	Professor P Liddle	1	2,056,176
Professor D Altmann	1	154,384	Professor D Lomas	1	1,797,040
Professor D J Balding	1	542,620	Professor S Lovestone	1	427,124
Professor J C Baron	1	599,580	Professor P Luzio	1	1,520,896
Professor S Bloom	1	735,828	Professor L Macaskie	1	102,336
Professor M Boots	1	49,992	Professor P Martin	1	583,100
Professor J Brazier	3	774,678	Professor P Matthews	1	600,008
Professor A Briggs	1	152,884	Professor Sir A McMichael	1	10,000,052
Professor I Buchan	2	1,184,864	Professor G D Murray	1	116,128
Dr A O Cathain	1	236,508	Professor A North	1	608,276
Professor D Cohen	1	1,041,460	Professor D Nutt	2	2,145,508
Professor P J Diggle	1	402,340	Professor L Piddock	1	136,872
Professor A Dominiczak	1	383,516	Professor J Popay	1	685,844
Professor C Donaldson	1	487,184	Professor S Radford	1	965,456
Professor G Dunn	2	1,046,072	Professor C A Sabin	1	1,876,924
Professor M Fitzgerald	1	1,609,432	Professor P A G Sandercock	1	116,128
Professor K Fox	1	1,213,148	Professor B J Sahakian	1	536,876
Professor G J Graham	1	1,736,600	Professor M Sculpher	1	351,372
Professor A P Grieve	1	408,016	Professor D T Shima	1	454,496
Dr R Gunn	1	399,320	Professor R Smith	2	581,894
Professor D Higgs	1	10,000,052	Dr N J C Strachan	1	49,956
Professor J Hill	1	1,871,544	Mr I R White	2	662,548
Professor S Holgate	1	2,158,616	Professor M Woolhouse	1	49,971
Professor P G Ince	1	1,597,144	Professor B Wren	1	49,998
Dr J Langhorne	1	161,216	Dr X Yuan	1	101,800

26 Related party transaction (continued)

Research Organisation	Number of awards	Value (£000)
Cardiff University	8	4,260
Professor A Clarke	Professor K Fox	Professor D Kipling
Professor B Duerden	Professor K Graham	Professor J Williams
Cardiff University	1	670
Professor M Zambon		
Imperial College London	33	19,830
Professor D Altmann	Professor M Feldmann	Professor C Kennard
Professor D Ashby	Professor N Ferguson	Professor M D Schneider
Professor P Ashton-Rickardt	Professor J S Friedland	Professor G R Screatton
Professor D J Balding	Dr R Gunn	Professor M Wilins Shaunak
Professor S Bloom	Professor S E Harding	
King's College London	24	19,200
Professor D Armstrong	Professor F Kelly	Professor P J J Parker
Professor G Bates	Professor S Lovestone	Professor J Pearson
Professor S J Bevan	Professor M H Malim	Professor S H Sacks
Professor P Blower	Professor I Mason	Professor A Tinker
Professor A O Grieve	Professor M Morgan	
London School of Hygiene & Tropical Medicine	10	5,470
Professor V Berridge	Professor S Lindsay	Professor J Whittaker
Professor Sir A Haines	Professor M Petticrew	Professor B Wren
Professor D A Leon	Professor R Smith	
Newcastle University	9	52,960
Dr M Carroll	Professor B Keavney	Professor J Mathers
Professor C P Day	Dr D Lydall	Professor J N Matthews
Professor C Donaldson	Professor S Marshall	Professor A Thiele
Professor J Goodship		
Oxford Radcliffe Hospitals NHS Trust	1	90
Professor B McCormack		
Queen Mary	9	3,260
Professor J Gribben	Professor N Lemoine	Professor T MacDonald
Queen's University Belfast	3	10,101
Dr G Fleming	Professor B Hannigan	Professor P Johnston
The Beatson Institute for Cancer Research	1	210
Dr R Insall	Professor H Leung	
The University of Manchester	20	11,570
Professor T Attwood	Professor K Herholz	Dr M Rattray
Professor I Buchan	Professor K E Kadler	Professor D Ray
Professor J Davis	Professor C Kielty	Professor C Streuli
Professor S Downes	Professor J Nazroo	Dr X Yuan
Professor G Dunn	Professor A North	
University of Aberdeen	6	2,330
Professor M Campbell	Professor R F Elliott	Dr N J C Strachan
University of Birmingham	15	9,530
Professor D Adams	Professor J Frampton	Professor P Moss
Professor A Ahmed	Professor J Lord	Professor L Piddock
Professor J Deeks	Professor L Macaskie	

