

MRC Council Members 2002/03

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University of Manchester

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*New members appointed
1 August 2002

Outgoing Membership

Members whose appointment ended on 31 July 2002:

Professor John Bell

University of Oxford

Professor Eve Johnstone

Royal Edinburgh Hospital

Medical Research Council (MRC)

Annual Report and Accounts 2002/03

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

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Professor Sir George Radda

Deputy Chairman & Chief Executive

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The MRC

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

The MRC's mission is:

- To encourage and support high-quality research with the aim of maintaining and improving human health.
- To train skilled people, and to advance and disseminate knowledge and technology with the aim of meeting national needs in terms of health, quality of life and economic competitiveness.
- To promote public engagement with medical research.

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This Report relates to MRC's activities from 1 April 2002 to 31 March 2003. A selection of outstanding achievements by MRC scientists during this year are highlighted in the 2002/03 Annual Review that complements this Report. The MRC website at www.mrc.ac.uk has more detailed information about all MRC activities and electronic versions of all MRC publications.



Introduction by the Chairman

As Sir George's time as MRC Chief Executive draws to a close it is timely to reflect on his extremely productive term of office.

When he arrived in 1996 he set out to consolidate links with our many stakeholders. Since then, our partnerships with research charities have been substantially strengthened. For example, funders' fora for research into cancer, ageing, and cardiovascular disease have been set up to work together to tackle these major health problems. The Cancer Research Funders' Forum paved the way for the National Institute for Cancer Research, which was set up in 2001 as a key part of the NHS cancer plan. George also played a leading role in developing the strategy and vision of Research Councils UK.

Increased partnership working with universities has also borne fruit. Since 1998, eight joint MRC/University Centres have been set up. They are located throughout the UK and cover subject areas across the whole MRC research portfolio, from biomolecules to social science. Such centres were created to encourage interdisciplinary working, which has been a prominent theme of George's leadership. New Discipline-hopping and Bridging Awards are promoting collaboration with other funders and between scientists in different fields, and new Innovation Grants are providing seed funding for blue skies research. Several new MRC Units including the Prion Unit, the Functional Genomics Unit, the Human Immunology Unit and the Cancer Cell Unit were established to meet pressing research priorities, and George led the appointment of 22 of the 31 current MRC Unit Directors.

Opportunities for scientists at all stages of their careers, from graduates to senior researchers, have been progressively enhanced. PhD stipends have increased and a comprehensive range of grant schemes tailored to both clinical and non-clinical scientists has been introduced. A new predoctoral fellowship scheme was launched in 2001 to attract the very best graduates to medical research careers. At the top of the career ladder, the MRC's International Appointments Initiative has successfully attracted a number of high-calibre scientists from abroad to bring their expertise to the UK.

MRC technology transfer has also been transformed. In 1998 the UK Medical Ventures Fund (MVM Ltd) was set up to create and invest in companies based on MRC know-how. It has already raised over £100m, attracted investment from multi-national concerns and set up 14 companies.

A dedicated technology transfer arm – MRC Technology (MRCT) – was set up in 2000 to amalgamate the MRC's knowledge transfer activities. Royalty income has risen from £1.4m in 1997/8 to £15.1m this year.

The MRC's work is constantly subject to the public's scrutiny and expectations. We have never shied away from taking on controversial scientific issues, and under George's stewardship have produced influential reports on autism, fetal pain, water fluoridation, gulf war veterans' illnesses and CFS/ME. Our Consumer Liaison Group was set up in 2000 as a key element in engaging in public dialogue over such issues.

In wishing George farewell, I would like to thank him on behalf of everyone at the MRC for all his hard work and wish him a happy, healthy and prosperous future.

Sir Anthony Cleaver
Chairman



Foreword by the Chief Executive

In this year, my last in office, the MRC has once again been in the public eye. MRC scientists Sir John Sulston and Dr Sydney Brenner – together with US scientist Robert Horvitz – shared the 2002 Nobel Prize for Physiology or Medicine for their work on the nematode worm. The research was all carried out or initiated at the MRC Laboratory of Molecular Biology (LMB, Cambridge). The award was particularly fitting in the 50th anniversary year of the discovery of the double helix structure of DNA by James Watson and Francis Crick, who worked in the research group from which LMB grew. The MRC joined 30 other organisations in high-profile celebrations of their Nobel prize-winning achievement.

With such an enviable record of achievement we must beware of complacency, and adapt to changing circumstances to ensure continued success. This year, the House of Commons Science and Technology (S&T) Select Committee's report on the MRC made some very serious criticisms of how it has been run. While the Government rejected the Committee's most serious allegations it agreed with their recommendations for improvement in some areas. We recognise the need for change and have taken specific initiatives to accelerate work already under way in many of these areas before the S&T review.

As we move forward, it is important that we tell our stakeholders what we are doing and take notice of their feedback. This year we have held consultations on MRC's clinical trials strategy, MRC's draft vision for the future of science, and on our Forward Investment Strategy for four of our largest establishments. Stakeholder input has significantly influenced MRC thinking in all of these areas.

Ongoing stakeholder involvement and partnership working has also been a feature of major research and policy initiatives involving the MRC. Work with the Wellcome Trust and Department of Health to develop the UK Biobank has continued, and its CEO, Dr John Newton, was appointed this year. There has also been rapid progress on the MRC-led UK stem cell initiative. The MRC and the Biotechnology and Biological Sciences Research Council jointly funded the National Institute for Biological Standards and Control to set up a National Stem Cell Bank. A new International Stem Cell Policy Forum, convened by the MRC, met for the first time in January and is already drawing up globally accepted standards for stem cell research. The MRC has also played a key role in laying the ground for the European and Developing Countries Clinical Trials Partnership, and will be its UK representative.

Ambitious projects like these have sometimes attracted criticism before they begin for being too large, costly and speculative. However, many, for example the Human Genome Project, have later demonstrated the value of long-term investment in high-quality science. During my time at the MRC, there has been tremendous increase in high-calibre UK biomedical research, and the great regard in which it is held internationally. I have greatly enjoyed visiting and speaking to MRC scientists throughout the UK about their work, particularly the younger researchers. Their work inspires great confidence that our record of world-class achievement will continue long into the future. Finally, I would like to pay tribute to the efforts of MRC's employees and other MRC-supported staff past and present, and thank everyone else who has advised and assisted the MRC during my stewardship. It has been a privilege to be involved with the MRC, and I send my successor Colin Blakemore and the MRC my best wishes for enduring success.

Professor Sir George Radda
Deputy Chairman & Chief Executive

Executive summary

Support for research

- The MRC spent £200.7m (£180.3m resource and £20.4m capital) to fund its own research centres.
- Grants to researchers in universities and medical schools, including training awards for post-graduate students and fellows, amounted to £194.9m.

Partnerships

- The MRC and the Biotechnology and Biological Sciences Research Council jointly funded the National Institute of Biological Standards and Control to establish a UK Stem Cell Bank. Twelve countries worldwide are represented at a new International Stem Cell Policy Forum convened by the MRC.
- The MRC has played a leading role in the establishing the European and Developing Countries Clinical Trials Partnership.

MRC Technology

- Exploitation income increased from £13.5m in 2001/02 to £15.1m in 2002/03.
- Forty-one new patent applications were filed, 32 new licensing agreements completed and two new spin-out companies, Iclactus Ltd and Etiologics Ltd, were established.

Good research practice

- New MRC guidance – *Cluster Randomised Trials: Methodological and Ethical Considerations* – was distributed to all UK Multicentre Research Ethics Committees.
- The MRC led an impact assessment of how UK publicly funded trials might be affected by transposing into UK law the EU Directive on Good Clinical Practice in Clinical Trials of Drugs.

Communication

- The MRC led a group of over 30 organisations to develop a programme of events to celebrate the 50th anniversary of the discovery of the double helix structure of DNA throughout the UK and overseas.
- The MRC launched a new newsletter – *MRC Network* – to keep scientists and other interest groups up-to-date with MRC activities.

People

- The MRC currently employs more than 4,000 staff.
- In 2002/03 the MRC awarded 50 new studentships in undermanned or rapidly growing research areas.

Finance

- The MRC's Domestic DEL (Departmental Expenditure Limit) for 2002/03 was £373.6m. In addition there was EU DEL of £3.3m. The Spending Review 2002 increased the MRC's baseline funding by £38.6m.
- The MRC's total expenditure for 2002/03 was £430m.

Spending review priorities

Current MRC research, particularly in the area of genomics, is building on additional funding provided by the Government Spending Review 1998 to address particular research priorities and increase funding across the MRC portfolio.

Spending Review 2000

The Spending Review 2000 (SR2000) awarded the Research Councils additional funds to target the priority areas of genomics, basic technology and e-Science. Examples of MRC work in these areas are described in the table below.

Genomics	Basic Technology	e-Science
<p>The MRC Mouse Genome Sequencing consortium completed 50 megabases of finished mouse genomic sequence ahead of schedule in 2002.</p> <p>The MRC has re-launched an expanded biology services division at the MRC HGMP Resource Centre, under the name "MRC Geneservice," to underpin genomics research in the UK.</p> <p>The MRC microarray programme has distributed more than 5,000 arrays to more than 100 UK academic groups.</p> <p>UK Biobank: the MRC, Wellcome Trust and Department of Health have jointly advanced plans for the prospective study of environmental and genetic factors in determining health, involving half a million UK participants.</p> <p>The MRC has established a new Cancer Cell Unit in Cambridge to focus on translational cancer research.</p>	<p>The Basic Technology Research Programme is a cross-Council endeavour, managed by the Engineering and Physical Sciences Research Council (EPSRC). It will establish a UK technology research capability, change the way we do science, and underpin the industrial base of the future. Fifteen fundamental high-quality research projects have been funded at a total cost of £41m; supported work involves innovation at new scientific interfaces and is not constrained by research community divisions or Research Council boundaries.</p>	<p>Funding for the Core Programme is managed by EPSRC on behalf of all the Research Councils; in addition, each Council has been charged with funding specific problems within its remit. The MRC has funded a total of 18 awards and contributions at a total cost of £8m. These include 7 e-Science demonstrator projects (4 jointly with other Councils), 6 informatics grants and 5 underpinning activities (including posts and workshops).</p>

Spending Review 2002

SR2002 increased the MRC's baseline funding by £38.6m. In addition the MRC received specific allocations to boost some of its priority research areas, including stem cells (£26m) and brain science (£9.7m), together with increases from the SR2000 allocations for genomics (£6.25m) and e-Science (£13.1m) which have been rolled forward into the SR2002 period. The MRC was also awarded an extra £8m to implement recommendations in the Robert's Review on PhD stipends.

Major research developments and partnerships

Partnerships and research

Partnerships with other organisations are a key part of the MRC's research and scientific strategy. This section highlights new and ongoing partnerships with a variety of other organisations, including Research Councils, Government departments and research charities, and shows how they are contributing to work across the MRC's research portfolio. The examples are listed under the six broad scientific areas that we use to classify our research, and a separate category to cover cross-cutting initiatives. Industrial partnerships are covered in the MRC Technology section on page 18.

The MRC Annual Review 2002/03 and our website highlight major research developments and achievements during this reporting year.

Genetics, molecular structure and dynamics

Estimated gross spend in 2002/03 – £90.4m

This research 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 and the affects 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 investigate 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.

Nobel Prize: two MRC scientists – Sir John Sulston and Dr Sydney Brenner – won the 2002 Nobel Prize for Physiology or Medicine together with US scientist Robert Horvitz for their work on the nematode worm, *Caenorhabditis elegans*.

Nanotechnology: the Cambridge Interdisciplinary Research Centre (IRC) in Nanotechnology and the Oxford IRC in Bio-nanotechnology are jointly funded by the MRC, the Engineering and Physical Sciences Research Council (EPSRC), the Biotechnology and Biological Science Research Council (BBSRC) and the Ministry of Defence (Cambridge IRC only). The Oxford IRC was officially launched during a three-day international biotechnology meeting in Oxford in April 2002. The Cambridge IRC in Nanotechnology held its first scientific meeting in December 2002, which gave some of the younger members of the IRC the opportunity to present their work to an international audience that included members of the IRC International Scientific Advisory Board. In October 2002, two members of the Oxford IRC (including the director, Professor John Ryan) took part in a Department of Trade and Industry-led bio-nanotechnology mission to the south and the west of the USA.

Microarrays: the MRC Microarray Programme has distributed over 5,000 arrays to over 100 UK academic groups. The Programme has also attracted additional funding from the BBSRC and the Leukaemia Research Fund.

UK Biobank: the MRC has continued to work with the Wellcome Trust and Department of Health to develop the management structure for the jointly funded UK Biobank initiative and to consult with various stakeholders. The Chief Executive, Dr John Newton, has been appointed and through a jointly organised process the University of Manchester has been selected to host the coordinating centre, and six regional centres have been selected to participate in the running of the project. An interim advisory group has been established under the chairmanship of Dr William Lowrance to advise the funding partners on further development of the ethics and governance framework for the project.

See Section 7.1 of the MRC Operating Report 2002/03 for progress against 'Genetics, molecular structure and dynamics' targets in the MRC Operating Plan 2002/03 and 2003/04.

Cell biology, development and growth

Estimated gross spend in 2002/03 – £78.3m

Investigating processes at the cellular level is vital to understanding how the human body functions, and how things can go wrong to cause disease. 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.

Cancer research classification: the MRC has worked closely with other funding agencies to classify all current cancer research projects. Data drawn by the National Cancer Research Institute (NCRI) from all UK cancer research funding bodies has joined data from the major US cancer research funding agencies to establish an international database of cancer research. Analysis of this data has helped inform strategic planning for NCRI partners, beginning with reviews of research on supportive and palliative care and on cancer prevention. Both reviews will have reported during 2003.

Cancer tissue: the MRC has been contributing to a joint MRC, Cancer Research UK and Department of Health (DoH) initiative to establish a National Cancer Tissue Resource. The aim is to establish a national, high-quality tissue collection to enable the cancer research community to investigate the biological basis of clinical outcome, relating molecular phenotype to toxicity profiles, response to therapy, and survival.

Stem cells: the MRC has continued to progress development of the UK stem cell initiative, working with key national funding and regulatory agencies. A new cross-Research Council committee has been established to coordinate efforts funded through the SR2002 spending review. Collaborative interfaces on the global stage are being

pursued through a new MRC-led International Stem Cell Policy Forum which met for the first time in January 2003 and involves representatives from 12 countries.

The MRC and the BBSRC have collaborated to fund the establishment of a national Stem Cell Bank at the National Institute for Biological Standards and Control (NIBSC) in Hertfordshire; this will make available to national and international researchers quality-controlled, ethically sourced adult, fetal and embryonic stem cell lines and thereby reduce the number of embryos used by individual research teams.

A new high-level Steering Committee has been put in place to govern the Stem Cell Bank; it is currently developing codes of practice for the Bank and for the use of stem cell lines and will review all applications to use the Bank. The NIBSC has established a local Management Committee. In addition, the MRC has set up clinical and user liaison committees each comprising around 40 individuals; these provide key discussion fora for those using the Bank as well as consultation fora in relation to policy development. Details of all the governance structures are on the MRC website.

At the end of 2002, the Government announced the provision of £40m through the Spending Review 2002 to support research on stem cells. The MRC, the BBSRC, the Economic and Social Research Council (ESRC), the EPSRC, and the Council for the Central Laboratory of the Research Councils (CCLRC) will work together through a new cross-Council coordinating committee to put in place a concerted programme of multidisciplinary research that builds on recent major conceptual and technical advances.

The MRC has issued two separate calls for proposals during the year; one aimed at establishing consortia between IVF clinicians and researchers and the other at bringing forward research that will provide high-quality resources to underpin stem cell research in the UK. The latter call includes opportunities under the Small Business Research initiative. The Research Councils have agreed to jointly fund any stem cell proposals that cross boundaries.

A key strategy within the national stem cell initiative is to develop existing centres of excellence and establish new ones. Three new centre proposals are currently under consideration by the MRC, all with the potential of contributions from other agencies; funding decisions will be taken later in the year.

See Section 7.2 of the MRC Operating Report 2002/03 for progress against 'Cell biology, development and growth' targets in the MRC Operating Plan 2002/03 and 2003/04.

Medical physiology and disease processes

Estimated gross spend in 2002/03 – £81.7m

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 portfolio area covers basic and clinical research into these common 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.

