Greetings from our new CEO, Professor Colin Blakemore

I am very pleased to be able to welcome you to this edition of Network, in my new role as Chief Executive of the MRC. My first two months in office have been extremely busy, and I’m still learning an enormous amount about the organisation. Many thanks to my predecessor George Radda and all the staff at Head Office for helping me to settle in.

Some of my academic friends have asked whether I regret giving up the freedom of academic life and the excitement of research for pen-pushing in London. The challenge of spending nearly half a billion pounds a year to nurture UK biomedical research is a huge responsibility, but for me, this position is a privilege and an honour. I owe my research career to the MRC and I’m delighted to have a chance to repay the debt.

Over the next few months I hope to meet as many of you as possible at our regional roadshows (see below), and talk about what you think we should be doing. And there are several important tasks that we must tackle straight away, such as the strategic review of the National Institute of Medical Research, the continuing launch of the UK Biobank and the stem cell initiative, and the preparation of proposals for the 2004 Spending Review. We are also setting to work on reviewing grant schemes and Board structures and responsibilities. I anticipate challenging but exciting times ahead, so look out for news on all these activities in MRC Network.

CEO at large

Colin Blakemore is mid-way through a series of regional roadshows to meet the medical research community. His aim is to learn about their views, concerns and hopes for the future, to hear about the research strategies of participating universities and medical schools, and to share his initial thoughts about the MRC’s role.

Hosted by universities throughout the UK, the meetings are giving researchers a chance to find out more about the research priorities of their local institutions, and to take part in debates about what the MRC should be doing as the largest national public funder of medical research.

Roadshow FAQs

A number of common themes have emerged from the roadshows held so far. These include the need to strengthen clinical research; the MRC’s involvement with national, European and international partners and how it influences science policy; the progress of plans for the National Institute for Medical Research; calls for increased training and research support for young scientists, and public engagement issues. Several of the people who asked about MRC research funding raised concerns about MRC grant schemes, particularly the move from project grants to co-operative group grants (COGGs) which some thought were too complex and disenfranchised young scientists.

The MRC Monitoring and Evaluation Steering Group review of the COGG scheme is now complete and the MRC’s Council are deciding on its future in December.

Roadshow dates 2004

Cambridge 2 February
Belfast 5 February
Cardiff 20 February
Liverpool early 2004

Find out more online

For details of Colin’s roadshow itinerary and programmes and summaries of particular meetings, visit www.mrc.ac.uk/public_cb_roadshows

If you have any questions for Colin or would like to follow-up on issues raised at any of the roadshows, please email roadshows@headoffice.mrc.ac.uk
Top honour for imaging pioneer

Sir Peter Mansfield, Emeritus Professor of Physics at the University of Nottingham, has won the 2003 Nobel Prize for Physiology or Medicine

Sir Peter shares the Prize with US scientist Paul Lauterbur.

Working independently, they both harnessed natural forces to create one of the most powerful diagnostic tools available to modern medicine.

Funded for more than 20 years by the MRC, Sir Peter pioneered magnetic resonance imaging (MRI) in the UK and has been instrumental in tailoring the technique to clinical use. His award makes it two Nobels in a row for MRC scientists (John Sulston and Sydney Brenner won the prize last year) and brings the total awarded to our scientists to 23.

Sir Peter will receive the prize in Stockholm on 10 December. Praising his achievement as an example of the potential rewards of high-risk research, MRC CEO Professor Colin Blakemore said: “When the MRC first funded Sir Peter in the 1970s, we really didn’t know if the huge investment in this area would bear fruit. In fact, it surpassed all hopes. I’m delighted to congratulate him on his achievement. His work is correctly credited with changing the face of modern medicine.”

In 1976, Sir Peter produced the first human NMR image, of a student’s finger, complete with bone, bone marrow, nerves, and arteries. Soon afterwards he produced the first MRI image of the human abdomen, and conceived of a rapid-scanning MRI technique known as echo-planar imaging (EPI), which can scan the human brain in a few milliseconds. EPI has been applied to medical imaging since the early 1990s and is the key to MRI’s offspring, functional MRI (fMRI), which can study biological processes as they happen in real time.

The success of MRI lies in its ability to provide detailed medical information harmlessly without invasive surgery. For the first time, it showed doctors a hidden world beyond the bones and shadowy tissues of X-rays, allowing them to look deep inside people’s bodies to diagnose disease. MRI’s continuing progress has been one of the most important breakthroughs in medical science and its growth since the early 1980s has spawned a multibillion dollar industry. Advances in high-speed computing and superconducting magnets have allowed researchers to build larger, more powerful machines. These have enormously improved sensitivity and resolution, producing exquisitely detailed MRI images. Today, MRI scanning and spectroscopy are routine tools for medical diagnostic imaging. All major hospitals are equipped with MRI whole-body scanners and more than 22,000 systems in use worldwide perform at least 60 million investigations every year.

MRI and fMRI have revolutionised neuroscience and physiology research by opening windows on the working brain and body. Conventional MRI provides detailed images of anatomical structure and can detect cancer and signs of damage in the body’s bones, tissues and organs. fMRI is helping scientists to gain the first real understanding of brain function by letting them see what happens inside the working brain. It can show how brain function is disrupted by disease or injury, and how the brain reorganises itself in response to damage. For example, fMRI allows doctors to see changes in brain activity in patients with strokes, head injuries and Alzheimer’s disease, and alterations to the brain and nervous system in multiple sclerosis. It has also been used to investigate how the brain’s neural networks develop during infancy, and to look for subtle abnormalities in brain activity in patients with disorders such as schizophrenia.

At the age of 70 Sir Peter is still hard at work, refining the technique he originated 30 years ago. He is currently looking at ways to reduce the loud noise generated by MRI scanners to minimise discomfort for patients, operators and medical staff. The machine’s coils and magnets produce around 130-140 decibels (dB), well above the EU safety limit of 85dB for continuous exposure to noisy environments. He has set up his own spin-out company – General Magnetic – to develop quieter MRI and already succeeded in reducing average noise levels to 90dB.

Preparation of patient for an MRI scan

Physicists and chemists have known about the phenomenon of nuclear magnetic resonance (NMR) since the 1940s, when Nobel Prize-winning work by Isidor Rabi showed that information about the magnetic properties and internal structure of molecules, atoms, and nuclei could be deduced from their interactions with magnetic fields. However, it was not until 1973 that Peter Mansfield, working at the University of Nottingham, and US chemist Paul Lauterbur independently devised a way to adapt NMR to visualise the internal structure of complex objects, including soft tissues.