26 Related party transaction (continued)

Research Organisation		Number of awards	Value (£000)
University of Brighton		1	390
Dr D Britt			
University of Bristol		1	390
Professor P Martin	Professor T Peters	Professor D Wraith	
Professor C Orchard	Professor N Scolding		
University of Cambridge		25	16,540
Dr J Ahringer	Professor T Green	Professor P Luzio	
Dr P Barker	Professor K Khaw	Professor S O'Rahilly	
Professor M Brown	Professor D Lomas	Professor B J Sahakian	
Professor A C Ferguson-Smith			
University College London		49	33,450
Professor R Ali	Professor M Fitzgerald	Professor C Sabin	
Dr A J Bain	Professor S H Gilliespie	Dr P Sonnenberg	
Professor S Caddick	Professor A Johnson	Professor A Steptoe	
Professor C Carey	Professor C Dezateux	Professor G Rees	
University of Dundee		7	4,740
Professor D Cantrell	Professor V Entwistle	Professor J Frearson	
Professor M Chaplain	Professor A H Fairlamb		
University of East Anglia		2	280
Professor M Mugford	Professor D Russell		
University of Edinburgh		23	16,970
Professor J Clark	Professor G D Murray	Professor M Shipston	
Professor C French-Constant		Professor D Price	
Dr P Warner	Professor J R Seckl	Professor M Woolhouse	
University of Exeter		1	50
Dr S Hinchliffe			
University of Glasgow		14	9,520
Professor A Briggs	Dr M Girolami	Professor I B McInnes	
Professor J Cooper	Professor G J Graham	Professor J P Pell	
Professor A Dominiczak			
University of Lancaster		2	1,050
Professor P J Diggie	Professor J Popay	Mr R Wilson	
Dr F Meashame			
University of Leeds		13	5,380
Professor M J P Arthur	Professor J Colyer	Professor S Radford	
University of Leicester		3	940
Professor M Dixon-Woods	Professor R Quiroga	Professor A Sutton	
University of Liverpool		4	2,980
Professor M Begon	Professor P Trayhurn	Professor P Weightman	
Professor P Salmon			
University of Nottingham		11	6,950
Professor D Ala Aldeen	Professor S Hill	Professor H F Sewell	
Professor I P Hall	Professor P Liddle	Professor S J B Tandler	

26 Related party transaction (continued)

Research Organisation		Number of awards	Value (£000)
University of Oxford		26	18,460
Dr P Borrow	Professor J Gedes	Professor X Lu	
Professor B Davis	Professor C Godfrey	Professor Sir A McMichael	
Professor J Endicott	Professor V Gouverneur	Professor I Tracy	
Professor R Fitzpatrick	Professor H Higgs	Professor I Travey	
Professor C Garland	Professor C Kennard		
University of Reading		2	970
Professor I Jones	Professor P Lansley		
University of Sheffield		10	4,510
Professor P Andrews	Dr A O Cathain	Professor G Mountain	
Professor J Brazier	Professor D Crossman	Professor J P Nicholl	
Professor M Boots	Professor P G Ince		
University of Southampton		6	3,880
Dr K Gerard	Professor S Holgate	Professor K Temple	
University of St Andrews		1	330
Professor V Brown			
University of Strathclyde		2	1,330
Professor G Gettinby	Dr D A Greenhalgh		
University of Sussex		1	5,170
Dr S Elbe			
University of Warwick		2	760
Professor J Dunn	Professor S Weich	Professor E Wellington	
Professor S Thornton			
University of York		2	550
Professor S E Gathercole	Professor I Greer	Professor M Sculpher	
Professor H Graham	Professor E Roman	Professor D Smith	