Hypertension: hypertension is a major risk factor for coronary artery disease and stroke. The MRC has reviewed and extended its investment in the internationally important BRIGHT study of genetics of hypertension (March 2003). The work undertaken in this major UK research collaboration has created a unique clinical resource, and the next stage will focus on two particular regions of the genome linked to hypertension.

Diabetes: together with the DoH, the MRC carried out a joint review of all UK research into diabetes, which is being used to inform research strategy by both organisations. Unique opportunities for stem cell research in diabetes were recognised, as was the possibility for population studies provided by the UK Biobank. For the MRC, a key strategic focus will be lifestyle and behavioural aspects of preventing obesity and diabetes, and patient care.

Fluoride: at the request of the DoH, the MRC set up an expert group to consider what further research might be required to improve the evidence base in the area of fluoride and health. Although the report concluded that there was no firm evidence linking water fluoridation to adverse health effects, it recommended that further research was required on water fluoridation, in particular on differences in absorption by the body of naturally occurring and artificially fluoridated drinking water. The DoH is to commission a project on the absorption of fluoride in accordance with the recommendations of the report.

See Section 7.3 of the MRC Operating Report 2002/03 for progress against 'Medical physiology and disease processes' targets in the MRC Operating Plan 2002/03 and 2003/04.

Immunology and infection

Estimated gross spend in 2002/03 – £67.6m

Research in this area aims to find out how the human immune system works, how it fights against disease, and what happens when it goes wrong in auto-immune and inflammatory diseases, for example, 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 evolve drug resistance.

HIV/AIDS trials: a new phase of the world's first clinical trial to test a vaccine candidate for one of the most prevalent HIV strains affecting Africa, started in April 2002 in Oxford and London. This expands the ongoing trials in Oxford and Nairobi, Kenya, which aim to harness the ability of the body's own immune system to fight disease.

The DART trial, looking at appropriate and effective forms of anti-retroviral drug therapy for AIDS in Africa, was launched in October 2002 with £9m funding from the MRC, the Department for International Development and the Rockefeller Institute, and support from three drug companies (GlaxoSmithKline, BoehringerIngelheim, and Gilead). Patients from Uganda and Zimbabwe will be involved in the study.

Vaccines: the MRC, the BBSRC, GlaxoSmithKline, and the DoH – the sponsors of the Edward Jenner Institute for Vaccine Research – decided they will not renew the joint funding agreement after its first 10 years ends in 2005. Discussions with the Board, staff, and other centres are planned to establish how each funder can best continue its support for vaccines research, and exploit the progress made over the first 10 years, through new structures.

See Section 7.4 of the MRC Operating Report 2002/03 for progress against ‘Immunology and infections’ targets in the MRC Operating Plan 2002/03 and 2003/04.

Neuroscience and mental health

Estimated gross spend in 2002/03 – £74.6m

This area covers research on the biology of the brain and the nervous system in both normal and diseased states. Such studies are helping to reveal how brain and nervous system structure and function control perception, thinking, memory, and the mental and physical activities that these processes activate. The work has important medical implications for developing new interventions and treatments for neurological disorders, such as Parkinson’s disease and Alzheimer’s disease, which are a growing problem given the UK’s ageing population, and for other mental health problems such as depression, schizophrenia, and the causes of antisocial behaviour. Research in this area will also help us to better understand the psychological aspects of human health.

Autism: in 2002, the DoH in England and the Scottish Executive provided dedicated funds to the MRC to take forward the research recommendations of the *MRC Review of Autism: Epidemiology and Causes*, published in December 2001. An MRC Autism Research Strategy Steering Group, chaired by Professor Carol Dezateux, was set up and two of a series of four workshops were held during 2002/03. The workshops (*Gut and the Developing Child; Brain and Mind; Autism in Populations; and Interventions in Autism*) are intended to lead to high-quality proposals for research in areas that were highlighted in the Review.

Chronic Fatigue Syndrome/ME (CFS/ME): following the publication of a Report of the Chief Medical Officer’s Independent Working Group in January 2002, and at the

request of the DoH in England, the MRC convened an independent CFS/ME Research Advisory Group to develop a broad strategy for advancing biomedical and health services research on CFS/ME. The research strategy was published on 1 May 2003, when the MRC issued a highlight notice welcoming research proposals (investigator-initiated) covering the spectrum of research into CFS/ME. In addition, the MRC will investigate usefulness of existing longitudinal studies for undertaking epidemiological research on CFS/ME in the UK.

The MRC’s Council agreed the funding of two clinical trials of treatments for CFS/ME in March 2003. A trial led by Dr Alison Wearden (University of Manchester) will evaluate pragmatic rehabilitation, a nurse-led self-help intervention in the treatment of CFS patients in primary care, against supportive listening or treatment as usual. Dr Peter White (St Bartholomew’s Hospital, London) will undertake a randomised controlled trial of cognitive behaviour therapy, graded exercise therapy, and adaptive pacing against usual medical care for patients with CFS. This latter study is funded in partnership with the DoH, the Department of Work and Pensions, and the Chief Scientist’s Office of the Scottish Executive.

Dual diagnosis: as part of its commitment to taking forward research in dual diagnosis, and in compliance with DoH level 3 priorities, the MRC expedited its clinical trial procedures for a proposal from Dr Christine Barrowclough (University of Manchester) and colleagues. A trial development group was convened to advise the trialists on the development of an optimally designed full proposal. This was considered in October 2002 and the MRC’s Council agreed to fund the clinical trial in March 2003.

Mental health: the MRC continued to work closely with the DoH on taking forward research in mental health, including the newly formed National Institute for Mental Health in England, and the associated Mental Health Research Network, led by Professor Til Wykes. The MRC is actively engaged as a member of the National Portfolio Director’s Mental Health Funders Group.

Multiple sclerosis (MS): following on from an MRC workshop on MS, ongoing interactions with the MS Society have led to the development of a joint highlight notice which

identifies key areas for future research. In parallel to this, there have been discussions regarding future joint funding of fellowships in the area.

Neuroinformatics: during the year the MRC worked with the BBSRC and the EPSRC on co-funding a proposal for a UK neuroinformatics network. A final application for establishing a pilot network is expected in 2003.

Stroke: in November 2002, the MRC's Strategy Development Group (see page 12) held a workshop on stroke research. This included representatives from the DoH and the Stroke Association. As a result of this meeting, stroke has been listed as an area of strategic priority for the MRC.

Transmissible spongiform encephalopathies (TSEs): building on strong collaboration and led by the MRC, the five UK public funders of research of TSEs (the BBSRC, the Department for Environment, Food and Rural Affairs, the DoH, the Food Standards Agency and the MRC) have undertaken the production of a combined UK research and development strategy for TSEs. This document is due to be published in the autumn of 2003.

A partnership between the DoH and the MRC, the Prion-1 Trial represents the first clinical trial to evaluate a potential therapy (Quinacrine) for human prion disease. Involving two MRC units (the MRC Prion Unit and the MRC Clinical Trials Unit), the trial protocol has been developed in close collaboration with the patient support groups, namely the CJD Support Network and the Human BSE Foundation. Recruitment is expected to commence during 2003.

Research funded by the MRC with additional support from the DoH has made a major advance in developing approaches to treating prion disease. A team led by Dr Simon Hawke at Imperial College London in collaboration with Professor John Collinge of the MRC Prion Unit at the Institute of Neurology, London, and Professor David Anstee of the National Blood Service has established proof of principle that monoclonal antibodies (mAbs) can prevent prion disease in mice. The work, published in *Nature* (March 2003) lays the foundation for further research to explore the potential of mAbs to treat specific prion diseases such as CJD and vCJD.

See Section 7.5 of the MRC Operating Report 2002/03 for progress against 'Neurosciences and mental health' targets in the MRC Operating Plan 2002/03 and 2003/04.

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

Estimated gross spend in 2002/03 – £56.3m

Improving human health is the ultimate aim of all the MRC's work. Public health work 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 peoples' 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, involving groups of patients in all disease areas, to test new preventative, diagnostic, and treatment approaches, with the ultimate goal of improved healthcare.

Clinical Trials Advisory and Awards Committee

(CTAAC): in partnership with Cancer Research UK, a new joint approval process for clinical trials in cancer was initiated in September 2002. The new CTAAC committee represents a single entry point for all outline applications for cancer clinical trials. Full applications are either reviewed by the CTAAC or by the MRC's Health Services and Public Health Research Board, depending on the scale and type of work proposed. The MRC contributes £250k per annum to the CTAAC budget.

Clinical trials review: in a major consultation exercise entitled *Clinical Trails for Tomorrow*, 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 is being disseminated during 2003.

European and Developing Countries Clinical Trials

Partnership (EDCTP): the MRC 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. A ministerial decision on funding of up to €200m, and legal registration, was expected during 2003.

Patient safety research: the MRC, in conjunction with the ESRC and the EPSRC, 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. Following the workshop, pump-priming funding has been made available by the Research Councils and a call for proposals to establish multidisciplinary networks in this area was announced. The MRC is coordinating this cross-Council initiative.

Sexual Health and HIV Research Strategy

Committee: this new Committee has been established with the Health Departments. Five awards were made following the Committee's first call for proposals in July 2002.

Special Research Training Fellowships in Health

Services and Health of the Public Research: this initiative is funded jointly with the DoH and 15 awards were made in the past year.

UK Biobank: see above, under "Genetics, molecular structure and dynamics", page 6.

Gulf veterans' illnesses: in January 2003, the MRC's Military Health Research Advisory Group carried out a major independent review of UK research related to 1991 Gulf veterans' illnesses following a Ministry of Defence request for advice. A key finding was that the UK Gulf veterans' research programme was very highly regarded and had influenced the international approach to research in this area. The review put research aiming to improve the long term health of Gulf veterans with persistent symptoms as a priority. No new general epidemiological studies were found to be needed, but further research and follow-up were advised in a small number of discrete areas.

On the basis of independent scientific advice from the MRC, the Ministry of Defence funded a pilot study looking at the feasibility of a full-scale epidemiological study on the incidence of mortality and cancer in volunteers who took part in

studies at the Research Defence Establishment at Porton Down whilst in the services. Pilot work on a questionnaire survey of concerned volunteers was also carried out.

See Section 7.6 of the MRC Operating Report 2002/03 for progress against 'Health services and public health research' targets in the MRC Operating Plan 2002/03 and 2003/04.

Cross-cutting initiatives

The MRC also maintains and develops partnerships, with a range of stakeholders, that cut across specific scientific areas.

Consumer Liaison Group: this Group helps to ensure that appropriate consumer input is obtained in relation to Board advisory committees, patient information leaflets for clinical trials, and other issues that have arisen during the year. (See also page 26)

e-Science: the MRC has supported a total of 18 awards and contributions through Spending Review 2000 funds. Seven of these are e-Science demonstrator projects, four of which have been jointly sponsored with other Research Councils: one with the Partical Physics and Astronomy Research Council (PPARC) (cancer), two with the BBSRC (neuroscience and ageing) and one with the Core e-Science Programme through the EPSRC (imaging). The MRC also organised a health informatics workshop in July 2002, jointly funded with the BBSRC, the EPSRC, the Department of Trade and Industry, the DoH and the Core e-Science Programme, to bring together experts from many different areas, including industry, to discuss the key issues in health informatics. The outcomes were published on the MRC web site.

Medical charities: following discussion with the MRC's Strategy Development Group about the framework for interaction with charities, a paper has been produced outlining principles of partnership and a basis for working together with medical charities in a mutually beneficial way to achieve joint aims. Charities from the Association of Medical Research Charities have been consulted about this and their suggestions have been taken into account in the final version, which includes examples of working partnerships.

Medical colleges and societies: liaison has been maintained and suitable opportunities taken to brief colleges and societies – and the clinical research community more generally – about developments relating to the MRC and clinical research; for example, the British Institute of Radiology about clinical research, and the Royal College of Physicians about research skills.

NHS Research Governance Framework for Health and Social Care: the MRC amended its Terms and Conditions for grants and fellowships in early 2003 to reflect the requirements of the NHS Research Governance Framework (RGF). Guidance was also drafted for researchers and senior administrators. This spelt out the circumstances under which the MRC was able to accept the role of sponsor under the RGF. The principles were that MRC sponsorship extended to all research in the NHS that the MRC had approved (through peer review) and agreed to fund. However, the MRC did not accept responsibilities that other organisations were better able to carry out, such as day-to-day management of research in universities and NHS trusts receiving MRC funding.

Strategy Development Group: the MRC's Strategy Development Group organised four key workshops during the year on stroke (see page 10), diabetes and obesity, infections and behaviour change, each with a view to identifying UK strengths, weaknesses and new opportunities. National and international experts, and representatives from other interested agencies, contributed to the presentations and discussions.

See Section 10.1, 10.2, 10.7 and 10.9 of the MRC Operating Report 2002/03 for progress against 'Partnerships with other agencies', 'Cross-Research Council Programmes', 'Research Governance' and 'Information Technology' targets in the MRC Operating Plan 2002/03 and 2003/04.

International

International policy

The MRC continues to be active in the international arena and to identify opportunities for strategic collaboration of benefit to the UK's biomedical research effort. For example, the post-genomic era increasingly necessitates a strategic approach to sharing of effort and resource across national boundaries; this is also apparent for more specific issues such as those relating to stem cell research. In addition the MRC has needed to respond to political drivers such as the concept of the European Research Area (ERA) – a free market for research across Europe – and the increased political commitment towards tackling the main infectious diseases associated with poverty in Africa and other developing regions. Other areas such as new and re-emerging infectious diseases and bioterrorism similarly demand a more coordinated international approach.

Over the past year the MRC has hosted numerous bilateral meetings with overseas funding organisations and policy makers, where such issues have been discussed. These have included high-level meetings with representatives from national funding organisations in Australia (National Health and Medical Research Council), Canada (Canadian Institute of Health Research), China (National Science Foundation), France (Institut National de la Santé et de la Recherche Médicale), Germany (Max-Planck-Gesellschaft) and the USA (National Heart, Lung and Blood Institute), as well as the European Science Foundation (ESF) and European Space Agency. In addition discussions have been held with governmental representatives from Hungary, India, Israel and Russia.

The MRC also hosts the high-level meetings of the HIROs group, an informal group of Heads of International Research Organisations encompassing the major funders of biomedical research across the globe. The MRC, along with the other Research Councils, also continues to participate in a European policy forum spanning all disciplines, termed EUROHORCS, which is an informal grouping of the European Heads of Research Councils.

International collaboration

MRC research centres participate in a large number of international collaborations, both bilaterally and as part of large consortia (eg, through the EU's Framework Programmes), and also host large numbers of visiting workers from overseas. The majority of international collaborations are researcher-led, and the MRC's role is primarily to nurture and develop such initiatives. A favoured approach is to fund meetings or workshops where opportunities can be identified and networks established. Examples from the past year include the annual MRC-Max Planck Gesellschaft young investigators' workshop on molecular imaging in biological systems, held this year in Berlin in March 2003, and a joint MRC-British National Space Centre workshop on biomedical research in space, held in London in August 2002 and involving international scientists from NASA and the European Space Agency.

International subscriptions

The MRC manages the UK's contribution to several international organisations, including the European Molecular Biology Conference, the European Molecular Biology Laboratory (EMBL), the International Agency for Research on Cancer (IARC), and the Human Frontier Science Program (HFSP), to which the BBSRC also contributes. The MRC also provides funding to the ESF in partnership with the other Research Councils, the Royal Society and the British Academy. The MRC is involved in the governance of all of these organisations, through membership of their governing bodies. Such commitments are under constant review in order to ensure complementarity between these organisations and national programmes, both in scientific content and value-for-money. Significant developments in the past 12 months have been:

The European Molecular Biology Laboratory: the MRC has provided initial input into the EMBL's strategic forward look, which is being undertaken by member states in preparation for the recruitment of a new Director-General in 2005.

The International Agency for Research on Cancer:

the MRC currently chairs the IARC Governing Council, which is overseeing the recruitment of a new Director to be in place in 2004.

The Human Frontier Science Program: the MRC and the BBSRC agreed to a substantial increase in its budgetary contribution to the HFSP following the Intergovernmental Conference of 2002 which agreed to realign member state contributions in a more equitable manner. The MRC and BBSRC contributions rose from £527k and £33k in 2001/02 to £860k and £150k respectively in 2002/03, bringing the total UK contribution to £1.01m per annum.

EU Framework Programmes

The MRC continues to provide policy input and advice to the UK research community in relation to the European Union's 6th Framework Programme (FP6), which was launched in January 2003. In particular the MRC has been actively engaged in protecting the interests of the UK research community in the high-profile discussions relating to the funding of human embryonic stem cell research under FP6.