Find out more online
Sir Peter Mansfield Magnetic Resonance Centre
www.magres.nottingham.ac.uk/
Nobel Prize Foundation
www.nobel.se/medicine/laureates/2003/index.html

Curriculum Vitae

1933 Born in London
1948-56 Left school to work in a print shop; took ‘A’ levels at night school, then joined the army
1956 Won a bursary to attend Queen Mary College, London
1959 BSc Physics
1962 PhD Physics
1962 Research associate, Physics, University of Illinois
1964-79 Lecturer, senior lecturer and reader, University of Nottingham Department of Physics
1972-73 Senior visitor, Max Planck Institute, Heidelberg
1979 Professor, University of Nottingham Department of Physics

Sir Peter Mansfield, outside the University of Nottingham Magnetic Resonance Centre named after him
Opportunities

MRC awards
The MRC offers support for talented individuals who want to develop research careers in the biomedical sciences, public health, and health services. We have a comprehensive range of personal award schemes each tailored to particular stages in clinical or non-clinical careers. For further details visit www.mrc.ac.uk

Closing dates for MRC awards
Joint MRC/Linbury Trust Clinician Scientist Fellowship
09.01.04
Clinical Research Training Fellowship
30.01.04
Joint Collaborative Career Development Award in Stem Cell Research
09.02.04
Career Establishment Grants
03.03.04
Department of Health Clinician Scientist Award
17.05.04

Board application deadlines 2004
Deadline Meeting
Clinical Trials Cross-Board subgroup
02.01.04 21.04.04
21.05.04 08.09.04
20.08.04 07.12.04
Molecular and Cellular Medicine Board *
06.02.04 18/19.05.04
Health Services and Public Health Research Board *
20.02.04 2/3.06.04
Physiological Medicine and Infections Board *
29.01.04 10/11.05.04
Neurosciences and Mental Health Board *
13.02.04 26/27.05.04
Cross-Board Group (Co-operative Grants) *
• COGG renewal
13.02.04 10/11.06.04
• New COGG grant programme development
27.02.04 10/11.06.04
* Applicants should discuss their application with an MRC Programme Manager (www.mrc.ac.uk/about-research_management_groups) before submitting it

Research centre news

NIMR Taskforce update
The MRC’s specially commissioned task force on the National Institute for Medical Research (NIMR) was set up to push forward with the process of planning NIMR’s scientific future following the July 2003 MRC Council meeting. It arose from the Council’s consideration of recommendations from its Forward Investment Strategy (FIS) exercise to draft a roadmap for the future of the MRC’s major capital investments over the next 10 to 15 years. The Council saw a need to further develop a vision for a strong scientific future for the NIMR and to consider and consult on a broader set of options for its size and location than the FIS subcommittee had originally proposed.

With members drawn from the MRC’s Council, the NIMR, and including independent national and international experts, the task force is charged with making further recommendations to Council on NIMR’s future including:
• The strategic positioning of the NIMR’s research within the MRC’s overall vision and policy framework for the future of medical research in the UK
• Consideration of, and consultation on, options for the size and location of the NIMR
• Framing of the business case for future investment in the NIMR
• Initial planning for the appointment of a new Director of the NIMR

Council drew up a set of ground rules for the task force to follow. The key stipulations were to start with a ‘clean sheet’ concerning the NIMR’s future size and location, to base discussions on MRC’s Vision for Science and the policy drivers and principles set out in the FIS subcommittee’s draft report, and to consult fully with NIMR staff at all levels and their representatives.

Look out for further announcements about the task force’s progress at www.mrc.ac.uk/public-forward_investment_strategy_consulation

Scottish stem cell centre revamp
The University of Edinburgh Institute for Stem Cell Research (ISCR) has been given a £1m funding boost to create a reconstituted world-class centre of excellence. The MRC and the Juvenile Diabetes Research Foundation (JDRF) are co-funding the centre development, while the Biotechnology and Biological Sciences Research Council (BBSRC) are increasing their existing £3.2m commitment to stem cell research at the University. Directed by ISCR Head Professor Austin Smith, the new centre will encourage collaborations between its scientists and clinicians to speed the translation of basic research on stem cell biology into clinical applications such as transplantation and tissue repair. www.iscr.ed.ac.uk

Epidemiology research push
The MRC has launched a multi-million pound epidemiology initiative centred on new research programmes on obesity, diabetes and osteoporosis. The key aim is to find ways to prevent such conditions through integrated and collaborative studies of how they are influenced by genetic and environmental factors as play from before birth and through adulthood. Casting around £6m, the initiative will be led by a new MRC Epidemiology Unit directed by Dr Nick Wareham in Cambridge, and the MRC Epidemiology Resource Centre in Southampton, which will be led by Professor Cyrus Cooper.

Cutting edge cell imaging centre opens
Sir George Radda, former MRC CEO, opened a new cell imaging centre at the University of Liverpool in August. The £1.5m facility will house state-of-the-art imaging equipment and software that will enable researchers to examine multiple microscopic biological processes as they happen, and in greater detail than ever before. The new tools will help scientists to seek out new ways to treat common diseases such as cancer, diabetes, asthma and arthritis. The Centre’s costs were met by the MRC, the Department for Trade and Industry, the Biotechnology and Biosciences Research Council, the Higher Education Funding Council for England, and the Wellcome Trust.

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Calling all MRC PhD students...
Most of us can remember what a difference a lively and inspiring teacher could make to our appreciation of school subjects. If you’re a young scientist working on an MRC studentship, how would you like the opportunity to help make science more exciting and accessible to teenagers? The Researchers in Residence Scheme, funded by Research Councils UK and the Wellcome Trust, offers you the chance to use your expertise as a researcher to help bring science alive for secondary schoolchildren through a range of activities.

How the scheme works
Volunteers spend about 24 hours working with their host school, and receive £125 expenses after completing their placement. They have a day’s briefing before going into the schools, including lots of ideas for activities with pupils which they then plan with school staff. After the residency each Researcher is given a record of experience document for their CV which is of real interest to future employers.

Researchers working with schools in this way can have a powerful impact on young people who are on the brink of making important decisions about their future. They can be very effective role models, not only for their particular fields, but also for research as an attractive career choice. By talking to pupils about their passion for and experience of science, they help to banish negative perceptions about science and scientists. This can prompt young people to think positively about the possibility of studying science at a higher level. Past Researchers in Residence have found the experience extremely rewarding, both from a career development and a personal point of view. Not only did it enhance communication and presentation skills, but also gave a valuable insight into issues around public engagement with science.

Here’s what Rianna Gwilliam of the Sanger Centre (Hinxton, Cambridge) had to say about her participation: “I recommend the scheme to all PhD students. The enthusiasm and feedback I received from students and teachers made it a very positive experience, and it has built my confidence for public speaking and my enthusiasm for science.”

