





# Medical Research Council (MRC)

## Annual Report and Accounts 2003/04

Presented to Parliament by the Secretary of State, and by the Comptroller and Auditor General in pursuance of Schedule 1, Sections 2(2) and 3 (3) of the Science and Technology Act 1965.

Sir Anthony Cleaver  
Chairman

Professor Colin Blakemore  
Deputy Chairman and Chief Executive

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## The MRC

The Medical Research Council (MRC) was originally set up in 1913 to administer public funds provided for medical research. It was incorporated under its present title by Royal Charter in 1920. A supplemental charter was granted in 1993 describing the MRC's new mission following the 1993 Government White Paper on Science and Technology. The MRC's Royal Charter and Mission were amended in July 2003. The MRC receives an annual grant-in-aid from Parliament through the Office of Science and Technology (OST) and funds from other sources including government departments, international agencies, industry and medical research charities.

**The MRC Mission statement (in its shortened form) from July 2003 is to:**

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

## MRC Council members 2003/04

**Sir Anthony Cleaver**

*Chairman*

**Professor Colin Blakemore \***

*Deputy Chairman and Chief Executive*

**Dr David Armstrong \*\***

*King's College London*

**Dr E Mac Armstrong**

*Scottish Executive Health Department*

**Sir William Castell**

*Amersham plc*

**Professor Kay Davies**

*University of Oxford*

**Professor Dick Denton**

*University of Bristol*

**Dr Peter Fellner**

*Vernalis plc*

**Mr Derek Flint**

*Non-executive Director of Alliance & Leicester Insurance plc*

**Dr Ruth Hall**

*The National Assembly for Wales*

**Dr Chris Henshall**

*Office of Science and Technology observer*

**Professor Ian MacLennan**

*University of Birmingham*

**Professor Alan North**

*University of Sheffield*

**Professor Sir John Pattison**

*Department of Health*

**Professor Geneva Richardson**

*Queen Mary and Westfield College,  
University of London*

**Professor Nancy Rothwell**

*University of Manchester*

**Professor John Savill**

*University of Edinburgh*

\* New member appointed 1 October 2003

\*\* New member appointed 1 August 2003

### Outgoing membership:

**Professor Sir George Radda \***

*Deputy Chairman and Chief Executive*

**Professor Raymond Fitzpatrick \*\***

*University of Oxford*

\* Appointment ended on 30 September 2003

\*\* Appointment ended on 31 July 2003

# Contents

<b>Foreword from the Chairman and the Chief Executive</b>	2
<b>Executive summary</b>	4
<b>Research</b>	6
Scientific aims and objectives	6
Spending Review priorities	7
Major research developments and partnerships	8
Cross-cutting initiatives	14
International	15
Supporting research excellence	16
Publication output indicators	20
<b>Investment in people</b>	22
Human resources	22
Training	23
<b>Technology transfer</b>	26
MRC Technology	26
Technology transfer indicators	28
<b>Communication</b>	30
<b>Operational</b>	34
Good research practice and ethics	34
Effective business practice	36
<b>Financial summary</b>	42
<b>Annual Accounts 2003/04</b>	45

This report relates to the MRC's activities from 1 April 2003 to 31 March 2004. A selection of outstanding achievements by MRC scientists during the year are highlighted in the MRC Annual Review 2003/04. Our website at [www.mrc.ac.uk](http://www.mrc.ac.uk) provides more detailed information about MRC activities and electronic versions of MRC publications.

## Foreword from the Chairman and the Chief Executive



**Sir Anthony Cleaver**  
*Chairman*



**Professor Colin Blakemore**  
*Deputy Chairman and Chief Executive*

With the arrival of a new Chief Executive, 2003/04 has been a year of transition, review and renewal. But it has also been one of ongoing development, and when taking forward our mission to improve human health we have been careful to build on the strengths that have made the MRC a world leader in medical research. This year brought further international recognition of the MRC's track record. For example, the worldwide celebrations of the fiftieth anniversary of Watson and Crick's elucidation of the structure of DNA, and Sir Peter Mansfield's Nobel Prize for his pioneering work on magnetic resonance imaging.

Listening and responding to Government, the scientific community and the wider public was integral to our planning in 2003/04. The public funds the MRC's work, so its opinions about medical research and health-related issues are very important to us. We are continually seeking ways to increase public involvement in our work, and our Consumer Liaison Group has been renamed the Advisory Group on Public Involvement to reflect this. In 2003/04 the MRC received a warm welcome at a series of roadshows hosted by universities active in medical research, at which we canvassed the scientific community's views about MRC funding schemes. Their valuable feedback influenced the major revision of our funding schemes and procedures in February 2003.

We have streamlined our grants system to create fewer, simpler, and more flexible schemes. They cater for researchers at all stages of their careers, and will make it easier for us to fund research in partnership with other organisations. We have also introduced measures to simplify the peer-review

process, speed up grant processing, and 'smooth' our funding from year to year. And to reflect the MRC's strategic focus on clinical research, the Physiological Medicine and Infections Research Board has been reconfigured to create a Physiological Systems and Clinical Sciences Board, and a separate board covering Infections and Immunity. We will now monitor the new arrangements and continue to invite user feedback so that we can make any necessary refinements.

When drawing up the roadmap for our major infrastructure capital investments over the next 10-15 years, we set up a Task Force to draw up proposals for the MRC's National Institute for Medical Research (NIMR). It comprised MRC Council members, independent experts from the UK and abroad and senior NIMR scientists. Their interim report recommended that a renewed national institute, built around a core of current NIMR science, should be located in London. The MRC's Council will consider the Task Force's final recommendations in July 2004. Other major investments included the launch of a new £4m epidemiology initiative centred on obesity, diabetes and osteoporosis research in Cambridge, and the UK Stem Cell Bank that we set up in partnership with the Biotechnology and Biological Sciences Research Council.

This year we took a fresh look at MRC's support for clinical trials. We are actively seeking increased investment in clinical research, with a focus on translating basic research into benefits for patients. To do this we will need more researchers, increased funding for clinical research, and more effective ways to translate research findings into medical practice and

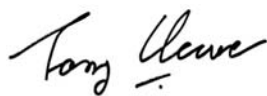
healthcare policy. These are the key components of our 2004 Spending Review bid. Our priorities were echoed in influential reports published this year by the Academy of Medical Sciences and the Biosciences Innovation and Growth Team.

The Government's Research for Patient Benefit Working Party recognised the MRC's key role in clinical research, and we will be centrally involved in the UK Clinical Research Collaboration, which is bringing together clinicians, hospitals, industry and the voluntary sector to accelerate translational research and increase patient participation.

Technology transfer is a crucial step in the journey from lab to clinic. Our dedicated technology transfer arm – MRC Technology (MRCT) – has made impressive progress in exploiting intellectual property arising from MRC-funded research. It has generated £60m in licensing income over the last four years, and a growing roster of MRC start-up companies that produce a steady stream of innovative healthcare products. In 2003 we launched a new Development Gap scheme to fund further research to develop MRC discoveries with commercial potential, and appointed an experienced biotechnology entrepreneur, Dr Roberto Solari, as MRCT Chief Executive in January.

We are encouraged by Chancellor Gordon Brown's budget announcement of a cash injection for medical research over the next four years, and will be working even more closely with the Government and the Health Departments to address national health priorities in the years ahead. As a new chapter in the MRC's long history unfolds, we have much cause for optimism. We look forward to bringing you news of our progress in next year's report.

Chairman



Deputy Chairman and Chief Executive





# Executive summary

## Support for research

- The MRC spent £235.6m (£209.1m resource and £26.5m capital) on its own research centres.
- The MRC's total spend on grants for research in universities and teaching hospitals was £180.2m, including training awards for post-graduate students and fellows.
- The MRC launched six new grant schemes to replace the current twelve. The new schemes provide more flexibility for all applicants in terms of size and length of grants, and increased support for researchers at the beginning of their careers.

## Partnerships

- The UK Stem Cell Bank (funded by the MRC and the Biotechnology and Biological Sciences Research Council) was officially opened.
- The MRC has continued to work with the Wellcome Trust and the Department of Health to develop the jointly funded UK Biobank initiative and to consult with various stakeholders.
- The MRC has worked on a clinical bid for SR2004 within Research Councils UK. It will establish a sub-group, the Clinical Research Advisory Group, to help shape the MRC's future strategy and position in clinical research. The MRC has also agreed to host the executive team of the new UK Clinical Research Collaboration.

## People

- The MRC currently employs more than 4,000 staff, working both in the UK and overseas.
- It has initiated the Investors in People assessment process.
- The MRC made 77 new fellowship awards at a cost of £24.4m in 2003/04, and currently supports about 1,200 research studentships in universities and MRC institutes and units.

## Technology transfer

- Exploitation income was maintained at the high level of a little over £15m (£15.04 compared to £15.11 in 2002/03).
- Twenty-eight new patent applications were filed and 26 new licensing agreements were completed.

## Communication

- Our newsletter, *MRC Network*, continued to keep stakeholders up-to-date with the MRC's activities during 2003/04.
- The fiftieth anniversary of the discovery of the structure of DNA by MRC-funded researchers was a key theme during 2003.
- We rolled out a refreshed corporate identity throughout the MRC.

## Operational

- The MRC continued to provide ethical guidance to researchers and to make input to relevant government bills and regulations.
- The MRC successfully transferred responsibility for corporate IT systems to a new managed service provider, LogicaCMG. The MRC and LogicaCMG partnership is called Auris.
- MRC has worked towards procurement of a new financial and accounting management system (FAMIS), due to be launched in June 2004.

## Finance

- The MRC's Domestic Expenditure Limit for 2003/04 was £399.6m. The 2002 Spending Review increased MRC baseline funding by £1.4m.
- The MRC's total expenditure for 2003/04 was £449.6m.



# Research

## The Science Budget research objectives are:

1. To continue to improve the excellence relevance and impact of the knowledge created from Research Council-funded programmes.
2. To increase research capability and international competitiveness of the UK in new strategic areas.
3. To increase the dynamism of and flexibility of Research Council programmes to respond to changing requirements and opportunities, and to support effectively multi-disciplinary research, new researchers and higher risk research proposals.
4. To maintain access for scientists working in the UK to the necessary major facilities, databases and supporting laboratory infrastructure that will enable them to deliver world-class research.

## Scientific aims and objectives

### Strategic Plan 1999/2003

2003/04 was the final year for implementation of the MRC Strategic Plan 1999/2003. A new Strategic Plan for the next four years – 2004 to 2007 – was prepared and approved.

In developing its scientific strategy, the MRC draws on inputs from key stakeholders and takes account of the areas of greatest scientific opportunity and the issues of primary importance to health. We also take into account imperatives to establish critical mass in priority areas, to maintain a reasonable and balanced research capacity across the full range of health issues, and to support innovation and new approaches.

### MRC Strategic Plan 2004/07

The MRC's future strategic aims have been developed in consultation with stakeholders and with reference to the mission enshrined in the MRC Charter and the objectives set out in the Government's Science Budget allocations for 2003/04 to 2005/06. They are also intended to contribute to achieving the Office of Science and Technology (OST) Public Service Agreement target of improving the relative international performance of the UK's science and engineering base; exploitation of the UK science base; and the innovation performance of the UK economy. Our strategic aims from 1 April 2004 are to:

- Invest in **high-quality research** relating to human health.
- Attract and train **first-rate people** to meet scientific and broader UK labour needs.
- Fund **partnerships** and promote collaboration.
- Promote the transfer of **research into practice**, including dissemination of information, provision of scientific advice and contribution to health service policy and practice.
- Encourage **commercial exploitation** for the benefit of national health and wealth.
- **Engage the public** in medical research and its wider implications for society and for health.
- Provide **leadership in the governance** of research and operate according to rigorous principles.
- Promote good practice, and strive for improvements in **effective organisation**, including appropriate methods for the evaluation of aspects of performance.

## Spending Review priorities

### Spending Review 2002 (SR2002)

Progress with each Spending Review initiative is reported under the relevant scientific area in **Major research developments and partnerships** (page 8); MRC spend on each initiative is listed below for information.

Initiative	MRC spend during 2003/04	Explanatory text for key activities during 2003/04
<b>SR 2002 specific initiatives</b>		
• Genomics	£21.5m	Genetics, molecular structure and dynamics (page 8)
• e-Science	None <sup>1</sup>	Genetics, molecular structure and dynamics (page 9)
• Basic technology	£1.4m	Genetics, molecular structure and dynamics (page 9)
• Stem cells	£14.5m	Cell biology, development and growth (page 9), International/collaborations (page 15)
• Brain science	£5.0m	Neuroscience and mental health (page 12)
<b>Roberts Review</b>	£0.7m	Investment in People (Training section, page 23)

1. A call for proposals was issued in 2003; awards were made in 2004 for spend in 2004/05 from the £13.1m allocation and will be covered in next year's Annual Report.

### Spending Review 2004 (SR2004)

SR2004 will cover the period 2005/06 to 2007/08, though the Government has indicated that there will be no new money for 2005/06 as this is the final year of the previous Spending Review period, SR2002. During the year, the MRC worked closely with the other Research Councils (RCs), through Research Councils UK (RCUK), to develop cross-Council proposals for submission to OST as input to the SR2004 process. This involved extensive consultation with the RCs' stakeholders. Eight cross-Council themes were presented. The MRC was either the lead RC, or expected to play a significant part, in the following six:

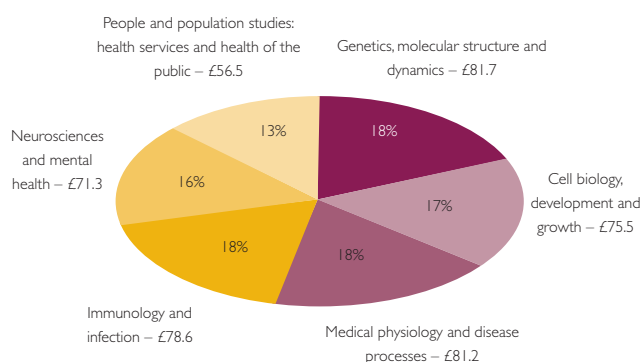
Theme	Lead RC	
Infectious Disease	MRC	In addition, the MRC submitted requests for additional funds to continue two of the cross-Council programmes funded under SR2002:
Changing Ourselves	Economic and Social Research Council (ESRC)	
Creativity and Innovation	Arts and Humanities Research Board	• Brain science.
Personal and National Security	Engineering and Physical Sciences Research Council (EPSRC)	• Stem cells/Regenerative medicine.
Scales of Complexity	EPSRC	Later in the year, the RCs were invited to submit 'single Council' proposals. The MRC submitted:
Systems Biology: Understanding life processes	Biotechnology and Biological Sciences Research Council (BBSRC)	• Accelerating Research for Patient Benefit (clinical and translational research).
		• National Centre for the Replacement, Refinement and Reduction of Animals in Research (jointly with the BBSRC).
		The announcement of the Science Vote is expected in July, but the allocations to individual RCs are not expected to be announced until early 2005.

## Major research developments and partnerships

Partnership working with other organisations, both bilaterally and in consortia, is a key element of all the MRC's work. This section highlights new and ongoing partnerships with other RCs, government departments and research charities, and shows how they are contributing to the MRC's research objectives. The examples are listed under the six broad scientific areas that the MRC currently uses to classify its research, with a separate category to cover cross-cutting initiatives (page 14). Industrial partnerships are covered in **Technology transfer** (page 26), and joint communications activities in **Communication** (page 30).

The breakdown of MRC expenditure by scientific area is shown in Figure 1 below:

Figure 1: Spend by six scientific areas (estimated gross spend in 2003/04) - £m and %



This is the last year that MRC spend will be reported against these six scientific areas. From 1 April 2004 it will be reported against five areas corresponding to the five research boards that will operate from that date: Health Services and Public Health Research Board (HSPHRB); Infections and Immunity Board (IIB); Molecular and Cellular Medicine Board (MCMB); Neuroscience and Mental Health Board (NMHB); and Physiological Systems and Clinical Sciences Board (PSCSB).

### Genetics, molecular structure and dynamics

#### Estimated gross spend in 2003/04 – £81.7m

Research in this area aims to characterise the fundamental processes of life and the origins of disease at the molecular level. The work ranges from basic studies of gene and protein structure and function, to investigating the regulation of gene

activity, the effects of genetic variation and mutation, and ultimately unravelling the complex interactions between the many gene products that coordinate biological processes. Studies of yeast, the nematode worm, fruit flies and mice, which share many genetic similarities with humans, are helping to throw light on human biology and to provide experimental models of human disease. Genetic information from donated human sample collections and powerful new data-management tools are enabling scientists to investigate how genes, lifestyle and the environment interact to maintain health and cause disease. The area also encompasses the MRC's investments in resources underpinning basic and clinical gene-based research, such as DNA collections and facilities supporting mouse genetics research. Developments this year include:

**The UK Biobank:** the MRC has continued to work with the Wellcome Trust and the Health Departments (HDs) to develop the management structure for the jointly funded UK Biobank initiative and to consult with various stakeholders. The focus this year has been on developing the ethical and governance framework and on completing legal requirements for establishing the company. More information can be found on the UK Biobank website – [www.biobank.ac.uk/](http://www.biobank.ac.uk/).

The funders of UK Biobank have undertaken to establish an Ethics and Governance Council to independently safeguard the project's ethics and governance framework and to advise the board of directors on how well the UK Biobank's activities conform to this framework and to the interests of participants and the public. The Ethics and Governance Council will be appointed in the summer of 2004 by the MRC and the Wellcome Trust on the advice of an appointments committee chaired by the Reverend Dr John Polkinghorne.

From 2004/05 the UK Biobank will be part of the HSPHRB portfolio.

**Structural biology/structural genomics:** plans for a research complex alongside the new synchrotron (DIAMOND) were developed in partnership with other RCs. The facilities will ensure that biomedical, biological, and physical scientists in the UK are able to fully exploit the opportunities that DIAMOND will offer. Construction plans have been delayed due to lack of capital funds – the building is expected to be completed by 2009. The MRC has convened and will chair a cross-Council coordinating group to take the work forward. The MRC's plans that the research complex should include support for high-throughput protein production, crystallisation and analysis had to be reconsidered during the year due to lack of funds. The MRC will review the Phase I Protein Production Facility in Autumn 2004.

**Bioinformatics:** Bioinformatics Forum partners agreed funding for a scoping project for networking/archiving in August 2003. There was a call for tenders (deadline December 2003) with the aim of starting the project in May 2004.

**UK DNA banking network:** the MRC has established a UK DNA banking network to provide access to samples and secure storage for UK DNA collections funded under the MRC's initiative in 2000. The partners in the DNA bank are the MRC geneservice (Cambridge), the Centre for Integrated Genomic Medical Research (University of Manchester) and the European Collection of Cell Cultures (Porton Down). The partners will also conduct pilot studies to improve cell transformation and studies to improve whole genome amplification and genotyping technology evaluation. The operation of the network is being overseen by an independent advisory committee which will advise DNA banks on operational, procedural and ethical matters.

**e-Science initiative:** the MRC continued to work with the core e-Science programme and other RCs to ensure a coordinated approach to the UK initiative. The MRC was allocated £8m for e-Science by SR2000: 18 awards and contributions have been made at a total cost to the MRC of £8.1m. Funds leveraged from other agencies (the BBSRC, the Particle Physics and Astronomy Research Council (PPARC), the core e-Science programme, the Department of Health (DoH) and the Department of Trade and Industry (DTI) towards these awards provided a further £1.1m, bringing the total awarded to £9.2m. The MRC also organised a jointly funded health informatics workshop with the BBSRC, the EPSRC, the core e-Science programme, the DoH and the DTI.

The framework for a call for proposals to grid clinical trials was developed by the MRC, refined during a workshop with key stakeholders (including the DoH and clinicians), and issued during 2003. Applicants have been invited to join together to develop single high-quality grids and awards will be made in Summer 2004, depending upon peer review.

**Basic Technology programme:** the RCUK Basic Technology research programme aims to contribute to building a generic technology base that can be adapted to a diverse range of scientific research problems and challenges spanning the interests of all the RCs. The programme transcends RC boundaries and potentially encompasses all research disciplines. Consequently the scope is not constrained, and the programme offers researchers the opportunity to think about new ideas without needing to fit the research into a disciplinary or organisational box. The programme recognises that a multi-

disciplinary approach is very much part of basic technology and requires cooperation and collaboration through consortia of researchers in different fields. Three calls for research project proposals of between £0.5 and £5m were issued in 2001, 2002 and 2003. These were open to all ideas that contribute to the programme vision, and emphasised the requirements for impact, generic applicability, risk and challenge of the basic technology. To date grants totalling £63m have been awarded to 24 projects.