The MRC has been proactive in encouraging the participation of the UK research community in FP6, and in doing so has worked closely with the other Research Councils, the UK Research Office in Brussels and government departments, the Office of Science and Technology, and the DoH. The MRC has also taken on the role of UK National Contact Point for the Life Sciences thematic priority under FP6, and has provided a series of information seminars around the UK since the summer of 2002, as well as a telephone helpline service and dedicated web pages.

The European Research Area and the European Research Council

The MRC has continued to play an active role in discussing how best to facilitate the ERA, a concept to which all EU member states gave their support at the Lisbon Council of Ministers in May 2000. While FP6 will be the European Commission's main instrument for implementing ERA, the intention is broader than this and seeks to improve and develop European research resources as a whole by involving national research agencies. In some quarters this has led to calls for the establishment of a European Research Council

(ERC), and the MRC has participated in several high-level meetings at which this has been discussed (Copenhagen October 2002, Brussels November 2002, and Paris February 2003). Whilst welcoming the concept of the ERA, the MRC has been more cautious about an ERC, arguing that we should adopt a step-wise approach to build up collaborative ventures and look at opening up our funding further, rather than create a separate bureaucratic structure. We have also been keen to emphasise that international collaboration in medical research is not confined to Europe.

International partnerships

European and Developing Countries Clinical Trials

Partnership (EDCTP): the MRC has played a leading role in the establishment of the EDCTP under Article 169 of the Treaty of Rome. The initiative aims to accelerate the development of effective, affordable and sustainable interventions against infectious diseases related to poverty, specifically HIV/AIDS, tuberculosis and malaria, by improving coordination and cooperation between European research organisations, funding clinical trials, and developing research capacity in developing countries. This initiative will concentrate on Africa in the first instance. The EU is to provide €200m for the EDCTP initiative over the first five years. EU member states have also committed themselves to looking for ways to improve alignment of their programmes of trials and basic research over this period, and the initiative will also seek collaborative funding agreements with industry, charities, and other international initiatives. Thus, EDCTP is said to have a target of helping direct resources worth €600m to the three diseases.

Clinical trials (UK, USA, Canada): the MRC is continuing to work with the US Veterans Administration and the Canadian Institutes of Health Research to fund international clinical trials that address healthcare questions of common concern. One study is currently funded through this initiative, the OPTIMA trial, which is designed to assess new clinical management strategies for HIV patients.

Cardiovascular Initiative (USA): in 2002 the MRC awarded £200k over two years to the Universities of

Cambridge and Yale (USA) as pilot funding towards the creation of a collaborative programme to strengthen research into vascular disease.

International Stem Cell Forum: in January 2003 the MRC hosted a meeting of key international agencies (from the USA, Canada, Sweden, Finland, Israel, Australia and Singapore) to explore the possibilities for establishing an international consortium to aid the development of human stem cell research. The primary aim of the meeting was to facilitate discussion and interaction between countries and agencies that are sponsoring stem cell research. Four other countries have since joined the Forum – France, Germany, The Netherlands and Japan. The Forum has established a working group that will lead an international effort to characterise human stem cells, coordinate national banking activities and share resources with the aim of accelerating advances in the field.

Fellowships in stem cell research: the MRC, the BBSRC, UK research charities and the USA Juvenile Diabetes Research Foundation have recently launched an international Collaborative Career Development Fellowship scheme to provide specialised training in stem cell research to support fundamental stem cell biology or work towards new stem derived treatments for major diseases and disabilities.

Fellowships in computational biology (National Institutes of Health/National Institute of General Medical Sciences NIH/NIGMS, USA):

following a successful joint workshop with the USA National Institute of General Medical Sciences (NIGMS) in 2001, the MRC is funding Special Research Training Fellowships in the field of computational biology. Fellows may spend up to one year in an appropriate overseas institution, and applications have been encouraged from individuals wishing to undertake a placement within an NIH/NIGMS laboratory.

Complex human genetics (Croatia): in 2002 the MRC Human Genetics Unit initiated a joint research programme with the University of Zagreb in Croatia on the genetics of common human diseases. The MRC is contributing £213k to the initiative. The approach utilises isolated human populations with natural low genetic variability to accelerate the identification of genetic factors in common disease.

Sequencing of the mouse and pufferfish genomes:

several MRC Units (HGU, MGU and the UK HGMP-Resource Centre) are participating in the broad international effort to provide high-quality sequence data for the mouse genome. In addition, the UK HGMP-Resource Centre is part of a smaller consortium determining the sequence of the pufferfish genome, which includes contributors from both the USA and Singapore.

Post-genomic research (Centre National de la Recherche Scientifique, France and RIKEN, Japan):

the MRC has established separate agreements with both CNRS and RIKEN to share resources underpinning post-genomic research. The agreement with CNRS seeks to coordinate the development of and access to mouse gene microarrays, and a bilateral coordinating committee was established in 2002 to oversee this collaboration.

European Science Foundation EUROCORES

programmes: the MRC has agreed to participate in the EuroDyna programme to fund pan-European collaborations in the area of chromosomal dynamics and nuclear architecture.

International health

Combating infectious disease and researching the links between poverty and disease is high on the political agenda. The MRC continues to work closely with the Department for International Development (DFID) to tackle the priority health problems of people in developing countries, and in 2002/03 the total MRC/DFID portfolio amounted to £22.5m, to which DFID contributed approximately £4m.

The MRC is currently funding extensive programmes of work on poverty-related disease in Africa, through our directly supported MRC Laboratories in the Gambia (HIV/AIDS, tuberculosis, malaria, reproductive health, viral diseases, respiratory infections, non-communicable diseases and nutrition). It is also funding programmes in Uganda (HIV/AIDS), Tanzania (malaria research); Kenya (HIV/AIDS vaccine trial); China, South Africa and Nigeria (reproductive health); India (maternal nutrition and fetal development); and Jamaica (sickle cell disease).

The MRC is one of ten organisations taking part in an Anglo-French Alliance for Tropical Medicine aiming to improve collaboration and communication between developing world researchers funded by the two countries.

Other UK stakeholders

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 Research Councils and encourage cross-Council collaboration both at strategic and operational levels. RCUK is led by a Strategy Group of which all of the Research Council Chief Executives are members, chaired by the Director-General of the Research Councils. During 2002/03, the MRC has played a leading role in synthesising the strategies of all the Councils and developing a vision for UK research. Both reports will be published during 2003/04. RCUK has also advised the Director-General on the allocation of the Science Vote for 2003/04 to 2005/06 (SR2002) and has developed an administration strategy to effect closer working between the Research Councils on operational matters. MRC staff have chaired the Research Council International Network, a body established to coordinate the international activities of the Councils, the Performance Evaluation Group and the Communications Group. The MRC provided the press office for RCUK for its first eight months of operation. Discussions have started on the Research Councils' case for additional funding for the next Spending Review (SR2004) period: 2005/06 to 2007/08. More details about RCUK are available at www.rcuk.ac.uk

Government Departments: the MRC continues to work closely with the Department of Trade and Industry, the OST and the DoH in relation to EU research programmes (FP6, public health) and policy issues that might impact upon UK research (eg, EU Directives relating to clinical trials, tissue and cell donation). Other ongoing partnerships with Government address international health issues (with DFID) and intelligence gathering and the promotion of UK science overseas (with the Foreign and Commonwealth Office).

See Section 10.3 of the MRC Operating Report 2002/03 for progress against 'International collaborations' targets in the MRC Operating Plan 2002/03 and 2003/04.

Supporting research excellence

The MRC is the only public funding agency for medical research in the UK which covers the whole spectrum from basic research to applied activities. It supports this activity by funding research programmes and infrastructure, and investing in training and employment both in universities and in its own research centres. The MRC achieves this by:

- providing support to secure the national medical research infrastructure over the long term, through maintaining existing facilities, and establishing research centres in areas of strategic importance;
- investing in training and employing research scientists;
- providing investigator-initiated funding of grant proposals submitted to the MRC by researchers who have identified problems that need addressing.

The MRC is independent in its choice of which research to support and does not generally earmark funds for particular topics. Rather, the MRC views its research as an integrated programme and research proposals in all areas compete for the funding available. Scientific funding schemes are developed in consultation with a range of stakeholders. The MRC occasionally calls for research proposals in particular areas of strategic relevance.

Research excellence and importance to health are the main considerations in funding decisions. Research proposals are stringently peer-reviewed by a core of scientific experts – notably the four MRC 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 £194.9m in 2002/03;
- funding for the MRC's own research institutes and units, amounting to £200.7m in 2002/03.

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. There were two major developments relating to MRC Centres during the course of the year:

MRC Cambridge Centre for Behavioural and Clinical Neuroscience: funding for this new Centre commenced in October 2002. The Centre brings together basic and clinical research with a view to understanding the functions of defined brain systems and networks and how they malfunction in neuropsychiatric or neurological disorders, including acute brain injury, Parkinson's and Huntington's diseases, addiction, dementia, depression, schizophrenia, autism and attention deficit disorder. The Centre aims to refine methods of diagnosis and to develop and test new treatment strategies.

MRC Social Genetic and Developmental Psychiatry Centre – Institute of Psychiatry, King's College London: a purpose-built building to house the MRC Social Genetic and Developmental Psychiatry Centre (SGDPC), funded through a Joint Infrastructure Fund award, was opened by The Princess Royal in January 2003. The Director of the SGDPC, Professor Peter McGuffin, submitted a mid-term review for consideration by the MRC Neurosciences and Mental Health Board, who agreed the Centre had made outstanding progress over its first three years.

Cooperative Group Grants

Cooperative Group Grants (COGGs) draw together researchers to improve the overall output of research and enhance individual research projects (supported by Component Grants when funded by the MRC).

In 2002, the MRC set up 10 new COGGs, bringing the total number of such awards to 118 at the end of the year. Thirteen new COGG Component Grants were also awarded.

Career Establishment Grants

Career Establishment 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 made eight such awards in 2002, bringing the total number to 102 at the end of the year.

Programme Grants

Programme Grants remain the MRC's principal mechanism for supporting both focused and more broadly based long-term research programmes. The MRC made 25 new awards in 2002, bringing the total number to 257 at the end of the year.

Discipline-hopping Awards

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. Two other Research Councils, the Engineering and Physical Sciences Research Council (EPSRC) and the Biotechnology and Biological Sciences Research Council (BBSRC), jointly funded the programme, enabling 25 new projects to be supported across physics, chemistry and engineering. Six of the new Institutional Discipline-bridging Awards were also funded.

Other types of award

Also awarded during 2002 were:

- 8 Trials Grants, bringing the total to 64 at the end of the year;
- 16 Strategic Grants (awards that support work that makes a specific contribution to implementing the aims of the MRC's scientific strategy), bringing the total to 132 at the end of the year;
- 26 Joint Research Equipment Initiative (JREI) awards, bringing the total to 27 at the end of the year.

MRC research units

MRC Anatomical Neuropharmacology Unit – Oxford: the quinquennial review of the Unit, its first under Director Professor Peter Somogyi, was completed in July 2002. The MRC's Council agreed that the Unit's research continued to be at the international forefront and commended

Professor Somogyi on developing the Unit's research into a well-integrated, cohesive analysis of neuronal anatomy and function from the molecular through to the systems level.

MRC Cancer Cell Unit – Cambridge: the MRC has established a new Unit in Cambridge, directed by Professor Ron Laskey, to focus on translational cancer research. This establishment, which formally opened in April 2002, is closely integrated with programmes of the Cancer Research UK Department of Oncology at the University of Cambridge to form the new Hutchison/MRC Research Centre. The aim of the Centre is to bring basic research in cell biology and genetics toward application for the prevention, diagnosis and treatment of cancer.

MRC Institute of Hearing Research – Nottingham: during the year, plans for the future direction and scientific programme of the Institute were developed by the Institute's new Director, Professor David Moore. His plans will be finalised and considered by the MRC's Council in 2003.

MRC Laboratories – the Gambia: following the resignation of Professor Keith McAdam as Director of MRC Laboratories, the Gambia, the MRC's Council agreed a new management structure which includes an executive management group. Dr Tumani Corrah was appointed as Director of Clinical Services and Chairman of the Executive Management Group. A new position of Director of Research has been advertised. Research plans are being revised, but will remain focused on infections linked to poverty.

New developments in epidemiology: in March 2003, the MRC's Council endorsed plans for an initiative in epidemiology split between a new Epidemiology Unit in Cambridge (Director Designate: Dr Nick Wareham) and a new Resource Centre for Epidemiology in Southampton (Director Designate: Professor Cyrus Cooper). The initiative will look at the interplay between lifecourse and genetics, with an emphasis on diabetes, obesity and physical activity, building on the MRC's research investment in understanding the infant origins of adult disease.

See Section 8.1 and 8.2 of the MRC Operating Report 2002/03 for progress against 'Grant funding schemes' and 'Units' targets in the MRC Operating Plan 2002/03 and 2003/04.

MRC Technology

MRCT Strategic Plan

During the course of 2002/03 an internal strategic review of MRC Technology (MRCT) was completed covering all aspects of its operations. This included a comprehensive analysis of business processes, technology, resources and skill requirements, and interfaces with key stakeholders. A range of operational improvements were recommended by MRCT management in the form of a strategic plan including a proposal for an expanded Development Gap Fund to provide support for translational research to evaluate and validate the commercial potential of novel discoveries arising from MRC research centres. The plan was approved by the MRCT Governing Body and by the MRC's Council in February 2003, and will be implemented during 2003/04.

Working with industry

Progress has been made in a range of activities to meet the MRC objectives for commercial exploitation. During the year, 41 new patent applications were filed and 32 new licensing agreements completed with companies. Two new spin-out companies were established:

llectus Ltd: The company is based upon novel technologies developed in the laboratory of Dr Terry Rabbits at the MRC Laboratory of Molecular Biology in Cambridge. llectus will focus on developing intrabody and masked antisense molecules as therapies for the treatment of cancer, and as tools for target validation. The company was founded in August 2002 with funding from BTG and is based in the MRCT incubator facility in Mill Hill.

Etiologics Ltd: The company has been established to apply technology from the MRC Mammalian Genetics Unit at Harwell to generate and screen new mouse strains on a large scale for discovery and validation of novel therapeutic targets. The company was founded in October 2002 with funding from MVM and ABN Amro and is based on the Harwell site.

Significant technologies were also licensed to other companies including:

- Polymerase evolution technology (to Domantis Ltd.)

- Polycystic kidney disease gene sequence and applications (to Athena Diagnostics)
- Caged compounds (to Tocris Cookson)
- Protein kinase targets and assays (to various companies)
- Protein structure determination (collaboration with Trigen)
- Further licensing of antibody humanisation technology
- Continued licensing of research tools

Employment in start-up companies (as at 31.3.03)

Company	Employees
CAT	299
Cobra	75
TopoTargets (Prolifix)	36
MRCT (all sites)	54
BioFocus (CGL)	162
RiboTargets	92
Sangamo (formerly Gendaq)	65
Aeres	8
Domantis	35
Avidis	13
Ardana	17
MVM	10
IRSL	73
Etiologics	15
llectus	4
Oxxon	15

Bracketed cases represent MRC start-ups which have merged with other companies.

The above list does not include Celltech Group plc, although this originated in 1980 as a start-up company based on MRC technology.

Applied Research Division

The MRCT laboratories at Mill Hill, London, continue to serve an 'incubator' function for the MRCT spin-out companies AERES Biomedical and Virogen, and for the MRC start-ups Anacrine and llectus. Surplus laboratory space has been leased to a non-MRC start-up company, NCE,

in return for rental income and services in the area of medicinal chemistry. This collaboration provides income to support the ongoing objectives of the MRCT Assay Development Group (ADG).

ADG, now well established at the MRCT Mill Hill centre, creates robust, high-throughput chemical screening assays to identify potential drug candidates with pharmacological activity directed towards new molecular targets identified in MRC establishments. This process represents the earliest stage of drug discovery and development. The most advanced of these programmes has identified lead compounds that inhibit a malaria protease, and have been shown to inhibit the invasion stage of the malarial parasite. A cell-based assay to identify modulators of the VPAC2 receptor has also been developed in collaboration with Professor Tony Harmor. Other molecular targets of commercial interest arising from discoveries in MRC Units in Glasgow, Oxford, Cambridge and London are also currently being pursued.