If you would like to become a Researcher in Residence find out more by contacting Laura Doleman, Researchers in Residence Project Administrator on 0114 225 3785, email l.doleman@sheffield.ac.uk
MRC Unit profile – The Mammalian Genetics

The first in a new series that takes an in-depth look at the work of MRC units throughout the UK

It is now widely known that animals share many genes with humans and can suffer from the same diseases, for example diabetes or deafness. Investigating these diseases in animals can provide vital leads to understanding both their causes and ways to treat them in humans. This approach to medical research lies at the heart of work at the MRC Mammalian Genetics Unit (MGU) at Harwell in Oxfordshire.

Harwell reaches critical mass

Harwell has been a site of MRC research activity since 1947, when the MRC Radiobiology Unit was opened alongside the Atomic Energy Research Establishment, now the headquarters of the UK Atomic Energy Authority. A former RAF base, the site is now a hub of science and technology, and home to a cluster of high-tech organisations, which will soon be joined by the UK’s new Synchotron, the Diamond Light Source. In 1995 the MRC Radiobiology Unit was reconstituted to form two new Units, the Radiation and Genome Stability Unit and the MGU. These opened in January 1996, together with the UK Mouse Genome Centre which is now part of MGU, making MRC Harwell a unique campus for multi-disciplinary genetics research.

Since MGU’s Director Steve Brown took the reins in 1996, the Unit has dramatically expanded its scientific scope and increased its personnel from 40 to over 100. It now has 13 research programmes encompassing molecular genetics, genomics, genetic manipulation and data analysis at all levels, from single genes to the whole genome. With a combination of cutting-edge facilities and expertise unrivalled in Europe, MGU Harwell has become firmly established as one of the world’s leading academic centres for mouse genetics.

From mouse to man

Network spoke to Steve Brown to find out more about the MGU’s research and the latest developments at Harwell. The mouse, he explained, is pivotal to investigating human disease. Not only is this long-standing favourite of geneticists easy to breed and work with, but more importantly it was the first mammal to have its genome entirely characterised. The full DNA sequence, which was published in Nature a year ago and to which the MGU contributed through its role as coordinating centre of the UK mouse genome sequencing consortium, showed that nearly all human genes have a mouse counterpart. However, hunting for rare naturally occurring genetic diseases in mice that happened to exactly mirror human ones would be akin to looking for hens’ teeth, so the bulk of the MGU’s work is built around a systematic approach to creating mouse models. MGU researchers look for abnormal inherited physical characteristics, or phenotypes, that might correspond to human diseases in the offspring of male mice that have been treated with N-ethyl-N-nitrosourea (ENU), an organic chemical that induces genetic mutations in sperm. After rigorous analysis to find out exactly what is wrong, they use molecular genetics to pinpoint the faulty gene and then search for its human equivalent.

A sticky problem

The approach has most recently paid dividends in the discovery of genes that might be involved in glue ear, or otitis media. This distressing condition causes partial deafness in two out of three young children at some time, and is the most common reason for childhood operations. It is caused by a chronic inflammation that leads to a build-up of sticky fluid which blocks the middle ear and impairs hearing. At best this is uncomfortable, but in severe cases it can delay children’s speech and social development and lead to hearing problems later in life. Although glue ear is known to run in families, its genetics are poorly understood.

Steve Brown has long had an interest in the genetics of deafness. A test for hearing loss was part of the intensive battery of screens that MGU researchers used to seek out new disease models among tens of thousands of ENU-generated mice. While most of the mutations they found affected the workings of the inner ear, in one mouse line the middle ear was full of thick pus, just like glue ear seen in children (see figure 1). The MGU team went on to isolate two disrupted genes called Jeff and Junbo and are now looking to see whether they have defective human counterparts in families prone to glue ear.
The Mary Lyon Centre

But what about medical conditions that are much more difficult to detect? There is a clear need to develop even more sophisticated and comprehensive tests to pick up subtle new phenotypes. And as we learn more about the genetics of disease in mice, it becomes increasingly important to find out what is happening physiologically, so that we can compare disease processes in mice and humans. This is where the new Mary Lyon Centre at Harwell fits in. Named in honour of Dr Mary Lyon, who has worked at Harwell since joining the Radiobiology Unit in 1955 and discovered the phenomenon of X-chromosome inactivation, it will house specially designed mouse phenotyping facilities and create a new centre of excellence in mouse anatomy, physiology and pathology. The Mary Lyon building was commissioned and handed over to the MGU in November and will officially open in June 2004. Professor Bob Johnson has been appointed to head the new Centre. It has the capacity to house all of Harwell’s mice as well as the MRC’s Frozen Embryo and Sperm Archive (see box below). In the first appointment of its kind in the UK, Michael Cheeseman, a member of the Royal College of Veterinary Surgeons, has been tasked with building expertise in mouse pathology, which will be disseminated to the research community through residencies and externships.

Innovative to the core

As the MGU has expanded, its research programmes have been integrated around a number of broad themes to make the most of existing strengths and to develop new synergies. These are: basic genetics mechanisms such as imprinting and development; functional genomics; neurobehavioural and neuromuscular genetics; and the molecular genetics of deafness and type-2 diabetes. The work is supported by five ‘core’ facilities (see box opposite), soon to be augmented by the new Mary Lyon Centre. As well as supporting existing MGU research, the cores’ own innovations contribute to developing new approaches and methods at Harwell.

Harwell United

One of the major challenges facing genetics is to integrate genetic information with biology, from the level of DNA to the whole organism. This requires multidisciplinary working, not just at the MGU but also through external collaborations. The MGU’s location is ideal for this. It provides access to other major scientific facilities at Harwell—for example, a CRAY supercomputer at the neighbouring Rutherford Appleton Laboratory—and positions the Unit within the wider campus of Oxford University. The MGU’s first joint appointment with Oxford, in statistical genomics, highlights the strong links that the two institutions have forged. The appointee will lead the MGU’s computational biology programme to manage and analyse large-scale functional genomics data. Harwell’s thriving research community is also a draw for many of Oxford’s graduate and post-graduate students.

The MGU is the leading partner in EUMORPHIA (European Union Mouse Research for Public Health and Industrial Applications), a pan-European project to improve our understanding of human physiology and disease by developing informative mouse models. The consortium brings together 17 partners in eight European Union countries. Steve Brown is its coordinator and the MRC’s Human Genetics Unit and Functional Genomics Unit are among the UK partners. EUMORPHIA was highlighted as an model integrated research programme at the launch of the sixth EU Research Framework Programme (FP6) a year ago.