*See Section 5.4.1 of the MRC Operating Report 2003/04 for progress against 'Genetics, molecular structure and dynamics' targets in the MRC Operating Plan 2003/04.*

## Cell biology, development and growth

### Estimated gross spend in 2003/04 – £75.5m

Investigating processes at the cellular level is vital to understanding how the human body functions, and how things can go wrong to cause disease. This area comprises work on how cells function at a molecular and structural level, and coordination of cells within tissues, and during development, healing, or other changes. Studies of cell growth and division, development and specialisation, molecular signalling within and between cells, cell structure, and how cells assemble to create the body's tissues and organs, will continue to reveal how these exquisitely finely tuned mechanisms are regulated and coordinated. Research in this area is also concerned with the maintenance systems that repair and replace damaged cells, tissues and organs, and with both naturally occurring and disease-related mechanisms of ageing and cell death. Such studies will help biomedical scientists to develop new and more effective ways to prevent and treat disease. The MRC will work with the BBSRC, the EPSRC and others to ensure that important translational technologies, such as high-throughput screening, molecular imaging, and tissue engineering/repair are underpinned with a strong academic research base. Developments this year include:

**Stem cells:** working closely with other key stakeholders (RCs, charities, the DoH, the Human Fertilisation and Embryology Authority, and the Medicines and Healthcare products Regulatory Agency [MHRA]), the MRC was proactive in the continued development of strategies and priorities for stem cell research and banking. This was accomplished through the UK funders coordinating committee, the steering committee for the UK Stem Cell Bank and for the use of stem cell lines; a new cross-Council coordinating committee to take forward SR2002 strategies within a jointly agreed



strategic framework; and the International Stem Cell Forum, which is working on cell line characterisation, ethics, and intellectual property rights. (See also **International**, page 15 and **Training**, page 23).

A key strategy within the UK stem cell initiative is to develop existing centres of excellence and establish new ones. During 2003/04 two centres funded jointly with the Juvenile Diabetes Research Foundation were established, one in Edinburgh and the other in Cambridge. In addition, funds totalling £9.2m were apportioned to 32 strategic underpinning grants and seven *in vitro* fertilisation (IVF) consortia grants.

**UK Stem Cell Bank:** the first of its type in the world, the UK Stem Cell Bank is funded by the MRC and the BBSRC and hosted by the National Institute for Biological Standards and Control (NIBSC), at South Mimms, Hertfordshire. It is responsible for storing, characterising and supplying ethically approved, quality-controlled stem cell lines for research and ultimately for treatment. The Bank will hold stem cell lines – derived originally from embryonic, fetal and adult tissues – that continue to multiply and reproduce themselves indefinitely. The UK's first two human embryonic stem cell lines, developed separately by researchers at King's College London and the Centre for Life in Newcastle, are to be deposited in the Bank at its official opening by Health Minister, Lord Warner, in May 2004. Applications to deposit stem cell lines in the Bank or to access banked stem cell lines will have to be reviewed and authorised by a high-level steering committee, chaired by Lord Naren Patel, before they can proceed. (See also [www.nibsc.ac.uk/divisions/cbi/stemcell](http://www.nibsc.ac.uk/divisions/cbi/stemcell)).

Work relating to the Stem Cell Bank during 2003/04 focused on developing guidance documents, procedures and practices for evaluating applications to use its facilities and cell lines, and on overseeing its setting up at NIBSC. Future work will centre on overseeing and auditing the work of the Bank. This will be done through six-monthly reports from the Bank on finances and risk, annual reports from its management committee, audit reports from relevant inspectorates (MHRA, UK Accreditation Service, and an audit report from the Research Council Internal Audit Service); the funders will also carry out dipstick audits of Bank documents and practices. It is anticipated that the Codes of Practice will be completed and published by July 2004.

*See Section 5.4.2 of the MRC Operating Report 2003/04 for progress against 'Cell biology, development and growth' targets in the MRC Operating Plan 2003/04.*

## Medical physiology and disease processes

### Estimated gross spend in 2003/04 – £81.2m

Non-infectious diseases such as cancer, heart disease and high blood pressure, diabetes, obesity and asthma are among the greatest causes of death and ill-health, both in the UK and in

developing countries. This area of our portfolio covers basic and clinical research into these diseases and into the normal and diseased states of every part of the human body. Studies range from nutrition and food processing, to waste product and toxin excretion, hormone function, reproductive health and pregnancy, and the affects of drugs and hazardous environmental agents. Research into diagnosis and treatment is also important, and includes medical imaging, anaesthesia and surgery, intensive care, and gene therapy. Developments this year include:

**Cardiovascular Research Funders Forum (CVRFF):** the CVRFF, which brings together the major UK funding bodies in cardiovascular and diabetes research, has recruited a dedicated research coordinator to consolidate and disseminate information on members' current research activities and future areas of opportunity. The MRC organised a CVRFF-sponsored international workshop on cardiac imaging in September 2003 to highlight cutting-edge technologies and promote cross-fertilisation of ideas between small-animal and human imaging.

**Breast cancer prognosis:** MRC Cancer Cell Unit scientists have found a better way to predict the outcome of breast cancer following surgery, which might lead to the improved management of the disease. The research team, led by Dr Nicholas Coleman, examined breast cancer tissue removed in surgery and found that a protein called Mcm-2 gives a more precise indication of how quickly tumour cells in breast cancer grow. The test allows doctors to establish the status of the disease more accurately, which in turn helps them make better predictions of overall survival and to determine the chances of a tumour recurring after treatment or of the cancer spreading to other organs.

**National Cancer Research Institute (NCRI):** plans for recruiting a Chief Operating Officer for the National Cancer Tissue Resource are progressing now that relationships with the National Translational Cancer Network have been clarified.

The MRC has been actively engaged in developing and implementing a number of NCRI initiatives. For example, it is a co-funder of the National Prevention Research Initiative (NPRI), which has been set up to provide additional funds and infrastructure to increase the amount of high-quality research aimed at preventing cancer and other major diseases by studying common risk factors such as smoking and obesity. The NPRI will provide dedicated funding (around £12m over 5 years) to advance research aimed at primary prevention of cancer, coronary heart disease and diabetes. The MRC will be managing the initiative on behalf of the other NPRI funders.

**Diabetes:** in October, the MRC announced a multi-million pound investment in new research programmes on obesity,

diabetes and osteoporosis, as part of a major new initiative in epidemiology. The key aim of the initiative, likely to cost in the region of £4m, is to help prevent conditions such as diabetes and obesity by developing integrated, collaborative research programmes that explore the genetic and environmental factors at play in the development of such conditions from before birth and throughout adulthood. The programmes will be led by a new MRC Epidemiology Unit in Cambridge and the MRC Epidemiology Resource Centre in Southampton. Two new directors have been appointed: Dr Nick Wareham will lead the Cambridge Unit and Professor Cyrus Cooper will lead the Southampton Centre.

The UK Prospective Diabetes Study, a randomised, multi-centre trial of glycaemic therapies in over 5,000 patients with newly diagnosed type 2 diabetes, completed its post-study monitoring in December. This £25m landmark study on the treatment and control of type 2 diabetes has been supported by a funding consortium led by the MRC and including Diabetes UK, the British Heart Foundation, the National Institutes for Health (USA) and a syndicate of 12 pharmaceutical companies. The main trial and subsequent follow-up of patients has demonstrated the value of early control of both glycaemia and blood pressure in preventing some of the complications of type 2 diabetes including kidney damage and eye disease.

The MRC awarded £1.2m for research at the University of Bristol to explore further how insulin works and so pave the way for new treatments for diabetes. The research, led by Professor Jeremy Tavaré at the University of Bristol, will focus on an enzyme called protein kinase. Scientists know the enzyme is involved in the process by which insulin stimulates removal of glucose from the blood, but do not understand exactly how it does this and how it might be affected in diabetes.

*See Section 5.4.3 of the MRC Operating Report 2003/04 for progress against 'Medical physiology and disease processes' targets in the MRC Operating Plan 2003/04.*

## Immunology and infection

### Estimated gross spend in 2003/04 – £78.6m

Research in this area aims to find out how the human immune system works, how it fights disease, and what happens when it goes wrong in auto-immune and inflammatory diseases such as multiple sclerosis and rheumatoid arthritis. An important part of the work involves research on viral, bacterial and parasitic infectious diseases – for example, AIDS, tuberculosis and malaria. Much of this research is aimed at improved treatment through developing new vaccines and drugs, and understanding how infectious organisms evade

the body's immune defences and develop drug resistance. Developments this year include:

#### **Infectious disease linked to poverty in the developing world:**

the MRC is among the largest funders of research in developing countries and contributed to preparing the ground for the European and Developing Countries Clinical Trials Platform (EDCTP) by working to establish its aims and scope. The MRC represents the UK in the EDCTP's legal structure, and is contributing to ongoing development of the EDCTP strategy, and taking a leading research role. The MRC will foster closer links with the Department for International Development (DFID) and other UK stakeholders, and maintain close dialogue with other EU states to ensure that policies and decision-making reflect the EDCTP's mission. A new advisory committee on the EDCTP has been established in agreement with the Wellcome Trust and the DoH. The committee will be a funding interface with the EDCTP and its remit includes North-North networking on HIV/AIDS research. The first meeting will take place during 2004/05.

**New appointments:** Dr Heiner Grosskurth has been appointed Director of the MRC Programme on AIDS in Uganda, taking over from Professor James Whitworth who was Director for eight years; and Professor Sarah Rowland-Jones is the new Director of Research for our Laboratories in The Gambia. She takes up the post in September 2004.

**Microbicides:** the UK is a world leader in microbicide development. Scientists at the MRC Clinical Trials Unit are planning a large-scale human effectiveness trials (Phase III) in Africa of two of the six vaginal microbicides nearing the last stage of clinical development. A total of 12,000 women are expected to take part in the three-year trials to be held in South Africa, Zambia, Tanzania, Uganda and Cameroon. The microbicides were developed by the MRC and Imperial College London through the DFID-funded Microbicides Development Programme, and could provide a barrier to the transmission of the HIV virus during sex.

#### **Edward Jenner Institute for Vaccine Research (EJIVR):**

following the decision by EJIVR's sponsors (the MRC, GlaxoSmithKline, the DoH and the BBSRC) not to renew the Institute's joint funding, an independent review of current programmes at EJIVR has taken place. The outcome will inform the EJIVR Board decisions on which group leaders should be offered Jenner Fellowships.

*See Section 5.4.4 of the MRC Operating Report 2003/04 for progress against 'Immunology and infection' targets in the MRC Operating Plan 2003/04.*



## Neuroscience and mental health

### Estimated gross spend in 2003/04 – £71.3m

This area covers research on the biology of the brain and the nervous system in both normal and diseased states. The work has important implications for developing new treatments for neurological disorders, such as Parkinson's disease and Alzheimer's disease – a growing problem given the UK's ageing population – and for other mental health problems such as depression, schizophrenia, autism, addiction and the causes of antisocial behaviour. Developments this year include:

**Partnerships:** the MRC has continued to work, alongside the DoH, to strengthen research into the main psychiatric conditions. The DoH-funded Mental Health Research Network will be launched in June 2004, and the MRC had previously awarded funds for a major clinical trial of interventions for dual diagnosis (schizophrenia and substance abuse) patients. Preparations for this trial continued through 2003, and it will begin later in 2004.

To help improve coordination and cooperation between funders, the MRC has begun working with the DoH, the Mental Health Research Funders Forum, other RCs, the Wellcome Trust, and charities, to develop a plan for funders to share and analyse information about their research portfolios consistently. We have also funded the DTI/DoH/South East England Development Agency National Neuroscience Research Institute to strengthen their work on information sharing and coordination with the pharmaceutical and biotech sector.

Following the Cognitive Systems Foresight exercise, the MRC, the Wellcome Trust, and other RCs will coordinate funding at the interface between man-made and biological cognitive systems, and promote joint funding. In view of the University of Cambridge's decision not to proceed with a new primate and animal imaging facility, the MRC and the Wellcome Trust have invited proposals for a jointly funded centre to bolster integrative behavioural neurosciences in Cambridge by using alternative upgraded primate facilities.

**Brain science:** the MRC was awarded £9.7m for new brain science activities under SR2002 and aims to build on its existing investments, focusing on neurodegeneration and mental health. Working with other RC partners, the HDs and industry, the programme will aim to build capacity in basic, translational and applied research through small pump-priming grants.

The MRC furthered its commitment to building research capacity in brain sciences through two calls for proposals – Pathfinders and Trial Platforms. Twenty-nine awards (18 Pathfinders and 11 Trial Platforms) worth £5m were made under the first brain sciences call in January 2004. For details of the awards, visit [www.mrc.ac.uk/funding-bscall-successful](http://www.mrc.ac.uk/funding-bscall-successful). A second call in September 2004 will have a strong focus on neurodegeneration and mental health. To help build capacity and new lines of work in applied mental health research – especially projects that build on the Mental Health Research Network – the DoH has agreed to contribute £1m for awards in this area, on top of the MRC's £4.7m.

**Prion disease:** the Prion-1 Trial, a partnership between the DoH and the MRC, is the first UK clinical trial to evaluate the drug quinacrine as a potential therapy for human prion disease. Involving the MRC Prion Unit and the MRC Clinical Trials Unit, the trial protocol has been developed in close collaboration with patient support groups (the CJD Support Network and the Human BSE Foundation) and received multi-centre research ethics committee approval in March 2004. There had been long-standing issues between the two centres – the National CJD Surveillance Unit in Edinburgh and the National Prion Clinic/MRC Prion Unit at University College London – but broad agreement was reached in 2003.

**Autism:** 2003 saw the last two in a series of four workshops intended to stimulate new research approaches and new funding applications in autism. Eighteen grant applications were received as a result, and most will receive a decision in May 2004. Three outline applications for clinical trials of treatments for autism were assessed, and two fully worked up applications were invited.

We also helped to organise the first Annual Forum for Autism Research, which brought together people affected by autism, relevant charities, funders and researchers.

**Chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME):** a completed strategy for CFS/ME was published in May 2003, which will enable researchers and funders in the UK and elsewhere to press ahead with work on this complex and debilitating illness. Developed by an independent advisory group set up by the MRC, and with consumer involvement, the strategy makes long-term and short-term recommendations for research that will lead to greater understanding of CFS/ME and advances in patient care.

The MRC funded two trials which will investigate the effectiveness of various treatments for CFS/ME, to help enable patients and doctors to choose the most appropriate

treatment. The first trial, known as PACE (Pacing, Activity and Cognitive behaviour therapy: a randomised Evaluation), is the first assessment of a popular treatment choice called 'Pacing'. The second trial, known as FINE (Fatigue Intervention by Nurses Evaluation) will test two different treatments that are particularly suited to helping reach those who are too ill to attend a specialist clinic.

*See Section 5.4.5 of the MRC Operating Report 2003/04 for progress against 'Neuroscience and mental health' targets in the MRC Operating Plan 2003/04.*

## People and population studies: health services and health of the public

### Estimated gross spend in 2003/04 – £56.5m

Our public health research addresses the wider influences on physical and mental wellbeing and ill-health; for example, the biological, socio-economic, lifestyle, and environmental factors at play throughout people's lives. It therefore includes all aspects of health promotion, disease prevention and healthcare provision. A key aim is to understand how and why ill-health is distributed as it is within the population, and how to improve public health through interventions and improvements that address the causes of health inequalities. The MRC has a wide portfolio of clinical trials that includes patients in every disease area and tests new approaches to prevention, diagnosis, and treatment with the ultimate goal of improved healthcare. Developments this year include:

#### Public health research

The MRC has continued to make significant investments in the field of public health, supporting projects to improve our understanding of the determinants of health and health inequalities, and interventions to prevent disease and improve quality of life. This includes programme grant awards of nearly £5m to Professor Sir Michael Marmot and Dr Paul Surtees to investigate the psychosocial determinants of and biological pathways to chronic ill health, particularly in an ageing population.

Following a successful review in 2003 of the first five years work of the Health Services Research Collaboration (HSRC), support for a further five years (from 1 April 2004) has been awarded, at a little over £8.5m. The HSRC represents a key MRC investment in health services research, and places particular emphasis on methodology, nurturing interdisciplinary research, and contributing to capacity development and training.

In an era when sexual health in the UK is deteriorating the MRC has continued to work with the HDs to develop a

programme of research to support the national strategies for sexual health. In the last year this has included £1.5m of research to better understand the management of patients with sexually transmitted infections/HIV, evaluate options for service delivery, and develop and test new approaches to improving the health and health behaviours of groups at risk.

The MRC's Council awarded continuation of support for the General Practice Research Framework (GPRF) from 1 April 2004, while a new scientific leader for the Framework was recruited, and new proposals for the future of the GPRF were developed. The GPRF continues to provide a national framework that enables and facilitates research both in and on primary care.

**Clinical trials:** in a major consultation exercise, the MRC has been taking a fresh look at its position on the types of clinical trials it should seek to support. The outcome of the consultation was disseminated during 2003. One of the recommendations of the review was that we provide support for pilot studies for trials, and two such studies were supported during 2003/04. From April 2004 the revised MRC funding schemes support pilot studies through Research Grants. The MRC has introduced measures to speed response to clinical research applications. For example, applicants can now submit full applications without going through the outline stage, after discussion with the MRC. For details visit [www.mrc.ac.uk/current-clinical\\_research](http://www.mrc.ac.uk/current-clinical_research).

The MRC has awarded £280k to fund the UK arm of an international trial to determine whether vitamin supplements can prevent further strokes in stroke patients. Up to 1,000 UK patients will take part in the trial coordinated by Professor Kennedy Lees, who is based at the University of Glasgow Department of Medicine and Therapeutics. Eight thousand stroke patients from 15 countries will be monitored. If the supplements are shown to be effective, they will be an extremely safe and inexpensive additional treatment, available to virtually every patient who is at risk of stroke. This international approach to funding has been particularly useful for conducting trials in rare diseases.

**New Dynamics of Ageing:** a new cross-Council research programme – New Dynamics of Ageing – has been established to foster a combined and innovative interdisciplinary approach to meeting the challenges of ensuring older people's health and well-being, and improving the management of age related conditions. The programme will build on the work of the ESRC's Growing Older

programme and the National Collaboration on Ageing Research. It has also been heavily influenced by the Government's EQUAL (Extend Quality Life) initiative, the Foresight Ageing Population Panel report *The Age Shift-Priorities for Action*, and the European Forum on Population Ageing Research.

New Dynamics of Ageing is led by the ESRC in partnership with the EPSRC, the MRC and the BBSRC, and directed by Professor Alan Walker of the University of Sheffield. The central objective is to gain a better understanding of the dynamic interplay between the effects of old age and people's changing technological, social, biomedical, economic, physical and geographical environments.

*See Section 5.4.6 of the MRC Operating Report 2003/04 for progress against 'People and population studies: health services and health of the public' targets in the MRC Operating Plan 2003/04.*

## Cross-cutting initiatives

### UK Clinical Research Collaboration (UKCRC)

Following the release of two reports on clinical research/clinical trials (Academy of Medical Sciences and DTI Biotechnology Innovation and Growth Team) the Research for Patient Benefit Working Party, chaired by the DoH, was established to develop practical proposals for implementing the recommendations. The MRC actively contributed to the development of these proposals. As the Working Party's recommendations were being finalised, the Chancellor of the Exchequer and the Secretary of State for Health announced substantial increases to NHS R&D funding over the next four years and the creation of the UK Clinical Research Collaboration (UKCRC), one of the Working Party's key recommendations.

The UKCRC initiative brings together the MRC, the HDs, the NHS, medical charities, patients and industry to speed up the development and translation of new medicines and treatments from the laboratory into the clinic. The MRC continues to be closely involved in the discussions about how these new arrangements will be implemented. The MRC also established the Clinical Research Advisory Group, a sub-group of its Council, to develop strategies to deliver clinical research, and a number of work-streams are already underway.

### Research Councils UK (RCUK)

RCUK was established in May 2002 in response to the 2001 Quinquennial Review of the Research Councils. It was set

up to enhance the collective leadership and influence of the RCs and encourage cross-Council collaboration at strategic and operational levels. RCUK is led by a strategy group of which all of the RC Chief Executives are members, currently chaired by the Director-General of the RCs. The MRC has played a key role in the creation of the RCUK *Synthesis of Research Council Strategies*, published during September 2003. This paved the way for the development of a 10-year *Vision for Science*. MRC staff have chaired the Research Council International Network, a body established to coordinate the international activities of the Councils, and the Performance Evaluation Group. Discussions also started on the RCs' case for additional funding for the SR2004 period: 2005/06 to 2007/08 (see page 7). RCUK has also started to implement its Administration Strategy (see page 36). More details about RCUK's activities during 2003/04 are available at [www.rcuk.ac.uk](http://www.rcuk.ac.uk).

### Government departments

The MRC continues to work closely with the DTI, the OST and the DoH on EU research programmes (FP6, public health); on policy issues that might impact upon UK research, such as the EU Directives relating to clinical trials, tissue and cell donation; and on renewing the partnership between the MRC and the HDs. In 2004 we entered into a new Partnership Agreement with the HDs, which takes account of developments since the 1997 Concordat and builds on this ongoing collaboration. The Agreement sets out the aims and principles for continuing the HDs/MRC partnership to ensure effective development, funding, management dissemination and exploitation of publicly-funded UK medical and health services research for the benefit of the population.

Other ongoing partnerships with Government address international health issues (DFID); clinical research (HDs, see page 14); intelligence gathering and the promotion of UK science overseas (Foreign and Commonwealth Office); annual stockholder meetings to review links (Financial Services Authority); and research recommendations from the review of research into gulf veterans' illnesses (Ministry of Defence).