Applied research programmes at the MRCT Mill Hill and Edinburgh centres include:

- a project funded by the Study of Ageing (a not-for-profit, USA-based grant-awarding body) to pursue further research and development of agents that act allosterically at muscarinic receptors, based initially on a collaboration between MRCT and the National Institute for Medical Research (NIMR);
- a project performed in collaboration with a USA-based pharmaceutical company in the area of gene expression;

- a 'proof of concept' study funded by the Scottish Executive to develop a new antibody expression technology arising from the Human Genetics Unit, Edinburgh;
- commercialisation of Optical Projection Tomography, discovered and developed by Dr James Sharpe, Human Genome Unit, Edinburgh.

The ten-year collaborative venture with Teijin (Japan) was marked by a celebration at the NIMR in September 2002, attended by the President and CEO of Teijin, Mr Nagashima. The Research Collaboration Agreement was extended for a further five years in June 2002, with an option for an additional five years. The current project has been established to identify novel drug targets for treatment of kidney and lung fibrosis.

Revenues and performance indicators

MRC income from the exploitation of its intellectual property increased from £13.5m in 2001/02 to £15.1m in 2002/03. The increase 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.

The year-on-year trends on MRC exploitation activity are summarised below:

See Section 10.11 of the MRC Operating Report 2002/03 for progress against 'Exploitation' targets in the MRC Operating Plan 2002/03 and 2003/04.

Year	New patent filings	New licence agreements (cumulative totals in brackets)	Royalty income from licensing agreements (£M)*
1998/99	40	25 (251)	2,883
1999/00	32	26 (301)**	8,262
2000/01	34	36 (337)	13,832***
2001/02	50	42 (379)	13,469
2002/03	41	32 (411)	15,118

* restated under accruals basis

** cumulative figure adjusted following review of licences

*** includes £8.13m from sale of shares

Good research practice

The MRC sets standards in biomedical research ethics and oversees ethical issues and conduct of all medical research facilitated by the awards and grants it distributes.

Centre for Best Practice for Animals in Research

The Centre for Best Practice for Animals in Research (CBPAR) is committed to supporting and facilitating the commitment of the UK's scientific community to high standards in laboratory animal welfare and the implementation of the principles of the 3Rs (the replacement, reduction and refinement of the use of animals). Over the last year the CBPAR has focussed on a wide range of issues, including the welfare of primates used in biomedical research, the provision of training resources on experimental design and statistical analysis, and the development of welfare-assessment schemes for genetically modified mice.

In 2003 the Biotechnology and Biological Sciences Research Council (BBSRC) agreed to provide financial support for the work of the CBPAR.

Replacement, reduction and refinement of animal

use: 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 2002/03. 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.

Further information about the CPBAR can be found at www.mrc.ac.uk/public-cbpar.htm

See Section 10.8 of the MRC Operating Report 2002/03 for progress against 'Animal research' targets in the MRC Operating Plan 2002/03 and 2003/04.

Cluster randomised trials

The particular methodological and ethical issues posed by cluster randomised trials were highlighted in the November 2002 booklet *Cluster Randomised Trials: Methodological and Ethical Considerations*. This guidance was distributed to all UK Multicentre Research Ethics Committees at the request of the Central Office of Research Ethics Committees.

Data sharing and preservation

The MRC commissioned the UK Data Archive (UKDA) in March 2002 to work with seven MRC-funded Units/programmes to identify current sharing and preservation practices in population-based studies and clinical trials. The findings were discussed by researchers, archivists and informaticians at a workshop in October 2002. These formed the basis of draft policy statement approved by the MRC's Council in December 2002, the principles of which are:

- confirmation of the MRC's expectation that data sharing is normal practice in biomedical research, subject only to protection of privacy and intellectual property;
- data preservation to enable sharing will require the development and dissemination of tools and standards;
- data preservation is a legitimate cost in research proposals;
- investigators, as data creators, need recognition for sharing valuable data sets;
- research proposals involving major data sets should include data preservation and sharing plans.

The MRC also recognised that the research community required help in meeting these requirements. To take forward this work, the MRC agreed that a steering group be established to develop a data-preservation strategy during 2003, based on a small number of pathfinder projects and workshops to identify existing tools, standards and models; identify and address gaps; and demonstrate the feasibility of new tools.

Ethics of research in developing countries

The Global Forum on Bioethics in Research, of which the MRC is a sponsor, brings together researchers and ethicists from developing and developed countries to discuss key issues of practical importance in developing societies.

Following its third meeting, which the MRC hosted in Cape Town in February 2002, the MRC has established an email discussion group to facilitate contact between Forum members across the world in-between meetings. MRC staff have also been participating actively in preparations for the next meeting of the Forum, to be hosted by UNESCO and the Institut National de la Santé et de la Recherche Médicale (France) in April 2004.

European Union Directive on Good Clinical Practice (GCP) in Trials of Medicinal Products

In February 2003 the Medicines & Healthcare products Regulatory Agency (MHRA, then the Medicines Control Agency) launched a three-month consultation on the draft UK legislation to transpose into UK law the EU Directive on Good Clinical Practice in Clinical Trials of Drugs. The MRC, working closely with Cancer Research UK and the National Coordinating Centre for Health Technology Assessment, established a project to assess the impact of the UK legislation on publicly funded trials. This was led by a steering group chaired by Professor Stephen Evans. Clinical trialists, funders and other stakeholders were consulted and several trial sites were visited to identify and present evidence on current practice. The MRC response, which identified six key potential hurdles for publicly funded trials, was submitted to the MHRA in May 2003.

Research involving human material derived from the nervous system

An expert advisory group was established in 2002 to review the existing MRC guidance on the ethics of research involving brain and other central nervous system (CNS) tissue in relation to recent changes and developments. The resulting updated interim guidance, once approved by the MRC's Council, will provide an ethical framework for ongoing research on the human nervous system, particularly the brain, and take account of current government guidelines. The guidance will be published on the MRC website in June 2003 and will be modified as necessary to take account of expected changes in legislation.

See Section 10.4 of the MRC Operating Report 2002/03 for progress against 'Professional ethics' targets in the MRC Operating Plan 2002/03 and 2003/04.

Effective business practice

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.

In addition, the Audit Committee:

- 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 Director's Annual Statement of Internal Control across MRC establishments;
- monitored business critical projects and reviewed reports from MRC management.

Efficiency

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.

The MRC has continued to work jointly with four of the other Research Councils to procure and implement a common electronic record management system. The joint project board which oversees this work is chaired by the MRC's Executive Director.

During the year, the MRC has worked towards the procurement of a new financial accounting and management information system (FAMIS) as the first major business efficiency improvement solution to be advanced under a service delivery procurement project (which 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). FAMIS will be the first solution to use a new, enterprise-wide platform which will be common to all future developments in this area.

Expenditure on the MRC's Head Office and central administration represented 3.1% of total expenditure in 2002/03, as opposed to 3.3% in 2001/02. This proportion has been steadily declining over the last ten years – Head Office costs represented 5.4% of total expenditure in 1994/95.

See Section 10.6 and 11 of the MRC Operating Report 2002/03 for progress against 'Evaluation, monitoring and performance indicators' and 'Efficiency plan' targets in the MRC Operating Plan 2002/03 and 2003/04.

Environmental policy

The MRC is committed to continuous improvement of its environmental performance. All MRC research centres 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 centre 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. The MRC is also committed to cooperating with other bodies in the public and private sectors to develop and promote environmentally responsible practices.

Service First

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

The Research Councils and the Office of Science and Technology have agreed a list of key performance areas and each Research Council has set its own challenging standards. These standards will be regularly reviewed and additional measures identified. The MRC reports on its performance against these targets in this Annual Report and on its web site www.mrc.ac.uk

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 Consumers Liaison Group, Electronic Application and Assessment (EAA) 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.

Service First

Area and target	Achievement in 2002/03
Grant applications	
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 new electronic application and assessment system
Grant applications will be considered by the MRC's peer review process within 26 weeks of the submission date	*78% considered within 26 weeks
Feedback will be provided to grant applicants within 7 working days of a decision being made	80% within 7 working days
General correspondence	
Replies to general correspondence will be sent within 15 working days	98% with 15 working days
Payment of invoices	
Payment of bills will be within 30 days of presentation	76% within 30 days of presentation

*Some decisions were not reached within 26 weeks because:
 i) some funding decisions were deferred for financial reasons;
 ii) a lack of reviewers agreeing to consider applications, causing the planned meeting date of one panel to be postponed.

Health and Safety

The MRC has made steady progress towards its aim of demonstrating best practice in health and safety management. A key factor of the MRC's continuous improvement process is the use of risk-assessment management as a tool to ensure the protection of our staff, assets and research programmes.

In line with the Government strategy statement *Revitalising Health & Safety*, published in June 2000, the MRC planned and initiated a programme of briefings for all first-line and middle managers.

Training has been a particularly active area. Training courses have been developed on communication and negotiation skills for Unit Safety Coordinators, on workstation risk assessment and on hazardous substance risk assessment. The MRC has updated its training course for Biological Safety Officers. This unique course continues to be received enthusiastically by the pharmaceutical and university sectors as well as by MRC staff.

Each of the MRC's research centres produced a health and safety improvement plan and progress on meeting objectives is being monitored. For example, all animal accommodation managed by the MRC was inspected for adequate control of animal allergies during the summer of 2002; a review of the MRC's containment level 2 laboratories was also undertaken. Assurance was given to the MRC's Council that the management of these laboratories was satisfactory.

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

See Section 10.10 of the MRC Operating Report 2002/03 for progress against 'Health and safety' targets in the MRC Operating Plan 2002/03 and 2003/04.

Scientific misconduct

The MRC is required to record incidence of scientific misconduct. As was the case in 2001/02, no incidences were reported amongst MRC researchers.

Declarations of interest

When MRC Council members 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. Members also have a responsibility to notify the MRC Head Office of changes in their other interests, as these occur. The MRC keeps a central register of Council members' interests which is open to public inspection at www.mrc.ac.uk/about-council-members_register.htm

Communication

This year the Corporate Communications group continued to implement the new strategic plan for communications. One of our key objectives was to promote the work and achievements of MRC scientists. We did this in a number of ways including commissioning an artist who was previously a biomedical researcher to communicate the complexity and excitement of medical research through a series of paintings; working with journalists on hundreds of stories about the results of our research, and celebrating the momentous discovery 50 years ago of the structure of the double helix.

Media

The press office received just under 3,000 enquiries during the year and issued 45 news releases. There were over 1,000 stories in the UK print media mentioning the MRC, the vast majority positively reporting the results of our research.

Stories attracting wide media interest included the publication of the results of the international 'Magpie' trial which found that an injection of magnesium sulphate halved the risk of developing eclampsia, a life-threatening complication of pregnancy. Other well-publicised stories included the discovery of a gene for asthma, a report calling for more research on fluoridation and the funding of the UK Stem Cell Bank.

The press office continued its programme of media training and MRC scientists took part in numerous radio and television interviews.

The press office evaluated its work through a MORI survey of national print and broadcast health and science correspondents. Nine out of 10 journalists rated our media relations as fairly or very good and eight out of 10 said they had a favourable or very favourable impression of the MRC. And when compared with other well-known health and science organisations, we received top ranking for producing the most interesting and usable press releases.

Events

The MRC external communications team organised and attended events throughout the year to present the MRC's work to different audiences including the public, researchers, politicians, health service professionals, and to forge productive links with other organisations.

DNA double helix 50th anniversary. The MRC led a group of over 30 organisations to develop a programme of events to celebrate the 50th anniversary of the discovery of the double helix structure of DNA. We developed an anniversary logo and website www.DNA50.org.uk and devised and implemented a marketing and public relations strategy to encourage participation and to promote the activities.

The flag-ship event of the UK celebrations was a celebratory dinner hosted by the MRC, the Royal Society and *Nature*. The dinner, attended by 400 of the world's top scientists, government ministers, parliamentarians, interest groups, charities and the media, took place on 23 April at the Guildhall, London. Professor Sir George Radda, Lord Sainsbury of Turville, Dr James Watson, Professor Karen Vousden, Lord May of Oxford and Dr Philip Campbell spoke. The Prime Minister held a reception at No. 10 Downing Street beforehand.

Events are continuing throughout 2003 and include the National Schools Initiative *Genetic Futures*. The MRC, the Royal Society, the Biotechnology and Biological Sciences Research Council (BBSRC), the Department of Health, National Endowment for Science, Technology and the Arts and the Department for Education and Skills are hosting a series of eight regional science workshops and a National Forum for key stage 3 and 4 schoolchildren on the applications of DNA science.

Edinburgh International Science Festival (EISF).

Science @ the Assembly Rooms is part of the family programme at the EISF. It attracts a large family audience from toddlers upwards. The MRC's stand focused on DNA. Visitors could join in with a real experiment to test how much red pigment there was in their hair, become a DNA detective and solve a crime, and find out about how their genes work. The stand also featured a bench experiment where visitors could

learn how to extract DNA from peas. With PhD students from our Edinburgh Units acting as explainers, the stand attracted a steady stream of visitors who went away with more understanding of DNA science. Professor Nick Hastie, Director of the MRC Human Genetics Unit in Edinburgh, was one of the speakers in the Science Festival Public Lecture Series. His talk *Genetics: the New Fortune-telling* was held at the Royal Museum of Scotland and attracted a large public audience.

The British Association (BA). The MRC sponsored the Medical Sciences Section events at the BA Annual Festival of Science in Leicester in September 2002. President of Medical Sciences Section 2002, Nancy Rothwell is an MRC Professor at Manchester University. A former presenter of the Royal Institution Christmas Lectures, Nancy presented a two-part session entitled *Get fit – Stay Healthy* combining short talks with live demonstrations and experiments. The first session illustrated fundamental aspects of a healthy diet and why some people stay slim while others gain weight. The second session focused on why it is important to get fit, and what training does to the body, and compared the fitness of highly trained sports people. The session attracted a large public audience including groups from several local schools. In the run up to the BA Festival, the MRC sponsored a series of local talks organised by the local Section of the BA to highlight the Festival.

The MRC has sponsored another event in the BA Science and Public Affairs forum series, *A Testing Time for Medicine*, which focused on pharmacogenetics.

Meetings, exhibitions and conferences. The MRC, with the BBSRC and the Economic and Social Research Council (ESRC), sponsored a major one-day conference: *Stem Cells: Prospects for Research & Therapy* at the Millennium Gloucester Hotel. It was attended by nearly 400 scientists, policy-makers and representatives of interested charities. Complementing the talks were poster demonstrations, a learning zone, and surgeries by funding agencies and regulatory authorities.

The MRC held an evening event in conjunction with PAWS (Public Awareness of Science & Engineering) as part of our strategy to increase media awareness and understanding about clinical trials. Professor Janet Darbyshire, Director of

the MRC Clinical Trials Unit, Dr John Zajicek (MRC cannabinoids for multiple sclerosis trial) and Professor Ian Jacobs (MRC ovarian cancer screening trial) spoke to drama writers about various aspects of their work with a view to sparking ideas about how issues related to clinical research might be incorporated into TV and radio drama.

Max Perutz Essay Prize. Women scientists won all three prizes in the annual Max Perutz Essay competition. Collette Tourlaimain of Cambridge University won first prize with *A Virus Story*, an essay on the human papilloma virus and how it causes cervical cancer. The second prize went to Kate Lygoe of University College London for her essay *To Scar – Or Not to Scar*, about research into how to minimise or eliminate scarring. Jenna Walters of the University of Wales College of Medicine took third place with *Immunity – Avoiding the Own Goal*, describing what happens inside a person's body if their immune system has turned against them.

Consultation

Consultation with the public has become a key component in the development of MRC activities and policies. The MRC directly commissions and collaborates with external partners on a variety of consultations which take the form of quantitative opinion surveys, web-based surveys, and focus group consultations. Recent examples include: attitudes toward donation as part of our establishment of the UK Stem Cell Bank; public attitudes toward embryonic stem cell research; public attitudes toward use of animals in medical research; web-based stakeholder consultation on clinical trials, and web-based consultation on chronic fatigue syndrome. Extensive consultations were held for the UK Biobank project during two phases in 2000 and 2002. These consultations focused on attitudes toward collection of biological samples and on public trust.

The MRC also receives advice on issues of public interest and concern from its Consumer Liaison Group (CLG). The Group was established three years ago to advise the MRC on ways of promoting public involvement in MRC activities, to ensure the MRC is aware of and able to respond to public interests and concerns about research. Recent examples of issues to which CLG members have contributed include genetic research and autism.