EUMORPHIA partners have already completed their first task, to develop and agree standard ways to work with mice, and are now tackling the second, to devise a standardised and comprehensive range of phenotype tests. Other high priorities include developing and testing new IT tools for collecting, sharing and analysing data from these tests, and finding new ways to create and characterise informative mouse genetic variants.

Over the last seven years, the MGU has firmly established its role as a leading international player in mammalian genetics research. Working with partners at Harwell, Oxford, in Europe and worldwide it will continue to make a significant contribution to meeting one of the 21st century’s major challenges—translating genetic knowledge into improved human healthcare.
e-Science in essence

'"e-Science" is the latest scientific buzzword, but what does it mean for biomedical researchers, and how can it help them?"n Over the last decade, biomedical research has become big science. And managing the sheer quantity of data generated by global research efforts, like the projects to sequence the human genome and the genomes of other species, has become a serious logistical challenge. If this huge, and exponentially growing quantity of data is to help provide meaningful answers to biological questions, more sophisticated IT systems than ever before will be needed for its collection, storage, analysis and interpretation.

The Government’s e-Science programme was set up following the 2000 spending review (SR2000) to address this problem. Its stated purpose is to “To increase the productivity of UK science and engineering by addressing major challenges in the processing, storage and visualisation of increasing amounts of scientific data”. But what exactly is e-Science, some readers may be wondering. It is defined as "...the large-scale science that will increasingly be carried out through distributed global collaborations enabled by the Internet". Typically, this will involve very large data collections, IT resources capable of handling and integrating vast quantities of data, and high-performance interfaces linking researchers across the world. The Government is now working with the Research Councils to build a new framework called the "Grid", that will bring all these elements together to create an infrastructure capable of realising the e-Science vision.

The Grid
The Grid’s architects chose the name because of its parallels with the national electricity grid, which provides UK-wide access to power and, like information technology, has dramatically increased human capabilities to the benefit of all. They believe that computational grids will have a similar transforming effect by providing pervasive, dependable, consistent and inexpensive access to advanced computational capabilities, to databases, and to sensors and people. In essence the Grid offers biomedical researchers a golden opportunity to accelerate their research. It will support research from start to finish, allowing scientists to ask questions without needing to know what computer processed the data, or where the data came from. It will open up new knowledge-generation capabilities and allow unforeseen applications to emerge.

e-Science gets going
The Office of Science and Technology (OST) kick-started the initiative by investing a total of £213 million in e-Science over the 2000 and 2002 Government Spending Reviews. The enterprise is underpinned by a core e-Science programme, managed by the Engineering and Physical Sciences Research Council (EPSRC) on behalf of all the Research Councils; this is charged with developing a national infrastructure and its supporting services and facilities, including a distributed network of e-Science centres across the UK. This cross-council effort is focusing on links with industry and the Department of Trade and Industry as well as with infrastructure providers, such as SuperJANET, to ensure that UK researchers have the communications capacity they need.

In addition to the core programme, the OST gave each Research Council ring-fenced funds to set up pilot e-Science projects. The MRC deliberately focussed its £8m SR2000 allocation on pilots in the priority areas of clinical research, cancer, brain science, post genomics, and ageing (see box p7). Some were jointly funded with other Research Councils or the core programme. We also awarded a suite of targeted ‘informatics’ investments clustered around the e-Science pilots, and funded some key pilots, workshops and conference attendances. The 2002 Spending Review gave us an extra £13.1m to develop a comprehensive clinical trials grid. This will help researchers to design, manage and coordinate trials, in light of the broadest possible medical knowledge.

e-Science extras
MRC SR2000 pilot projects funded jointly by other Research Councils attracted £1.1m over and above our £8m allocation. We also committed £6.7m of our baseline funds to related e-Science activities, such as training and career development, the Joint Research Equipment Initiative and Discipline-hopping awards. Several key MRC e-Science recruitments included MRC funding for the research programme of Professor Jotun Hein who was attracted from Aarhus (Denmark) to take up an EPSRC-funded bioinformatics chair in Oxford, a joint appointment in statistical genomics between the MRC Mammalian Genetics Unit (Harwell) and the University of Oxford, and one of four new posts at the National Cancer Research Institute’s new Bio-informatics Coordination Unit.

Creating a community
The core programme organises annual All Hands meetings where the researchers funded by the UK e-Science initiative present their work. The events foster joint working and help to spread new results across the UK. To open up e-Science developments to the broader MRC community, similar meetings organised by the MRC for its e-Science grantees are also attended by MRC Unit Directors, MRC Professors and MRC Informatics Advisory Group members. Next year, the Joint Information Systems Committee (JISC) is running a consultation workshop – Building Collaborative eResearch Environments – to update participants on the state of play in e-Research and get feedback to inform its future work. The workshop will be held at the National e-Science Centre, Edinburgh, on 23 February 2004, and again at Scarman House, Warwick, on 5 March 2004.

Find out more online
Building Collaborative e-Research Environments: Workshop programme information and online booking
www.jisc.ac.uk/event_eResearch.html
Proceedings of UK e-Science All Hands Meeting 2003
www.nesc.ac.uk/events/ahm2003/AHMCD
RCUK e-Science activities
www.rcuk.ac.uk/escience/
MRC e-Science pages
www.mrc.ac.uk/strategy-e_science2

www.mrc.ac.uk/strategy-e_science2
MRC funded e-Science pilot projects

- Artificial neural networks in individual cancer management (ANN): This MRC-led joint project with the Particle Physics and Astronomy Research Council (now renamed the EPSRC) aims to develop and train a system of artificial neural networks to help healthcare workers manage patients with breast, gastro-intestinal and colorectal cancers.
- Professor A I Cuscieri (University of Dundee) and Professor R Marshall (University of Manchester)
- Biology of ageing – e-Science integration and simulation system (BASIS): The MRC is contributing to this BBSRC-led ageing research project which aims to promote interactions between biology, bioinformatics, IT, computer science, mathematics and statistics.
- Professor T Kirkwood, Dr D Wilkinson and Dr R Boys (University of Newcastle)
- A cooperative clinical e-Science framework (CLEF): This project is developing tools to link clinical and genomic research and to make clinical trials faster, more effective, and easier to manage.
- Professor A Rector (University of Manchester) and colleagues
- Coordination, integration and distribution of sequence and structural family data (e-FAMILY): This project aims to bridge the gap between gene sequence and structural information. It will coordinate and integrate information from five existing databases to improve access to and the usefulness of bioinformatics data for biologists worldwide, enabling them to accelerate their research.
- Dr A Bateman (Sanger Institute, Cambridge) and colleagues
- Grid-enabled modelling tools and databases for neuroinformatics (AXIOPE): This MRC-led joint project with the BBSRC and Department of Trade and Industry will develop ways to improve neuroscientists’ ability to collaborate in modelling and experimentation.
- Dr N Goddard (University of Edinburgh) and colleagues
- Manipulating the 3D mouse (BioCMAT): This is a long-term MRC-funded project to model and simulate mouse development. Additional e-Science funding from MRC and the core programme is now enabling researchers at the MRC Human Genetics Unit to take advantage of Grid approaches to reconstruct in 3D the changing gene activity in the mouse embryo.
- Dr Richard Baldock (MRC Human Genetics Unit, Edinburgh)
- National federated database of mammographic images (e-Diamond): The MRC is contributing to this core programme-led project which aims to build a national database of mammographic images for use in breast cancer diagnoses, epidemiological studies, and in training and educating radiologists and clinicians.
- Professor J M Brady, Dr D J Gavaghan and Dr A C Simpson (University of Oxford)