26 Related party transaction (continued)

Related Undertakings

There are a number of companies with whom the group have related undertakings. These are detailed below.

UK Biobank Limited

UK Biobank Limited is a company limited by guarantee and a registered charity. It is a major UK medical research initiative, with the aim of improving the prevention, diagnosis and treatment of a wide range of serious and life-threatening illnesses – including cancer, heart diseases, diabetes, arthritis and forms of dementia. The group is one of the two members of the company, along with the Wellcome Trust and is one of the prime funders of the organisation. UK Biobank Limited is a related party of the group. As the group is one of nine trustees that manage Biobank and it is a charity, the group is not able to exert any control and so the company is not consolidated in these accounts and its transactions with UK Biobank are expensed as grant payments. Grants payment by the group to UK Biobank Limited during 2009/10 were £6,108,118 (2008/09 = £6,554,165). There were no outstanding balances to / from UK Biobank Limited at the end of the year, or the prior year.

UKCMRI Limited (SPV) and UKCMRI Construction Limited (Conco)

To deliver the proposed UK Centre for Medical Research and Innovation the MRC, in partnership with Cancer Research UK, UCL and the Wellcome Trust, will set up a special purpose vehicle (SPV) to be known as UKCMRI Ltd, this entity will allow the delivery of the scientific aims of the joint venture. Currently UKCMRI Ltd is a shell company to be activated upon successful completion of the agreement with the other partners; this agreement will be enshrined in a Joint Venture Arrangement (JVA) between the four partners.

UKCMRI Construction Limited (Conco) is a company owned by the four partners and along with other partners the group holds one £1 share. Conco is a design and build vehicle and viewed by group as the device to enable all construction works in advance of the creation of the SPV. Conco is a related party of the group.

Post JVA and activation of the SPV, there will be a design and build contract between Conco and UKCMRI Ltd who will own Conco, the group's investment in the SPV will be represented by shares; at that point the group will consider its relationship with the SPV. However in 2009/10 prior to the creation of the SPV the group believe their investment is best represented as a fixed asset under construction and shown as property plant and equipment in the Statement of Financial Position. Accordingly we have not consolidated the results of Conco.

During the year the group made loan payments of £8,481,304 (2008/09 £7,505,580) as part of its funding agreement with UKCMRI and the other partners. As at 31 March 2010, the group was owed £15,986,884 and owed £427,585 (2008/09 = £117,427) to UKCMRI.

Markready Ltd

Markready Ltd is a company limited by guarantee, of which the group are one of four members the others being the Wellcome Trust, Oxford and Cambridge Universities. It was created specifically to oversee and secure the breeding and supply of high quality rhesus macaques to the UK academic community for carefully justified biomedical research, and establish an internationally recognised centre of excellence in primate welfare and care that will provide a resource centre for the academic community and an example of contemporary best practice.

Support is provided through grant mechanisms. Markready Ltd was established to ensure that each of the original partners was closely involved in securing the aims regarding ethics and breeding and standards of animal welfare. It is a special purpose entity where the relationship between the members is such that the substance of the relationship is not one of control. Accordingly it has not been consolidated into these accounts, with transactions being expensed through the Operating Cost Statement.

In 2009/10 the value of transactions between ourselves and Markready amounted to income from Markready £3.8m; deficit funding to Markready (MRC grant) £2.9m, goods and services provided to Markready by the group £2.2m; accrued income from Markready £1.0m.