### Medical charities

The MRC actively works with, and forges partnerships with, numerous medical charities. A booklet entitled *The MRC and charities: a basis for working together* was published in 2003 as a guide to joint working between the MRC and medical charities.

*See Section 5.6 of the MRC Operating Report 2003/04 for progress against 'Developing the broader framework for research' targets in the MRC Operating Plan 2003/04.*

## International

The growth in international travel, social and environmental change, the risk of terrorism and sabotage, and the emergence of new infectious diseases such as SARS (Severe Acute Respiratory Syndrome) have together multiplied the global threats to human health. In addition, many of the world's most devastating disorders, including heart disease, cancer, diabetes and Alzheimer's disease, are caused by complex interactions between genes, environment and lifestyle. Global increase of new and re-emerging infections, along with the research challenges of the post-genomic era, demand a more coordinated international approach to research management.

The MRC has a long-standing international programme and continues to promote biomedical/clinical research in the international arena. It achieves this by engaging with other key funders and organisations with an interest in research, subscribing to international organisations and brokering collaborations.

**Funder coordination:** high-level fora such as 'HIROs' (an informal group of Heads of International Research Organisations encompassing the major funders of biomedical research and coordinated by the MRC) and EUROHORCS (an informal policy-forming group of European Heads of Research Councils spanning all disciplines) continue to play major roles in framing the global research agenda.

The global threat to health of infectious disease has been identified by HIROs as an area where more international cooperation could make a difference. This year has seen early discussions on this topic.

**Europe:** the growing recognition of the socio-economic value of high-quality research in Europe has been a driver for the concept of the 'European Research Area' – a free market for research across Europe. Mobility of scientists is key to this and the MRC has been working with other EU funders to discuss the possibility of transferring grants during their term to assist researchers' career development.

The MRC recognises that the activities of the European Institutions and the European Commission are now central to the development of research across Europe. With the increasing flow of legislative directives from the EU it remains important for the MRC to keep up to speed with developments. The MRC uses its sponsorship of the UK Research Office in Brussels as a source for early information and this year has been very proactive in shaping directives on Clinical Trials and Human Cells and Tissues.

The MRC remains an active participant in promoting the EU's Framework Programme, the Commission's main mechanism for funding research across Europe. We act as both the UK National Contact Point and represent the UK on the Programme Management Committee for the 'Life Sciences and Genomics for Health' theme. This year has seen the launch of the second call for proposals and the shaping of the third call. In addition, the MRC has been involved in various fora discussions about the form the Framework Programme 7 might take and how the funding of researcher-initiated basic research may be part of that – possibly by the establishment of a European Research Council. (See International subscriptions below.)

**International subscriptions:** the MRC continues to subscribe, on behalf of the UK, to a number of international organisations, including, the European Molecular Biology Conference (EMBC), the European Molecular Biology Laboratory, the International Agency for Cancer Research (IARC) and the Human Frontier Science Program (HFSP). The MRC represents the UK on their governing bodies. This year saw a new six-year indicative scheme (programme and budget) being agreed by the EMBC which took full account of the MRC's arguments about a reasonable budgetary provision for the organisation. At IARC, Professor Peter Boyle was elected Director by the IARC Governing Council. This was first time a UK representative has been appointed to this position. The HFSP has maintained its high quality and high regard and in this last year has been particularly successful in supporting interdisciplinary research.

The MRC also provides funding to the European Science Foundation (ESF) and represents the UK on the COST (European Cooperation in the Field of Science and Technology Research – supported by the EU Framework Programme and now run by the ESF) Technical Committee for Medicine and Health. This year the MRC has signed up to two new EUROCORES (ESF Collaborative Research Programmes): EuroSTELLS promoting stem cell research and EuroGEAR focusing on genetic epidemiology of atherosclerosis and related traits.

**Collaborations:** the majority of MRC international collaborations continue to be researcher-led, bilateral or multi-consortia, and are often supported by EU framework, ESF or COST funding. Many involve MRC units and institutes.

At the centre of our international activity are our units and research programmes in Africa – a reflection of the MRC's long history of research in developing countries. We manage a significant international programme on behalf of government

departments. In 2003/04 the DFID contributed £5m to tackle the priority health problems of people in developing countries. It also provided £1.6m over five years to support the collaboration between the MRC Clinical Trials Unit and Imperial College London over developing microbicides that will prevent the transmission of HIV.

There have been a number of new collaborative initiatives in 2003/04. The MRC signed a memorandum of understanding with the Juvenile Diabetes Research Foundation International to formalise an agreement to work together to advance stem cell research in the UK. In conjunction with the Parkinson's Disease Society and the BBSRC, the MRC launched the first jointly funded stem-cell fellowships. Eight awards were made to the value of £1.4m. A £400k collaborative project to characterise embryonic stem cell lines was given the go-ahead by the International Stem Cell Forum at its meeting in Stockholm in January 2004, hosted by the Swedish Medical Research Council. The meeting welcomed a new member, the Swiss National Science Foundation, bringing the Forum membership to 14 countries.

The MRC response to the emerging need for SARS research resulted in a new collaboration between our Human Immunology Unit and the Beijing Public Health Bureau, over a project to study the immunopathogenesis of SARS.

The European and Developing Countries Clinical Trials Partnership (EDCTP) remained the major collaboration in 2003/04 (see page 11). We continued to work with other funders, experts, and the European Commission to establish the EDCTP. During the year agreement was reached on a legal structure and governance arrangements, and the proposal won support in the European Parliament and Committees. Ministers agreed to funding of up to €200m, and legal registration, for the EDCTP during 2003.

The latest initiative, in association with the DoH, is the DoH Healthcare Genetics Visiting Fellowships, which the MRC is administering. These new fellowships are designed to promote learning exchange in healthcare or academic settings that will improve the application of genetics to healthcare for the benefit of NHS patients. The scheme will support visits abroad by English health professionals of up to three months, and visits by foreign leaders in the field invited to England by host institutions. The first awards will be for visits made during 2005.

*See Section 5.6.3 of the MRC Operating Report 2003/04 for progress against 'Funding partnerships and collaborations (International)' targets in the MRC Operating Plan 2003/04.*

## Supporting research excellence

The MRC is the only public funding agency in the UK that covers the whole spectrum of medical research, from basic and translational research to the application of new treatments. We achieve this by:

- Providing support to secure the national medical research infrastructure over the long term, by maintaining existing facilities, and establishing research centres in topics of strategic importance.
- Investing in training and employing scientists in universities and our own research centres.
- Funding research proposals submitted by researchers who have identified scientific problems that need addressing.

The main factors in our funding decisions are the quality of the research and its potential significance in terms of improving human health. Proposals are stringently reviewed by a core of scientific experts – including our research boards – and other external expert referees both in the UK and abroad.

MRC research expenditure is split broadly between:

- Grants to researchers in universities and medical schools, including training awards for post-graduate students and fellows; this amounted to £180.2m in 2003/04.
- Funding for the MRC's own research institutes and units, amounting to £235.6m in 2003/04.

**Chief Executive roadshows:** during the first few months following his appointment in October 2003, Professor Colin Blakemore spent time meeting the medical research community at a series of regional MRC roadshows hosted by universities. His aim was to learn about the research community's views, concerns and hopes for the future, to hear about the research strategies of participating universities and medical schools, and to share his initial thoughts about the MRC's role. Common themes that emerged from the 17 roadshows included the need for:

- More flexible and simpler grants.
- Better support for young researchers.
- Enhanced clinical research and training.
- Stronger partnerships with universities, eg, Centre Grants (see below).
- More involvement of MRC's research boards in portfolio-building.

For details of the consultation with universities see [www.mrc.ac.uk/public-cb\\_roadshows](http://www.mrc.ac.uk/public-cb_roadshows).



**Strategic review of MRC funding policies:** the MRC made significant changes to its research funding and assessment policies during 2003/04. This included board restructuring, revising forms of support and peer review procedures, and introducing board budgets. The restructuring built on feedback from the scientific community at the roadshows and afterwards. The MRC Monitoring and Evaluation Steering Group (MESG) reviewed the cooperative group grant scheme in parallel to the roadshows and both fed into the redevelopment of MRC grant funding schemes (see below).

**Restructuring and increased delegation to MRC research boards:** the existing Physiological Medicine and Infections Board (PMIB) and the Molecular and Cellular Medicine Board (MCMB) that previously dealt with immunology, were divided to create a new Infections and Immunity Board (IIB). The PMIB became the new Physiological Systems and Clinical Sciences Board (PSCSB) to reflect the MRC's strengthened commitment to clinical research, and the MCMB will retain its present name. All five MRC research boards have been given their own budgets and are now responsible for developing their own scientific portfolios and contributing to the MRC's strategic planning.

**Strategy development:** the structure for developing corporate policy and strategy, business planning, and performance evaluation in the MRC was also revised. The aim was to better harness the scientific and academic expertise of board members in developing strategy and building the MRC's research portfolio, thereby empowering the boards. In addition, we expect the restructuring to help integrate strategy development with financial planning in the MRC, increase transparency, and facilitate stakeholder engagement.

The first step to giving the boards more ownership of their portfolios was to replace the Strategy Development Group with a Council Subcommittee on Strategy, Corporate Policy and Evaluation (SCoPE), which is the new body for strategy development within the MRC. SCoPE will play a central role in scientific strategy, horizon-scanning, business planning and performance evaluation. To help ensure that SCoPE's strategic aims reflect the needs, interests, and capacity of the scientific community, important inputs to this committee will come from the research boards. Board sub-groups called Strategy and Portfolio Overview Groups (SPOGs) will provide advice on scientific strategy and policy, opportunities for new partnerships in research, business planning, and performance evaluation.

### **Grant funding schemes (applicable until mid-February 2003)**

The MRC response-mode grant schemes are designed to:

- Encourage multi-disciplinary working, with forward-looking research strategies, greater emphasis on outputs and national needs, and greater transparency of funding and accountability.
- Target funds towards the most productive individuals and groups, providing more stable support and better infrastructure funding; such support will, in most cases, lead to greater critical mass.
- Fund individual centres of excellence which are based on a long-term strategy reflecting the views of universities, RCs, charities, industry and other stakeholders.
- Continue to provide funds for high-risk/high-impact work and studies which may act as a spring-board for longer-term research or research careers.

Key awards made over the last year include:

**Centre Grants:** MRC Centre Grants aim to support multi-disciplinary research-centred environments in partnerships with universities. They involve significant investment by both the MRC and the host universities with full-time scientific leadership. The first two Centre reviews took place in 2003/04. Both Centres were ranked as alpha-A, the highest rating, and were awarded funds for a further five years. The core research – the study of mechanisms of plasticity and their relation to learning and memory – at the MRC Centre for Synaptic Plasticity in Bristol was considered to be at the forefront internationally. The Centre was seen to provide very good value for money, with an exceptionally high quality overall research strategy for the past and future. It was agreed that the MRC Centre for Immune Regulation in Birmingham provided a world-class research environment and that much of the research undertaken was at the international forefront. The Centre was seen as a model for infrastructure applications. The MRC is launching a competition for outline proposals for new Centre Grants in April 2004.

**Cooperative Group Grants:** this cluster of grants includes Cooperative Group Grants and Cooperative Group Development Grants. The MRC awarded 55 new grants during 2003/04 and there were 254 live grants on 1 April 2004.

The MESG reviewed the Cooperative Group Grant Scheme during 2003 and reported to the MRC's Council in December 2003. The Council endorsed the recommendations of the review, including that the scheme should cease to exist. The findings from the review were incorporated into the review of all MRC grant schemes initiated by the new Chief Executive Officer (CEO).

**Programme Grants:** Programme Grants remained the MRC's principal mechanism for supporting both focused and more broadly-based long-term research programmes. During 2003/04 we made 36 new awards and 55 renewals (of which 84 per cent received the highest alpha-A rating). There were 240 live grants on 1 April 2004. Programme Grants will be replaced by Research Grants in the new package of grant schemes in 2004/05.

**Career Establishment Grants:** these grants are awarded for five years to recently-appointed clinical and non-clinical university scientists. The scheme aims to help them establish themselves as independent investigators capable of winning further support in open competition. The MRC awarded 11 new grants during 2003/04 and there were 86 live grants on 1 April 2004. During 2004/05, the Career Establishment Grant scheme will be evaluated alongside other schemes intended to support early career researchers.

**Strategic Appointments Scheme:** this scheme helps universities and MRC units to attract scientists of the very highest research calibre, usually from overseas, who can make a significant contribution to advancing university and MRC strategy. Previously called the International Appointments Initiative, the scheme was relaunched in 2003/04 with an annual budget of £1m. Three offers of awards under the scheme are being taken forward by the host organisations. To date, the scheme has helped universities and units to attract 17 scientists to the UK. The Strategic Appointments Scheme will be reviewed by the MESH during 2004/05.

**Discipline-hopping Awards:** the MRC made a third round of Discipline-hopping Awards during the year to encourage established physical sciences researchers to apply their expertise to life science problems. The awards, of up to £50,000 for a one-year period, are aimed at pump-priming new interdisciplinary collaborations. The EPSRC, the BBSRC and the PPARC jointly funded the programme, enabling 24 new projects to be supported across physics, chemistry and engineering.

**MRC Equipment Supplement Scheme:** the second round of the Equipment Supplement Scheme, designed to support requests for funds for scientific research equipment from MRC researchers, resulted in 26 awards totaling £1.5m. This scheme will be absorbed into the new Collaboration Grant scheme.

Information on awards made through all schemes from 2001 to 2004 is now available on the MRC web site at [www.mrc.ac.uk/funding](http://www.mrc.ac.uk/funding).

**New MRC grant schemes from 2004/05:** major changes to the MRC's approach to funding science were announced on 13 February 2004. The changes have been informed by extensive consultation with the scientific community through the MRC website and in a series of regional university roadshows, and include the introduction of simpler, more flexible forms of grant support.

The MRC's 12 existing grant schemes have been simplified to six: Research Grants, Collaboration Grants, Centre Grants, Trial Grants, New Investigator Awards, and Career Establishment Grants. The latter two schemes will be evaluated in 2004/05 and may be changed further. The MRC anticipates that most established scientists will apply for a new-style Research Grant. This flexible form of support will cover a wide variety of work, from a two-year pilot project to a programme of research for five years or even longer. Scientists will be able to specify the work they want to do and the resources and time that they need to do it. Cooperative Group Grants will be replaced with a simpler scheme of Collaboration Grants, awarded as supplements to Research Grants, to provide infrastructure support for networks of collaboration with other research groups, supported by any funding agency. The new range of schemes was approved by the MRC's Council in February 2004 and will be implemented from 1 April 2004. For further details see [www.mrc.ac.uk/funding\\_changes\\_2004](http://www.mrc.ac.uk/funding_changes_2004).

In January the MRC announced a new commitment to the careers of young clinical and non-clinical scientists, by allocating £4.8m in 2004/05 for a pilot funding scheme for project grants. The scheme is designed to encourage talented young scientists to pursue careers in medical research, offering them the opportunity to establish their independence and a place on the research career ladder.

*See Section 5.5.1 of the MRC Operating Report 2003/04 for progress against 'MRC grant funding schemes' targets in the MRC Operating Plan 2003/04.*

### MRC research institutes and units

The quinquennial reviews of six MRC units were completed during 2003/04. These units collectively had 37 programmes of past work assessed as part of their quinquennial reviews, and 31 programmes (84 per cent) received the highest ranking, alpha-A. The following four units were ranked alpha-A for future proposals and were awarded funds for a further five years: the Cognition and Brain Sciences Unit (Cambridge), the Human Immunology Unit (Oxford), the Prion Unit (London) and the Health Services Research Collaboration (Bristol).

The MRC decided to close two units: the Rosalind Franklin Centre for Genomic Research (formerly the Human Genome Mapping Resource Centre) is to close because its future plans were not considered to be competitive. The MRC Immunochemistry Unit will close when the current director retires in 2008. The Unit's quinquennial review was completed in 2002/03 and a strategic review of its future was carried out in 2003/04; options are now being explored for the remaining staff and resources.

A review of past work of the Radiation and Genome Stability Unit (Harwell, Oxford) was completed in July 2003. The Unit was ranked alpha-A and it was recommended that it should continue to receive support after the retirement of the current director. A search for a new director was initiated, as a joint appointment with Oxford University. The MRC is working with Cancer Research UK and Oxford University to develop a critical mass of high-quality basic and translational research in radiation science/oncology, building upon the Radiation and Genome Stability Unit, the re-location of the Gray Cancer Institute to Oxford, and other relevant research activities in Oxford.

The MRC Mary Lyon Centre at Harwell was completed in December 2003 and will be formally opened in June 2004 by Lord Sainsbury of Turville, Minister for Science and Innovation. With its state-of-the-art facilities, the Centre will provide a valuable range of services to the biomedical community to help improve the efficiency of genetics research programmes, and to promote the sharing and preservation of mouse models of human disease.

The quinquennial reviews initiated during 2003/04 included the Clinical Sciences Centre (London). Its four cluster reviews were completed (in Molecular and Metabolic Basis of Cardiovascular Disease; Molecular and Clinical Imaging; Physiological and Cellular Systems; and Cell Biology and Genetics), and the institute review will be completed during 2004/05.

**Steering group for units and university partnerships:** the MRC's Council agreed in March 2004 to establish a steering group to oversee and ensure coordination and delivery of a number of projects including:

- Consultation on and development of new approaches to unit reviews.
- Development and implementation of a new internal communication model between MRC units and head office, units and boards, SCoPE and the MRC Council, and units.
- Development of a plan for the reducing/phasing out of the external scientific staff cadre.

- Analysis of best practice in current partnerships with universities in MRC units/centres, development of possible models of best practice for the future, and an implementation plan including a revision of current criteria for 'direct' support.

A programme of investigative work, involving consultation with stakeholders and development of options, will take place during 2004/05 before the final approval by the MRC's Council in February 2005. The aim is to implement new practices from 1 April 2005. For more information see [www.mrc.ac.uk/about-sguup](http://www.mrc.ac.uk/about-sguup).

*See Section 5.5.2 of the MRC Operating Report 2003/04 for progress against 'Units and Institutes' targets in the MRC Operating Plan 2003/04.*

**Forward Investment Strategy:** the MRC Forward Investment Strategy (FIS) relates to the MRC's major capital investments over the next 10 to 15 years. The primary focus has been on four sites where decisions are required over the next few years. These were at Harwell near Oxford; Mill Hill, London; Hammersmith, London; and Addenbrooke's in Cambridge. Comments on the FIS report were invited from the wider scientific community and from other stakeholders. Reviewing the responses in July 2003, the FIS subcommittee and the MRC's Council concluded that there was a need to accelerate further development of a vision for a strong scientific future for the National Institute for Medical Research (NIMR) at Mill Hill and to consider and consult on a broader set of options for its size and location than was originally proposed by the FIS subcommittee. For this purpose, the MRC established the MRC NIMR Task Force. The Council also considered and endorsed all the recommendations in the FIS report relating to the Harwell, Hammersmith and Addenbrooke's sites. For more information see [www.mrc.ac.uk/public-fis\\_consultation](http://www.mrc.ac.uk/public-fis_consultation).

**NIMR Task Force:** the NIMR Task Force was set up to advise the MRC's Council on the future of the NIMR. Members were drawn from the MRC's Council and the NIMR, and included national and international experts. The Task Force started work in November 2003, and presented an interim report to the Council in March 2004. It has conducted extensive inquiries and consultations about options for the NIMR's future, both in the UK and abroad. The Task Force will hold its final meeting on 21 June to draw up recommendations for consideration by the Council in July 2004. For more information see [www.mrc.ac.uk/about-nimr\\_taskforce\\_bulletin](http://www.mrc.ac.uk/about-nimr_taskforce_bulletin).

*See Section 5.1 of the MRC Operating Report 2003/04 for progress against 'Forward Investment Strategy' targets in the MRC Operating Plan 2003/04.*



## Publication output indicators

The quality of MRC-funded research is demonstrated by the publication output, as well as by the peer-review ratings at the time of award. Recent OST research has shown that in scientific areas where the MRC is one of the dominant funders, the UK's share of world citations is second only to that of the USA. Moreover, the UK 'punches above its weight' in terms of the level of investment per researcher.

Between 1997 and 2001 the MRC contracted tracking of all publications that cited it as a funder to the Research Outputs Database (ROD), which was based at the Wellcome Trust before it was relocated to the City University, London. This year the MRC has been able to report only on output by its own employees in MRC institutes and units, as shown in the table below.

MRC units and institutes published over 1,800 papers in peer-reviewed journals in the calendar year 2003. More than 30 per cent involved researchers or funders from outside the UK and seven per cent involved researchers or funding from the private sector.

### a. MRC-intramurally supported publications

ROD data collection					New MRC data collection
Calendar year	1998	1999	2000	2001	2003
Refereed publications	1,624	1,565	1,604	1,298	1,814

### b. MRC-intramurally supported publications co-authored with industrial partners

ROD data collection					New MRC data collection
Calendar year	1998	1999	2000	2001	2003
Number of refereed publications co-authored with industrial partners	424	438	315	381	127
Percentage of all refereed papers	26.1	28	19.6	29.4	7 <sup>1</sup>

1. The ROD system included as 'industrial' those publications which acknowledged support from any company in the form of equipment, consumables, travel bursaries or other resources. MRC figures represent industrial co-authors on the publication.

