Measuring success
Early findings from MRC e-Val

It’s good to talk
Fiona Fox on scientists and the media
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Fiona Fox, Director of the Science Media Centre
As a publicly-funded organisation, the fortunes of the MRC rely, to a certain extent, on politicians. So elections make for interesting times.

Science needs strong support in Westminster, not only in terms of the level of research funding but also for the prioritisation of a long-term vision for UK science. Some nations, such as France, Germany and the US, understand the fundamental role that science plays in a successful economy, and these nations are sustaining and in some cases increasing their commitment to research funding.

For its part, the MRC needs to demonstrate the huge contribution that medical research makes to the nation’s health and wealth and the potential of scientific research to help boost the economic recovery. We know that MRC research is making an impact on health, the economy and society and contributing to global scientific knowledge. Strong evidence of this is emerging from our new online data gathering tool, MRC e-Val. We can show, for example, that MRC research has helped to launch 24 new products and medical interventions over the past four years alone, and has led to the creation and growth of 28 spin out companies. You can read about some of the early findings from MRC e-Val on page 10.

Lord Patel – a member of the influential House of Lords Science and Technology Committee and the MRC’s Council – stressed recently how vital it is that the scientific community engages with members of Parliament, old and new, whatever their party affiliations. He implored this generation of researchers to keep in touch with parliamentarians; to engage them with science and where it might lead. Raising the profile of medical research in Westminster helps make the case for continuing investment in science, he stated.

I would echo Lord Patel’s appeal, which he made at the inaugural MRC Fellows’ Symposium and Dinner in March (see page 5). The event was part of an initiative within the MRC to build better relationships with the researchers we fund. Our aim was to share with them the vision and strategy of the MRC, and hopefully to instil a greater feeling of community among our researchers. After all, what better champions can the MRC ask for than the scientists we fund?

We invited MRC Fellows to talk frankly to senior MRC management including myself, members of the MRC’s Council and members of our funding boards and panels. An afternoon of open dialogue was followed by dinner at which we were privileged to hear the engaging story of Venki Ramakrishnan – the MRC’s most recent Nobel Laureate – and his unorthodox but ultimately successful career.

It was wonderful to hear first-hand the experiences of bright young (or youngish) scientists. Alongside the many challenges of a research career, there are so many exciting opportunities to make an original contribution to the sum of human knowledge. The evident enthusiasm of the Fellows was infectious – it made me wish I was 30 years younger and starting out in research all over again.

It also gave me great encouragement that if we can demonstrate to politicians our passion for science, and our desire to make a positive difference to the world, we can win the argument to support science whatever the economic or political climate.

Sir Leszek Borysiewicz
**NEWS**

£250m government commitment for UKCMRI

The government is to invest £250 million in the UK Centre for Medical Research and Innovation (UKCMRI), a planned world-class research centre in London which is being funded by four partners, including the MRC.

On a visit to the Wellcome Trust in March, Gordon Brown reviewed the plans for the institute and announced the government funding for the project: “I think there is nothing more important to the future of our society and our economy than what we are setting in motion. I believe that the project that we are discussing today will transform lives, will make for a stronger economy, will put us at the forefront of research around the world and will give people a huge amount of hope about the future.”

The dedicated funds will be in addition to the £47m already spent by the MRC on the UKCMRI site, bringing the MRC’s contribution to around £300m.

Professor Sir Paul Nurse, Chair of Scientific Planning at UKCMRI, said: “UKCMRI will be one of the world’s largest centres of biomedical research – accommodating 1,500 scientists and staff. It will create the critical mass to find new ways to tackle difficult biological questions in health and disease. This investment helps us deliver a unique national asset supporting the biomedical research endeavour throughout the UK.”

UKCMRI will be constructed on 3.6 acres of land, to the north of the British Library in the St Pancras and Somers Town area of north London. A planning application will be submitted in the autumn, following a consultation period with the community and stakeholders. Work is scheduled to begin on the site in early 2011, for completion in late 2014 or early 2015. UKCMRI is funded by the MRC, Cancer Research UK, the Wellcome Trust and University College London.

MRC donates field station to Gambian medical school

The MRC’s unit in The Gambia has donated its Farafenni field site to the University of The Gambia’s Medical School.

The field site includes housing units and offices, a laboratory, insectaries, generators, four-wheel-drive vehicles and motorcycles. The MRC will also contribute to an endowment fund which will include a prize for the best graduating student in community medicine each year. The University of The Gambia plans to use the site as the Medical School’s community medicine centre.

Dignitaries including the Gambian Minister of Health, Dr Abubakar Gaye, and British High Commissioner Mr Phil Sinkinson attended the handover ceremony in February. The divestment was made as part of the MRC’s reorganisation of its Gambia unit towards more of an MRC centre-style working model.