27 Financial Instruments and Derivatives

IFRS 7, Financial Instruments: Disclosures, requires disclosure of the role which financial instruments have had during the period in creating or changing the risks the group faces in undertaking its activities. Specifically: (a) the significance of financial instruments affecting financial position and performance; and (b) the nature and extent of risks arising from financial instruments to which it is exposed. Because of the largely non-trading nature of its activities and the way it is financed, the MRC is not exposed to the degree of financial risk faced by businesses. Moreover, financial instruments play a limited role in creating or changing risk on its operational activities.

Liquidity risk

The group's net revenue resource requirements are largely funded by the grant-in-aid from its sponsor department. The capital expenditure is also financed through the grant-in-aid. The group is therefore not exposed to significant liquidity risks.

Interest rate risk

The group has a low level of exposure to interest rate fluctuations; it does not actively seek to invest cash in money markets. Any excess funds held outside of HM Paymaster General banking framework, which could attract interest, are maintained in low level current accounting arrangements, as part of its banking arrangements with Lloyds Banking Group.

Foreign currency risk

The group maintains US dollar and Euro bank accounts in order to deal with day-to day transactions. There is a risk attached to holding foreign currency denominations but this is not considered to be material.

The group also holds certain balances in overseas bank accounts to help manage day-to-day business transactions of its overseas operations. During the year end, the average monthly float levels were £1,054,170 (2008/09 = £1,016,000).

Foreign Currency Balances

Amount	As at 31 March 2010	As at 31 March 2009
USD 5,878,099	£3,527,864	£1,194,767
Euro 10,264,121	£8,394,651	£3,565,898

A 5 per cent (10 per cent) \pm movement in exchange rates would equate to £624,513, (£1,192,252), such events would have minimal impact on group's resources. In 2008/09 the corresponding amounts were £190,476 (£363,636).

Receivables and creditor risk

Financial assets and liabilities are held at fair value and changes in values are recognised in the Operating Cost Statement. The fair value of the group's financial assets and liabilities are equivalent to the carrying amount unless stated above. The group has limited powers to borrow or invest funds; financial assets and liabilities are generated by day-to-day operational activities and are not held to change the risks facing the group in undertaking its activities. Of current outstanding trade debt less than 7 per cent is greater than 30 days old (2008/09: 7 per cent).

28 Events after the reporting period

IAS 10 events after the balance sheet requires the disclosure on the date on which the financial statements were authorised for issue and who gave that authorisation. The accounts were authorised for issue by the Accounting Officer on 15 March 2011. The financial statements do not reflect events after this date.

Weatherall Institute for Molecular Medicine

On 1 April 2010 the group and Oxford University entered into a Strategic Alliance to support the further development of the Weatherall Institute for Molecular Medicine (WIMM) as an internationally competitive institute of translational medicine over the next decade. As part of the newly integrated institute, two MRC units – the MRC Human Immunology Unit and the MRC Molecular Haematology Unit – were transferred to Oxford University administration, creating two MRC ‘university units’ within the WIMM. This involved the transfer of 96 MRC staff from the two Units and assets with a net book value of £3.8m in support of the Strategic Alliance, marking the creation of the MRC’s first two University managed “University Units”.

Markready Ltd

The concern over security, public relations and anonymity considered important at the time of establishment of Markready Ltd have lessened with the passage of time. The existence of Markready Ltd as a company has come to be seen by all four partners as an unnecessary complication. Agreement was reached amongst the four members that it should be wound up, and ownership and management of the centre transferred to the MRC.

The concern over security, public relations reasons and anonymity considered important at the time of establishment of Markready Ltd, have lessened with the passage of time. The existence of Markready Ltd as a company has come to be seen by all four partners as an unnecessary complication. Agreement was reached amongst the four members that it should be wound up, and ownership and management of the centre transferred to the group.