### c. MRC-intramurally supported publications co-authored with overseas partners/co-authors

ROD data collection					New MRC data collection
Calendar year	1998	1999	2000	2001	2003
Number of refereed publications co-authored with overseas partners	no data	no data	no data	no data	572
Percentage of all refereed papers	-	-	-	-	31.4



# Investment in people

## Human resources

The MRC's Strategic Plan focuses its human resources (HR) activities on developing policies, procedures and partnerships to ensure the competitiveness and effective resourcing of MRC science. This is set in the context of extensive ongoing people and organisation change and development, as units and organisation entities continue to be created, repositioned or closed, to ensure the MRC delivers its overall mission.

**Directly funded units and institutes:** during 2003/04 the MRC has focused on the following priorities:

- Repositioning its remuneration and reward systems to deliver transparency and equality as well as maintaining competitive salaries to attract and retain high-quality research and other staff.
- Building our performance management systems and beginning to reshape reward systems to support outstanding performance.
- Implementing a revised appraisal system which focuses on meaningful dialogue rather than process.
- Concluding the implementation of a revised career structure which builds on the recommendations of the Roberts Review and incorporates the legislative changes arising from the EU Fixed Term Contracts Directive.
- Implementing extended flexible working practices.
- Commencing work on achieving Investors in People status with four pilot units identified and diagnostics currently underway.
- Defining an HR service strategy to shape future MRC HR knowledge and information management practices, within overall requirements of flexibility, efficiency and effectiveness.

The MRC currently employs more than 4,000 staff, working both in the UK and as locally employed staff overseas.

**Diversity and equal opportunities:** the MRC values the diverse skills and experiences of its employees and is committed to achieving equality of treatment for all. We have an Equal Opportunities sub-committee, which audits our employee data annually to ensure the aims of MRC policies and practices are being achieved in a fair and equal manner; and to identify any imbalances that may need to be addressed.

MRC policies and schemes are regularly monitored to ensure that they are sufficiently flexible to accommodate all researchers, male and female, and all career pathways. We aim to offer a competitive employment package and have a range of flexible working arrangements to help our employees balance work and non-work commitments.

**Women in science:** the MRC continues to investigate and address potential impediments to women rising to senior scientific research posts. A Women in Science advisory group has been established, chaired by Dr Ann Prentice, Director of MRC Human Nutrition Research in Cambridge.

**Leadership, learning and development:** the MRC is implementing a five-year learning and development plan, as part of our integrated provision of performance management, learning and development across all employee groups. To help provide leadership for this initiative, we are setting up an internal director-level advisory group to oversee its communication and implementation.

This year the MRC also initiated a programme of leadership development for senior business managers across the MRC, and started defining a scheme for director performance appraisal.

## Training

### The Science Budget training objectives are:

1. To raise the standard of postgraduate and postdoctoral researchers, and increase their numbers in priority fields experiencing shortfalls or recruitment difficulties.
2. To enhance their training to better fit them for careers requiring research skills and experience and increase their attractiveness to future employers.

The MRC's portfolio of personal award schemes provides opportunities for initial postgraduate training, acquisition of further research skills, and career opportunities for more experienced researchers.

**Studentships:** the MRC currently supports about 1,200 research studentships in universities and MRC institutes and units. Around 80 per cent of MRC PhD students successfully complete their research projects and submit their theses within four years of study. This complies with the Research Councils' minimum standard for 70 per cent of students to submit within four years of registration.

Year PhD started	1996	1997	1998	1999
Percentage submitted within four years of start date	75	75	81	84
Percentage submitted within five years of start date	83	78	83	Not yet available

First destination survey data for MRC-funded PhD students who commenced their studies between 1997 and 1999 show that around 90-95 per cent were employed. The majority – around 40-50 per cent – had an academic appointment and 12-15 per cent were working in private sector research. Full analysis of the first destinations of MRC students will be reported in the MRC Operating Report from 2004/05.

**Fellowships:** in 2003/04 the MRC made 77 new fellowship awards at a cost of £24.4m. First destination survey data for all fellows completing between 2000/03 show an overall pattern of more than 80 per cent of MRC non-clinical fellows going on to either permanent (26 per cent) or fixed-term (57 per cent) academic appointments. Of the MRC clinical fellows, 40 per cent go on to either permanent (22 per cent) or fixed term (18 per cent) academic appointments, while most of the remainder return to the NHS to complete their specialist clinical training. Only one per cent of fellows go

overseas immediately after their fellowship and less than two per cent take up a post in industry. Further details will be given in the MRC Operating Report from 2004/05.

**The introduction of Doctoral Training Accounts:** during 2003/04 the MRC has developed and implemented a new way of providing funds for postgraduate training. From October 2004 the majority of MRC funding for postgraduate studentships will be provided through Doctoral Training Accounts to higher education institutions (HEIs) and MRC institutes and units. This new system, which involves allocation of a cash budget earmarked for postgraduate training to institutions in receipt of MRC research funding, follows closely the mechanism used by the Engineering and Physical Sciences Research Council (EPSRC) for some years. Doctoral Training Accounts give considerably increased flexibility to institutions about how MRC funding can be used to support postgraduate students, and once in place will lead to efficiency savings in administrative time.

**Capacity-building Studentships:** these will be continued alongside the new Doctoral Training Accounts system as a means of funding additional students in areas where the research workforce needs to be built up to meet new or expanding research opportunities. In February 2004, 50 new studentships were awarded in brain sciences, intracellular imaging, stem cells, informatics (including computational biology), e-Science, infections and whole-animal physiology. The awards will be taken up later in 2004.

**Industrial Collaborative Studentships:** these were re-advertised to tie in with Capacity-building Studentships in September 2003, and eight awards were made for uptake later in 2004.

**Implementation of the Roberts Review recommendations:** in 2003/04 arrangements have been put in place to implement the recommendations from the Roberts Review, using the

additional funding allocated in the 2002 Spending Review. Stipend levels for existing and new MRC postgraduate students will increase from October 2004 and again in October 2005, to ensure all MRC-funded students receive at least the levels recommended by the Roberts Review. The MRC has provided additional support to HEIs and MRC units and institutes to fund training in generic or transferable skills for all new MRC-funded students, from October 2003 onwards (£190k allocated for 2003/04). We also have agreed arrangements with the other Research Councils (RCs) for a common mechanism to provide additional funding for transferable skills training for RC-funded students and postdoctoral researchers in HEIs from October 2004.

**Dorothy Hodgkin Awards for overseas students:** the MRC has provided funding (£450k over three years) for the first round of this new scheme to provide fully funded PhD studentships at UK universities to students from India, China, Hong Kong, Russia and the developing world. The scheme is being administered by the EPSRC behalf of the RCs, and the first awards will be taken up in October 2004.

**Joint ESRC/MRC fellowship and studentship scheme:** the MRC and the Economic and Social Research Council have developed a new joint scheme to fund interdisciplinary research students and postdoctoral fellows whose research is of interest to both RCs and which requires the combined approaches of the medical and social sciences. Funds have been allocated for up to 20 research students and 10 postdoctoral fellows in the first year of this scheme, with awards to commence in October 2004. Research areas identified as of particular interest for the first round of awards include stem cell research, genomics, obesity, occupational health, the management and delivery of health services, public health issues, deprivation and the developing world, and sexual health.

**Review of the Pre-doctoral Fellowship scheme:** the Pre-doctoral Fellowship scheme, which provides salaried fellowships for people undertaking PhD training in MRC units or institutes, is under review. It was introduced in 2000 as a three-year pilot, with the aim of making post-graduate training more attractive to high-quality candidates, and 28 fellows are in post. Feedback on the scheme has been gathered from fellows, supervisors and directors, and a decision will be taken later in 2004 as to whether it should continue beyond the pilot phase.

**Review of the Research Professorship scheme:** this review has been carried over to 2004 so that it can be undertaken in parallel with reviews of the MRC's External Scientific Staff scheme and our Strategic Appointments Initiative.

**Review of MRC training schemes:** during 2004/05 there will be consultation on a full review of the MRC's Research and Career Awards programme and budget.

**MRC clinical research training schemes:** the MRC has a range of clinical research fellowship schemes, that provides support for clinicians at all stages of a research career. We currently support 176 clinically qualified research fellows.

Our Chief Executive roadshows (Autumn 2003 to early 2004) and the Government's Research for Patient Benefit Working Party (April 2004) have highlighted the need for more workforce capacity in clinical and translational research. During 2004/05 we will review our clinical research training schemes to see how the MRC could contribute to addressing this shortage.

*See Section 6 of the MRC Operating Report 2003/04 for progress against 'Training objectives' targets in the MRC Operating Plan 2003/04.*





# Technology transfer

## The Science Budget knowledge transfer objectives are:

1. To increase the performance of the science and engineering base in exploiting the results of its research.
2. To increase the effectiveness of knowledge transfer from Research Council Institutes in line with the recommendations of the Baker Review of public sector research establishments and the National Audit Office report on commercialisation of public sector science.

The MRC has continued to work with industry and investors to expand exploitation of its research, primarily through its affiliated company, MRC Technology Ltd (MRCT). The MRC has direct responsibility for technology transfer with respect to its own units and institutes.

## MRC Technology (MRCT)

### MRCT strategic plan

In 2003/04 MRCT commenced implementation of the plans approved by the MRC's Council in February 2003 following an internal strategic review of MRCT activities. Additional staff (10 in total) were recruited, particularly to enable increased support for the commercial exploitation of new MRC technologies and improvements to systems for the identification, protection and licensing of MRC intellectual property. Major improvements have been made to MRCT's information and communication technologies, including inter-site networking and new databases.

A new Development Gap scheme was also approved by the MRC's Council in February 2003. It has been launched with the aim of funding further research to evaluate and validate discoveries in MRC establishments that have commercial potential. A full-time manager of the scheme was appointed in May 2003. Application and review procedures were developed in the light of experience of the earlier pilot study and the scheme was communicated and explained to MRC unit directors and researchers. As of 31 March 2004, 11 Development Gap funding applications had been submitted, of which seven have been approved and four declined. Applications have been received from a range of units and institutes and the total amount of funding committed is just over £600k.

### Working with industry

MRCT has made progress across a range of activities to meet the MRC's objectives for commercial exploitation. During the year, 28 new patent applications were filed and 26 new licensing agreements completed with companies. In a difficult period for investment in the biotechnology sector, no new MRC start-up companies were launched but some existing start-ups made striking progress:

**Domantis Ltd (Cambridge):** this company, which focuses on the development of single-domain antibody technology, succeeded in raising a further \$33m in February 2004, bringing the total funds raised to \$58m. By the time Domantis expanded into new premises at Cambridge Science Park in March 2004, the company's workforce had grown to 40 employees.

**Ardana Biosciences (Edinburgh):** working in the field of reproductive health, Ardana Biosciences also raised substantial further funds in 2003/04, bringing total investment to \$55.4m. In addition to taking forward the development of promising research results arising in the MRC Human Reproductive Sciences Unit, it has acquired rights from other companies to more advanced reproductive health products. *Striant™*, for testosterone replacement therapy, is expected to be the first to be launched in 2004.

*Iclectus Ltd* (Mill Hill, London) and *Oxxon Therapeutics* (formerly *Oxxon Pharmaccines*, Oxford) also achieved further rounds of funding in 2003/04. *ProteinLogics*, a new Cambridge company, was established during the year to work on the development of a unique disease diagnosis system based on patented inventions co-owned by the MRC.

MRC establishments continued to enter into new research collaborations with industry partners. For example, in 2003 the MRC Protein Phosphorylation Unit and the University of Dundee's School of Life Sciences renewed their collaboration with six of the world's major pharmaceutical companies. The companies – AstraZeneca, Boehringer Ingelheim International GmbH, GlaxoSmithKline, Merck Co Inc (USA), Merck KGaA (Germany) and Pfizer – agreed to provide further funding of more than £15m over five years to investigate two classes of enzymes, termed kinases and phosphatases, which are now among the most important classes of drug target in the pharmaceutical industry. Overall

the collaboration will have provided funding in excess of £21.5m over 10 years and supported the creation of over 20 new scientific posts within the specially created Division of Signal Transduction Therapy. New pathways and targets have been characterised and the MRC has licensed a number of patent applications to partners within the consortium and more widely.

Although the number of new licences to industry fell in 2003/04, again reflecting market conditions, licensing income continued to grow. This increase was driven largely, but not entirely, by increased sales of therapeutic antibody products developed from MRC patented inventions. In addition to royalty income from humanised antibody products, the MRC now also benefits from royalties on sales of the first antibody product (Humira™) derived from phage-display technology licensed to Cambridge Antibody Technology.

### Applied research division

The two MRCT spin-out companies, AERES Biomedical and Virogen (previously research groups within the MRC Collaborative Centre), have pursued different business models with mixed success. AERES Biomedical chose to offer high-value services in the area of mouse monoclonal humanisation. The company has had some success in attracting business during the period despite the extremely tough market conditions that have seen its natural customer-base dwindle and reduce spending. Virogen chose to take a high-risk drug-development strategy, which involved in-licensing two early-stage products, one at the pre-clinical stage and the other primed to enter phase II clinical trials. In addition, the company recruited an impressive Chief Executive and engaged professional advisers in order to try and raise significant investment to pursue these clinical opportunities. It became clear that this high-risk strategy had failed, as the company was unable to raise funds in an exceptionally difficult market for biotech investment. As a result, MRCT assumed control of the company and has been engaged in selling its assets. A very early-stage drug-discovery programme was sold to Arrow Therapeutics plc and the phase II candidate drug has been licensed to Micrologix of Vancouver, Canada.

The long-standing collaboration between MRCT and Teijin Pharma continues, with significant efforts made to strengthen direct ties with the MRC science base. The group has been working towards defining a new project in respiratory disease and various contacts have been made with MRC scientists working in the area.

MRCT Edinburgh continues to work closely with the MRC Human Genetics Unit in support of the invention of optical projection tomography (OPT) by Dr James Sharpe. Funding has been recently acquired from Scottish Enterprise to set up a service that will offer OPT imaging to the scientific community on a fee-for-service basis. This initiative stems from a large demand for imaging in the wake of the publication of the technique and the practical difficulty of providing prototype machines and support. In parallel, plans are afoot to generate a robust 'beta test' machine that it is hoped can be sold on the open market.

### New Chief Executive

In January 2004 Dr Roberto Solari took up his appointment as Chief Executive of MRC Technology. Dr Solari was trained as a molecular cell biologist at Nottingham University and went on to do postdoctoral research in Lausanne and Liverpool before joining Glaxo in 1986 to work in early-stage drug-discovery for inflammatory diseases. He worked in the pharmaceutical industry until 1999, at which stage he was head of the Cell Biology Unit at GlaxoWellcome. From 1999 to 2004 he was involved with a number of biotechnology start-up companies, notably Astex-Technology and Lorantis. During this period he also advised the venture capital firms Abingworth Management and Apax Partners.

### LINK

MRCT continues to manage the MRC's participation in the national LINK scheme. The MRC, the Biotechnology and Biological Sciences Research Council and the Department of Trade and Industry co-sponsor a programme in applied genomics, launched in August 2000. The MRC's commitment to this programme is £5.5m spread over eight financial years from 2001/02 to 2008/09. The programme is now closed to new applications.

*See Section 7 of the MRC Operating Report 2003/04 for progress against 'Knowledge transfer objectives' targets in the MRC Operating Plan 2003/04.*



## Technology transfer indicators

These figures show that the MRC's exploitation of intellectual property arising from its intramural research is effective according to both national and international standards. Licence income, for instance, amounts to 6.4 per cent of research expenditure on MRC institutes, units and centres, which is double the proportion achieved overall by US universities and six times the level in UK universities.

### a. Employment in start-up companies

Company	Number of employees (FTEs)		
	at 31 March 2002	at 31 March 2003	at 31 March 2004
Cambridge Antibody Technology	264	299	271
ML Laboratories (Cobra)	75	75	88
TopoTargets (Prolifix)	30	36	45
MRCT (all sites)	44	54	66
BioFocus (CGL)	180	162	130
Vernalis (Ribotargets)	95	92	125
Sangamo (Gendaq)	15	65	63
AERES Biomedical	8	8	7
Domantis	-	35	40
Avidis	17	13	11
Ardana Biosciences	9	17	26
MVM	7	10	9
Hammersmith Imanet (Imaging Research Solutions Limited)	70	73	80
Etiologics	-	15	18
Iclectus	-	4	5
Oxxon Therapeutics	-	15	30
<b>Total</b>	<b>814</b>	<b>973</b>	<b>1014</b>

Brackets show MRC start-ups which have merged with other companies. The list does not include Celltech Group plc, although this originated in 1980 as a start-up company based on MRC technology.

### b. Revenues and performance indicators

Year	Cash income from exploitation of MRC intellectual property (excluding interest on sums held in the MRC Commercial Fund) £m
2001/02	11.7
2002/03	14.2
2003/04	15.2

The increase in 2003/04 was driven largely by higher royalty income on end-product sales from patent licences. In the light of the poor market in shares in the biotechnology sector during this period, the MRC did not sell any of the equity which it holds in listed companies derived from the licensing of intellectual property.

### c. Year-on-year trends on MRC exploitation activity

Year	New patent filings	New licence agreements (cumulative totals in brackets)	Royalty income from licensing agreements £000 <sup>1</sup>
1998/99	40	25 (251)	2,883
1999/00	32	26 (301) <sup>2</sup>	8,262 <sup>3</sup>
2000/01	34	36 (337)	13,823 <sup>3</sup>
2001/02	50	42 (379)	13,469
2002/03	41	32 (411)	15,118
2003/04	28	26 (437)	15,043 <sup>4</sup>

1. Restated under accruals basis 2. Cumulative figure adjusted following review of licences. 3. Includes gain of £2.85m from sale of shares.

4. Includes £0.7m interest on balances in Commercial Fund.



# Communication

## The Science Budget Science in Society objectives are:

1. To enhance public awareness of the outcomes from and priorities for publicly funded science and increase openness over its management and use through greater engagement and dialogue with the public.
2. To increase the reach and impact of activities undertaken by the Research Councils and other bodies funded through the Science Budget by improving joint working between them and other organisations.

This year the MRC Corporate Communications Group participated in a full programme of activities to promote the work and achievements of MRC scientists and to enhance communication between the scientific community and the public.

### Media

The press office worked throughout the year to attract media interest in the work and achievements of the MRC. It received just over 3,500 enquiries during the year and issued 87 news releases. There were over 1,400 stories in the UK print media mentioning the MRC, the vast majority of them reporting the results of our research positively. The press office continued its programme of media training and MRC scientists took part in numerous radio and television interviews.

Stories that attracted wide media interest included the publication of the results of a large-scale trial of cannabis-derived treatments for multiple sclerosis; evidence that eating high-fat foods can increase the risk of breast cancer; and the news that scientists have determined the structure of the flu virus that caused the 1918 flu pandemic. Stem cell research and the use of animals in medical research made the headlines on several occasions and MRC scientists participated in documentary programmes on both issues.

### Events and partnerships

The MRC organised and participated in events throughout the year to present the MRC's work and to engage different audiences in topical issues.

In 2003 we led a group of more than 30 organisations to develop a worldwide programme of events to celebrate the fiftieth anniversary of the discovery of the structure of DNA. In the autumn, Genetic Futures, a series of day-long workshops for 800 14-16 year old pupils, was held in locations across the UK. The students explored ethical dilemmas in genetics and carried out practical work including writing a news story. The events were designed and run in partnership with the Royal Society, the Biotechnology and Biological Sciences Research Council, the National Endowment for Science, Technology and the Arts, the Department for Education and Skills and the Department of Trade and Industry. The workshops culminated in an award ceremony at the Royal Society featuring Nobel Prize winner Sir John Sulston.

Other contributions to the DNA anniversary celebrations included a symposium in Cambridge organised by the MRC Laboratory for Molecular Biology. The 2003 Max Perutz essay competition for MRC PhD students awarded a special prize for the best DNA science-related entry (won by *Born to be wild type* by Maxine Holder), in addition to the usual prizes (first prize won by Angharad Davies for *From Luciferase to Lazarus – a wake-up call to tuberculosis*).

The 2003 Nobel Prize for medicine was won by Sir Peter Mansfield for his pioneering work on magnetic resonance imaging. A celebration of his work was held at an event in January at Portcullis House, London, attended by parliamentarians and peers.

New partnerships this year included working with the European Dana Alliance of the Brain on *Mapping the Mind – Frontiers in Brain Science* as part of Brain Awareness Week in March 2004. More than a hundred people came to the Dana Centre in London to hear the MRC's Chief Executive Colin Blakemore and to discuss advances in research with MRC neuroscientists through web interfaces.

In July the MRC started a communication programme focusing on clinical trials by organising *Media Meets the Trialists* as part of an international clinical trials conference. A panel comprising tabloid journalists, editors and documentary producers discussed the kind of information and angles they look for when reporting on clinical trials and how trialists can help.