Working in Partnership

This year the MRC joined forces with external partners to increase public awareness of two major issues – stem cell research and the use of animals in medical research.

The Stem Cell Communication Coalition, chaired by the MRC, is made up of all major funders of stem cell research. Earlier this year the group commissioned a MORI poll which showed encouraging results for scientists working in this area. About 70 per cent of the respondents voiced approval for the use of human embryos for research to find treatment for serious diseases and for fertility research.

The Coalition for Medical Progress is a group of organisations – commercial, charitable, academic and funding – that are involved in some way with medical research using animals. The aim of the Coalition is to increase public understanding of medical research involving animals and to increase awareness of the benefits to human health. This year it launched the results of a MORI survey which assessed the public's view on the use of animals in medical research. The poll, which repeated the MRC's 1999 MORI survey, found an increase in support for research involving animals as long as certain conditions were met.

Parliamentary

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

House of Commons Science and Technology Select Committee Inquiries.

Scrutiny of the Work of the MRC – written evidence was submitted in November 2002. Sir George Radda and Mrs Jane Lee gave oral evidence to the Committee on 4 December 2002. The report (www.publications.parliament.uk/pa/cm200203/cmselect/cmsctech/132/132.pdf) made a number of recommendations about the work of the MRC, which the Government has accepted (www.science.gov.uk/research/councils/govt_response_to_select_committee_report_on_mrc.pdf), and which the MRC is now implementing. These include keeping the research community better informed, reducing the fluctuations in funding and award rates from year to year, and improving the quality of the information the MRC

provides. One other recommendation, to review the Cooperative Group Grant scheme, had already been put into effect before the Select Committee reported.

Government Funding of the Scientific Learned Societies – evidence was submitted in June 2002.

The Scientific Response to Terrorism – RCUK submitted written evidence in February 2003.

Other parliamentary Select Committees to which the MRC gave evidence.

The House of Commons Trade and Industry Select Committee Inquiry into the UK Biotechnology Industry – written evidence was submitted in April 2002.

The House of Commons Public Administration Select Committee Inquiry into Public Appointments and Patronage – written evidence was submitted in May 2002.

The House of Lords Science and Technology Select Committee, Subcommittee I, Inquiry on Issues relating to Human Infectious Diseases in the UK – written evidence was submitted in October 2002. Dr Diana Dunstan and Dr Peter Dukes of the MRC gave oral evidence to the Committee on 25 March 2003.

The 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 10.5 of the MRC Operating Report 2002/03 for progress against 'Public and stakeholder engagement' targets in the MRC Operating Plan 2002/03 and 2003/04.

People

The MRC's strategic plan focuses its human resources 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 2002/03 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.
- Greater recognition of outstanding performance.
- Defining a clearer career structure for research scientists by building on the Roberts Review, responding to the EU directive on fixed-term contracts and providing greater training opportunities.
- Starting the process of securing 'Investors in People' accreditation.

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.

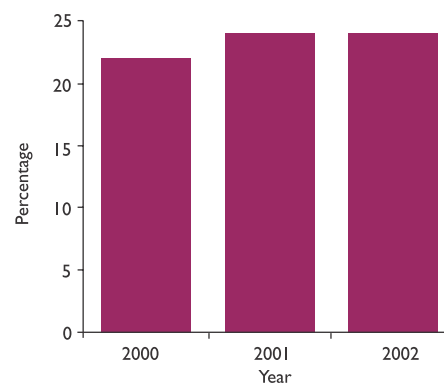
The MRC has an Equal Opportunities sub-committee, which audits MRC employee data annually to ensure the aims of its policies and practices are being achieved in a fair and equal manner, and to identify any imbalances that may need to be addressed.

Women in Science in the MRC

The MRC continues to promote opportunities for and address potential impediments to women rising to senior scientific research posts. The publication of the Greenfield Review has provided additional welcome focus and the MRC will continue to develop initiatives in this area.

Our policies and schemes are regularly monitored to ensure that they are sufficiently flexible to accommodate all (male and female) researchers and career pathways. We aim to offer a competitive employment package and have a range of flexible working arrangements to assist employees in balancing work and non-work commitments.

Women in science in the MRC



Strategic Appointments Scheme (International Appointments)

While the International Appointments Scheme was in abeyance for most of the year, the MRC was able to assist two UK universities each make an appointment of a world-class, clinically qualified researcher from outside the UK under the scheme this year. One was made in diabetes research and the other in muscle cell biology. The International Appointment Scheme was re-launched as the Strategic Appointment Scheme in April 2003.

Transferable skills training

The MRC now provides a full range of transferable skills training to all employee groups and has begun work on a five-year programme to further develop and expand this initiative. The programme will facilitate greater partnering with other employers and fuller integration of employee training by the MRC across all of its areas of involvement.

Work has begun on enhancing employee development, performance management and leadership skills across the organisation.

Training and career development

The MRC offers support for talented individuals who wish to pursue a research career in the biomedical sciences including areas such as public health and health services research. This support is provided through a broad range of personal award schemes that are designed to suit each stage in a clinical or non-clinical research career path. The schemes range from studentship awards through to career development opportunities for senior investigators. For further details, visit www.mrc.ac.uk

New Career Development Fellowships in

Stem Cell Research: stem cells are able to grow into any tissue type and have the potential to help treat diseases such as Parkinson's and diabetes. Stem cell research could therefore lead to major breakthroughs in medicine and the MRC believes that training scientists in this area is a high priority. In 2002 the MRC agreed to provide new Career Development Fellowships in Stem Cell Research. The aim is to support fundamental stem cell biology research or work towards new stem cell derived treatments for major diseases or disabilities. These postdoctoral fellowships will complement 11 MRC Studentships in Stem Cell Research which were also awarded during the year. The fellowships will be funded through a collaboration between the MRC and the Alzheimer's Society, the Biotechnology and Biological Sciences Research Council, Diabetes UK, the Juvenile Diabetes Research Foundation and the Parkinson's Disease Society. The intention is to make eight to 12 awards through the collaboration.

Capacity-building Studentships: in 2002/03 the MRC awarded in competition a total of 50 new Studentships in areas where the research workforce needs to be built up to meet new or expanding research opportunities. In addition to stem cell research, other research areas were brain sciences, informatics, e-Science, intracellular imaging, whole animal physiology and chemical biology. The awards will be taken up later in 2003.

See Section 8.3 and 9.1 of the MRC Operating Report 2002/03 for progress against 'Human resources' and 'Personal and career awards' targets in the MRC Operating Plan 2002/03 and 2003/04.

Financial summary

A summary of our financial results in 2002/03 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 Account.

Income and Expenditure

Financial Year [1]	2000/01		2001/02		2002/03	
	Resource £M	Capital £M	Resource £M	Capital £M	Resource £M	Capital £M
Domestic DEL [2]	289.9	32.3	309.3	38.6	325.6	48.0
EU DEL [3]	3.3	-	3.3	-	3.3	-
External Income	34.3	-	47.2	-	48.9	-
Income from Commercial Activities [4]	13.8	-	13.5	-	15.1	-
Balance Brought Forward [5]	-	-	10.9	-	37.8	-
Total Income	341.3	32.3	384.2	38.6	430.7	48.0
MRC Research Units	159.4	28.7	177.2	23.4	180.3	20.4
Research Grants	96.7	11.1	119.9	15.9	125.9	15.3
Special Contributions	4.8	-	6.7	-	8.7	-
Research Career Awards	38.4	-	44.8	-	44.2	0.8
International Subscriptions	6.0	-	7.2	-	9.6	-
Central Administration Running Costs	12.9	-	13.7	0.1	14.5	-
Restructuring Costs	3.2	-	2.7	-	3.0	-
Expenditure on Commercial Activities [4]	9.0	-	6.3	-	7.3	-
Total Expenditure	330.5	39.8	378.4	39.4	393.5	36.5
Balance Carried Forward					37.2	11.5

[1] Financial years 2000/01 and 2001/02 were previously presented in cash terms and have been restated in resource terms to enable comparison across years and to be consistent with reports submitted to Treasury, via the DTI.

[2] When Resource Accounting and Budgeting (RAB) was introduced, Grant-in-Aid was replaced by the Departmental Expenditure Limit 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 accounts. In other reports, MRC research activities are reported separately to its commercial activities.

[5] 2002/03 Balance Brought Forward reflects the MRC's cumulated underspend not previously recognised as part of its resource budget. In agreement with the OST, the MRC received credit for this amount during the year as one sum.

(All figures are subject to rounding.)

Reconciliation of Resource to Financial Statements – Annual Account

	Notes	2002/03 £000	£000
Total Income per I&E			434,987
Less Parliamentary GiA ¹	3	(344,671)	
Plus Domestic DEL		325,600	
Plus Balance Brought Forward		37,794	
Less Release of Deferred Income on Tangible Fixed Assets	24	(13,975)	
Less EU Income	5	(3,613)	
Plus EU DEL		3,334	
Less Joint Infrastructure Fund Income*		(8,683)	
Less Proceeds from FA sale (Cash Flow Statement)		(99)	
Plus Interest Receivable (Cash Flow Statement)		31	
			<u>(4,282)</u>
			<u>430,705</u>
Total Expenditure per I&E			474,348
Plus Unused Animal Licence Fee Income	19	39	
Less Capital Grants (see contra entry under Capital DEL)		(16,107)	
Less Joint Infrastructure Fund Expenditure*		(8,683)	
Less Movement in Provisions	23	(8,557)	
Less Amortisation of Intangible Fixed Assets	14	(8,117)	
Less Impairment of Intangible Fixed Assets	14	(1,637)	
Less Depreciation of Tangible Fixed Assets	15	(20,801)	
Less Cost of Capital	1(j)	<u>(16,967)</u>	
			<u>(80,830)</u>
			<u>393,518</u>
External Income			
Contribution from Other Government Departments	4		29,701
Contributions and Grants from Other Bodies	5		23,794
Other Income	6		<u>7,630</u>
			61,125
Less EU Income	5	(3,613)	
Less Joint Infrastructure*		(8,683)	
			<u>(12,296)</u>
			<u>48,829</u>

* The adjustment for JIF 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)

¹ Note to Annual Account shown where relevant

Reconciliation of Capital to Financial Statements

	Notes	2002/03 £000
Total Expenditure		
Capital Grants (see contra entry under Resource DEL)		16,107
Additions in Year	15	20,465
Less NBV of Disposals	15	(732)
Less Profit/Plus Loss on Disposal		634
		<u>36,474</u>

Review of the year

The MRC is required by the Department of Trade and Industry (DTI) and the Office of Science and Technology (OST) to control its budgets within a Departmental Expenditure Limit (DEL) under the Resource Accounting and Budgeting regime. The result against DEL for 2002/03, (which includes £20.5m in respect of accumulated surplus of the MRC's Commercial Fund), was an underspend of £48.7m with a balance of £37.2m resource and £11.5m capital available to carry forward for use in later years. Further commentary on performance during the year is given in the Annual Account.

The MRC's deficit for 2002/03

The Income and Expenditure Account shown in the Annual Account records a deficit for the financial year of £23.5m. For the purposes of the statutory accounts the MRC is funded by cash grant-in-aid, and the grant-in-aid income in the accounts excludes non-cash movements, which are included in the OST budget. Non-cash items, such as depreciation and cost of capital, are charged to expenditure without a corresponding amount in income. This technicality within the Government Accounting systems accounts for the deficit.

The balance sheet at 31 March 2003 also shows provisions for liabilities and charges of £35.9m. 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 MRC's sponsoring department, the Department of Trade and Industry.

Those liabilities falling due in 2003/04 have already been taken into account in the 2003/04 grant-in-aid which has been included in the department's Estimates for that year and approved by Parliament. As part of the formal accounting and audit process the OST has provided an assurance of their financial support for the accumulated deficit and accumulated provisions. It has accordingly been considered appropriate to adopt a going concern basis for the preparation of these financial statements.

Annual Accounts

Foreword

Statutory basis and history

Originally set up in 1913 as the Medical Research Committee to administer funds provided for medical research, the Medical Research Council (MRC) was incorporated under its present title by Royal Charter in 1920. A supplementary charter was granted in 1993 describing Council's new mission following the 1993 Government White Paper on Science and Technology. The Council receives an annual grant in aid from Parliament through the Office of Science and Technology as well as funds from other sources including Government departments, international agencies, industry and medical research charities.

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

Mission

The MRC's mission is:

To promote and support, by any means, high-quality basic, strategic and applied research and related post-graduate training in the biomedical and other sciences with the aim of maintaining and improving human health.

To advance knowledge and technology and provide trained researchers to meet the needs of users and beneficiaries (including the providers of health care and the biotechnology, food, health-care, medical instrumentation, pharmaceutical and other biomedical-related industries) thereby contributing to the maintenance and improvement of human health, the economic competitiveness of the United Kingdom and the quality of life.

To provide advice on, and disseminate knowledge and promote public understanding of, research in the biomedical sciences.

Review of the year

Review of the year is included under Major research developments and partnerships on page 6. Further achievements are highlighted in the MRC Annual Review 2002/03.

Medical Research Council - Membership for 2002/03 session

Sir Anthony Cleaver

Chairman

Professor Sir G K Radda CBE FRS

Deputy Chairman & Chief Executive

Dr E M Armstrong

Scottish Executive Health Department

Sir William Castell

Amersham plc

* Professor Kay Davies CBE

University of Oxford

Professor R M Denton FRS

University of Bristol

Dr Peter Fellner

Celltech Group plc

Professor R Fitzpatrick PhD MFPHM

University of Oxford

Mr Derek Flint

The Corner House, Salisbury

Dr Ruth Hall

The National Assembly for Wales

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

Professor Nancy Rothwell

University of Manchester

* Professor John Savill

University of Edinburgh

Dr Chris Henshall

DTI - Office of Science and Technology

* New members appointed to their posts on 1 August 2002

Outgoing membership

Former members whose appointment ended on 31 July 2002

Professor J I Bell MA MD FRCP

University of Oxford

Professor E Johnstone MD FRCP

(Glasgow & Edinburgh) FRCPsych, DPM

Royal Edinburgh Hospital

Financial results for the year

The Income and Expenditure account records a deficit of £23,540,000. Total income excluding grant-in-aid amounted to £76.3 million, staff costs totalled £124.6 million, other operating costs excluding depreciation totalled £81.8 million and expenditure on research grants totalled £149.9 million. Total asset values increased by £14.1 million, whilst creditors and other liabilities increased by £5.4 million. Owing to uncertainties in the Stock Market during the past year, Council's share-holdings in Cambridge Antibody Technology and their other holdings were revalued lower at £2.9 million from £11.3 million at 31 March 2002. Reserves, excluding the general reserve, showed a net increase of £8.3 million mainly due to increases in intellectual property reserves of £13 million. The deficit on general reserve increased by £6.0 million. Total government funds at 31 March 2003 stood at £255.5 million.

Future developments

There are no fundamental changes to be made or large scale developments planned that would affect the nature of the Council's activities.

Financial Management Strategy (FMS)

Financial Accounting and Management Information System (FAMIS)

The overall goal of the FMS is to enable the MRC to focus more resources on science through reform of planning and resource management throughout the organisation. Central to this reform is the introduction of Resource Accounting and Budgeting (RAB), through which government is replacing the old cash based methods for planning and control of expenditure. RAB will enable MRC as a whole to exercise better control of its resources and to meet the higher standards of accountability for publicly funded expenditure now expected.

FAMIS is one part of a wide programme for the introduction of new information services across the MRC. The Service Delivery Procurement Project (SDPP) is the overarching project designed to select a new corporate IS/IT provider for managerial and administrative services. A new business focussed IS/IT contract is being negotiated to provide us with

services, including FAMIS. Contract award is scheduled for September 2003, with FAMIS delivery due for financial year 2004/05.

The MRC is seeking an integrated financial accounting and management information solution operating on a single Chart of Accounts, which covers Head Office, corporate and local Unit needs. It envisages: interoperability with existing automated systems; the establishment of a single data source with optimised data capture for all information; and the availability of up-to-date financial information for all.

MRC have established a fully resourced Project Team to work with administrators, finance managers and staff in Head Office, Institutes and Units to ensure the successful introduction of FAMIS.

Human resources

The Council's strategic plan focuses HR activities around 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, closed etc. to ensure the MRC delivers on its overall mission.