UK Centre for Medical Research and Innovation

The MRC, Cancer Research UK, the Wellcome Trust and UCL (University College London) signed a Joint Venture Agreement on 9th November which established UKCMRI as a charity limited by shares subject to the agreement of the Charity Commission.

29 First time adoption of IFRS

This is the first year that the Council has presented its Financial Statements under IFRS.

The accounting policies set out in Note 1 have been applied in preparing the Financial Statements for the year ended 31 March 2010, the comparative information presented in these Financial Statements for the year ended 31 March 2009 and in the preparation of the opening IFRS Statement of Financial Position at 1 April 2008.

The following tables show how the MRC’s previously published financial position at 1 April 2008 and 31 March 2009, and its 2008-09 financial performance and cash flows produced under UK Accounting Standards have been adjusted to arrive at the equivalent figures produced under International Accounting Standards. The tables do not show the consolidated position as this has not been previously reported.

29 First time adoption of IFRS (continued)

Reconciliation of MRC Statement of Financial Position as at 1 April 2008

	MRC 2007-08 under UK GAAP	IAS 37	IAS 19, IAS 38	MRC 2007-08 under IFRS
	£000	£000	£000	£000
Non-current assets				
Intangible assets	174,498	-	379	174,877
Property, plant and equipment	353,742	-	(379)	353,363
Investment in Joint Venture	-	-	-	-
Financial assets	1,446	-	-	1,446
Total non-current assets	529,686	-	-	529,686
Current assets				
Inventories	2,351	-	-	2,351
Trade and other receivables	40,555	-	-	40,555
Cash and cash equivalents	35,543	-	-	35,543
Total current assets	78,449	-	-	78,449
Current liabilities				
Trade and other payables	(203,901)	2,207	(1,485)	(203,179)
Provisions falling due within a year	-	(2,444)	-	(2,444)
Total current liabilities	(203,901)	(237)	(1,485)	(205,623)
Total assets less current liabilities	404,234	(237)	(1,485)	402,512
Non-current liabilities				
Trade and other payables	(5,771)	5,771	-	-
Provisions	(5,561)	(5,534)	-	(11,095)
Pension (liability)/asset	117,808	-	-	117,808
Total non-current liabilities	106,476	237	-	106,713
Assets less liabilities	510,710	-	(1,485)	509,225
Equity				
Revaluation reserve	70,622	-	-	70,622
Intellectual property reserve	174,498	-	-	174,498
Donated asset reserve	760	-	-	760
Pension reserve	117,808	-	-	117,808
General reserve	147,022	-	(1,485)	145,537
Total government funds	510,710	-	(1,485)	509,225

29 First time adoption of IFRS (continued)

Reconciliation of MRC Statement of Financial Position as at 31 March 2009

	MRC 2008-09 under UK GAAP	IAS 37	IAS 19, IAS 38	IAS 36	MRC 2008-09 under IFRS
	£000	£000	£000	£000	£000
Non-current assets					
Intangible assets	170,729	-	220	-	170,949
Property, plant and equipment	389,794	-	(220)	-	389,574
Investment in Joint Venture ⁽¹⁾	2,131	-	-	-	2,131
Financial assets ⁽¹⁾	919	-	-	-	919
Total non-current assets	563,573	-	-	-	563,573
Current assets					
Inventories	2,687	-	-	-	2,687
Trade and other receivables	61,145	-	-	-	61,145
Cash and cash equivalents	40,805	-	-	-	40,805
Total current assets	104,637	-	-	-	104,637
Current liabilities					
Trade and other payables	1,765	(3,825)	(2,060)	-	(215,810)
Provisions falling due within a year	(1,765)	-	(1,765)	-	(1,765)
Total current liabilities	(213,750)	-	(3,825)	-	(217,575)
Total assets less current liabilities	454,460	-	(3,825)	-	450,635
Non-current liabilities					
Trade and other payables	(4,196)	4,196	-	-	-
Provisions	(1,904)	(4,196)	-	-	(6,100)
Pension liability	(15,005)	-	-	-	(15,005)
Total non-current liabilities	(21,105)	-	-	-	(21,105)
Assets less liabilities	433,355	-	(3,825)	-	429,530
Equity					
Revaluation reserve	60,432	-	-	9,520	69,952
Intellectual property reserve	170,729	-	-	-	170,729
Donated asset reserve	766	-	-	-	766
Pension reserve	(15,005)	-	-	-	(15,005)
General reserve	216,433	-	(3,825)	(9,520)	203,088
Total government funds	433,355	-	(3,825)	-	429,530