In 2003/04 the MRC continued to work with partners on the Coalition for Medical Progress (CMP). This group of industry, charity, academic and funding organisations implemented a full programme of activities designed to increase public understanding of medical research involving animals and people's awareness of the benefits to human health. In March the CMP hosted a innovative event from the Dana Centre in which web users at home heard a live broadcast from British neuroscientists about how animal research is helping scientists to understand and treat brain disease. Last October experts on the 3Rs (reduction,

refinement and replacement of animal use) spoke at an event called *The 3Rs in Britain Today*. The CMP later published a 16-page booklet highlighting key points from the presentations.

The Stem Cell Communication Coalition, chaired by the MRC and comprising the major funders of stem cell research, produced an information pack covering the science of stem cells, the UK regulatory environment, the UK Stem Cell Bank, ethical issues and examples of the ongoing research and activities of the member organisations. The pack was widely distributed and well received. The Coalition also became actively involved in efforts to influence the outcome of the EU Tissues Directive by preparing briefing materials for members of the European Parliament and holding meetings with EU officials.

The MRC continued to support three main annual science festivals – Edinburgh, Cheltenham and the British Association for the Advancement of Science (BA) festival. Our contribution to the Edinburgh Science Festival focused on genetics, with PhD students from MRC Human Genetics Unit engaging family audiences in interactive experiments. The 2003 BA festival in Salford was notable for the launch of the *Medical Research Revealed* exhibition of paintings by MRC-sponsored scientist/artist Lizzie Burns. She had talked in-depth to more than 50 MRC scientists throughout UK and represented their science in art. The paintings have received extensive media coverage and generated a number of opportunities to engage non-scientific audiences in discussion about medical research.

### Consumer Liaison Group (now the Advisory Group on Public Involvement)

The MRC Consumer Liaison Group (CLG) met four times in 2003/04 and between meetings continued to provide public involvement advice and input into a variety of MRC activities. These included: membership of the Stem Cell Bank management committee and of the board of the Centre for Best Practice for Animals in Research; contributing to the revision of guidance on ethics of research involving children; a patient-safety workshop; and the UK Biobank ethics and governance framework. In March the group met for an away-day held at the MRC Institute of Hearing Research in Nottingham. After hearing about the institute's work, they discussed how the CLG might facilitate public involvement in the work of our units – as well as giving further consideration to their own role. As a result a number of changes are planned, including a survey of all unit directors and recruiting a network of regional associates to the group. It was also

agreed that two CLG members should be full participants in the MRC subcommittee on strategy, corporate policy and evaluation, the newly set up strategic advisory group for the MRC's Council. Building on experience from NHS programmes and charities such as the Alzheimer's Disease Society, CLG members are also attending MRC board meetings with the aim of identifying how best to facilitate lay input to the peer-review process. These developments underpin the decision to rename the CLG the MRC Advisory Group on Public Involvement.

### Corporate identity

In 2002/03 we developed a new corporate identity for the MRC to reflect more accurately the organisational brand values defined in our 2002 communications strategy. This year we have focussed on implementing the new identity throughout the MRC. This has involved developing and distributing logo artwork, producing brand guidelines to help all MRC units and our external partners to use the new identity accurately and consistently, and user-testing the guidelines.

### Print and web communications

During the year the MRC's web and publications team produced more than forty publications and events-support materials aimed at a range of audiences. Key examples include *MRC Network*, a newsletter aimed at MRC-funded scientists; a pocket-sized guide of key facts about the MRC; the MRC Annual Review, which focussed on how our long-term investment in medical research benefits people everywhere; ethical guides for scientists on a number of topics; a range of corporate planning and reporting publications, including the Annual Report, and publications to promote the MRC's recruitment and career development opportunities for new and established scientists.

During the year the team continued to manage and refine the content of the MRC website, including rationalising the links between related areas of information across the site. It also developed a website for the International Stem Cell Forum (ISCF), which will be launched in April 2004 ([www.stemcellforum.org](http://www.stemcellforum.org)). The site will enable the member organisations to communicate with one another and access meeting and working documents. It also includes the latest developments in stem cell research and policy, including the results of ISCF initiatives; for example, a registry of stem cell lines for use by the international scientific community in early 2005.

## Parliamentary

The MRC submitted evidence to a number of parliamentary inquiries during the year:

### House of Commons Science and Technology Select Committee Inquiries:

- *The use of science in UK international development policy* – the MRC contributed to the Research Councils UK (RCUK) written evidence in November 2003.
- *Chief Executive of the Medical Research Council: introductory session* – Colin Blakemore appeared before the committee in December 2003.
- *Too little, too late? Government investment in nanotechnology* – the MRC contributed to the RCUK written evidence in December 2003 and Dr Diane McLaren presented oral evidence to the committee in October 2003.

### Other Parliamentary Select Committees to which the MRC gave evidence:

- *The House of Commons Public Administration Select Committee Inquiry into the Honours System* – Professor Blakemore (in a personal capacity) gave oral evidence to the committee in January 2004.
- *The Welsh Affairs Committee Inquiry into Manufacturing in Wales* – the MRC contributed to the RCUK written evidence in February 2004.
- *House of Lords Select Committee on Science and Technology Inquiry into Science and the RDAs* – the MRC contributed to the RCUK written evidence in February 2004.

The MRC Knowledge Management Group has dealt with a significant number of parliamentary questions as well as providing information to the Department of Health, the Office of Science and Technology and the Scottish Executive for ministerial briefing requests during the year.

*See Section 8 of the MRC Operating Report 2003/04 for progress against 'Science in Society objectives' targets in the MRC Operating Plan 2003/04.*





# Operational

## The Science Budget operational objectives are:

1. To complete work on implementation of the recommendations of the 2001 Quinquennial Reviews.
2. To meet the Government's requirements and targets concerning freedom of information, e-business, (including electronic records management), the modernisation of public services, and the promotion of social and gender equality of opportunity.
3. To have established the systems to support a co-ordinated performance management system for the Science Budget and the Research Councils in time for the next spending review.

The MRC contributed to these through joint working with the other Research Councils (RCs) under the auspices of Research Councils UK (RCUK), and by pursuing a number of internal operational objectives, summarised below.

## Good research practice and ethics

### Facilitating good practice

Implementing statutory regulations and good practice guidance can be a challenge for researchers, which is why the MRC is running a project to support its units in this area. Our aim is to achieve sustainable, locally relevant ways for researchers to implement MRC standards, and to enable units to work more closely with each other in this respect. A research governance network of unit representatives is being set up to address researchers' concerns, disseminate information and exchange experiences and ideas. The MRC contributed during the year to redrafting by the Department of Health (DoH) of the NHS Framework for Research Governance in Health and Social Care ([www.dh.gov.uk/PolicyAndGuidance/ResearchAndDevelopment/ResearchAndDevelopmentAZ/ResearchGovernance/fs/en](http://www.dh.gov.uk/PolicyAndGuidance/ResearchAndDevelopment/ResearchAndDevelopmentAZ/ResearchGovernance/fs/en)).

### Centre for Best Practice for Animals in Research (CBPAR)

The CBPAR has been closely involved with other stakeholders in implementing the recommendations of the House of Lords Select Committee on Animals in Scientific Procedures, particularly in relation to a National Centre for the 3Rs (reduction, refinement, replacement of animal use).

Achievements in 2003/04 included:

- Completion of the CBPAR section of the MRC website ([www.mrc.ac.uk/public-cbpar](http://www.mrc.ac.uk/public-cbpar)). The CBPAR is currently reviewing these pages to develop a more comprehensive, contemporary website.
- The Centre for Macaques became fully operational in summer 2003.
- Best practice guidelines on the accommodation and care of primates used in scientific procedures will be published in April 2004 and will be available in hard copy and on the MRC website.

- The MRC provided evidence to the Nuffield Council on Bioethics working party in December 2003 – see [www.mrc.ac.uk/pdf\\_nuffield\\_animals\\_consultation\\_response.pdf](http://www.mrc.ac.uk/pdf_nuffield_animals_consultation_response.pdf).

### 3Rs

The MRC continues to fund research to replace, reduce and refine the use of animals, both as an integral part of its research programmes and through its 3Rs highlight notice. Six full proposals have been evaluated under the 3Rs funding scheme in 2003/04. One award, of £200k over three and a half years, has been made to Dr Georgia Mason at the University of Oxford to study improvements in cage cleaning regimes as a husbandry refinement for laboratory mice.

The 3Rs funding highlight notice was relaunched in April 2003, and the CBPAR has established a panel of experts in the 3Rs. In the past year, two of the four applications submitted were funded.

Further information about the CPBAR is available at [www.mrc.ac.uk/public-cbpar](http://www.mrc.ac.uk/public-cbpar).

### Data-sharing and preservation – population-based research and clinical trials

The MRC's Council agreed a draft policy statement in December 2003 to encourage data-sharing and preservation within the framework of legislation and good practice for research involving personal data ([www.mrc.ac.uk/strategy-data\\_sharing\\_policy](http://www.mrc.ac.uk/strategy-data_sharing_policy)). A steering group was established under the chairmanship of Professor David Armstrong to take the policy forward. The following three activities were developed:

- In March 2003 a call for proposals for 'pathfinder' projects was launched to develop standards for data preservation and sharing. The MRC's Council funded a project at the Institute of Child Health to inform the development of an ethical, governance and sustainable framework for a national collection of neonatal bloodspot banks.
- The specification for a study of data standards supporting data-sharing across the life sciences was jointly developed by the MRC, the Wellcome Trust, the Biotechnology and Biological Standards Research Council (BBSRC), the Natural Environment Research Council (NERC) and the Department of Trade and Industry (DTI), with funding also from the RCUK Joint Information Systems Committee. An invitation to tender was launched at the end of 2003.
- In response to the concerns of researchers involved in data preservation and sharing, e-Science, and health informatics, plans were developed for a study of consent and confidentiality in data-sharing. The objectives were to identify practical examples of ways for researchers to meet statutory and good practice requirements and consider how to tackle remaining barriers and uncertainty.

Work is ongoing to identify the needs of the research community and how best they can be met, particularly in relation to the new challenges of digital data preservation.

### Patient-safety research

Medical errors have become a major concern for the general public, policymakers and clinicians and patient safety is at the heart of the Government's current policy to improve the quality of healthcare services. The MRC is coordinating the cross-Council initiative, with the Economic and Social Research Council (ESRC) and the Engineering and Physical Sciences Research Council (EPSRC). It convened a joint workshop on patient-safety research in January 2003 following a request from the Chief Medical Officer to consider how the research base in this area might be strengthened in the UK. Following the workshop, pump-priming funding has been made available by the RCs and a call for proposals to establish multi-disciplinary networks in this area was announced. Funding for the development of five cross-Council networks to stimulate and increase research to prevent medical errors in healthcare was announced in September, 2003 ([www.mrc.ac.uk/public-3\\_sept\\_2003](http://www.mrc.ac.uk/public-3_sept_2003)). A total of £205k has been jointly awarded by the MRC, the DoH, the ESRC and the EPSRC to fund the networks.

### Influencing policy

The RCUK's Research and Development Group (RDG) has agreed that the RCs should develop a common framework for ethics that includes principles of good practice for researchers; interactions between researchers and their institutions; and the ethics of research management. The RDG has set up a sub-group to take forward this project, with representatives from the MRC and the other RCs. The aim is for the common ethics framework to be developed by the end of 2004.

An external committee of experts, the MRC committee on the ethics of research involving human participants or tissues and personal information, has been set up to monitor emerging ethical issues and advise the MRC about how best to respond.

### Human Tissue Bill

The MRC has taken a close interest and participated in the consultations that preceded the publication of the Human Tissue Bill. The Bill largely reflects the MRC's views and its own guidance *Human tissue and biological samples for use in research* (2001), which emphasises the need for patient confidentiality, consent and information. However, the MRC raised concerns about particular aspects of the original draft Bill with the DoH and consulted others about their views. Their feedback was incorporated in our position statement – *MRC views on the draft Human Tissue Bill* – which considers the implications for medical research. The main concern is that legislation on the use of tissue remnants from diagnostic tests and operations could impose unnecessary bureaucracy and hinder important research.

### Medicines for Human Use (Clinical Trials) Regulations

The Medicines for Human Use Regulations, which transposed the EU Clinical Trials Directive into UK law on 1 May, have raised concerns in the academic trials community. Since 2003/04 the MRC has been working with the DoH, the Medical and Healthcare products Regulatory Agency, trialists and others to provide clarity on implementing the UK Regulations. The project team has published a series of guidance papers on subjects including sponsorship, trial initiation and closure, trial-management systems and trial supplies and pharmacovigilance – see [www.ncchta.org/eudirective/index.asp](http://www.ncchta.org/eudirective/index.asp).



## The ethics of research overseas

The MRC is a founder partner of the Global Forum on Bioethics in Research, which aims to enhance the ability of developing countries to conduct their own research ethics reviews, and helped to prepare for the Forum's fifth meeting in France in April 2003. The MRC was also involved in a Nuffield Council workshop in South Africa on the impact of various recent guidelines on research in developing countries. The MRC has a panel of expert advisers on the ethical conduct of externally sponsored research in developing countries, and this year we published a revised version of our guidance *Research involving human participants in developing societies*.

## MRC ethics and trials guidance

Additions made during 2003/04 to the MRC's wide range of ethics and trials guidance included: *Cluster randomised trials: methodological and ethical considerations*, which deals with the challenges of obtaining consent in studies involving groups of people, rather than individuals; *Interim guidance on the ethics of research involving tissues derived from the nervous system*; and *Best practice in the accommodation and care of primates used in scientific procedures*, which defines the criteria for MRC funding of work with non-human primates.

MRC guidance documents are available on our website at [www.mrc.ac.uk/publications-ethics\\_and\\_best\\_practice](http://www.mrc.ac.uk/publications-ethics_and_best_practice).

## Effective business practice

### Communication

The MRC website continues to enable the Modernising Government initiative and to improve the MRC's effectiveness and efficiency in communication with its customers, allowing them to find more of the material they are looking for and also speeding up the process of sharing information. In addition, an MRC portal is in development, which is designed to facilitate improved internal and public communication (see below).

### RCUK administration strategy

During the year the MRC has been actively involved with the other RCs in the research administration joint electronic submission (JeS) framework working groups. The MRC will be adopting the new joint core grant terms and conditions in April 2004, giving priority to working with the other RCs

on coordinating implementation of dual support reform. We will be adopting the JeS service for grants and fellowships as soon as it incorporates the current MRC peer-review functionality in the MRC's electronic application and assessment system.

### Electronic record management system (ERMS)

The MRC has continued to work jointly with the other RCs to procure and implement a common ERMS and to share information on related business change. The joint programme board which oversees this work is chaired by the MRC's Executive Director. Following the successful testing of the model office, the MRC system will go live in Autumn 2004.

### The Gershon Review

The RCs have collectively provided input to the Government's Gershon Review and will play their part in delivering efficiency improvements. The MRC is reviewing the way we structure and manage administrative support for institutes and units, and our own investment in information systems, in the light of the Review.

### The Lyons Review

Sir Michael Lyons was asked by the Chancellor of the Exchequer to "... conduct an independent review into the scope for relocating a substantial number of public sector activities from London and the South East of England to other parts of the UK." All civil service departments and public sector agencies and non-departmental public bodies are covered by the Review. In February the MRC submitted a case for the retention of its core functions in London, in close proximity to the DoH and other major stakeholders. As part of the submission there is a commitment to reduce the complement of posts in the MRC's Head Office from 272 to 190 within the next five years. This will be achieved through a mix of efficiency improvements (especially those that flow from investments in new information systems), joint working with other RCs, transferring functions out of London, eg, to units, and contracting out. The DTI will be examining the MRC case in the light of the recommendations of the Review.

### Investment in information systems

**Auris partnership:** the MRC successfully transferred responsibility for its corporate IT systems to the new managed service provider, LogicaCMG, in November 2003 under a service delivery procurement. The project was established

to deliver the infrastructure and services needed to enhance the provision and use of information technology and systems across the MRC in line with its information systems strategy. Corporate information systems are now covered by a partnership between the MRC and LogicaCMG, named Auris. This partnership is notable in that remuneration to LogicaCMG is closely tied to the delivery of specific business benefits and milestones rather than the more traditional IT measures found in most outsourcing contracts.

**MRC portal:** delivery of all the new services to be supplied by the Auris partnership will be achieved through an MRC portal. The portal is due to go live in May 2004 and will be accessible by all MRC staff. In the near future the portal will be made available to the wider research community and then, following incorporation of the MRC website content, to the public.

**Financial and accounting management information system:** during 2003/04, the MRC has worked towards the procurement of a new financial accounting and management information system (FAMIS) as a major business efficiency improvement solution. FAMIS is the first solution to use a new, enterprise-wide platform (SAP) which is expected to be common to all future MRC developments in this area. The business plan for the investment in FAMIS envisaged that there would be significant efficiency improvements and cost savings both at the MRC's Head Office and in units once the new system was established. FAMIS will be launched in June 2004.

## Audit

During the year, the Audit Committee continued to fulfil its expanded remit with respect to issues of corporate governance. In particular, this included providing guidance to management on embedding risk-management practices within the MRC, in line with Treasury requirements.

During 2003/04 the Audit Committee also:

- Approved the rolling programme of compliance and systems audits performed by the Research Councils Internal Audit Service and reviewed the audit reports.
- Oversaw the continuing use of the Directors' Annual Statement of Internal Control across MRC establishments.
- Monitored business critical projects and reviewed reports from the MRC's management.

## Risk management

As a non-departmental public body, the MRC is required to set a policy and framework for the management of risk so that the Chief Executive and Accounting Officer is able to give assurance on the system of internal control that supports the achievement of the MRC's objectives. In July 2001 the MRC's Council approved a risk-management policy and structure which has been implemented to support a full statement of internal control for 2003/04.

The Head Office risk register was completed in July 2003. The process then mapped the risks in the register against the top 10 risks agreed by the MRC's Council in 2001; the register is being refined further to ensure that it is fully embedded in the organisation and used in day-to-day management. During 2003/04 a steering group has provided support for units in establishing equivalent lists. These were completed by March 2004.

## Financial planning

The MRC's Council approved the provision of annual updates on the funding prospects for the forthcoming and future financial years during 2003/04. The information given on the MRC website will be updated after each February MRC Council meeting, when the budget is approved for the next financial year, and will only be amended at other times if significant/major changes occur during the financial year. The planned expenditure and estimated whole-life value of funds available for 2004/05 to 2006/07 can be found at [www.mrc.ac.uk/funding-funding\\_estimates](http://www.mrc.ac.uk/funding-funding_estimates).

## Freedom of Information (FOI)

The MRC has continued to prepare guidance for its staff and plans for appropriate training, in preparation for rights of access. An FOI project board has been established to oversee the preparation of guidance and to coordinate systems across the MRC for right of access to information for 1 January 2005. Communication will be greatly assisted by the forthcoming MRC portal, and the implementation of the electronic records management system will also help in handling requests for information.

## Environmental policy

The MRC is committed to continuous improvement of its environmental performance. All MRC units must meet all relevant current and foreseen statutory regulations and official codes of practice, and must specify that contractors do the same when working on MRC premises. Each unit is required to develop their own environmental policy, based on the MRC's central policy but adapted according to their local circumstances, and to produce an annual environmental report.

As part of its work to achieve optimum environmental performance, the MRC is committed to educating, training and motivating its staff and contractors to work in an environmentally responsible way and to play a full part in developing new initiatives, and to cooperating with other bodies in the public and private sectors to develop and promote environmentally responsible practices.

The MRC's Council will review progress in meeting the MRC's environmental management strategy in July 2004.

## Health and safety

Given the current background of the Lyons Review (see page 36) and the need to work more closely with the other RCs, the MRC's Health, Safety and Security section have been exploring opportunities for mutually beneficial working with the other RCs, universities and government departments. The MRC is currently working with the Land Registry and the NERC on sharing policy and guidance; the Council for the Central Laboratory of the Research Councils and ESRC on training for unit safety personnel; the Institute of Safety in Technology of Research on safe laboratory design; and the Home Office on counter-terrorism training of police and security officers. The MRC will continue to look for partnership arrangements during 2004/05.

In March 2004 the MRC, in partnership with the National Counter-Terrorism Security Office, organised a conference for 70 local counter-terrorism officers from around the country. The aims of the event were to provide a background to the role of animals in medical research, the regulatory framework for their use, and to give an insight into the high standards of husbandry and welfare provided in animal facilities.

Following a seminar for community-research programme managers, we published a guidance booklet on health, safety and security for researchers working with the public in March 2004. This guidance has been warmly greeted by research groups and those agencies and companies they interact with.

An investigation into the prevalence of work-related upper-limb disorder in laboratory-based MRC staff was undertaken last year using a questionnaire based on the standard Nordic questionnaire for the analysis of musculoskeletal symptoms. Although the investigation was primarily aimed at the users of micropipettes, the results showed a high prevalence of musculoskeletal complaints in laboratory staff generally. A coordinated approach to improving laboratory ergonomics will begin in the coming year.

From January 2005 there will be a rolling programme of health and safety audits of all MRC research units, picking up one-third of units per year.

Further information on the MRC's health, safety and security arrangements is available at <http://extra.mrc.ac.uk/hss/>.

## Scientific misconduct

The MRC is required to record incidence of scientific misconduct. As was the case in 2002/03, no new instances were reported among MRC researchers.