The MRC has responded positively to two recent significant external influences, namely:-

- repositioning the pay systems in the context of both equality proofing requirements and external market competition
- responding to the Fixed Term Contract Directive

To facilitate these changes the MRC has developed and agreed a new scientific career structure, which while offering an enhanced job security for a greater proportion of scientists, also creates a more visible need for clearly established standards and expectations around employee performance, training and development.

It is the MRC's intention over the coming year to support these initiatives using the Investors in People (IiP) standard as a means of benchmarking the MRC's effectiveness in managing its people resource, and measuring the means by which the organisation adjusts to these cultural changes.

Equal opportunities

The Medical Research Council is an equal opportunity employer and it is the MRC's policy to ensure that no applicant for employment by the MRC, and no employee of the MRC, receives less favourable treatment than another on grounds of sex, marital status, colour, race, creed, ethnic or national origin, or is disadvantaged by requirements or conditions which cannot be shown to be justifiable irrespective of the colour, race, nationality, ethnic or national origins, sex or marital status of the person to whom it is applied. Similar policies are applied to the employment of disabled persons, ex-offenders and to discrimination on grounds of sexual orientation.

Employee involvement

The Council produces a wide range of publications which inform the research community, and staff, of its activities on a regular basis. These include the Corporate Plan and Scientific Strategy, Operating Plan and Annual Report.

On employment matters, Council informs both through its consultation and negotiation mechanisms detailed at (i) and (ii) below and the routine publication of literature concerning employment policies, terms and conditions of service and other issues of interest to staff. The Council endorses the principle of collective consultation on matters that concern its staff and negotiation on terms and conditions of service. To this end, it recognises five trade unions, each representing a discrete category of staff. Negotiation and consultation take place at two levels.

- (i) with individual trade unions on matters relating specifically to the category of staff represented;
- (ii) with National Staff Side on matters relating to more than one category of staff.

Meetings are held on a regular basis. With respect to (ii), business is conducted at a General Purposes Committee set up for major specific issues or at subcommittees which deal with broad subject areas. There is also a formal AGM of the Joint National Consultative Committee of Union and Management Representatives at which the business conducted is reported.

The Research Funding Strategies and Priorities, Operating Plan and Annual Report, all of which are freely available to staff, contain detailed information on the financial framework within which the Council operates and financial and economic factors affecting its performance.

In addition, the National Staff Side is consulted on an annual paper to Council detailing the financial allocations for the forthcoming year.

Health and safety

The MRC has made steady progress towards its aim of demonstrating best practice in health and safety management. A key factor of the Council's continuous improvement process is the use of risk management as a tool to ensure the protection of our staff, assets and research programmes.

Each research establishment is required to produce a contingency plan to ensure the continuity of their research programmes in adverse circumstances e.g.: fire, flood, loss of services.

The Health and Safety Management Section has strengthened its links with host institutions' safety advisors and has agreed formal arrangements on the provision of day to day health and safety support for MRC staff.

Training has been a particularly active area. Training courses have been developed for Unit Safety Coordinators, workstation risk assessment and hazardous substance risk assessment. The Council has launched its training course for Biological Safety Officers which has been received enthusiastically by the University Sector as well as its own staff.

It is the MRC's intention over the coming year to provide further health and safety management seminars for senior managers and formal training programmes for all unit safety co-ordinators.

Environmental policy

The Council will improve its environmental performance continuously by taking measures such as:-

Conserving energy, water, wood paper and other resources – particularly those which are scarce or non-renewable – while still providing a safe and comfortable working environment.

Reducing waste through re-use and recycling and by using refurbished and recycled products and materials where such alternatives are available.

Monitoring discharges and emissions to air, land and water to assess what actions are necessary to reduce pollution or the risk of pollution.

Developing green transport plans for large units, and taking measures to reduce emissions from vehicles used for Council travel and transport through either the use of less polluting vehicles or greater use of public transport.

Meeting all relevant current and foreseen statutory regulations and official codes of practice, and specifying contractors do the same when working on Council premises.

Developing and maintaining, where significant hazards to the environment exist, emergency procedures for effectively dealing with them and limiting the risk to health and the environment.

Applying the standards in the Government's 'Green Claims Code' when buying goods and services.

Educating, training and motivating staff and contractors to work in an environmentally responsible manner and to play a full part in developing new initiatives, and co-operating with other bodies in the public and private sectors to develop and promote environmentally responsible practices.

Register of members' interests

All members of Council are required, on taking up their appointments, to declare any private, professional or commercial interests that might conceivably conflict with the interests of the Council, or which might be perceived by others as creating a conflict of interest. Members also have a responsibility to notify the office of changes in their other interests, as these occur. These interests are registered centrally, annually updated and are open for public inspection.

Creditor payment policy

The MRC observes The Confederation of British Industry's Code of Practice. Council adheres to the principles of the Prompt Payers Code, and makes every effort to ensure compliance with the agreed terms of payment of creditors' invoices, and endeavours to pay them within thirty days of the date of receipt of the invoice. The Council achieved a 76% (2001-02=73%) success rate in the payment of invoices within 30 days of receipt.

Audit Committee

A Council Audit Committee, under the chairmanship of Mr D Flint, meets three times a year to review internal and external audit matters and the Council's accounts.

Auditors

The accounts of the Medical Research Council 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.

Signed:



Chief Executive & Accounting Officer

Date: 19 September 2003

Statement of Council 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 Council is required to prepare a statement of accounts for each financial year in the form and on the basis directed by the Secretary of State for Trade & 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 Council'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 Council is required to:

- observe the accounts direction issued by the Secretary of State for Trade & 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 Council will continue in operation.

The Secretary of State for Trade & Industry has appointed the senior full-time official, the Chief Executive, as the Accounting Officer for the Council. 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

As Accounting Officer, I have responsibility for maintaining a sound system of internal control that supports the achievement of the Medical Research Council's aims and objectives, set by Council, whilst safeguarding the public funds and departmental assets for which I am personally responsible, in accordance with the responsibility assigned to me in Government Accounting.

The system of internal control in the management of risk across the MRC is designed to eliminate damaging risk and to manage opportunities where there is a risk element in order to achieve policies and objectives. It can provide only reasonable and not absolute assurance of effectiveness.

The system of internal control is based on an on going process designed to identify the principal risks to the achievement of Council's policies, aims and objectives, to evaluate the nature and extent of those risks and to manage them efficiently, effectively and economically. The procedures to implement Treasury guidance continue to be developed and implemented during 2003/4. This takes account of the time needed to fully embed the processes which the Council has agreed should be established, to improve and enhance the robustness of systems.

To this end, following consultation with the Executive Board (formerly the MRC Management Board), Council's Audit Committee, and the Research Councils Internal Audit Service (RCIAS), a risk management policy was developed and approved by Council in July 2001. To effect this policy, the terms of reference of the Executive Board¹ were amended so that members are now individually and collectively explicitly charged with the responsibility for management of risk and innovation and determining control strategies to mitigate risk.

¹ Executive Board membership: Chief Executive, Executive Director, Directors of Finance, Human Resources, Corporate Affairs, Research Management and Chief Executive of MRC Technology.

At present the system of internal control is based on a framework of regular management information, administrative procedures including the segregation of duties, and a system of delegation and accountability. In particular it includes:

- the establishment and work of the Council Audit Committee in accordance with Treasury guidelines, whose terms of reference include to “monitor and advise on appropriate standards for risk management, and internal control”;
- the annual review of Council’s risk profile, by Council supported by Council Audit Committee, as its risk management committee;
- regular Executive Board review of Council’s risk management arrangements, assessing the sensitivity of MRC’s risk profile;
- annual stewardship reviews with Head Office Directors and meetings with Directors of Establishments at which Senior Managers discuss risk management;
- regular review and formal reporting line of all Senior Unit Administrators to the Executive Director;
- strengthening project management through a programme of targeted training;
- regular reviews of projects and project status of activities undertaken by Council and submission of regular reports to the Executive Board and Council Audit Committee on those projects considered as business critical;
- a comprehensive internal audit programme of Corporate and Establishment systems on advice from the MRC’s Council Audit Committee;
- completion and submission of the Directors’ Annual Statement of Internal Control which reviews all common risks across MRC establishments;
- regular review of all Corporate risks by Head Office Directorates;
- regular reviews by the Executive Board of periodic and annual financial reports which indicate financial performance against targets;

- Executive Board’s review of targets set to measure performance across operational areas;
- clearly defined capital investment control guidelines;
- ‘dipstick testing’ procedures which, operated in conjunction with other Research Councils, provide assurance on regularity of research award expenditure at Universities and other research bodies;
- regular reviews by the Executive Board of MRC’s Health and Safety arrangements;
- independent reviews of the quality and value for money of the MRC’s scientific portfolio through peer review.

During 2002-2003 MRC responded to criticisms raised by the House of Commons Science and Technology Select Committee’s report and have begun to implement a number of initiatives (see Communication - Parliamentary in the Annual Report).

Also during 2002-2003, a senior level project team was established to work with all Head Office Directorates² to develop risk registers documenting risks for each area identified within the risk framework approved by Council, together with how each area relates to the broad timings of activities each year. Each Directorate register has been assessed and confirmed as accurate with the action agreed to address the key risks being implemented. These risks have been mapped onto the Council’s agreed framework to validate and approve control processes and to identify any gaps in either the Directorate registers or in the risk framework. This process has led to the development of a methodology for managing risks in each Directorate (through regular revision and review). Ownership of the registers rests clearly with each Group Director and through a programme of targeted training, to take place over the autumn of 2003, the registers will be fully embedded as active management tools.

² Head Office Directorates encompass: Finance Group (Financial Planning and Business development, Accounts, Estates Management, Information Services Group); Human Resources Group (Human Resources Advisory Group, research career Awards, Health & Safety); Corporate Affairs Group (Policy & Secretariat, International, Press Office); MRC Technology; Research Management Group (Peer Review, strategy Liaison, all Boards and Competition groups and Centre for Best Practise for Animals in Research)

A similar approach is underway for developing a risk management system for MRC Units and Institutes supplemented by the Directors' Annual Statement of Internal Control which will continue to be used to identify control strengths and weaknesses in common risk areas applicable across all Units and Institutes. Head Office Directorates jointly with Unit Administrators continue to be responsible for mitigating identified weaknesses and strengthening controls. It is intended that this work will be completed by December 2003. A risk management report on the actions taken together with a revised Corporate Governance framework including risk management will be presented to both the Council Audit Committee and Council annually, the latter who continues to set and assess the risk management policy and framework for the MRC. The Executive Board's remit ensures that the registers will be reviewed by them periodically.

The Medical Research Council's internal audit is provided by RCIAS which operates to standards defined in the Government Internal Audit Standards. The work of the internal audit unit is informed by an analysis of the risk to which the Council is exposed, and annual internal audit plans are based on this analysis, together with comments from the Council 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 Council'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 Council. The report includes the HIA's independent opinion on the adequacy and effectiveness of the Council's system of internal control.

My review of the effectiveness of the system of internal control is informed by the work of the internal auditors, the Audit Committee which oversees the work of the internal auditors and the Council's risk management processes, the Executive Board and Establishment Directors within the Council, who have responsibility for the development and maintenance of the internal control framework, and comments made by external auditors in their management letter and other reports.

Signed:



Accounting Officer MRC
Date: 19 September 2003

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 43 to 66 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 47 to 48.

Respective responsibilities of the Medical Research Council, the Chief Executive and Auditor

As described on page 38, the Council and Chief Executive are responsible for the preparation of the financial statements and for ensuring the regularity of financial transactions. The Council and the Chief Executive are also responsible for the preparation of the Foreword. My responsibilities, as independent auditor, are established by statute and guided by the Auditing Practices Board and the auditing profession's ethical guidance.

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 directions made thereunder by the Secretary of State for Trade and Industry, 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 review whether the statement on pages 38 to 40 reflects the MRC's compliance with Treasury's guidance "Corporate governance: statement on the system of 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.

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 Council and 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 which 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, or by 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 which 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 at 31 March 2003 and of the deficit, 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; and
- 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

22 September 2003

National Audit Office 157-197 Buckingham Palace Road

Victoria, London, SW1W 9SP

Income and Expenditure Account for the year ended 31 March 2003

	Notes	2002-03 £000	2001-02 £000
Income			
Parliamentary grant-in-aid	3	344,671	332,477
Release of deferred income	24	13,975	12,855
Contribution for licence fees	3	98	98
Contributions from other government departments	4	29,701	28,207
Contributions and grants from other bodies	5	23,794	19,455
Commercial activities	13	15,118	13,469
Other income	6	7,630	12,535
Total Income		<u>434,987</u>	<u>419,096</u>
Expenditure			
Staff costs	7	124,578	115,444
Other operating costs	8	81,810	84,267
Research grants	9	149,930	146,010
Other research	10	8,704	6,702
Postgraduate/training awards	11	45,017	44,768
International subscriptions	12	9,547	7,166
Commercial activities	13	7,240	6,251
Amortisation of intangible fixed assets	14	8,117	10,078
Impairment of intangible fixed assets	14	1,637	6
Depreciation of tangible fixed assets	15	20,801	17,365
Cost of capital	1(j)	16,967	15,195
Total Expenditure		<u>(474,348)</u>	<u>(453,252)</u>
Deficit on operations		(39,361)	(34,156)
Loss on disposal of tangible fixed assets		(634)	(2,837)
Interest receivable	17	31	41
Other non-operating income	18	298	213
Amounts payable to the Office of Science & Technology	19	(337)	(250)
Unwinding of discount	23	(504)	(570)
Reversal of cost of capital		16,967	15,195
Deficit for the financial year		(23,540)	(22,364)
Accumulated deficit on general reserve brought forward		(23,945)	(19,350)
Transfers from reserves	25	15,676	14,588
Transfer between reserves on disposal of fixed assets	25	1,816	3,181
Accumulated deficit on general reserve carried forward		<u>(29,993)</u>	<u>(23,945)</u>

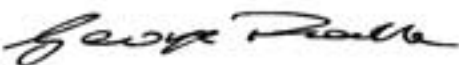
All activities are regarded as continuing

The notes at pages 47 to 66 form part of these Accounts

Balance Sheet as at 31 March 2003

	Notes	2002-03 £000	£000	2001-02 (restated) £000
Fixed assets				
Intangible assets	14	96,065		83,115
Tangible assets	15	186,800		176,334
Investments	16	<u>3,112</u>		<u>11,551</u>
			285,977	271,000
Current assets				
Stocks	20	2,856		2,561
Debtors	21	25,100		20,740
Cash at bank and in hand		<u>35,008</u>		<u>40,529</u>
		62,964		63,830
Creditors falling due within one year	22	<u>(57,512)</u>		<u>(60,707)</u>
Net current assets			5,452	3,123
Total assets less current liabilities			<u>291,429</u>	<u>274,123</u>
Financed by				
Provisions for liabilities and charges	23		35,889	27,332
Deferred income				
Deferred grant-in-aid account	24	130,117		123,627
Capital and reserves				
Revaluation reserve	25	53,292		57,935
Capital land reserve	25	6,059		6,059
Intellectual property reserve	25	96,065		83,115
Accumulated deficit on general reserve	25	<u>(29,993)</u>		<u>(23,945)</u>
Government funds	26		<u>255,540</u>	<u>246,791</u>
			<u>291,429</u>	<u>274,123</u>

Signed:



Chief Executive & Accounting Officer

Date: 19 September 2003

The notes at pages 47 to 66 form part of these Accounts

Cash Flow Statement for the year ended 31 March 2003

	Notes	£000	2002-03 £000	2001-02 £000
Net cash (outflow)/inflow from operating activities	27		<u>(5,612)</u>	<u>12,169</u>
Returns on investments and servicing of finance				
Interest received	17	31		41
Other non-operating receipts	18	298		213
Payments to the Office of Science & Technology	19	<u>(337)</u>		<u>(250)</u>
Net cash (outflow)/inflow from returns on investments and servicing of finance			<u>(8)</u>	<u>4</u>
			<u>(5,620)</u>	<u>12,173</u>
Capital expenditure				
Payments to acquire tangible fixed assets and investments		(20,465)		(23,771)
Receipts from sale of tangible fixed assets		<u>99</u>		<u>338</u>
Net cash outflow from capital expenditure			<u>(20,366)</u>	<u>(23,433)</u>
Net cash outflow before financing			(25,986)	(11,260)
Financing				
Capital grant-in-aid received	24	20,465		23,771
Net cash inflow from financing			<u>20,465</u>	<u>23,771</u>
(Decrease)/increase in cash	28		<u>(5,521)</u>	<u>12,511</u>

The notes at pages 47 to 66 form part of these Accounts

Statement of Total Recognised Gains and Losses for the year ended 31 March 2003

	2002-03 £000	2001-02 £000
Deficit for the year	(23,540)	(22,364)
Gains on revaluation of fixed assets	<u>24,655</u>	<u>34,816</u>
Total gains and losses for the year	1,115	12,452
Prior year adjustment	<u>1,378</u>	<u>-</u>
Total recognised gains and losses since last Annual Report	<u>2,493</u>	<u>12,452</u>

The notes at pages 47 to 66 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 & 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 Council 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 & buildings is open market value for existing use where this can be established. However, because of the specialised nature of MRC 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, that element of the Revaluation Reserve which becomes realised as a result 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 -	5-15 years
Computers and software -	3 years
Engineering, office & 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 Council'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 Council 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 Council 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 a period of between eight and thirteen 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. Any permanent impairments in value are charged to the Income and Expenditure account in the year in which they arise.