Research Councils UK – Administration Strategy

Management arrangements to implement the Research Councils UK (RCUK) Administration Strategy are now in place and work has started on the first of several priority areas likely to benefit from joint working.

The RCUK Administration Strategy was developed in response to recommendations made in the Government’s five-yearly review of the six Research Councils published in November 2001. The review report said that the Councils should implement a joint administration strategy, both to show a common face to researchers, the public and the users of research wherever possible, and to develop cost-effective, efficient and economic systems and structures to support their work.

Consultants from Deloitte and Touche worked with Research Council staff to produce the Strategy, which was officially approved in November 2002. Its aims are to underpin and support the Research Councils’ own research strategies by building on successful joint-working initiatives and identifying further opportunities to draw together administrative policies, processes and systems. A management board was set up in early 2003 to oversee the work, which Programme Director Barbara Fletcher and her team in Swindon are taking forward.

The Strategy identifies seven areas where joint Research Councils working would bring benefits. Initial ‘options analysis’ reviews of each area are under way to assess and set out the opportunities for joint-working in the short- and medium-term, and making recommendations for harmonisation or convergence. Analyses of research administration and human resources and information technology/systems are finished, or nearly complete, and work on implementing projects in these areas has started, or will shortly begin. The finance options analysis review project will be initiated next with performance management, marketing and communications and information management to be addressed later.

Research administration project

The research administration project has drawn upon existing Research Council work to set up the Je-S (joint electronic submission) Framework to support electronic processing of documents relating to the submission and processing of research grant proposals. A series of workshops is being run to look in detail at how individual Research Councils will deliver the programme. So far, the MRC, the Engineering and Physical Sciences Research Council (EPSRC) the Natural Environment Research Council (NERC) the Biotechnology and Biological Sciences Research Council (BBSRC) and the Particle Physics and Astronomy Research Council (PPARC) are setting up internal groups to take the work forward, and a series of regional seminars will be held this December and in January 2004. The project’s ‘status reporting’ arm, which aims to improve information about the status of research administration transactions, is making good progress; requirements for a Common Data Repository are being finalised and the Je-S1 project is nearly complete.

Je-S

The initial release of Je-S (JeS1), which supports electronic proposals to BBSRC, EPSRC, NERC and PPARC, went live this year. Additional Je-S functions, such as peer review, are under development. The MRC will switch over to Je-S when the system has equivalent functionality to the MRC’s own electronic application system (EAA), which has already been operating for some time.
The prospect for clinical research in the UK

Two recent reports and renewed commitment by the MRC indicate a promising future for UK clinical research …

The Academy of Medical Science (AMS) report Strengthening Clinical Research was published at the end of October. It recommended that a national network for clinical research should be created to develop clinical research facilities within the NHS and that the NHS should reconfirm its original goal of placing one and a half per cent of its turnover into clinical research. In mid November the MRC also welcomed the publication of the Bioscience and Innovative Growth Team’s (BIGT) report, Bioscience 2015: Improving National Health, Increasing National Wealth. The report included recommendations on supporting excellence in clinical trials and on new initiatives to ensure that new treatments reach clinical practice as quickly as possible after discovery in the laboratory. In response to the BIGT report, the Government has announced a £10m funding package to help NHS patients reap the benefits of the latest advances in medical science.

A working group involving key stakeholders, led by Sir John Pattison, the Department of Health’s Director of Research and Development, has been set up to consider the issues raised in both reports. The group will develop practical proposals for improving patient benefits from clinical trials and translational research within the NHS.

The MRC pushes for increased funding

The MRC is currently seeking funding from government to further develop its clinical research programme. The proposed programme of activity is designed to expand clinical research in the UK, with a particular focus on benefits to the individual patient. It involves several closely related areas of activity, which together will:

- improve the process of translating basic research from the laboratory to the clinic to benefit patients.
- provide better research on the mechanisms of disease that contribute significantly to the UK’s health burden, including respiratory, kidney and cardiovascular diseases, infections and immunity, and mental health;
- help to implement clinical research findings more effectively in clinical practice and health policy;
- develop the next generation of skilled clinical researchers, with initiatives to help them deal with the challenges of combining a clinical and research career.

Chairman of the Board

Sir Alan Langlands, has been appointed Chairman of the UK Biobank’s Board of Directors. Sir Alan is Principal and Vice Chancellor of the University of Dundee, and former Chief Executive of the National Health Service for England. Acting as company directors and charity trustees under UK law, the Board will have overall responsibility for the direction, management and control of UK Biobank Ltd., which has been set up as a charitable company limited by guarantee under a Joint Venture Agreement between its funders. The Board’s full membership will be announced shortly.

Science committee starts work

The UK Biobank science committee has started its work to formulate advice to the Board of Directors on the project’s direction and scientific goals and protocol. Chaired by Professor John Bell (University of Oxford), its members include two of the Board of Directors, representatives from the six Regional Collaborating Centres and the three funders, the CEO and other experts. They have now met three times, and four subgroups have been set up to look at recruitment, questionnaire and measurement, data management and sample storage.

Find out more online

www.ukbiobank.ac.uk

UK Biobank takes shape

Ethics and Governance

Since the very beginning of the UK Biobank project, its funders – the MRC, the Wellcome Trust and Department of Health – have been committed to developing a rigorous and public ethics and governance framework (EGF) to govern this landmark initiative. To help them, they assembled an Interim Advisory Group (IAG), chaired by Dr William Lowrance, a consultant in health policy and ethics. The IAG comprised experts in research ethics, philosophy, law, science and social science, and consumer representation. Consultations with scientists, health professionals, parliamentary representatives and the public, among others, helped to inform the IAG’s discussions and shape the funders’ first public draft EGF, which was put out for comment on 24 September. The consultation period is now over and the EGF will be developed in light of this feedback.