## Register of members' interests

When MRC Council and board members are appointed, they are required to declare any private, professional or commercial interests that might conceivably conflict with the MRC's interests, or which might be perceived by others as creating a conflict of interest. Members are also responsible for notifying the MRC Head Office of changes in their other interests, as these occur. The MRC keeps a central register of its Council members' interests which is open for public inspection at [www.mrc.ac.uk/about-council-register\\_breakdown](http://www.mrc.ac.uk/about-council-register_breakdown).

See Section 9 of the MRC Operating Report 2003/04 for progress against 'Operational Objectives' targets in the MRC Operating Plan 2003/04.

## Standards of service

Service First was the Government's charter programme which aimed to focus attention on service delivery across the public sector as an integral part of the Better Government initiative.

The MRC has decided to continue to monitor its list of key performance areas. We report on our performance against these targets in our Annual Report (see below) and on the MRC web site at [www.mrc.ac.uk/about-service\\_first\\_statement](http://www.mrc.ac.uk/about-service_first_statement).

The MRC undertakes to:

- Abide by equal opportunities and anti-discrimination legislation.
- Ensure that procedures exist for consulting users proactively, eg, concordats with the Health Departments and other government departments, the work of the Advisory Group on Public Involvement (formerly the Consumer Liaison Group), electronic application and assessment, roadshows in universities, etc.
- Provide contact details on all external documents.
- Uphold high standards of integrity in all areas of our operations.
- Operate a complaints procedure including names of contacts to which complaints should be directed.
- Maintain an up-to-date web site.

## Standards of service

Area and target	Achievement in 2003/04
<b>Grant applications</b>	
Receipt of all grant applications will be acknowledged within 15 working days and applicants given an indication of the timetable for consideration.	100% through the electronic application and assessment system
Grant applications will be considered by the MRC's peer review process within 26 weeks of the submission date.	98% considered within 26 weeks
Feedback will be provided to grant applicants within seven working days of a decision being made.	71% <sup>1</sup> within seven working days 80% within 10 working days
<b>General correspondence</b>	
Replies to general correspondence from members of the public will be sent within 15 working days.	100%
<b>Payment of invoices</b>	
Payment of bills will be within 30 days of presentation.	77% <sup>2</sup> within 30 days of presentation

1. This percentage under-represents the actual position. Many applicants received informal verbal feedback within the seven working days standard, which may not be recorded.

2. Introduction of the new financial management system (FAMIS) should lead to more accurate documentation of payments and will improve payment turnaround.







## Financial summary

A summary of our financial results in 2003/04 and the preceding two years is shown in the income and expenditure table below. The results in the Annual Account have been adjusted to allow a comparison of performance against budget; a reconciliation statement is provided to make these adjustments clear. The income and expenditure table is presented in a format that is broadly consistent with other documents produced, such as the MRC Operating Report and Operating Plan. A full review of the activity can be found in the Annual Accounts (page 45).

### Income and expenditure

Financial Year <sup>1</sup>	2001/02		2002/03		2003/04	
	Resource £m	Capital £m	Resource £m	Capital £m	Resource £m	Capital £m
Domestic DEL <sup>2</sup>	309.3	38.6	325.6	48.0	364.8	34.8
EU DEL <sup>3</sup>	3.3	-	3.3	-	-	-
External income	47.2	-	48.9	-	56.4	-
Transfer from private funds	-	-	-	-	-	-
Income from commercial activities <sup>4</sup>	13.5	-	15.1	-	15.0	-
Balance brought forward	10.9	-	37.8	-	37.2	-
<b>Total income</b>	<b>384.2</b>	<b>38.6</b>	<b>430.7</b>	<b>48.0</b>	<b>473.5</b>	<b>34.8</b>
MRC research units	177.2	23.4	180.3	20.4	209.1	26.5
Research grants	119.9	15.9	125.9	15.3	111.6	8.4
Special contributions	6.7	-	8.7	-	8.0	-
Research career awards	44.8	-	44.2	0.8	51.6	0.6
International subscriptions	7.2	-	9.6	-	6.9	0.9
Central administration running costs	13.7	0.1	14.5	-	14.5	-
Restructuring costs	2.7	-	3.0	-	3.9	-
Expenditure on commercial activities <sup>4</sup>	6.3	-	7.3	-	7.6	-
<b>Total expenditure</b>	<b>378.4</b>	<b>39.4</b>	<b>393.5</b>	<b>36.5</b>	<b>413.2</b>	<b>36.4</b>
<b>Balance carried forward</b>					<b>60.3</b>	<b>(1.7)</b>

1. Financial year 2001/02 was previously presented in cash terms and has been restated in resource terms to enable comparison across years and to be consistent with reports submitted to the Treasury, via the Department of Trade and Industry.

2. When Resource Accounting and Budgeting was introduced, grant-in-aid was replaced by the Departmental Expenditure Limit (DEL) as the primary control.

3. An expenditure control on EU funded activities is now in place. Expenditure is managed against a pre-determined budget, not income received.

4. Income and expenditure relating to commercial activities are included to ensure comparability with the Annual Account. In other reports, MRC research activities are reported separately from its commercial activities.

(All figures are subject to rounding)

## Reconciliation of resource to financial statements – Annual Account

	Notes	2003/04	
		£000	£000
<b>Total income per income and expenditure</b>			483,404
Less parliamentary grant-in-aid	3	-383,461	
Plus domestic DEL		364,835	
Plus balance brought forward		37,200	
Less release of deferred income on tangible fixed assets	23	-21,729	
Less EU income	5	-	
Plus EU DEL		-	
Less Joint Infrastructure Framework income		-6,645	
Less proceeds from fixed assets sale (cash flow statement)		-50	
Plus interest receivable (cash flow statement)		18	
			<u>-9,832</u>
			<u>473,572</u>
<b>Total expenditure per income and expenditure</b>			469,255
Plus unused animal licence fee income	18	-	
Less capital grants (see contra entry under capital DEL)		-9,922	
Less Joint Infrastructure Framework expenditure <sup>1</sup>		-5,326	
Less movement in provisions	22	-118	
Less amortisation of intangible fixed assets	14	-6,915	
Less impairment of tangible fixed assets	15	-5,719	
Less depreciation of tangible fixed assets	15	-18,179	
Less FRS17 pension costs	7e	-9,862	
			<u>-56,041</u>
			<u>413,214</u>
<b>External income</b>			
Contribution from other government departments	4		31,313
Contributions and grants from other bodies	5		21,393
Other income	6		<u>10,367</u>
			63,073
Less EU income	5	-	
Less Joint Infrastructure Framework	4	-6,645	
			<u>-6,645</u>
			<u>56,428</u>

1. The adjustment for Joint Infrastructure Framework is limited to the expenditure accrued in the year, as income above this is retained by the MRC to meet the income shortfall in previous years (note 9).

## Reconciliation of capital to financial statements

	Notes	2003/04	
		£000	£000
<b>Total expenditure</b>			
Capital grants (see contra entry under resource DEL)		9,922	
Additions in year	15	26,471	
Less net book value of disposals	15	-1,568	
Less profit/plus loss on disposal		1,518	
			<u>36,343</u>

### Review of the Year

The MRC is required by the Department of Trade and Industry (DTI) and the Office of Science and Technology to control its budgets within a Departmental Expenditure Limit (DEL) under the Resource Accounting and Budgeting regime. The result against DEL for 2003/04 was an underspend of £58.6m with a balance of £60.3m resource and (£1.7m) capital available to carry forward for use in later years. The overspend on capital is offset against the carry forward from 2002/03 but not drawn down during the year. Further commentary on performance during the year is given in the Annual Accounts (page 45).

The balance sheet at 31 March 2004 shows provisions for liabilities and charges of £7.6m. This reflects the inclusion of liabilities falling due in future years which, to the extent that they are not to be met from the MRC's other sources of income, may only be met by future grant-in-aid from the DTI, the MRC's sponsoring department. 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.

Grant-in-aid for 2003/04, 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 for that year, which have been approved by Parliament.

# Annual Accounts 2003/04

## Financial results for the year

- The income and expenditure account records a surplus of £9,833,000.
- The parliamentary grant-in-aid totalled £409.9m.
- Total income excluding grant-in-aid amounted to £78.1m, staff costs totalled £139.6m, other operating costs excluding depreciation totalled £97.9m and expenditure on research grants totalled £125.3m.
- Total asset values increased by £11.8m, whilst creditors fell by £24.1m.
- Reserves, excluding the general reserve showed a net increase of £61.1m. Owing to FRS17 disclosures affecting the current and prior year figures, the balance on the general reserve increased to a surplus of £39.0m, compared to a restated surplus of £9.1m in 2002/03. (Note 23).
- Total government funds at 31 March 2004 stood at £383.2m, largely as a result of the introduction of the pension reserve of £54.4m under FRS17. (Note 2).
- Amounts payable to the Consolidated Fund during the year were £235k (2002/03 = £337k). See note 18.
- Charges for impairment of intangible fixed assets, which were previously set against the income and expenditure account, are now set directly against the intellectual property reserves. (Note 2).

## 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 30 days of receiving them. In 2003/04 the MRC paid 77 per cent (2002/03 = 76%) of invoices within 30 days.

## Audit Committee

An MRC Audit Committee, chaired by Mr Derek Flint (MRC Council member and non-executive Director of Alliance & Leicester Insurance plc), meets three 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.



Chief Executive and Accounting Officer

7 October 2004

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

Under paragraph 3 of Schedule 1 to the Science and Technology Act 1965 the MRC 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 Trade and Industry, with the consent of the Treasury. The accounts are prepared on an accruals basis and must show a true and fair view of the MRC's state of affairs at the year-end and of its income and expenditure and cash flows for the financial year.

In preparing the accounts the MRC is required to:

- Observe the accounts direction issued by the Secretary of State for Trade and Industry, 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 have been followed, and disclose and explain any material departures in the financial statements.
- Prepare the financial statements on the going concern basis, unless it is inappropriate to presume that the MRC will continue in operation.

The Secretary of State for Trade and Industry has appointed the senior full-time official, the Chief Executive, as the Accounting Officer for the MRC. His relevant responsibilities as Accounting Officer, including his responsibility for the propriety and regularity of the public finances and for the keeping of proper records, are set out in the Non-Departmental Public Bodies' Accounting Officers' Memorandum, issued by the Treasury and published in *Government Accounting*.

## Statement on internal control

### 1. 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, set by the MRC's Council, whilst safeguarding the public funds and assets for which I am personally responsible, in accordance with the responsibilities assigned to me in *Government Accounting*.

The Department of Trade and Industry Accounting Officer has designated me as the Accounting Officer of MRC, responsible for the effective, safe and efficient operation of the MRC in accordance with the Management Statement.

### 2. 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 the MRC's 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 for the year ended 31 March 2004 and up to the date of approval of the Annual Report and Accounts and accords with Treasury guidance. However, I recognise that a continued period of refinement during 2004/05 will be required to ensure that the process is fully embedded at the MRC.

### 3. Capacity to handle risk

Following consultation with the MRC's Executive Board and Audit Committee, and the Research Councils Internal Audit Service (RCIAS), the risk management policy originally developed and agreed by the MRC's Council in July 2001 was revised in March 2003, to reflect the full and final risk management framework which includes delegations, procedures and processes we have put in place to give effect to risk management across the MRC.

Staff are trained or equipped to manage risk in a way appropriate to their authority and duties. We ensure that all MRC staff understand the range and relative priority of risks they have to manage by:

- Setting appropriate objectives for staff in line with the MRC's policy on risk.
- Assigning ownership of key risks to people with the authority and responsibility to manage them.
- Identifying and in consultation with Directors, assigning resources to the range of risks to achieve best value for money.
- Ensuring that the system of control is evidenced to support the corporate governance statement on internal control.
- Identifying in good time the risks that generate actual failures of control.
- Strengthening project management through a programme of targeted training, by providing guidance and induction in understanding risk and project management, in association with corporate objectives.

Embedding risk management across MRC staff is a continuing process, and is expected to be complete by the end of the financial year.



#### 4. The risk and control framework

Risk management and internal control is considered on a regular basis by the MRC's Executive Board and Audit Committee during the year. Risk management is an essential item in the corporate planning and decision making processes of the MRC and its institutes. Progress on the risk management assessment framework is regularly considered at meetings of the Risk Management Steering Group.

The MRC Executive Board and Audit Committee will review the risk management framework throughout 2004/05. They will receive reports on the business critical projects and review the risk register.

There is also an annual review of external risks using dipstick testing procedures which are operated in conjunction with other Research Councils. Dipstick testing is an important element of the framework to review expenditure and systems which support Research Council projects at universities and other research bodies.

#### 5. Review of effectiveness

As Accounting Officer, I have responsibility for the effectiveness of the system of internal control. My review of its effectiveness is informed by the work of the internal auditors, the Audit Committee, which oversees the work of the internal auditors, and the MRC's risk management processes, Executive Board and research directors – who have responsibility for developing and maintaining the internal control framework – and comments made by the external auditors in their management letter and other reports. The Executive Board and the Audit Committee have advised me about the implications of the outcome of my review of the effectiveness of the system of internal control, and a plan is in place to address weaknesses and ensure continuous improvement of the system. The MRC has established the following procedures and processes to achieve this:

- The MRC's Council and its advisory committees: set risk policy and framework and review, which includes independent reviews of the quality and value for money of the MRC's scientific portfolio through peer review.
- The work of the MRC Audit Committee in accordance with Treasury guidelines, whose terms of reference includes to "monitor and advise on appropriate standards for risk management, and internal control."
- The role of the Executive Director who is accountable and responsible to the Chief Executive for the organisation's operational risk management practices.
- The existence of an Executive Board comprising the Chief Executive, the Executive Director and the directors of the major business functions with meetings every week, whose responsibilities *in relation to risk* include:
  - Identification of risks and regular assessment of the sensitivity of the MRC risk profile; for the major business functions and unit risk, and reporting on the risk profiles to the MRC Audit Committee twice a year.
  - Establishing project boards for the management of key projects.
  - Reviewing progress reports on individual projects.
  - Assigning responsibility for a particular risk area where it is not pervasive across the board.
  - Initiating action plans for implementing decisions about identified risks.
  - Reviewing performance in the management of risks.
  - Review and submission of business critical projects analysis to each meeting of the MRC Audit Committee.
  - Regular reviews of MRC's health and safety arrangements.
  - Review of targets set to measure performance across operational areas.
  - Regular reviews of periodic and annual financial reports which indicate financial performance against targets.

- The roles of the directors of major business functions, heads of sections (Band 2) at Head Office, directors of research and senior unit administrators and heads of departments/divisions/groups and principal investigators who are responsible for assessing, prioritising, and managing operational risks within their area of responsibility and documenting such risks in their risk registers.
- Submission of Directors' Annual Statement of Internal Control and implementation of appropriate follow-up action particularly where risks or weak controls are highlighted.
- The Chief Executive holds regular stewardship reviews with directors of the major business functions and directors of research, which include a review of the risk management approach as it relates to ongoing scientific and operational activity and future plans.

The MRC's internal audit is provided by RCIAS, which operates to Government Internal Audit Standards. The work of the internal audit unit is informed by an analysis of the risk to which the MRC is exposed. Annual internal audit plans are based on this analysis, together with comments from the MRC Audit Committee, who are asked to consider whether the planned activity addresses the MRC's current risks, and whether there are any other areas which require internal audit attention. The analysis of risk and the internal audit plans are endorsed by the MRC's Audit Committee and approved by me. At least annually, the Head of Internal Audit (HIA) at RCIAS provides me with a report on internal audit activity in the MRC. The report includes the HIA's independent opinion on the adequacy and effectiveness of the MRC's system of internal control.

*Colin Blakemore*

Chief Executive and Accounting Officer

7 October 2004

## The certificate and report of the Comptroller and Auditor General to the Houses of Parliament

I certify that I have audited the financial statements on pages 52 to 77 under the Science and Technology Act 1965. These financial statements have been prepared under the historical cost convention, as modified by the revaluation of certain fixed assets, and the accounting policies set out on pages 56 to 57.

### Respective responsibilities of the MRC, the Chief Executive and Auditor

As described on page 46, the MRC and its Chief Executive are responsible for preparing the financial statements in accordance with the Science and Technology Act and Treasury directions made thereunder for ensuring the regularity of financial transactions. The MRC and its Chief Executive are also responsible for preparing the foreword and other contents of the Annual Report. My responsibilities, as independent auditor, are established by statute and I have regard to the standards and guidance issued by the Auditing Practices Board and the ethical guidance applicable to the auditing profession.

I report my opinion as to whether the financial statements give a true and fair view and are properly prepared in accordance with the Science and Technology Act 1965 and Treasury directions made thereunder, and whether 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. I also report if, in my opinion, the foreword is not consistent with the financial statements, if the MRC has not kept proper accounting records, or if I have not received all the information and explanations I require for my audit.

I read the other information contained in the Annual Report and consider whether it is consistent with the audited financial statements. I consider the implications for my certificate if I become aware of any apparent misstatements or material inconsistencies with the financial statements.

I review whether the statement on pages 47 to 49 reflects the MRC's compliance with Treasury's guidance on the Statement on Internal Control. I report if it does not meet the requirements specified by Treasury, or if the statement is misleading or inconsistent with other information I am aware of from my audit of the financial statements. I am not required to consider, nor have I considered whether the Accounting Officer's Statement on Internal Control covers all risks and controls. Neither am I required to form an opinion on the effectiveness of the MRC's corporate governance procedures or its risk and control procedures.

### Basis of audit opinion

I conducted my audit in accordance with *United Kingdom Auditing Standards* issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts, disclosures and regularity of financial transactions included in the financial statements. It also includes an assessment of the significant estimates and judgements made by the MRC and its Chief Executive in the preparation of the financial statements, and of whether the accounting policies are appropriate to the MRC's circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations that I considered necessary in order to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by error, fraud or other irregularity, and that 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 that govern them. In forming my opinion I have also evaluated the overall adequacy of the presentation of information in the financial statements.

## Opinion

In my opinion:

- The financial statements give a true and fair view of the state of affairs of the Medical Research Council as at 31 March 2004 and of the surplus, total recognised gains and losses and cash flows for the year then ended, and have been properly prepared in accordance with the Science and Technology Act 1965 and directions made thereunder by the Secretary of State for Trade and Industry.
- 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.