(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, VAT 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 impairments in value are 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 Council has no specific interest bearing debt. In accordance with Treasury guidance, the calculation is based on a 6.0% rate of return on average net assets employed.

(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

As MRC is partially exempt for VAT purposes, all expenditure and fixed asset purchases is 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. See note 7(e).

(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 Council's notional cost of capital. The unwinding of the discount has been debited to the Income and Expenditure account.

2. Prior year adjustment

As part of a continuing review programme of local units' fixed asset records, a number of buildings with a gross value of £1,488,229 at Council's laboratories in The Gambia, have been found never to have appeared in the Fixed Asset Register. The accumulated depreciation on these properties totalled £109,783 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 £1,378,446 respectively.

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

	2002-03 £000	2001-02 £000
Grant allocation for recurrent expenditure	317,100	309,696
Grant allocation for capital expenditure	48,036	46,552
	<u>365,136</u>	<u>356,248</u>
Transferred to deferred grant-in-aid account for purchase of tangible fixed assets	(20,465)	(23,771)
Credited to income and expenditure account	<u>344,671</u>	<u>332,477</u>

The grant, and contributions in respect of (Animal) Licence Fees of £98,000 (2001-02 = £98,000) are provided by the Department of Trade and Industry for the financial year 2002-03. The parliamentary grant-in-aid for 2002-03 was £365,136,000

4. Contributions from other government departments

	2002-03 £000	2001-02 £000
Department of Health	12,012	10,284
Department for International Development	4,777	4,393
Ministry of Defence	64	224
NHS Executive	1,041	1,105
Joint Infrastructure Fund	9,236	10,150
Others	2,571	2,051
	<u>29,701</u>	<u>28,207</u>

5. Contributions and grants from other bodies

	2002-03 £000	2001-02 £000
Research Councils	3,262	1,379
Charities	8,068	5,646
Collaboration with industry	3,100	3,380
European Commission	3,613	2,659
World Health Organisation	1,036	2,241
Human Frontiers Science Program	502	385
Health Authorities and NHS Trusts	935	1,386
Universities	1,673	1,208
Other sources	1,605	1,171
	<u>23,794</u>	<u>19,455</u>

6. Other income

	2002-03 £000	2001-02 £000
Sales and other income	<u>7,630</u>	<u>12,535</u>

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

7. Staff costs

	2002-03 £000	2001-02 £000
Employee costs (note 7c)	123,805	112,642
Agency staff costs	2,099	2,591
Remuneration to Council and Committee members (note 7d)	178	162
Early retirement costs (note 23)	<u>946</u>	<u>1,842</u>
Gross staff costs	127,028	117,237
Less commercial activities	<u>(2,450)</u>	<u>(1,793)</u>
Staff costs for general activities	<u>124,578</u>	<u>115,444</u>

(a) Remuneration of senior employees

Chief Executive

The Chief Executive is an ordinary member of the Council'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. His total emoluments were £102,804 including a performance-related bonus of £8,858. (2001-02 = £108,737, including a performance-related bonus of £17,200). As a result of the latest actuarial valuation of the Council's pension scheme, there has been no employer's pension contribution in the year. See note 7 (e).

His fixed-term appointment was renewed until 30 September 2003.

	Chief Executive**	Executive Director	Director of Human Resources Group*	Director of Human Resources Group*	Director of Research Management Group**	Director of Corporate Affairs Group	Director of Finance Group
	Prof. Sir G.K. Radda	Mr N.H. Winterton	Mrs G. Breen	Mrs E. Sideris	Dr D.R. Dunstan	Mrs J.M. Lee	Dr D.L. Smith
Age	66	55	58	49	60	54	55
Salary, including performance pay at 31.3.03	£102,804	£ 92,663	£ 16,345	£53,155	£85,824	£69,433	£79,158
Real increase in pension at age 60	£0 - 2,500	£2,501 - £5,000	£0 - 2,500	£0 - 2,500	£0 - £2,500	£0 - £2,500	£2,501 - £5,000
Total accrued pension at age 60 at 31.3.03	£5,001 - £7,500	£35,001 - £37,500	£17,501 - £20,000	£0 - £2,500	£27,501 - £30,000	£22,501 - £25,000	£27,501 - £30,000

* Mrs G Breen retired in May 2002. Her replacement, Mrs E Sideris joined in July 2002.

** Real increase in pension at age 65.

No director received any bonus payments or benefits in kind.

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

(b) Staff numbers

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

	2002-03 £000	2001-02 £000
Job functions		
Science	1,141	1,155
Research project support	1,058	988
Management administration & policy	556	487
Technical services	439	409
Infrastructure	159	167
Locally employed staff (overseas)	768	724
	<u>4,121</u>	<u>3,930</u>

(c) Employee costs

	2002-03 £000	2001-02 £000
Salaries and wages	105,807	98,452
Social security costs	7,778	7,224
Superannuation costs	10,220	6,966
Total	<u>123,805</u>	<u>112,642</u>

(d) Remuneration to Council and Committee Members

	2002-03 £000	2001-02 £000
Fees and honoraria	173	158
Social security costs	5	4
Total	<u>178</u>	<u>162</u>

Council Chairman

The position of Council Chairman is non-pensionable and there is no entitlement to compensation for loss of office. His total emoluments were an honorarium of £13,745 (2001-02 = £13,300). His fixed-term appointment will end on 30 September 2006.

In addition, the following Board Chairmen and Council Members received honoraria falling within the following ranges:

	2002-03 No.	2001-02 No.
£5,001 to £10,000	10	10
Over £10,000	1	1

(e) Superannuation

The Medical Research Council operates a funded pension scheme (MRCPS) providing benefits based on service and final pensionable pay at a normal retirement age of 60. Benefits accrue at the rate of 1/80th of pensionable salary for each year of service. In addition a lump sum equivalent to 3 years' pension is payable on retirement. Members pay contributions of 6% 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 and 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 0%². The latest actuarial assessment of the MRCPS was as at 31 December 2001. The assumptions that have the most significant effect on the results of the valuation are those relating to the rate of return on investments and the rates of increase in salaries and pensions. It was assumed that the investment return would be 7% per annum (8.5% at the date of the previous valuation in December 1998), that salary increases would average 5.5% per annum (7% 1998) and that present and future pensions would increase at the rate of 4% per annum respectively at the date of the previous valuation in December 2001 (5.5% 1998). At the date of the latest actuarial valuation, the market value of the assets of the

² Estimated results used for 2001/02

MRCPS was £758 million (£591m 1998). On the basis of the valuation method prescribed by the Inland Revenue, there was a deficit of assets over liabilities of (£38.6) million (surplus of £35.6m 1998). The benefit of the surplus at 31 December 1998 continues to be spread in accordance with SSAP 24. In recognising the successive valuation, the reduction in surplus is spread separately over the estimated average remaining service lives of the employees (14 years). The Government Actuary has estimated the Employer's standard contribution rate is 12.9% of aggregate pensionable payroll. A provision of £28,142,766 (2001-02 = £17,960,346) is included in provisions for liabilities and charges, representing the excess of accumulated pension cost over the amount funded (see note 23).

The total superannuation contributions paid by the Council in 2002-03 were £37,575 (2001-02 = £43,779). These amounts represent employers' contributions at 5% and 10% for a small number of long-serving members of the National Health Service Superannuation Scheme and the Federated Superannuation Scheme of Universities respectively.

FRS 17

Council are following the ASB phased implementation timetable and the required disclosures are detailed below. FRS 17 gives the present value of pension liabilities by discounting pension commitments, including salary growth, at an AA bond yield and includes assets at market value at that date. The valuation used for FRS 17 disclosures has been based on the most recent actuarial valuations as at 31 December 2001 updated to take account of the requirements of FRS 17 in order to assess the liabilities of the Scheme at 31 March 2003. The financial assumptions used to calculate Scheme liabilities are: inflation of 2.4% per annum, salary increases of 3.9% and that present and future pensions would increase by 2.4%; the gross rate of return on assets, dictated by the market yield on AA corporate bonds was 6.8%. At 31 March 2003 the fair value of Scheme assets was £457m, Scheme liabilities were £449m leading to a surplus of assets over liabilities of £7.8m. The assets held in the Scheme by proportion and long term expected rates of return were:

Global Equities and Property	80%	7.2%
Index Linked Bonds	0.2%	2.1%
Fixed Bonds	19.8%	4.6%

Other disclosures	£000	
Amount that would have been charged to operating cost		
Current service cost (net of employee contributions)	7,745	
Past service cost	-	
Total operating charge	7,745	
Analysis of the amount that would have been credited to other finance income		
Expected return on pension scheme assets	43,199	
Interest on pension scheme liabilities	24,082	
Net return	19,117	
Analysis of amount that would have been recognised in statement of total recognised gains and losses		
Actual return less expected return on pension scheme assets	(169,759)*	(37.15%)
Experience gains and losses arising on the scheme liabilities	18,908 **	(4.21%)
Changes in assumptions underlying the present value of liabilities	(9,185)	
Actuarial loss in pension scheme	(160,036)**	(35.64%)
Surplus set aside for members	-	
Actuarial loss recognised in STRGL	(160,036)**	(35.64%)
Movement in surplus of scheme assets over liabilities during the year		
Surplus at beginning of year	175,600	
Current service cost (including employee contributions)	(12,421)	
Contributions	4,676	
Past service costs	-	
Other financial income	-	
Actuarial loss	(160,036)	
Surplus at end of year	7,819	

The effect on reserves of the pension asset would have been to decrease the accumulated deficit on general reserve from £29,993,000 to £22,174,000.

* As a percentage of pension scheme assets at the balance sheet date.

** As a percentage of the scheme liabilities at the balance sheet date.

8. Other operating costs

	2002-03 £000	2001-02 £000
Rent and rates	4,272	3,466
General maintenance, cleaning, heating & lighting	7,908	7,584
Maintenance of buildings	3,086	6,859
Office supplies, printing and stationery	4,298	4,619
Laboratory supplies	30,070	29,037
Management consultancy & other professional fees	3,287	3,396
Postage and telephone	2,301	2,276
Audit fee	39	39
Travel, subsistence and hospitality	7,154	6,519
Computing	5,519	5,431
Equipment servicing	3,660	3,057
Minor equipment	5,225	6,582
Miscellaneous	4,086	5,058
Transport costs	663	539
Exchange rate losses/(gains)	114	(248)
Increase in provision for bad debts	128	53
	<u>81,810</u>	<u>84,267</u>

10. Other research

	2002-03 £000	2001-02 £000
Contributions to special research programmes	<u>8,704</u>	<u>6,702</u>

9. Research grants

Research grants are paid quarterly to institutions against pre-notified profiles.

Expenditure in the year comprised:

	Higher Education Institutions £000	2002-03 Other Institutions £000	Totals £000	Higher Education Institutions £000	2001-02 Other Institutions £000	Totals £000
Project grants	641	-	641	2,262	16	2,278
Strategic project grants	31,529	2,985	34,514	31,129	3,705	34,834
Programme grants	63,239	130	63,369	55,898	30	55,928
Realising our potential awards	2,185	-	2,185	3,378	-	3,378
Cooperative grants	22,617	121	22,738	22,692	25	22,717
Joint Infrastructure Framework awards	8,683	-	8,683	10,839	-	10,839
Others	17,800	-	17,800	16,036	-	16,036
	<u>146,694</u>	<u>3,236</u>	<u>149,930</u>	<u>142,234</u>	<u>3,776</u>	<u>146,010</u>

11. Postgraduate/training awards

	Higher Education Institutions £000	2002-03 Other Institutions £000	Totals £000	Higher Education Institutions £000	2001-02 Other Institutions £000	Totals £000
Research studentships/ advanced course studentships	14,406	5,002	19,408	13,538	4,204	17,742
Postdoctoral Fellowships	21,731	3,878	25,609	24,003	3,023	27,026
	<u>36,137</u>	<u>8,880</u>	<u>45,017</u>	<u>37,541</u>	<u>7,227</u>	<u>44,768</u>

12. International subscriptions

	2002-03 £000	2001-02 £000
International Agency for Research on Cancer	790	857
European Molecular Biology Conference	1,678	1,177
European Molecular Biology Laboratory	6,219	4,605
Human Frontier Science Program	860	527
	<u>9,547</u>	<u>7,166</u>

13. Commercial activities

	2002-03 £000	2001-02 £000
Income during the year	15,118	13,469
Expenditure during the year	(7,240)	(6,251)
Net income for the year	<u>7,878</u>	<u>7,218</u>

Council 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.

14. Intangible fixed assets

	£000
Valuations	
Values as at 1 April 2002	93,193
Additions	1,144
Revaluation	12,209
Impairment	(2,364)
Values as at 31 March 2003	<u>104,182</u>
Amortisation	
Amortisation as at 1 April 2002	10,078
Charge for the year	8,117
Revaluation	(9,351)
Impairment	(727)
Amortisation as at 31 March 2003	<u>8,117</u>
Net book value as at 31 March 2003	<u>96,065</u>
Net book value as at 1 April 2002	<u>83,115</u>

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 2003 amounted to £20,497,000.

15. Tangible fixed assets

	*Land & buildings £000	Assets under construction £000	Equipment & vehicles £000	Total £000
Cost or valuation:				
as at 1 April 2002	240,476	3,629	144,367	388,472
Prior year adjustment (Note 2)	<u>1,488</u>	<u>-</u>	<u>-</u>	<u>1,488</u>
At 1 April 2002 (restated)	241,964	3,629	144,367	389,960
Additions	1,199	7,840	11,426	20,465
Reclassification	2,455	(2,455)	-	-
Disposals	(22)	-	(3,281)	(3,303)
Revaluation	<u>9,626</u>	<u>-</u>	<u>14,919</u>	<u>24,545</u>
At 31 March 2003	<u>255,222</u>	<u>9,014</u>	<u>167,431</u>	<u>431,667</u>
Depreciation:				
as at 1 April 2002	117,599	-	95,917	213,516
Prior year adjustment (note 2)	<u>110</u>	<u>-</u>	<u>-</u>	<u>110</u>
At 1 April 2002 (restated)	117,709	-	95,917	213,626
Provided during the year	9,036	-	11,765	20,801
Disposals	(18)	-	(2,553)	(2,571)
Revaluation	<u>(343)</u>	<u>-</u>	<u>13,354</u>	<u>13,011</u>
At 31 March 2003	<u>126,384</u>	<u>-</u>	<u>118,483</u>	<u>244,867</u>
Net book value:				
As at 31 March 2003	<u>128,838</u>	<u>9,014</u>	<u>48,948</u>	<u>186,800</u>
As at 1 April 2002 (restated)	<u>124,255</u>	<u>3,629</u>	<u>48,450</u>	<u>176,334</u>
At historical cost	145,736	9,014	121,388	276,138
Depreciation	<u>(49,817)</u>	<u>-</u>	<u>(76,416)</u>	<u>(126,233)</u>
Net book value	<u>95,919</u>	<u>9,014</u>	<u>44,972</u>	<u>149,905</u>

* Tangible fixed assets include £11,876,250 in respect of land, which is not depreciated.

The net book value of land & buildings comprises:

	2002-03	2001-02
Freehold	32,983	30,742
Long leasehold	83,094	82,187
Short leasehold	<u>12,761</u>	<u>11,326</u>
	<u>128,838</u>	<u>124,255</u>

Land and buildings were valued using relevant indices to establish valuations at 31 March 2003 and in accordance with SAVP and RICS guidance notes. The last professional revaluation was performed by Powis Hughes and Associates, Chartered Surveyors, at 31 March 1999. Additional depreciation on revaluation was £6,490,286.28.