An Ethics and Governance Council will independently safeguard the EGF by monitoring and advising the UK Biobank, and reporting back publicly on how well it is conforming to the Framework and to the interests of participants and the public. This Council, the Science Committee and others will advise on updating the EGF in response to scientific, legal and other developments throughout the 20-year project.

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The MRC Consumer Liaison Group

As the MRC’s mission statement confirms, a key aspect of our work is to promote public engagement with medical research. In early 2000 the MRC’s Council decided to take positive steps to promote such consumer involvement. By March that year the MRC Consumer Liaison Group (CLG) had been set up to advise the MRC on ways of encouraging dialogue, and to help us be aware of and respond to the public’s interests and concerns about research.

The first wave of recruitment, through advertisements in The Guardian, the Health Services Journal and the British Medical Journal, attracted more than 150 applications. We interviewed 25 and appointed a group of 12. The result is a lively collection of people from all walks of life, united by their interest in health and research and a desire to ‘make a difference’ through influencing the MRC’s decision-making about its work and its relationship with the public. All of them bring valuable experience and expertise to the Group, which meets formally up to four times a year (see box opposite for members’ details). Between meetings members actively contribute to MRC events and committees such as the Water Fluoridation Committee and the CJD working group, as well as commenting on our government consultation documents, policy, and corporate publications.

Two new members – Richard Barnard and Stephen Hill – joined the CLG earlier this year. In addition, the CLG has recently welcomed a new chairman, Dr David Armstrong. David is also Chairman of the MRC Health Services and Public Health Research Board, so his appointment helps maintain the Group’s close link with the MRC Council and its Chief Executive.

Assessing the impact of the CLG

During 2002 the CLG commissioned a team from the Institute of Health and Society at Brunel University to carry out an evaluation of the group. The aim was to determine the value that 35 relevant stakeholders placed on the remit, operation and impact of the CLG in relation to decisions, polices and strategies of the MRC, and to identify ways these might be enhanced in the light of stakeholder feedback.

The evaluation report published in November 2002 suggested that the CLG is a worthwhile, positive, influence on the MRC in terms of transparency and awareness of the consumer perspective, but that it is more difficult to demonstrate an impact on specific aspects of MRC policy and practice. It made 18 recommendations, covering areas such as continuity, visibility, influence on organisation culture and awareness of public expectations. A CLG sub-group is working on proposals for implementing these proposals.

Richard Barnard, new CLG recruit and member of the sub-group, told Network: “This is an exciting opportunity for me and a great honour to be part of a group so fundamental to the values and policies of the MRC. I hope my scientific background and administrative flair coupled with past involvement in the Terrence Higgins Trust will be useful for the CLG and help in moulding MRC policy. I have already been asked to join the sub-group that is focusing on developing the CLG network as a result of the impact evaluation and hope to contribute some useful and innovative ideas.”

Working with MRC research centres

One important spin-off from the impact evaluation is the decision to extend the CLG to a local level. The aim is to provide a pool of members to input into a broader range of MRC activities than has been possible to date. CLG members and staff from the Corporate Affairs and Research Management Groups at MRC head office will be talking to MRC units about how a wider network could be recruited and used.

CLG membership

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
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<tbody>
<tr>
<td>Chair</td>
<td>Dr David Armstrong</td>
</tr>
<tr>
<td>Parliamentary Research Assistant</td>
<td>Ms Jacqueline Apperley</td>
</tr>
<tr>
<td>Business Manager at the Institute of Psychiatry</td>
<td>Mr Richard Barnard</td>
</tr>
<tr>
<td>Founder of Cognitive Abnormalities of the Brain Institute</td>
<td>Prof Raymond Feldman</td>
</tr>
<tr>
<td>Media background with BBC arts and drama</td>
<td>Ms Ada Harrison</td>
</tr>
<tr>
<td>Training consultant for an NHS Trust and Faculty of Health and Social Care visiting lecturer</td>
<td>Ms Susan Haslehurst</td>
</tr>
<tr>
<td>Management consultant</td>
<td>Mr Stephen Hill</td>
</tr>
<tr>
<td>Retired adult education lecturer</td>
<td>Mrs Helen Milar</td>
</tr>
<tr>
<td>Coordinator for the Alzheimer’s Society ‘Quality Research in Dementia’ Consumer Network</td>
<td>Mrs Shirley Nurock</td>
</tr>
<tr>
<td>BT internal management consultant</td>
<td>Mr John O’Sullivan</td>
</tr>
<tr>
<td>Clinical psychologist at Community Health Sheffield</td>
<td>Ms Rosemary Telford</td>
</tr>
<tr>
<td>Department of Health</td>
<td>Ms Sarah Buckland</td>
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Find out more online

www.mrc.ac.uk/public-consumer_liason_group

For more information about the CLG, email Heather Finch at heather.finch@headsoffice.mrc.ac.uk

MRC international

New directors for Uganda and the Gambia

Dr Heiner Grosskurth has taken over from Professor James Whitworth as Director of MRC’s Ugandan AIDS Programme. Originally from Germany, Dr Grosskurth joins the Programme from the London School of Hygiene and Tropical Medicine, where Professor Whitworth is now pursuing his research. Dr Grosskurth previously headed the Population Council’s HIV Prevention and Care Research Programme in India.

The MRC’s Laboratories in the Gambia have also been reorganised, following the departure of the Director, Professor Keith McAdam. In a new management structure, Dr Tumani Corrah becomes Unit Director 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.

“I’m delighted to take responsibility for the future direction of the Programme and look forward to building upon its past success in both the local and global fight against AIDS.”

Dr Heiner Grosskurth
Cannabis helps say MS patients
In the largest study yet of whether cannabis-derived drugs (cannabinoids) might help to treat multiple sclerosis (MS), most of the patients who took the medication said that they felt better. However, the researchers found little measurable improvement in these patients’ symptoms. The three-year MRC-funded trial set out to determine whether either whole cannabis extract, or tetrahydrocannabinol (THC) – its main active component – can reduce muscle spasms, stiffness and pain (spasticity) in MS patients’ limbs. Participants took a 15-week course of either oral THC capsules, cannabis extract, or an inactive placebo in addition to their standard medicine. In tests, the researchers found no change in spasticity in patients receiving cannabis and no measurable improvement in their general disability or wellbeing. However, these patients reported significant pain relief and their mobility increased. Two-thirds of them said they felt their muscle control was better, as did half of those on the placebo.