I have no observations to make on these financial statements:



**John Bourn**

*Comptroller and Auditor General*

7 October 2004

National Audit Office  
157-197 Buckingham Palace Road  
Victoria, London, SW1W 9SP

# Income and expenditure account

for the year ended 31 March 2004

	Notes	2003/04 £000	2002/03 (restated, note 2) £000
<b>Income</b>			
Parliamentary grant-in-aid	3	383,461	344,671
Release of deferred income	23	21,729	13,975
Contribution for licence fees	3	98	98
Contributions from other government departments	4	31,313	29,701
Contributions and grants from other bodies	5	21,393	23,794
Commercial activities	13	15,043	15,118
Other income	6	10,367	7,630
<b>Total income</b>		<b>483,404</b>	<b>434,987</b>
<b>Expenditure</b>			
Staff costs	7	139,573	122,141
Other operating costs	8	97,903	81,810
Research grants	9	125,314	149,930
Other research	10	7,980	8,704
Postgraduate/training awards	11	52,255	45,017
International subscriptions	12	7,788	9,547
Commercial activities	13	7,629	7,240
Amortisation of intangible fixed assets	14	6,915	8,117
Depreciation of tangible fixed assets	15	18,179	20,801
Impairment of tangible fixed assets	15	5,719	-
<b>Total expenditure</b>		<b>(469,255)</b>	<b>(453,307)</b>
<b>Surplus/(deficit) on operations</b>			
Interest receivable	17	14,149	(18,320)
Notional cost of capital	1j	253	329
Amounts payable to the Office of Science and Technology	18	(9,393)	(16,967)
Other finance income	7e	(235)	(337)
Unwinding of discount on provisions	22	6,823	19,117
Loss on disposal of tangible fixed assets		(246)	(504)
		(1,518)	(813)
<b>Surplus/(deficit) for the financial year</b>			
Reversal of notional cost of capital		9,833	(17,495)
Accumulated surplus/(deficit) on general reserve brought forward	23	9,393	16,967
Transfer from reserves on depreciation and amortisation		9,077	(6,250)
Transfer between reserves on disposal of fixed assets		10,285	15,676
		367	179
<b>Accumulated surplus on general reserve carried forward</b>		<b>38,955</b>	<b>9,077</b>

All activities are regarded as continuing

The notes at pages 56 to 77 form part of these Accounts

# Balance sheet

as at 31 March 2004

	Notes	2003/04 £000	2002/03 (restated) £000
<b>Fixed assets</b>			
Intangible assets	14	84,740	96,065
Tangible assets	15	200,375	187,479
Investments	16	4,651	3,112
		<u>289,766</u>	<u>286,656</u>
<b>Current assets</b>			
Stock	19	2,357	2,856
Debtors: amounts falling due within one year	20	24,443	25,100
Cash at bank and in hand		44,819	35,008
		<u>71,619</u>	<u>62,964</u>
Creditors: amounts falling due within one year	21	(33,368)	(57,512)
<b>Net current assets</b>		<u><b>38,251</b></u>	<u><b>5,452</b></u>
<b>Total assets less current liabilities</b>		<b>328,017</b>	<b>292,108</b>
Provisions for liabilities and charges	22	(7,629)	(7,747)
Net assets excluding pension asset		<u>320,388</u>	<u>284,361</u>
Pension asset	7e	62,788	7,819
<b>Net assets</b>		<u><b>383,176</b></u>	<u><b>292,180</b></u>
<b>Capital and reserves</b>			
Deferred grant-in-aid account	23	135,538	130,796
Revaluation reserve	23	63,429	53,736
Capital land reserve	23	6,059	6,059
Intellectual property reserve	23	84,740	96,065
		<u>289,766</u>	<u>286,656</u>
Accumulated surplus on general reserve excluding pension reserve	23	38,955	9,077
Pension reserve	23	54,455	(3,553)
Accumulated surplus on general reserve including pension reserve		<u>93,410</u>	<u>5,524</u>
<b>Government funds</b>	23	<u><b>383,176</b></u>	<u><b>292,180</b></u>

The notes at pages 56 to 77 form part of these Accounts

*Colin Blakemore*

Chief Executive and  
Accounting Officer

7 October 2004



# Cash flow statement

for the year ended 31 March 2004

	Notes	2003/04		2002/03 (restated)
		£000	£000	£000
<b>Net cash inflow/(outflow) from operating activities</b>	24		<u>9,743</u>	<u>(5,612)</u>
<b>Returns on investments and servicing of finance</b>				
Interest received	17	253		329
Payments to the Office of Science and Technology	18	<u>(235)</u>		<u>(337)</u>
<b>Net cash inflow/(outflow) from returns on investments and servicing of finance</b>			<u>18</u>	<u>(8)</u>
			9,761	(5,620)
<b>Capital expenditure</b>				
Payments to acquire tangible fixed assets and investments		(26,471)		(20,465)
Receipts from sale of tangible fixed assets		<u>50</u>		<u>99</u>
<b>Net cash outflow from capital expenditure</b>			<u>(26,421)</u>	<u>(20,366)</u>
<b>Net cash outflow before financing</b>			<u>(16,660)</u>	<u>(25,986)</u>
<b>Financing</b>				
Capital grant-in-aid received	23		26,471	20,465
<b>Net cash inflow from financing</b>			<u>26,471</u>	<u>20,465</u>
<b>Increase/(decrease) in cash</b>	25		<u>9,811</u>	<u>(5,521)</u>

The notes at pages 56 to 77 form part of these Accounts

# Statement of total recognised gains and losses

for the year ended 31 March 2004

	2003/04 £000	2002/03 (restated) £000
Surplus/(deficit) for the year	9,833	(17,495)
Reversal of notional cost of capital	9,393	16,967
Gains on revaluation of fixed assets	9,020	24,655
Actuarial gain/(loss) in pension scheme	58,008	(179,153)
Total recognised gains and losses for the year	<u>86,254</u>	<u>(155,026)</u>
Prior year adjustment	<u>36,640</u>	<u>1,378</u>
Total recognised gains and losses since last Annual Report	<u>122,894</u>	<u>(153,648)</u>

The prior year adjustment for 2002/03 related to adjustments recorded for the first time in the 2002/03 accounts.

## Analysis of actuarial gain recognised in the statement of total recognised gains and losses

	2003/04 £000	2002/03 £000
Actual return less expected return on pension scheme assets	78,378	(169,759)
Experience gains and losses arising on the scheme liabilities	9,429	(209)
Changes in assumptions underlying the present value of liabilities	<u>(29,799)</u>	<u>(9,185)</u>
Actuarial gain/(loss) recognised in statement above	<u>58,008</u>	<u>(179,153)</u>

The notes at pages 56 to 77 form part of these Accounts

# Notes to the Accounts

## I. Accounting policies

### a. Basis of accounting

The accounts have been prepared in accordance with a direction given by the Secretary of State for Trade and Industry, with the approval of Treasury, in pursuance of Section 2(2) of the Science and Technology Act 1965.

The accounts have been prepared under the historical cost convention, modified to include the revaluation of tangible and intangible fixed assets and investments, and the valuation of stock to reflect current costs. Without limiting the information given, the accounts meet the accounting and disclosure requirements of the Companies Act 1985 and accounting standards issued or adopted by the Accounting Standards Board so far as these requirements are appropriate. The Accounts Direction exempts the MRC from the requirement to produce a note of historical cost profits, assets and losses.

### b. Tangible fixed assets and depreciation

Expenditure on fixed assets includes the purchase of land, buildings and equipment costing £3,000 or more. Tangible fixed assets are included at cost or at valuation. 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. (Buy-back lease arrangements are valued every five years only.) 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 MRC'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 income and expenditure account 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 tangible fixed assets 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	Not depreciated
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.

Fixed assets originally valued at or costing £25,000 or more, which have been fully depreciated resulting in nil net book values and are still in productive use at the MRC's establishments, are revalued to determine their continuing worth.

### c. Intangible fixed assets and amortisation

The values of patents, licences and royalties held by the MRC are capitalised as intangible fixed 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 fixed assets are amortised over the period these agreements are in force. 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 temporary deficit on valuations following such reviews is taken to a revaluation reserve.

### d. Ownership of equipment purchased with MRC research grants

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

### e. Grant-in-aid

Grant-in-aid for revenue purposes is credited to income in the year to which it relates. Grant-in-aid applied for the purchase of land is credited to the capital land reserve account and that applied to the purchase of tangible fixed assets is credited to the deferred grant-in-aid account and released to the income and expenditure account over the estimated operational lives of the related assets.

### f. Other income

Other income is shown net of trade discount, value added tax and other taxes.

### g. Investments

Listed investments are shown at market value. 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 income and expenditure account in the year in which they arise.

### h. Stocks

Livestock and consumable stores are included in the balance sheet at cost.

### i. Research and development

As a research organisation, all MRC's research and development expenditure is charged to the income and expenditure account when it is incurred.

### j. 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 MRC 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. Notional cost of capital charged during the period of the Account was £9,393,000 (2002/03 = £16,967,000 at 6%).

### k. Foreign currencies

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 income and expenditure account.

### l. Value added tax (VAT)

As MRC 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 the income and expenditure account as negative expenditure.

### m. Pension costs

Employer superannuation costs are based on an actuarially derived contribution rate. Council has adopted FRS 17 disclosures replacing SSAP 24 requirements, to account for retirement benefits in respect of its pension arrangements. See note 7e.

### n. Early retirement costs

Compensation payments are provided for in the income and expenditure account. 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 the MRC's notional cost of capital. The unwinding of the discount has been debited to the income and expenditure account.

### o. Operating leases

Operating lease charges are recognised in the income and expenditure account in the year to which they relate. At 31 March 2004, the MRC had annual commitments of £1.5m for I.T. equipment under operating leases expiring in more than five years.

## 2. Prior year adjustment

The following adjustments have been made to the figures for the prior year:

### a. Revaluations

Owing to the treatment of revaluation in the past, gross asset cost values and accumulated depreciation values have been overstated in the Account over a number of years. The overstatement of £31.7m was the same for gross cost and accumulated depreciation values respectively, and therefore, had no effect on the net book value of assets reported at 31 March 2003. An additional correction to reserves has been made resulting in an increase to revaluation reserves and a corresponding decrease to general reserves of £444,000 respectively.

### b. Asset take-ons

Following the professional revaluation of the MRC's properties at its laboratories in The Gambia, a number of buildings, with a gross value of £754,575, have been found not to have appeared in the fixed asset register. The accumulated depreciation on these properties totalled £75,457 and therefore, the effect of this take-on correction, is to increase the balance on the deferred grant-in-aid account and increase net asset value by £679,118 respectively.

### c. Pension costs

Following adoption of FRS17 – retirement benefits – net asset values increased by £54,969,000 in respect of the 'pension asset' (2002/03 = £7,819,000). Reserves increased by £58,000,000 in respect of the 'pension reserve' (2002/03 = decrease of £3,553,000). Retirement benefit costs charged to the income and expenditure account were £9,862,000 (2002/03 = £7,745,000). The net return in respect of the scheme's assets and liabilities were £6,823,000 (2002/03 = £19,117,000) shown as 'other finance income' in the Accounts.

### d. Notional cost of capital

Following the revised guidelines issued by HM Treasury concerning the presentation of accounts from non-departmental public bodies, the MRC has reviewed its presentation and has moved the notional cost of capital to below the surplus/(deficit) on operations line in accordance with FRS3. The reversal has been moved to below the surplus/(deficit) for the year line.

### e. Impairment of intangible fixed assets

Impairment of intangible fixed assets were previously charged to the income and expenditure account. Following a review these charges are now directly set against the intellectual property reserves account. The charge for 2002/03 (£1,637,000) has been reversed accordingly.

The effects on the 2002/03 income and expenditure accounts are shown below.

	2002/03 £000
<b>Expenditure for the year as previously reported</b>	<b>(474,348)</b>
FRS17 retirement benefit costs	(7,745)
Reversal of SSAP24 retirement costs	10,182
Reversal of intangible fixed assets impairment charge	1,637
Adjustment for cost of capital	16,967
<b>Expenditure for the year as restated</b>	<b>(453,307)</b>
<b>Deficit on operations as previously reported</b>	<b>(39,361)</b>
FRS17 retirement benefit costs	(7,745)
Reversal of SSAP24 retirement costs	10,182
Reversal of intangible fixed assets impairment charge	1,637
Adjustment for cost of capital	16,967
<b>Deficit on operations as restated</b>	<b>(18,320)</b>
<b>Deficit for the financial year as previously reported</b>	<b>(23,540)</b>
FRS17 retirement benefit costs	(7,745)
Reversal of SSAP24 retirement costs	10,182
Reversal of intangible fixed assets impairment charge	1,637
Other finance income	19,117
Adjustment for cost of capital	(16,967)
Revaluation adjustment on disposal of fixed assets	(179)
<b>Deficit for the financial year as restated</b>	<b>(17,495)</b>

The effect on net assets is shown in note 23.

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

The grant, and contributions in respect of (Animal) Licence Fees of £98,000 (2002/03 = £98,000) are provided by the Department of Trade and Industry (DTI) for the financial year 2003/04. The parliamentary grant-in-aid for 2003/04 was £409,932,000.

	2003/04 £000	2002/03 £000
Grant allocation for recurrent expenditure	372,375	317,100
Grant allocation for capital expenditure	<u>37,557</u>	<u>48,036</u>
	409,932	365,136
Transferred to deferred grant-in-aid account for purchase of tangible fixed assets (note 23)	<u>(26,471)</u>	<u>(20,465)</u>
Credited to income and expenditure account	<u>383,461</u>	<u>344,671</u>

### 4. Contributions from other government departments

	2003/04 £000	2002/03 £000
Department of Health	14,320	12,012
Department for International Development	5,929	4,777
Ministry of Defence	504	64
NHS Executive	421	1,041
Joint Infrastructure Fund	6,645	9,236
Department of Trade and Industry	512	188
Foods Standards Agency	1,188	196
Scottish Home and Health Departments	722	605
Other	<u>1,072</u>	<u>1,582</u>
	<u>31,313</u>	<u>29,701</u>

### 5. Contributions and grants from other bodies

	2003/04 £000	2002/03 £000
Research Councils	2,701	3,262
Charities	6,260	8,068
Collaboration with industry	2,285	3,100
European Commission	2,501	3,613
World Health Organisation	1,036	1,036
Human Frontiers Science Program	624	502
Health Authorities and NHS Trusts	1,065	935
Universities	3,519	1,673
Other sources	<u>1,402</u>	<u>1,605</u>
	<u>21,393</u>	<u>23,794</u>

## 6. Other income

	2003/04 £000	2002/03 £000
Sales and other income	<u>10,367</u>	<u>7,630</u>

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

## 7. Staff costs

	2003/04 £000	2002/03 (restated) £000
Employee costs (note 7c)	135,892	121,368
Agency staff costs	2,644	2,099
Remuneration to MRC Council and committee members (note 7d)	193	178
Early retirement costs (note 22)	<u>3,141</u>	<u>946</u>
Gross staff costs	141,870	124,591
Less commercial activities (note 13)	<u>(2,297)</u>	<u>(2,450)</u>
Staff costs for general activities	<u>139,573</u>	<u>122,141</u>

### a. Remuneration of senior employees

#### Chief Executive

The Chief Executive is an ordinary member of the MRC's pension scheme. His entitlements under his conditions of service are the same as those for other members of staff and should his contract be terminated early, he would be entitled to compensation under the terms of the MRC early retirement and severance compensation scheme. Sir George Radda's fixed term appointment ended on 30 September 2003. His total emoluments were £80,263 including a performance-related bonus of £21,614 (2002/03 = £102,804 including a performance related bonus of £8,858). Professor Colin Blakemore was appointed on 1 October 2003. His total emoluments were £58,119. Professor Blakemore's fixed-term appointment will expire on 30 September 2007.

As a result of the latest actuarial valuation of the MRC's pension scheme, there has been no employer's pension contribution in the year. See note 7e.



## Senior managers

The salary and pension entitlements of members of the Executive Board were as follows:

	Chief Executive	Chief Executive	Executive Director	Director of Human Resources Group	Director of Research Management Group	Director of Corporate Affairs Group	Director of Finance Group
	Prof C. Blakemore	Prof Sir G.K. Radda <sup>1</sup>	Mr N.H. Winterton	Mrs E. Sideris	Dr DR. Dunstan <sup>1</sup>	Mrs J.M. Lee	Dr DL. Smith <sup>2</sup>
Age	59	67	56	50	61	55	56
Salary, including performance related pay at 31 March 2004	£58,119	£80,263	£98,449	£81,433	£94,274	£73,472	£82,645
Real increase in pension at age 60	£0-2,500	£0-2,500	£2,501-5,000	£0-2,500	£2,501-5,000	£0-2,500	£0-2,500
Total accrued pension at age 60 at 31 March 2004	£0-2,500	£7,501-10,000	£40,501-42,500	£0-2,500	£32,501-35,000	£2,500-27,500	£30,000-32,500
Cash equivalent transfer value at 31 March 2004	£9,000	£92,000	£684,000	£19,000	£476,000	£434,000	£523,000

1. Real increase in pension at age 65.

2. On 1 September 2003, Dr Smith moved on from his position as Director of Finance Group and was appointed Head of the MRC Task Force on the National Institute of Medical Research. From 1 September 2003 to 31 March 2004, £175,000 was paid to a third party for the services of an interim director.

With the exception of Sir George Radda's bonus (described above), no director received any bonus payments or benefits in kind. As a result of the latest actuarial valuation of the MRC's pension scheme, there has been no employer's pension contribution in the year. See note 7e.

## b. Staff numbers

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

	2003/04	2002/03
<b>Job functions</b>		
Science	1,201	1,141
Research project support	1,051	1,058
Management administration and policy	570	556
Technical services	438	439
Infrastructure	169	159
Locally employed staff (overseas)	1,044	768
<b>Total</b>	<b>4,473</b>	<b>4,121</b>

### c. Employee costs

	2003/04	2002/03 (restated)
	£000	£000
Salaries and wages	116,538	105,807
Social security costs	9,462	7,778
Superannuation costs (note 7e)	9,892	7,783
<b>Total</b>	<b><u>135,892</u></b>	<b><u>121,368</u></b>

### d. Remuneration to MRC Council and committee members

	2003/04	2002/03
	£000	£000
Fees and honoraria	186	173
Social security costs	7	5
<b>Total</b>	<b><u>193</u></b>	<b><u>178</u></b>

#### MRC Council Chairman

The position of MRC Council Chairman is non-pensionable and there is no entitlement to compensation for loss of office. His total emoluments were an honorarium of £14,225 (2002/03 = £13,745). His fixed-term appointment will end on 30 September 2006.

In addition, the following MRC board chairmen and Council members received honoraria falling within the following ranges:

	2003/04	2002/03
	Number	Number
£5,001-10,000	11	10
Over £10,000	1	1

### e. Superannuation

	2003/04	2002/03
	£000	£000
<b>Total superannuation costs</b>		
Current service costs (net of employee contributions relating to MRCPS)	9,862	7,745
Other schemes	30	38
	<b><u>9,892</u></b>	<b><u>7,783</u></b>

## MRCPS

The MRC operates a funded pension scheme (MRCPS) providing benefits based on service and final pensionable pay at a normal retirement age of 65. 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 nought per cent. The latest actuarial assessment of the MRCPS was as at 31 December 2001 at which the market value of the assets of the MRCPS was £758m (1998 = £591m). The actuarial value of the assets was sufficient to cover 117 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.

**FRS17:** the valuation used for FRS17 disclosures has been based on the most recent actuarial valuations as at 31 December 2001, updated to take account of the requirements of FRS17 in order to assess the liabilities of the scheme at 31 March 2004.

### Financial assumptions used to calculate scheme liabilities

	2003/04 %	2002/03 %
Rate of increase on pensionable salaries	4.30	3.90
Rate of increase on pension payments	2.80	2.40
Discount Rate	5.40	5.40
Inflation Rate	2.80	2.40
Expected return on equities	7.36	7.20
Expected return on bonds	4.69	4.52
Expected return on overall fund	7.10	6.80

### The assets and liabilities in the scheme

	2003/04 Market value £000	2002/03 Market value £000
<b>Assets</b>		
Equities and property	511,587	366,300
Bonds and cash	55,086	90,905
	<u>566,673</u>	<u>457,205</u>
Actuarial value of liability	(503,885)	(449,386)
Surplus in scheme	<u>62,788</u>	<u>7,819</u>

### The movements in the scheme surplus

	2003/04 £000	2002/03 £000
Surplus at beginning of year	7,819	175,600
Current service cost (including employee contributions)	(15,110)	(12,421)
Employee contributions	5,248	4,676
Current service costs net of employee contributions	(9,862)	(7,745)
Other financial income	6,823	19,117
Actuarial gain	58,008	(179,153)
Surplus at end of year	<u>62,788</u>	<u>7,819</u>
<b>Other finance income</b>		
	2003/04 £000	2002/03 £000
Expected return on pension scheme assets	31,090	43,199
Interest on pension scheme liabilities	(24,267)	(24,082)
Net return	<u>6,823</u>	<u>19,117</u>

### Other schemes

The total superannuation contributions paid by the MRC in 2003/04 were £30,293 (2002/03 = £37,575). These amounts represent employers' contributions at five per cent and 10 per cent for a small number of long-serving members of the National Health Service Superannuation Scheme and Federated Superannuation Scheme of Universities respectively.

## 8. Other operating costs

	2003/04 £000	2002/03 £000
Rent and rates	5,082	4,272
General maintenance, cleaning, heating and lighting	6,054	7,908
Maintenance of buildings	5,671	3,086
Office supplies, printing and stationery	4,766	4,298
Laboratory supplies	34,918	30,070
Management consultancy and other professional fees	7,828	3,287
Postage and telephone	2,075	2,301
Audit fee	45	39
Travel, subsistence and hospitality	7,417	7,154
Computing	7,725	5,519
Equipment servicing	4,467	3,660
Minor equipment	6,007	5,225
Miscellaneous	4,728	4,086
Transport costs	661	663
Exchange rate losses	441	114
Bad debts charge	18	128
<b>Total</b>	<u><b>97,903</b></u>	<u><b>81,810</b></u>

## 9. Research Grants

Research grants are paid quarterly to institutions against pre-notified profiles. Expenditure in the year comprised:

	2003/04			2002/03		
	Higher education institutions	Other institutions	Totals	Higher education institutions	Other institutions	Totals
	£000	£000	£000	£000	£000	£000
Career Establishment Awards	7,934	-	7,934	8,279	-	8,279
Strategic project grants	26,538	1,527	28,065	31,529	2,985	34,514
Programme grants	57,697	-	57,697	63,239	130	63,369
Realising Our Potential awards	618	-	618	2,185	-	2,185
Cooperative grants	17,953	6	17,959	22,617	121	22,738
Joint Infrastructure Framework awards	5,326	-	5,326	8,683	-	8,683
Others	7,697	18	7,715	10,162	-	10,162
<b>Total</b>	<b>123,763</b>	<b>1,551</b>	<b>125,314</b>	<b>146,694</b>	<b>3,236</b>	<b>149,930</b>

## 10. Other research

	2003/04	2002/03
	£000	£000
Contributions to special research programmes	7,980	8,704

## 11. Postgraduate/training awards

	2003/04			2002/03		
	Higher education institutions	Other institutions	Totals	Higher education institutions	Other institutions	Totals
	£000	£000	£000	£000	£000	£000
Research studentships/advanced course studentships	14,450	6,133	20,583	14,406	5,002	19,408
Postdoctoral Fellowships	27,484	4,188	31,672	21,731	3,878	25,609
<b>Total</b>	<b>41,934</b>	<b>10,321</b>	<b>52,255</b>	<b>36,137</b>	<b>8,880</b>	<b>45,017</b>

## 12. International subscriptions

	2003/04 £000	2002/03 £000
International Agency for Research on Cancer	561	790
European Molecular Biology Conference	347	1,678
European Molecular Biology Laboratory	5,927	6,219
Human Frontier Science Program	953	860
<b>Total</b>	<b><u>7,788</u></b>	<b><u>9,547</u></b>

## 13. Commercial activities

	2003/04 £000	2002/03 £000
Income during the year	15,043	15,118
Expenditure during the year:		
Staff costs (note 7)	2,297	2,450
Other expenditure	5,332	4,790
	(7,629)	(7,240)
<b>Net income for the year</b>	<b><u>7,414</u></b>	<b><u>7,878</u></b>

The MRC 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 MRC inventions and know-how.