⁽¹⁾ In UK GAAP accounts these lines are combined into £3,050,000 on the Investments line.

29 First time adoption of IFRS (continued)

Reconciliation of MRC Operating Cost Statement for the year ended 31 March 2009

	MRC 2008-09 under UK GAAP	IAS 19, IAS 38	IAS 36	MRC 2008-09 under IFRS
	£000	£000	£000	£000
Expenditure				
Staff costs	166,668	2,340	-	169,008
Other operating costs	135,893	-	-	135,893
Research grants	229,481	-	-	229,481
Other research	36,887	-	-	36,887
Postgraduate/training awards	67,946	-	-	67,946
International subscriptions	15,316	-	-	15,316
Commercial activities	31,517	-	-	31,517
Amortisation of intangible assets	21,561	241	-	21,802
Depreciation of property, plant and equipment	22,168	(241)	-	21,927
Impairment of property, plant and equipment	1,317	-	9,520	10,837
Total operating expenditure	728,754	2,340	9,520	740,614
Income				
Release of deferred income on donated asset	151	-	-	151
Commercial activities	66,423	-	-	66,423
Other income	12,972	-	-	12,972
Grant income	-	-	-	-
Total operating income	(79,546)	-	-	(79,546)
Net operating expenditure	649,208	2,340	9,520	661,068
Interest receivable	(472)	-	-	(472)
Notional cost of capital	14,429	-	-	14,429
Amount payable to the Department for Business, Innovation and Skills	17,639	-	-	17,639
Other finance cost/(income)	(6,935)	-	-	(6,935)
Unwinding of discount on provisions	469	-	-	469
Loss on disposal of property, plant and equipment	879	-	-	879
Share of losses of Joint Venture	-	-	-	-
Minority Interest	-	-	-	-
Net expenditure for the year	675,217	2,340	9,520	687,077
Reversal of notional cost of capital	(14,429)	-	-	(14,429)
Net expenditure for the year after reversal of notional cost of capital	660,788	2,340	9,520	672,648

29 First time adoption of IFRS (continued)

Reconciliation of MRC net expenditure for the year ended 31 March 2009

	£000
Net expenditure for the year under UK GAAP	(675,217)
IAS 19 adjustment	(2,340)
IAS 38 adjustment	(9,520)
Net operating cost for 2009/2010 under IFRS	(687,077)

Restatement of MRC total reserves on transition to IFRS

	Revaluation reserve	Intellectual property reserve	Donated asset reserve	Pension reserve	General reserve	Total reserves
	£000	£000	£000	£000	£000	£000
UK GAAP as at 1 April 2008	70,622	174,498	760	117,808	147,022	510,710
IAS 36	-	-	-	-	(1,485)	(1,485)
IAS 19	-	-	-	-	-	-
IFRS as at 1 April 2008	70,622	174,498	760	117,808	145,537	509,225
UK GAAP as at 31 March 2009	60,432	170,729	766	(15,005)	216,433	433,355
IAS 38	9,520	-	-	-	(9,520)	-
IAS 19	-	-	-	-	(3,825)	(3,825)
IFRS as at 31 March 2009	69,952	170,729	766	(15,005)	203,088	429,530