Leading researcher Dr John Zajicek from the Peninsula Medical School and the University of Plymouth urged caution in interpreting the findings, pointing out that there was a strong placebo effect at work. But he added that “Patients experienced few side-effects from the treatments and, given that how a patient feels is an important part of improving health, cannabis-based treatments may be of benefit to some patients.”

Lancet 362, 1517-26

HAART commutes AIDS sentence
Data analysis by the MRC Clinical Trial Unit (CTU) has shown that highly active anti-retroviral therapy (HAART) slashed AIDS death rates following its introduction in 1997. HAART relies on a powerful combination of anti-viral drugs to attack the HIV virus that causes AIDS, slowing disease progression to prolong patients’ lives. When CTU scientists amalgamated AIDS data from 22 European, Canadian and Australian studies they found that HAART had immediately halved death rates. From 1997-2001 the number of HIV-infected patients treated with HAART rose from one in five to more than half, and the death rate was cut by more than 80 per cent. The study also found that with HAART the life expectancy of older (45+) HIV positive people was no longer shorter than younger ones (16-24), as it had been before 1997.

Lancet 362 1267-74

Meanwhile, a nationwide study led by Dr Di Gibb at the CTU shows that Anti-Retroviral Therapy (ART) has also helped to significantly cut child deaths from HIV.

BMJ 327, 1019-23

Gene therapy alternative
Researchers at the MRC Clinical Sciences Centre (CSC) have developed a new technique that holds out the hope of treatment to people with the terminal illness Duchenne muscular dystrophy (DMD). One in 3,500 children a year, mostly boys, are born with this incurable genetic disease. Most cases are due to mutations in a gene called dystrophin, which leave the gene largely intact but stop the cell from making working dystrophin protein. Dystrophin prevents muscle wastage and most DMD patients die from respiratory or heart failure due to muscle weakness before they are 30. Attempts to treat DMD with gene therapy have so far failed because the dystrophin gene is exceptionally large and difficult to get into the appropriate muscle fibres. The new technique, called antisense therapy, sidesteps these obstacles by overriding the inherent genetic defect. It uses ‘molecular camouflage’ to blind the cell’s protein manufacturing machinery to DMD mutations. This allows the key parts of dystrophin to be made, so that it works almost normally and relieves many symptoms of the disease. CSC scientists led by Dr Qi Long Lu and Professor Terrence Partridge successfully used antisense therapy to restore dystrophin production and improve muscle function in the mouse form of DMD.

Nature Medicine 9, 997-998

Parkinson’s drug shows promise
MRC-funded research has shown that a new drug called ropinirole slows the loss of nerve function in early Parkinson’s disease by a third compared with the best current treatment. Parkinson’s is caused by the premature death of nerve cells that make the chemical messenger dopamine. The conventional treatment boosts dopamine levels with a drug called levodopa (L-dopa) that is converted to dopamine in patients’ brains. Although L-dopa effectively relieves Parkinson’s symptoms, over time it has the unwelcome side effect of causing involuntary jerking movements. Research led by Professor David Brooks of MRC Clinical Sciences Centre and Imperial College London shows that ropinirole reduces this problem and may protect the nerves from harm. But while ropinirole slows the loss of nerve function, L-dopa controls Parkinson’s symptoms more effectively. Further research to assess the long-term health benefits of one treatment over the other is under way.

Annals of Neurology 54, 93-101

Fast food in the frame
MRC scientists have blamed fast food for expanding waistlines in regular consumers. They assembled their case by gathering evidence from in-depth studies on volunteers in the UK and Africa and information from fast food company websites about what goes into their meals. Energy density (the calories different foods contain weight for weight) is known to be critical in regulating food intake. The energy density of a typical fast food meal is more than one and a half times higher than an average traditional British meal and two and a half times higher than a traditional African meal. It is this excessive calorie-packing, say the researchers, that increase a person’s risk of weight gain and obesity, even though they may feel that they are eating no more than they would if they ate an average meal. The research was led by Professor Andrew Prentice, Head of the MRC International Nutrition Group at the London School of Hygiene and Tropical Medicine and Dr Susan Jebb, Head of Nutrition and Health Research, MRC Human Nutrition Research.

Obesity Reviews 4, 187-194
Stem cells update

Stem Cells: Shaping the Future

The MRC’s 2002 conference Stem Cells: Prospects for Research and Therapy was such a success that we joined with the Biotechnology and Biosciences Research Council (BBSRC) and the Department of Trade and Industry (DTI) to organise a follow-up meeting Stem Cells: Shaping the Future in London this September. The popular two-day event attracted more than 500 delegates from 12 countries, who included researchers, clinicians, companies, politicians, consumers, and patient, religious and pro-life groups.

The first day’s programme, which was organised by the MRC and opened by Sir David King, the Government’s Chief Scientific Adviser, reviewed the year’s progress and discussed the future. It featured presentations by national and international experts, and wrapped-up with an open question and answer session. Between talks the Research Councils and medical charities sponsored a series of breakout sessions aimed at identifying the key challenges facing stem cell research in the short, medium and long-term to inform strategy development. Lord David Sainsbury opened the second day, which was organised by the DTI Biosciences Unit and reported on the DTI Stem Cell Mission to Canada and the USA in March 2003. Both days also included poster demonstrations by young researchers and a learning zone.

New stem cell fellowships

September also saw the MRC, together with the BBSRC, the Parkinson’s Disease Society and the Juvenile Diabetes Research Foundation (JDRF), launch the UK’s first jointly funded stem cell research fellowships. The four sponsors are all members of the UK Funders Co-ordinating Committee for Stem Cell Research, which actively seeks to identify joint funding opportunities to advance the field in the UK. They awarded £1.4m to fund eight fellowships aimed at gaining fundamental insights into stem cell biology and hastening the hunt for stem cell-based therapies for major diseases and disabilities.

MRC/JDRF pact

The MRC and the JDRF, which are already significant stem cell research funders, have formalised their partnership by co-signing a Memorandum of Understanding. Their aim is to assemble expertise from different yet complementary disciplines and to promote collaboration between scientists. The agreement covers research grants and fellowships for research into generating stem cell lines, regulating and directing stem cell growth, and development of stem cell therapies. The two parties have already joined forces to award £1m over three years (£810k from the MRC and up to £100k a year from JDRF) to Professor Austin Smith to develop a new centre of excellence in stem cell research at the University of Edinburgh (see Research centre news p3). They have also funded the stem cell Career Development Fellowship of Dr Karen Cosgrove at the University of Manchester.

EU Tissue and Cells Directive

Members of the European Parliament (EP) are voting on amendments to the draft EU Directive on research using human tissues and cells at its Second Reading this December. Following the vote, the Council of Health Ministers will consider the Commission’s proposed final version of the Directive.