Income and expenditure relating to commercial activities is credited and charged to the income and expenditure account and its cumulative balance represented within the general reserve on the balance sheet. The cash surplus on such activities as at 31 March 2004 was £28,604,000 (2002/03 = £20,497,000).

## 14. Intangible fixed assets

Intangible fixed assets include patents and licences generated by MRC research.

	2003/04 £000
<b>At valuations</b>	
Net book value as at 1 April 2003	96,065
Additions	14,552
Revaluations	(30,823)
Discount factor change <sup>1</sup>	11,861
Charge for the year	(6,915)
Net book value as at 31 March 2004	<b><u>84,740</u></b>

1. During the year, there was a reduction in the value and life of the MRC's largest patent holding, with a consequent reduction in expected future income streams. There was also a change in the value of the discount rate which was reduced from 6% to 3.5%. This reduction led to an increase in the overall value of investments of £11,861,202.

## 15. Tangible fixed assets

	Land and buildings <sup>1</sup>	Assets under construction	Equipment and vehicles	Total
	£000	£000	£000	£000
<b>Cost or valuation:</b>				
At 1 April 2003	255,222	9,014	167,431	431,667
Prior year adjustment (note 2):				
• Revaluation	(183)	-	(31,539)	(31,722)
• Additions	754	-	-	754
At 1 April 2003 (restated)	<u>255,793</u>	<u>9,014</u>	<u>135,892</u>	<u>400,699</u>
Additions	1,815	12,615	12,041	26,471
Reclassification	20,039	(20,039)	-	-
Disposals	(451)	-	(5,660)	(6,111)
Revaluation <sup>2</sup>	10,505	-	1,770	12,275
At 31 March 2004	<u>287,701</u>	<u>1,590</u>	<u>144,043</u>	<u>433,334</u>
<b>Depreciation:</b>				
At 1 April 2003	126,384	-	118,483	244,867
Prior year adjustments (note 2):				
• Revaluation	(183)	-	(31,539)	(31,722)
• Additions	75	-	-	75
At 1 April 2003 (restated)	<u>126,276</u>	<u>-</u>	<u>86,944</u>	<u>213,220</u>
Provided during the year	5,902	-	12,277	18,179
Disposals	(34)	-	(4,509)	(4,543)
Revaluation	5,822	-	281	6,103
At 31 March 2004	<u>137,966</u>	<u>-</u>	<u>94,993</u>	<u>232,959</u>
<b>Net book value:</b>				
As at 31 March 2004	<u>149,735</u>	<u>1,590</u>	<u>49,050</u>	<u>200,375</u>
As at 1 April 2003 (restated)	<u>129,517</u>	<u>9,014</u>	<u>48,948</u>	<u>187,479</u>
At historical cost	167,428	1,590	127,441	296,459
Depreciation	(53,467)	-	(82,429)	(135,896)
Net book value	<u>113,961</u>	<u>1,590</u>	<u>45,012</u>	<u>160,563</u>

1. Tangible fixed assets include £17,110,000 in respect of land, which is not depreciated.

2. £5,719,000 of the revaluation has resulted in an impairment charge to the income and expenditure account. The remainder has been credited to the revaluation reserve.



The net book value of land and buildings comprises:

	2003/04	2002/03 (restated)
	£000	£000
• Freehold	31,006	32,983
• Long leasehold	102,012	83,094
• Short leasehold	16,717	13,440
	<u>149,735</u>	<u>129,517</u>

Professional revaluation of land and buildings in the UK was performed by Powis Hughes and Associates, Chartered Surveyors, at 1 December 2003. Professional revaluations of land and buildings at the MRC's laboratories in The Gambia and Uganda were performed locally by Sphinx Associates, Chartered Quantity Surveyors in association with BB Barry Consultancy Service (Land Economist) at 31 October 2003, and BBL (U) Chartered Quantity Surveyors in December 2003 respectively. Additional depreciation on revaluation of land and buildings was £2,237,752.

Included in the figures for leasehold properties, is a sum totalling £55,899,780 (2002/03 = £55,929,836) representing properties subject to leasehold buy-back arrangements under which the lessors are required to purchase these properties should the MRC decide to relinquish their use.

As reported in note 2, the prior year adjustment increased net asset value by £679,000. The revaluation adjustment covers land and buildings (£183,000) and equipment and vehicles (£31,539,000) affecting both gross costs and depreciation respectively.

## 16. Fixed asset investments and non-consolidated subsidiary companies and joint ventures

	Subsidiary Companies	Joint Ventures	Other Investments	Total Investments
	£000	£000	£000	£000
Valuation as at 1 April 2003	-	227	2,885	3,112
Revaluation	<u>-</u>	<u>-</u>	<u>1,539</u>	<u>1,539</u>
Valuation as at 31 March 2004	<u>-</u>	<u>227</u>	<u>4,424</u>	<u>4,651</u>

### Subsidiary companies

#### MRC Technology

MRC Technology Ltd (MRCT) is a company limited by guarantee and a registered charity which was set up to provide a laboratory-base for project management of applied research funded by industrial partners, and offer infrastructure to 'spin-out' companies. Since April 2000 it has also managed the exploitation of MRC intellectual property under a service agreement with MRC.

MRCT is a separate legal entity that prepares its own accounts under a different format. Due to its charitable status, the risks and rewards of MRCT do not lie with the MRC and the MRC cannot exercise control over its decisions. MRCT has therefore been excluded from consolidation.

For the year ended 31 March 2004 the accounts of MRCT revealed a total loss for the year of £2,489,583 (2003 = £1,744,757 loss) and net assets of £5,768,488 (2003 = £6,508,587 restated).

During the year ended 31 March 2004 the MRC provided goods and services to MRCT to a value of £2,717,520 (2002/03 = £2,148,000). These goods and services were costed on the same basis on which they would be provided between departments within the MRC. As at 31 March 2004, the MRC were owed £722,065 (2002/03 = £1,491,241). There were no outstanding balances owing to MRCT.

#### MVM Limited

MVM Limited are venture capital fund managers. The MRC holds 100 per cent of the ordinary shares valued at £127,523. The accounts of MVM Limited have not been consolidated into these financial statements on the basis that the amounts involved are not material to the MRC.

MVM Limited manages the UK Medical Ventures Fund and the International Life Sciences Fund. Both funds were formed to establish and invest in new companies to exploit biotechnologies, the primary source of technologies originating from the MRC's intramural research programme.

The Funds are structured as a limited partnership and following a restructuring during the year each fund has its own general partner (GP). MVM (GP) (2) Ltd was set up as GP of the International Life Sciences Fund, leaving MVM (GP) Ltd, as the UK Medical Ventures Fund. Both GPs are wholly owned subsidiaries of MVM Limited. The GP has unlimited liability for any unsatisfied obligations of the partnership, and is entitled to a priority profit share. Until such time as the Funds have income and capital from which to make a payment of priority profit share, the partnership agreement allows the GP to draw loans on funds' cash assets, on an interest free basis, in respect of its prospective entitlement to priority profit share. In the year to 31 March 2004 the cumulative priority profit share due to both GPs was £7,848,404 of which £7,667,904 had been drawn down. The partnership agreement provides that on termination of the partnership, if insufficient profits have been earned by the Fund to provide the GP with sufficient profits to cover its drawings, that the outstanding drawings shall be waived by the partnership.

Both Funds have carried interest partners (CIP), MVM (CIP) Limited and MVM (CIP) (2) Limited, each entitled to a carried interest of 20 per cent of the profits of the partnership, once investors have received back their investment and a return thereon. The CIPs are wholly owned subsidiaries of MVM Limited.

Separately, the MRC is entitled to a further 5 per cent carried interest of the profits of the partnership.

In the year to 31 March 2004 MVM Limited received management fees from MVM (GPs) of £2,110,001 (2003 = £1,929,106).

## Joint ventures

### Hammersmith Imanet Limited (formerly Imaging Research Solutions Limited)

The MRC hold 25 per cent of the ordinary shares of the company whose capital and reserves were valued at £987,319 at 31 December 2003. The profit and loss account for the period then ended recorded a loss of £98,013 (2002/03 = £117,266 profit). This joint venture with Amersham plc contains a number of agreements on scanning services and a research award.

**Scanning services:** Hammersmith Imanet Ltd provides scanning services to the MRC. In consideration for this service MRC agree to pay £2,232,500 (including VAT) per year for a contract period from February 2001 to December 2005. During the year to 31 March 2004 this amounted to £2,232,500 (2002/03 = £2,232,500).

**Research award:** The MRC approved an award as a special contribution. This was a cash limited award of £1m per year from February 2001 to December 2005. During the year to 31 March 2004 this amounted to £1,000,000 (2002/03 = £1,000,000).

The Investment in Hammersmith Imanet Ltd is shown at cost (the net value of assets transferred after deduction of cash proceeds), revalued to reflect the MRC's share of the company's net assets at 31 March 2004. MRC's share of Hammersmith Imanet Limited's results has not been included in the accounts in accordance with FRS9 on the grounds of materiality.

### Markready Ltd

Markready Ltd is a joint venture company that was incorporated on 23 July 2001 as a private company limited by guarantee without share capital.

The company was formed to run the administrative and financial affairs of a research development known as the Centre for Macaques, whose purpose is to provide bio-medical research facilities to the UK academic community.

## Other Investments

Description of holding	Number of shares held	Class held (%)	Purchase price (£)	Market value at 31 March 2004 (£000)
<b>Quoted</b>				
Biofocus plc	266,307	1.64	-	570
Cambridge Antibody Technology plc	660,000	1.61	100	3,036
M L Laboratories plc	204,190	0.12	-	40
Natus Medical Inc	7,066	0.04	-	15
Sangamo Biosciences Inc	165,255	0.66	-	556
Amylin Pharmaceuticals Inc (warrants)	20,000	-	-	-
Vernalis plc (formerly British Biotech plc)	310,392		-	207
				<u>4,424</u>
<b>Private unquoted</b>				
Ardana Biosciences Ltd	120,000		-	No current open market value
ASM Scientific Ltd	20,000		-	No current open market value
Avidis S.A.	594		-	No current open market value
D-Gen Ltd	8,000		-	No current open market value
Domantis Ltd (formerly Diversys Ltd)	2,500,000		-	No current open market value
Etiologics Ltd	2,200,000		-	No current open market value
Iclectus Ltd	560		-	No current open market value
Oxxon Therapeutics Ltd (formerly Oxxon Pharmaccines)	10,332		-	No current open market value
Senexis Ltd	10		-	No current open market value
TopoTargets A/S	9,493		-	No current open market value

At the close of business on 31 March 2004 the price per share of the MRC's shareholdings listed on the London Stock Exchange, the AIM and the Nasdaq were as follows:

Biofocus plc	214p
Cambridge Antibody Technology plc	460p
M L Laboratories plc	19.5p
Vernalis plc	66.5p
Natus Medical Inc <sup>1</sup>	\$4.02
Sangamo Biosciences Inc <sup>1</sup>	\$6.18

1. The share prices of the two listed US companies, were converted at a rate of US \$1.8379 = £1.00

These companies represent the MRC's interest in enterprises engaged in the commercial development of MRC inventions and know-how. These equity positions were received in return for company access to MRC intellectual property. The MRC also has the option to purchase shares in Amylin Pharmaceuticals Inc at any time up to 8 May 2007.

## 17. Interest receivable

	2003/04 £000	2002/03 £000
Interest earned on the MRC's Euro and Dollar accounts	18	31
Interest earned on the MRC's Sterling bank balances	<u>235</u>	<u>298</u>
	<u>253</u>	<u>329</u>

## 18. Amounts payable to the Office of Science and Technology

	2003/04 £000	2002/03 £000
Other non-operating income (note 17)	235	298
Unspent animal licence fee contribution	-	<u>39</u>
Surrendered to Office of Science and Technology	<u>235</u>	<u>337</u>

The MRC's non-operating income, together with any underspend for licence fees payable under the Animal Licences Act 1986 are surrendered to the consolidated fund through the Office of Science and Technology.

## 19. Stock

	2003/04 £000	2002/03 £000
Consumable stores and livestock	<u>2,357</u>	<u>2,856</u>

## 20. Debtors: amounts falling due within one year

	2003/04		2002/03	
	£000	£000	£000	£000
Trade debtors	5,989		5,728	
Less provision for bad debts	<u>(277)</u>		<u>(274)</u>	
		5,712		5,454
Other debtors		3,132		3,314
Accrued income		10,484		14,817
Prepayments		<u>5,115</u>		<u>1,515</u>
		<u>24,443</u>		<u>25,100</u>

## 21. Creditors: amounts falling due within one year

	2003/04 £000	2002/03 £000
Trade creditors	2,188	6,214
Accruals	20,450	45,213
Taxation and social security	3,840	2,770
Income received in advance	5,059	1,976
Others	1,831	1,339
	<u>33,368</u>	<u>57,512</u>

## 22. Provisions for liabilities and charges

	Early retirement compensation scheme £000	Pension costs £000	Legal costs £000	Total provisions £000
At 1 April 2003 (as originally reported)	7,727	28,142	20	35,889
Prior year adjustment	-	<u>(28,142)</u>	-	<u>(28,142)</u>
At 1 April 2003 (as restated)	7,727	-	20	7,747
Amount provided in year	3,141	-	55	3,196
Unwinding of discount	246	-	-	246
Amount expended in year	<u>(3,540)</u>	-	<u>(20)</u>	<u>(3,560)</u>
Balance at 31 March 2004	<u>7,574<sup>1</sup></u>	<u>-</u>	<u>55</u>	<u>7,629</u>

1. This figure represents the MRC's liability for annual compensation payments up to the year 2018.

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.

### 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.

### Aged under 50

Compensation takes the form of a lump sum payment based on age, length of service, and final salary; payment levels are higher in the case of compulsory retirement.

### 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.

## 23. Capital and reserves

	Deferred grant-in-aid	Re-valuation reserve	Capital land reserve	Intellectual property reserve	Pension reserve	General reserve	Total government funds
	£000	£000	£000	£000	£000	£000	£000
At 1 April 2003	130,117	53,292	6,059	96,065	-	(29,993)	255,540
Prior year adjustment	679	444	-	-	(3,553)	39,070	36,640
At 1 April (as restated)	130,796	53,736	6,059	96,065	(3,553)	9,077	292,180
Capital grant-in-aid received	26,471	-	-	-	-	-	26,471
Grant-in-aid released to income and expenditure account	(21,729)	-	-	-	-	-	(21,729)
Additions during year	-	-	-	14,552	-	-	14,552
Revaluation during year	-	13,430	-	(18,962)	-	-	(5,532)
Actuarial gain/(loss) in the pension scheme	-	-	-	-	58,008	-	58,008
Transfer to income and expenditure account – depreciation	-	(3,370)	-	(6,915)	-	10,285	-
Transfer to income and expenditure account disposals	-	(367) <sup>1</sup>	-	-	-	367	-
Surplus for the year	-	-	-	-	-	9,833	9,833
Reversal of notional cost of capital	-	-	-	-	-	9,393	9,393
<b>Balance at 31 March 2004</b>	<b>135,538</b>	<b>63,429</b>	<b>6,059</b>	<b>84,740</b>	<b>54,455</b>	<b>38,955</b>	<b>383,176</b>

1. In respect of the revalued element of disposed tangible fixed assets and investments in the year.

## 24. Reconciliation of the operating surplus/(deficit) to net cash inflow/(outflow) from operating activities

	2003/04	2002/03 (restated)
	£000	£000
Operating surplus/(deficit)	14,149	(18,320)
Depreciation charge	18,179	20,801
Amortisation charge	6,915	8,117
Impairment charge	5,719	-
Other non-cash items – FRS 17 pension costs	9,862	7,745
Unwinding of discount on provisions	(246)	(504)
Transfer from deferred grant-in-aid account	(21,729)	(13,975)
Decrease in provision for liabilities and charges	(118)	(1,625)
Decrease/(increase) in stocks	499	(295)
Decrease/(increase) in debtors	657	(4,360)
Decrease in creditors	(24,144)	(3,196)
Net cash inflow/(outflow) from operating activities	<u>9,743</u>	<u>(5,612)</u>

## 25. Reconciliation of movement in cash to movement in net funds

	2003/04	2002/03
	£000	£000
Net funds at 1 April	35,008	40,529
Increase/(decrease) in cash	9,811	(5,521)
Net funds at 31 March	<u>44,819</u>	<u>35,008</u>

## 26. Contingent liabilities

HM Customs and Excise have disputed the MRC's recovery of input tax totalling £1m in respect of the building costs incurred during the Markready Ltd joint venture construction of the Centre for Macaques.

## 27. Commitments

### Capital

The MRC had estimated future commitments to capital expenditure, which had been contracted but not provided for at the balance sheet date of £17,980,000 (£14,415,000 at 31 March 2003).

### Research awards

Forward commitments on research awards to higher education institutes:

	£000
2004/05	126,500
2005/06	88,800
2006/07	48,500



## 28. Related party transactions

The MRC is a non-departmental public body sponsored by the DTI. For the purposes of *Financial Reporting Standard 8*, the DTI is regarded as a related party. During the year, the MRC has had various material transactions with the DTI and other bodies for which the DTI is regarded as the parent department; namely the Economic and Social Research Council, the Engineering and Physical Sciences Research Council and the Biotechnology and Biological Sciences Research Council. See note 16 for transactions with subsidiary and joint venture undertakings. During the year, the following material transactions with MRC Council, board and committee members took place in respect of payments from awards funded by the MRC.

Name	No. of awards	Value (£)
Professor J I Bell	1	178,396
Professor M Bienz	1	197,292
Professor G Coombs	1	423,791
Professor R M Denton	1	245,348
Professor NM Hooper	1	1,572,898
Professor C M Isacke	1	571,795
Professor A Johnson	2	318,964
Professor C Kennard	2	182,916
Professor KT Khaw	1	93,234
Professor D Leach	1	469,773
Professor P M Matthews	1	302,948
Professor E R Moxon	1	122,328
Professor C Newbold	1	122,328
Professor R Patterson	1	343,895
Professor O Petersen	1	273,541
Professor S H Ralston	1	199,600
Professor N Rothwell	1	1,716,582
Professor J M Tavaré	1	1,274,662
Professor R Thakker	1	1,412,505
Professor C Tickle	2	845,047
Professor R Walters	1	978,095
Professor P Weissberg	1	1,784,520

None of the above were involved in the approval of these awards. In addition, the MRC made the following aggregate payments in respect of MRC funded awards to institutions where MRC Council, board and committee members are also senior members of staff.

Related party	Institution	No. of awards	Aggregate amount (£)
Professor J Scott Professor G Thornicroft Professor T Wykes	Institute of Psychiatry	9	6,831,583
Professor D Elbourne	London School of Hygiene and Tropical Medicine	1	327,492
Professor G Richardson	Queen Mary and Westfield College	1	48,224
Professor A C Dolphin	University College London	9	2,893,499
Professor K Cheng Professor I C M MacLennan	University of Birmingham	8	3,681,353
Professor R M Denton Dr J Brown Professor G Davey-Smith	University of Bristol	6	4,064,120
Professor B Everitt Professor R Patterson Professor E Bullmore	University of Cambridge	11	4,981,999
Professor D Leach Professor K A A Fox Professor I R Whittle	University of Edinburgh	7	3,473,684
Professor A Dominiczak Professor R M Elliot Faulty	University of Glasgow	4	1,241,653
Professor N M Hooper	University of Leeds	6	2,258,221
Professor O Petersen	University of Liverpool	5	1,844,044
Professor T K Attwood Professor G Dunn Professor N Rothwell Professor R Grecis	University of Manchester	6	2,691,415
Professor H Calvert	University of Newcastle-upon-Tyne	3	490,196
Professor A Derrington	University of Nottingham	8	3,950,541
Professor J Hodgkin Professor R Collins Professor R Thakker Professor J M Brady Professor K E Davies Professor P J Harrison	University of Oxford	25	14,491,044
Professor A North Professor R Eastell Professor J P Nicholl	University of Sheffield	7	2,393,875
Professor J J Strain	University of Ulster	1	47,990

## 29. Financial instruments

FRS13, *Derivatives and Other Financial Instruments*, requires disclosure of the role which financial instruments have had during the period in creating or changing the risks a body faces in undertaking its activities. 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 much more limited role in creating or changing risk than would be typical of the listed companies to which FRS13 mainly applies. The MRC 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 MRC in undertaking its activities.

### Liquidity risk

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

### Interest rate risk

The MRC is not exposed to any interest rate risk.

### Foreign currency risk

The MRC holds certain balances in overseas bank accounts to help manage day-to-day business transactions of its overseas operations. At 31 March 2004, the average monthly float levels were £600,000 (2002/03 = £525,000).

## 30. Post balance sheet events

There have been no events since the end of the financial year which would affect the understanding of the Accounts.

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