Included in the figures for leasehold properties, is a sum totalling £55,929,836 (2001-02 = £55,947,390) representing properties subject to leasehold buy-back arrangements under which the lessors are required to purchase these properties should Council decide to relinquish their use.

16. Fixed assets investments

	Joint venture investment £000	Other investments £000	Total investments £000
Valuation as at 1 April 2002	227	11,324	11,551
Revaluation	-	(8,439)	(8,439)
Valuation as at 31 March 2003	227	2,885	3,112

At the close of business on 31 March 2003 the price per share of Council's shareholdings listed on the London Stock Exchange, the AIM and the Nasdaq were as follows:

Biofocus plc	80p
Cambridge Antibody Technology plc	350p
M L Laboratories plc	14p
*Natus Medical Inc	\$3.41
*Sangamo Biosciences Inc	\$2.87

*The share prices of the two listed US companies, were converted at a rate of US \$1.50235 = £1.00.

During the year Council acquired shares in ASM Scientific Ltd, Ilectus Ltd, Senexis Ltd and Topotargets A/S. The shares have not been valued in the accounts as they have no readily ascertainable market value.

Cambridge Antibody Technology and these companies listed in the share holdings list, represent Council'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.

Description of holding	Number of shares held	Percentage of class held	Purchase price	Market value at 31 March 2003
<i>Quoted</i>				
Biofocus plc	266,307	1.64%	-	£213,046
Cambridge Antibody Technology plc	660,000	1.73%	£100	£2,310,000
M L Laboratories plc	204,190	0.13%	-	£28,587
Natus Medical Inc	7,066	0.04%	-	£16,039
Sangamo Biosciences Inc	165,255	0.60%	-	£315,694
Amylin Pharmaceuticals Inc (Warrants)	20,000	-	-	
<i>Private unquoted</i>				
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
Diverseys Ltd	2,500,000		-	No current open market value
Etiologies Ltd	2,200,000		-	No current open market value
Iclectus Ltd	560		-	No current open market value
Oxxon Pharmaccines Ltd	10,332		-	No current open market value
Ribo Targets Holdings Plc	* 412,500		-	No current open market value
Senexis Ltd	10		-	No current open market value
Topotargets A/S	** 9,493		-	No current open market value
Zarpex Biosciences Ltd	85,000		-	No current open market value

*On 23 April 2003, Ribo Targets Holdings Plc merged with British Biotech Plc and at the same time British Biotech undertook a share restructuring plan which resulted in the issue to Council of 310,392 new ordinary shares in the company. British Biotech Plc is listed on the London Stock Exchange.

**During the year Council received shares in Topotarget A/S, a Danish company which acquired the former holding, Prolifix Ltd.

Non-consolidated subsidiary companies and joint ventures

Company	Nature of business	Country of incorporation	Shares held	% of class held	Capital & reserves
MVM Limited	Venture Capital Fund Managers	England	Ordinary	100%	£55,018
Imaging Research Solutions Limited	Provision of scanning services	England	Ordinary	25%	£1,085,332

MVM Limited

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 Medical Research Council.

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 General Partner 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 General Partner to draw on Funds' cash assets, on an interest free basis, loans in respect of its prospective entitlement to Priority Profit Share. In the year to 31 March 2003 the cumulative Priority Profit Share due to both GPs was £5,685,403 of which £5,554,903 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 General Partner with sufficient profits to cover its drawings, that the outstanding drawings shall be waived by the partnership.

Both funds have carried interest partners, MVM (CIP) Limited and MVM (CIP)No2) Limited, each entitled to a carrier interest of 20% of the profits of the Partnership, once Investors have received back their investment and a return thereon. The CIP's are wholly owned subsidiaries of MVM Limited.

Separately, the MRC is entitled to a further 5% carried interest of the profits of the Partnership.

In the year to 31 March 2003 MVM Limited received management fees from MVM (GP's) of £1,929,106 (2002 = £1,309,467).

Imaging Research Solutions Limited (IRSL)

This joint venture with Nycomed – Amersham plc contains a number of agreements on scanning, research award and shared services.

Scanning Services

IRSL provides scanning services to MRC. In consideration for this service MRC agree to pay £2,232,500 (including VAT) p.a. for a contract period from February 2001 to December 2005. During the year to 31 March 2003 this amounted to a cost of £2,232,500.

Research Award

MRC approved an award to IRSL as a special contribution. This was a cash limited award of £1,000,000 p.a. from February 2001 to December 2005. During the year to 31 March 2003 this amounted to a cost of £1,000,000.

Shared Services

MRC have provided a number of administrative services to IRSL in the year ended 31 March 2003. Services include: computing, financial, human resources, technical and premises management. Transactions to the value of £275,067 remain owing to MRC at the year end. In addition IRSL are owed £17,512 from sales invoices raised by Council on behalf of IRSL, paid to Council before year end.

The Investment in IRSL is shown at cost (the net value of assets transferred after deduction of cash proceeds), revalued to reflect MRC's share of the company's net assets at 31 March 2003. MRC's share of IRSL's results has not been included in the accounts in accordance with FRS 9 on the grounds of materiality.

Markready Ltd

As reported in the 2001–02 accounts, 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 CFM, whose purpose is to provide bio-medical research facilities to the UK academic community.

The CFM development has now been completed and contributions to the cost of the project from the other joint venture parties are being received. Final costs incurred by the MRC during 2002-03 were £1,754,000.

MRC Technology

MRC Technology (formerly MRC Collaborative Centre) 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. These are services previously provided by the MRC, and MRC staff are seconded to MRC Technology.

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

For the year ended 31 March 2003 the accounts of MRC Technology revealed a total loss for the year of £1,744,757 (2002 = £1,101,958 loss) and net assets of £6,586,923 (2002 = £8,277,540).

During the year ended 31 March 2003 the MRC provided goods and services to MRC Technology to a value of £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 2003, the MRC were owed £1,491,241. There were no outstanding balances owing to MRC Technology.

17. Interest receivable

	2002-03 £000	2001-02 £000
Interest earned on the Council's Euro & other accounts	<u>31</u>	<u>41</u>

18. Other non-operating income

	2002-03 £000	2001-02 £000
Interest earned on Council's Sterling bank balances	<u>298</u>	<u>213</u>

19. Amounts payable to the Office of Science & Technology

	2002-03 £000	2001-02 £000
Other non-operating income (note 18)	298	213
Unspent Animal Licence Fee contribution	<u>39</u>	<u>37</u>
Surrendered to Office of Science and Technology	<u>337</u>	<u>250</u>

The Council's non-operating income, together with any underspend for Licence Fees payable under the Animal Licences Act 1986 are surrendered to the Consolidated Fund via the Office of Science and Technology.

20. Stock

	2002-03 £000	2001-02 £000
Consumable stores and livestock	<u>2,856</u>	<u>2,561</u>

21. Debtors

Amount falling due within one year:	2002-03		2001-02	
	£000	£000	£000	£000
Trade debtors	5,728		4,972	
Less provision for bad debts	<u>(274)</u>		<u>(156)</u>	
		5,454		4,816
Other debtors		3,314		4,641
Accrued income		14,817		10,057
Prepayments		<u>1,515</u>		<u>1,226</u>
		<u>25,100</u>		<u>20,740</u>

22. Creditors

Amount falling due within one year:	2002-03		2001-02	
	£000	£000	£000	£000
Trade creditors		6,214		7,668
Accruals		45,213		48,036
Taxation & social security		2,770		2,526
Income received in advance		1,976		1,223
Others		<u>1,339</u>		<u>1,254</u>
		<u>57,512</u>		<u>60,707</u>

23. Provisions for liabilities and charges

	Early retirement compensation scheme £000	Pension costs £000	Legal costs £000	Total provisions £000
At 1 April 2002	9,245	17,960	127	27,332
Amount provided in year	946	10,182	20	11,148
Unwinding of discount	504	-	-	504
Amount expended in year	<u>(2,968)</u>	<u>-</u>	<u>(127)</u>	<u>(3,095)</u>
Balance at 31 March 2003	<u>* 7,727</u>	<u>28,142</u>	<u>20</u>	<u>35,889</u>

* This figure represents Council's liability for annual compensation payments up to the year 2018

There are 2 categories of early retirement: Compulsory and Flexible. Both categories 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 Council work is not possible.

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

24. Deferred grant-in aid account

	£000
Balance at 1 April 2002	122,249
Prior year adjustment (note 2)	<u>1,378</u>
At 1 April 2002 (restated)	123,627
Purchases of tangible fixed assets	20,465
Released to income	<u>(13,975)</u>
Balance at 31 March 2003	<u>130,117</u>

25. Capital and reserves

	Revaluation reserve £000	Capital land reserve £000	Intellectual property reserve £000	General reserve £000	Total reserve £000
At 1 April 2002	57,935	6,059	83,115	(23,945)	123,164
Transfer to general reserve	(7,559)	-	(8,117)	15,676	-
Revaluation during year	3,095	-	21,560	-	24,655
Movement in respect of additions during year	-	-	1,144	-	1,144
Deficit for the year -	-	-	-	(23,540)	(23,540)
Transfer between reserves	<u>*(179)</u>	-	<u>*(1,637)</u>	<u>1,816</u>	-
Balance as at 31 March 2003	<u>53,292</u>	<u>6,059</u>	<u>96,065</u>	<u>(29,993)</u>	<u>125,423</u>

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

26. Reconciliation of movement in government funds

	2002-03 £000	2001-02 £000
Government funds as at 1 April	246,791	213,133
Prior year adjustment	-	1,378
At 1 April (restated)	246,791	214,511
Deficit for the year	(23,540)	(22,364)
Movement on deferred grant-in-aid account for the year	6,490	10,916
Revaluation in year	24,655	34,816
Increase in intellectual property reserve	1,144	7,111
Increase in investment reserve	-	1,801
Government funds as at 31 March	255,540	246,791

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

	2002-03 £000	2001-02 £000
Operating deficit	(39,361)	(34,156)
Depreciation charge	20,801	17,365
Amortisation charge	8,117	10,078
Impairment of intangible fixed assets	1,637	6
Cost of capital employed	16,967	15,195
Unwinding of discount	(504)	(570)
Transfer from deferred grant-in-aid account	(13,975)	(12,855)
Increase in provision for liabilities and charges	8,557	6,712
(Increase)/decrease in stocks	(295)	432
(Increase) in debtors	(4,360)	(5,741)
(Decrease) /increase in creditors	(3,196)	15,703
Net cash (outflow)/inflow from operating activities	(5,612)	12,169

28. Reconciliation of movement in cash to movement in net funds

	2002-03 £000	2001-02 £000
Net funds at 1 April	40,529	28,018
(Decrease)/increase in cash	(5,521)	12,511
Net funds at 31 March	35,008	40,529

29. Contingent liabilities

There are no contingent liabilities this year.

30. Commitments

Capital

The Council had estimated future commitments to capital expenditure which had been contracted but not provided for at the balance sheet date of £14,415,000 (£9,897,369 at 31 March 2002).

Research awards

Forward commitments on research awards to Higher Education Institutes:

	£000
2003-2004	131,930
2004-2005	92,090
2005-2006	63,720

31. Related party transactions

The MRC is a Non-Departmental Public Body sponsored by the Department of Trade and Industry (DTI).

For the purposes of Financial Reporting Standard 8, DTI is regarded as a related party. During the year, MRC has had various material transactions with DTI and entities for which DTI is regarded as the parent department, viz.; Economic and Social Research Council, Engineering and Physical Sciences Research Council and Biotechnology and Biological Sciences Research Council.

During the year, the following material transactions with Council, Board and Committee members took place in respect of payments from awards funded by the MRC:

Dr M Bienz	(1 award)	£197,000
Professor M Brady	(1 award)	£46,000
Professor A C Dolphin	(3 awards)	£2,534,000
Professor A Dominiczak	(2 awards)	£2,094,000
Professor G Dunn	(3 awards)	£3,255,000
Professor B J Everitt	(1 award)	£562,000
Professor K Fox	(2 awards)	£1,419,000
Professor R M Greenhalgh	(1 award)	£230,000
Professor C M Isake	(1 award)	£572,000
Professor A M Johnson	(1 award)	£221,000
Professor M King	(1 award)	£269,000
Professor D R F Leach	(1 award)	£470,000
Professor A F Markham	(1 award)	£38,000
Professor P Matthews	(2 awards)	£1,655,000
Professor E R Moxon	(1 award)	£261,000
Professor C I Newbold	(1 award)	£261,000
Professor O H Petersen	(1 award)	£1,677,000
Professor J P Sissons	(2 awards)	£1,293,000
Professor T G Smart	(2 awards)	£1,981,000
Professor S Smith	(2 awards)	£653,000
Professor E Soloman	(2 awards)	£949,000
Professor R Weiss	(1 award)	£2,080,000
Professor T Wykes	(1 award)	£2,133,000

None of the above were involved in the approval of these awards.

In addition, MRC made the following aggregate payments in respect of MRC funded awards to institutions where Council, Board and Committee are also senior members of staff.

Related party	Institution	No. of awards	Aggregate amount
Professor K Fox	Cardiff University	1	£240,000
Professor C Kennard/ Professor R M Greenhalgh	Imperial College	14	£3,745,000
Professor C Dezateux	Institute of Child Health	4	£1,675,000
Professor C M Isake/ Professor E Soloman	King's College London	4	£1,484,000
Professor A. M Johnson	Guy's, King's and St. Thomas Schools	4	£1,484,000
Professor A. M Johnson	London School of Hygiene and Tropical Medicine	4	£5,626,000
Professor A. Dominiczak	Queen Mary and Westfield	1	£1,922,000
Dr M Bienz/ Professor B J Everitt/ Professor J P Sissons/ Professor S Smith	University of Cambridge	13	£8,253,000
Professor A C Dolphin/ Professor A. M Johnson/ Professor T. G. Smart/ Professor M Brady/ Professor R Weiss/ Professor M King	University College London	7	£3,045,000
Professor C Tickle	University of Dundee	2	£390,000
Dr D. R. F. Leach	University of Edinburgh	9	£5,173,000
Professor A Dominiczak	University of Glasgow	5	£2,030,000
Professor A. F. Markman	University of Leeds	6	£1,133,000
Professor O. H. Peterson/ Professor G Dunn	University of Liverpool	3	£1,520,000
Professor G. Dunn/ Professor T Wykes/ Professor P. Matthews/ Professor E. R. Moxon/ Professor C. I. Newbold	University of Manchester	8	£4,839,000
Professor P. Matthews/ Professor E. R. Moxon/ Professor C. I. Newbold	University of Oxford	12	£5,311,000
Professor D Wynford-Thomas/ Professor R Waters	University of Wales College of Medicine	2	£860,000

32. Financial instruments

FRS 13, Derivatives and Other Financial Instruments, requires disclosure of the role which financial Instruments have had during the period in creating or changing the risks an entity faces in undertaking its activities. Because of the largely non-trading nature of its activities and the way it is financed, the Council is not exposed to the degree of financial risk faced by business entities. Moreover, financial instruments play a much more limited role in creating or changing risk than would be typical of the listed companies to which FRS 13 mainly applies. The Council 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 Council in undertaking its activities.

Liquidity risk

The council'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 Council is therefore not exposed to significant liquidity risks.

Interest rate risk

The Council is not exposed to any interest rate risk.

Foreign currency risk

The Council's exposure to foreign currency risk is not currently significant.

33. Post balance sheet events

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

MEDICAL RESEARCH COUNCIL ACCOUNTS DIRECTION GIVEN BY THE SECRETARY OF STATE FOR TRADE AND INDUSTRY

The Secretary of State for Trade and Industry with the approval of the Treasury, in pursuance of Section 2(2) of the Science and Technology Act 1965, hereby gives the following Direction:

The annual accounts shall give a true and fair view of the income and expenditure and cash flows for the financial year, and the state of affairs as at the year end. Subject to this requirement the Medical Research Council shall prepare final accounts for the financial year ended 31 March 2002 and subsequent financial years in accordance with:

- a. Executive Non-Departmental Public Bodies Annual Reports and Accounts Guidance published by HM Treasury and as amended from time to time;
- b. other guidance which the Treasury may issue from time to time in respect of accounts where the requirements is to give a true and fair view of the financial statements;
- c. any other specific disclosures which may be required by the secretary of state;

except where agreed otherwise with H M Treasury, in which case the exception shall be described in the notes to the accounts.

Signed for and on behalf of the Secretary of State for Trade and Industry

Stephen Speed

Dated 27 November 2001

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