The Directive was proposed in June 2002 to ensure the quality and safety of human tissues and cells used in human applications, for example, transplantation. Its broad scope covers the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells intended for use in humans, and of manufactured products derived from them. The Directive will also introduce safety standards across the EU, allowing tissues and cells to be exchanged between member states more easily and safely, and protecting the health of patients who receive treatments involving the use of donated human tissue and cells. While welcoming the overall aims of the Directive, the MRC has been particularly concerned about amendments that would restrict the progress of research involving the use of human embryonic stem cells, and which if approved would ban the clinical use of material derived from embryos created by therapeutic cloning.

UK’s first embryonic stem cell line

The MRC has welcomed the news that researchers at King’s College London have generated the UK’s first embryonic stem cell line. Following rigorous testing and certification to meet regulatory requirements, it will be deposited in the UK Stem Cell Bank (see MRC Network issue 1).

Find out more online

Stem Cells: Shaping the Future: video recordings, presentations and workshop reports
www.livewrap.co.uk/
stemcellconference2003/index2.php

Events diary

10 December 2003
Taking the planet seriously. The National Institute for Medical Research (NIMR), is launching a new annual lecture – The Colston Lecture – on the theme of Science and Society. Its aim is to provide a focal point at NIMR for discussion of Science & Society issues and to stimulate greater awareness of the need for dialogue with the public among scientists. This lecture will be given by Mary Midgley, a philosopher and author with special interests in human relationships with the natural world, the sources of morality, and the relationship between science and religion. She has recently become particularly interested in the Gaia concept, which embraces these concerns. The lecture will take place at 4.15 pm in the Fletcher Hall, NIMR, Mill Hill, London. The lecture is free and open to the public, but space may be limited, so if you wish to attend please enquire by email to contact@nimr.ac.uk

2 December 2003 to 1 February 2004
Visual inspiration from the human cell, an art-science collaboration between Judith Devons and the MRC Toxicology Unit, Leicester. Screen prints by Judith based on the Unit’s hugely magnified images of normal and abnormal human cells will be displayed in the main reception area in Leicester Royal Infirmary’s Balmoral Building until the end of 2003. Her work will also be exhibited in the foyer of De Montfort Hall, Leicester from 2 December until 1 February 2004. Admission is free.

26 January to 29 February 2004
Change of Heart, a new play by Rosemary Friedman about the issues surrounding transplant surgery. Rosemary adapted the play from her novel, Intensive Care (see Information), which was inspired by the true story of Professor Julia Polak. The play opens at the New End Theatre, Hampstead, on 26 January for five weeks. Performances are Tuesday to Saturday at 7.30pm and Saturday and Sunday at 3.30pm. A gala performance, is planned for Wednesday 25 February 2004 with proceeds going to the Julia Polak Research Trust. For gala tickets contact lallibert@nhsnet.ic.ac.uk Further details will be posted at www.polak-transplant.med.ic.ac.uk/
MRC people

• Sir John Skehel, Director of the MRC's National Institute for Medical Research, has been awarded a Royal Medal by the Royal Society for his pioneering research in virology. The Society makes three of the prestigious awards each year to recognise outstanding and influential science. John’s award was for his discoveries about how the influenza virus binds to host cells, and in virus-cell membrane fusion, which have had a fundamental impact on the field. He joins an illustrious list of previous MRC medalists including, among others, the Nobel Prize winners Francis Crick, Frederick Sanger and Max Perutz.

• MRC research professor and MRC Council member Nancy Rothwell has won the 2003 Pfizer prize for Innovative Science. The £50,000 prize is for research that has made a significant impact on the discovery and development of new medicines. Nancy won the award for research on brain injury and repair which has contributed to the greater understanding of conditions such as Alzheimer’s and stroke. It also recognises her skills as a natural communicator, particularly on the subject of animals in research.

• Professor Uta Frith has won the Fondation Ipsen's 2003 Jean-Louis Signoret Prize. Uta is an MRC-funded scientist working at University College London’s Institute of Cognitive Neuroscience, and won the 20,000 award for her outstanding contribution in the domain of neurocognitive development. She told Network: “I would never have received this prize if it had not been for continuous support from the MRC throughout my career. I would like to take this opportunity to express my deep gratitude for this support.”

• Dr Mary Lyon, who has worked at MRC Harwell since 1955, has been awarded the Genetics Society's Mendel Medal. This award for distinguished scientific achievement recognises her major contributions to the field of mouse genetics. The award ceremony was held at the Genetics Society meeting, The Mouse: Genetics and Genome, at the Royal Society in November. Dr Lyon gave the Mendel Lecture: Fifty years back from the mouse genome: a personal story, reflecting on her lifetime’s work with the MRC.

• Professor Julia Polak, founder-director of the Imperial College Tissue Engineering and Regenerative Medicine Centre and head of the MRC co-operative group on tissue engineering, has been awarded the DBE for her services to medicine in the Queen’s Birthday honours. She was also recognised as a “Pioneer to the life of the Nation”. Professor Polak was delighted with her two visits to the palace and told Network: “I regard my award and invitation to the Pioneers reception as recognition for the whole tissue engineering community. I hope the support from the MRC and others will enable this country to remain at the forefront of such scientific endeavour.”

Your feedback please

MRC Network is for anyone who has an interest in the work of the MRC, including scientists, doctors, and health professionals involved in medical research, government departments and parliamentarians, and university staff and students. The aim is to provide a quick, easy-to-read summary of activities across the MRC, from research news through to funding, grant schemes and policy issues, with pointers to more in-depth information on websites and in other publications.

We hope you find Network interesting and informative. Now that we have reached Issue 3, we are very keen to receive feedback from readers. If you have any comments, including suggestions for new features that you would find useful, please let us know. Just email newsletter@headoffice.mrc.ac.uk

MRC Network is produced by the MRC Publications Team and is available in print and in downloadable pdf format at www.mrc.ac.uk

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Infowatch

Intensive Care

This novel by Rosemary Friedman was inspired by the remarkable story of Professor Julia Polak. Julia is one of the longest surviving heart and lung transplant recipients, and leads MRC-funded research into tissue engineering and regenerative medicine. A donation of 45 per cent of the cover price will go to the Julia Polak Research Trust if you order the book through julibone@imperial.ac.uk

House of Stratus £11.99 (hardback), £9.99 (paperback)
ISBN 0 7551 0012 3

The Next Big Thing

An acclaimed series produced by Vega and the Open University. A series of round-table discussions in which MRC Chief Executive Colin Blakemore and a panel of experts discuss “The Next Big Thing” in science and technology.

www.vega.org.uk/series/tnbt/index.php