29 First time adoption of IFRS (continued)

Reconciliation of MRC Statement of Cash Flows for the year ended 31 March 2009

	MRC 2008-09 under IFRS	IAS 19	IAS 36	MRC 2008-09 under IFRS
	£000	£000	£000	£000
Cash flow from operating activities				
Net operating expenditure	(649,208)	(2,340)	(9,520)	(661,068)
Depreciation charge	22,168	(241)	-	21,927
Amortisation charge	21,561	241	-	21,802
Impairment of property, plant and equipment	1,317	-	9,520	10,837
Other non-cash items – IAS 19 pension costs	826	-	-	826
Unwinding of discount provisions	(469)	-	-	(469)
Release of deferred income	(151)	-	-	(151)
Decrease in provision for liabilities and charges	(3,657)	-	-	(3,657)
(Increase) in inventories	(336)	-	-	(336)
(Increase) in trade and other receivables	(20,590)	-	-	(20,590)
Increase in trade and other payables	31,598	2,340	-	33,938
Net cash outflow from operating activities	(596,941)	-	-	(596,941)
Cash flow from investing activities				
Interest received	472	-	-	472
Payments to the Department for Business, Innovation and Skills	(417)	-	-	(417)
Receipts from sale of tangible fixed assets	168	-	-	168
Payments to acquire Property, Plant and Equipment and investments	(108,005)	-	-	(108,005)
Net cash outflow from investing activities	(107,782)	-	-	(107,782)
Net cash outflow before financing	(704,723)	-	-	(704,723)
Cash flows from financing activities				
Grant-in-aid received	643,000	-	-	643,000
Other capital funding received	157	-	-	157
Contributions from other government departments	16,242	-	-	16,242
Contributions from grants from other bodies	50,416	-	-	50,416
Net cash inflow from financing activities	709,985	-	-	709,985
Increase in cash and cash equivalents	5,262	-	-	5,262
Cash and cash equivalents at the beginning of the period	35,543	-	-	35,543
Cash and cash equivalents at the end of the period	40,805	-	-	40,805

29 First time adoption of IFRS (continued)

Explanation of IFRS adjustments

IAS 19 Employee benefits

The Council has made a provision for accrued holiday pay of £1,485,000 as at 1 April 2008 as required by IAS 19. This provision has been recognised at the transition date and has reduced net assets by £1,485,000 at 1 April 2008. At 31 March 2009 the provision has been increased to £3,825,000, increasing the net expenditure for 2008/09 and reducing the net assets at 31 March 2009 by £2,340,000.

IAS 36 Impairment of assets

Under UK GAAP where the impairment of an asset is expected to reverse in the medium term, the fall in value is taken to the revaluation reserve and reported through the Statement of recognised gains and losses. Under IAS 36, the impairment is reported in the Operating Cost Statement and not the Revaluation reserve. The impairment recognised by the Council for the year ended 31 March 2009 was £9,520,000. This has increased the net expenditure for 2008/09. This has reduced the General reserve and increased the Revaluation reserve as at 31 March 2009 by this amount.

IAS 37 Provisions, contingent liabilities and contingent assets

The Council has transferred the compensation payments in relation to early retirement costs from payables to provisions. Early retirement costs represent the MRC's liability for compensation payments up to the year 2021.

This is because under IFRS they more accurately meet the definition of a provision. A provision is a liability of uncertain timing or amount. The liability results from a present obligation arising from a past event, which is expected to result in the outflow of the MRC's resources. As there is uncertainty over the amounts payable these costs have been reclassified into provisions.

There is no impact upon the net assets.

IAS 38 Intangible assets

Under UK GAAP, software costs were carried as tangible non-current assets within property, plant and equipment. Under IAS 38, software that is not an integral component of related computer hardware is categorised as an intangible non-current asset. The Council has reclassified software costs of £379,000 as intangible assets at 1 April 2008 and £220,000 at 31 March 2009 and £241,000 of depreciation has been reclassified as amortisation for the year ended 31 March 2009. There is no impact upon net assets.

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