Professor Tumani Corrah, Director of MRC Laboratories, The Gambia, commented: “This donation is testament to the MRC’s strong partnership with the University of The Gambia. We are honoured to make this significant contribution towards building capacity in medical education and research in The Gambia.”
Experts convene to tackle Chinese diabetes epidemic

Diabetes is an urgent public health issue in China. A recent study published in the New England Journal of Medicine estimated that nearly 10 percent of the adult population, or 93 million people, now have diabetes and a further 150 million are at risk of developing it.

In April, the MRC co-sponsored China’s first training seminar on diabetes, epidemiology and public health, which attracted 60 doctors, clinical academics and scientists. The aim of the week-long seminar, held in the city of Hangzhou, was to build capacity in China in this field of research. Jointly organised by the MRC Epidemiology Unit, the Chinese Academy of Science, the Institute of Nutritional Science, and the Chinese Diabetes Society, the seminar covered the underlying risk factors, causes, public health aspects and prevention of diabetes. Lectures and talks from international speakers were interspersed with smaller group sessions to allow attendees to share information, discuss topics in greater detail and invite comment on how their research could be improved.

The MRC Epidemiology Unit’s Director, Professor Nick Wareham, commented: “If we are to understand the risk factors for diabetes in China, and to understand approaches to its prevention in China, we must build local research capacity within China.”

Dr Nita Forouhi, Programme Leader Track scientist at the unit, co-organised the event with Professor Wareham. She added: “The seminar was a resounding success, and has also helped to forge important research links between the MRC Epidemiology Unit and our colleagues in China. These links will be important for the MRC’s investment in global health.”

Building the MRC community

MRC Fellows recently had a unique chance to get together to quiz senior staff and discuss issues around strategic policy and support for scientists. Around 80 researchers on various clinical and non-clinical MRC Fellowship schemes attended the March event at BMA House in London, where Sir Leszek Borysiewicz, and members of the MRC’s Council, funding boards and overview groups were on hand for some top-level networking and an open exchange of views about the MRC.

The inaugural MRC Fellows’ Symposium and Dinner was designed to inform Fellows about how the MRC works, give an insight into some of our activities beyond funding research, and enable Fellows to pose their questions directly to senior staff. One of the highlights of the day was a lively, at times heated, session called MRC Question Time, during which a panel of senior staff and decision-makers answered questions.

Issues covered ranged from the impact of the current economic climate on MRC funding strategy to the role of the pharmaceutical industry in medical research. On careers, advice was sought on achieving work-life balance, mentoring and routes of funding.

In the evening, Sir Leszek wrapped up proceedings with a short presentation of his own reaction to the day’s discussions. At dinner, Dr Venki Ramakrishnan gave an inspiring talk about his career and being the MRC Laboratory of Molecular Biology’s latest Nobel Laureate.

The event was extremely popular with the Fellows who attended, and the Symposium and Dinner are likely to continue in years to come. It will be complemented by other initiatives to engage MRC scientists and enable them to connect more directly with the organisation that funds them.
MRC announces first university units

An exciting new partnership between the MRC and one of the country’s top universities could become a model for similar scientific collaborations in the future.

From 1 April 2010, the new MRC Weatherall Institute of Molecular Medicine (MRC WIMM) at the University of Oxford became host to our first university units: in other words, MRC-funded, university-managed research units. The MRC Molecular Haematology Unit (MHU) and the MRC Human Immunology Unit (HIU), which are located within the institute, have become MRC university units, and MRC staff have now transferred to become university employees.

The MRC WIMM is a key part of the MRC’s strategic plan and the result of an alliance between the MRC and the University of Oxford to unite biomedical research in Oxford. The MRC has invested £60 million over five years in the alliance. Its focus is on closer integration of the MHU and HIU with collaborators in the university, optimising interactions with the newly-established Oxford Biomedical Research Centre; increasing investment from the MRC to support capacity building in translational medicine; and strengthening both bioinformatics capacity-building and infrastructure.

The mission of the MRC units is to improve the management of patients with inherited and acquired blood diseases and help to develop new therapies for diseases like AIDS, avian flu, multiple sclerosis, arthritis and eczema.

Sir Leszek Borysiewicz said: “This strategic alliance is an exciting and challenging new venture for the MRC – enabling us to strengthen our academic ties with the university and enhance both basic and translational research opportunities.”

Dr Anne-Marie Coriat, Head of the MRC’s Regional Centre in Oxfordshire, led negotiations for the transfer. She said: “This has been an exciting project to be involved with and is the beginning of a new relationship with the University of Oxford. Thanks must go to staff in both units, the project team and our university colleagues, who all worked incredibly hard over the last 18 months to ensure that the project was delivered on time.”

This integration ensures a smooth transition from the best possible basic, laboratory-based research to phase I and phase II clinical trial research. It will enable the expansion of successful training programmes for clinician scientists within Oxford.

Professor Sir Andrew McMichael, Director of the MRC WIMM and HIU, is looking forward to seeing how the investment will boost research in biomedical science. He said: “The MRC WIMM will provide opportunities for six early-career investigators to develop new independent research groups in the institute. In turn it is intended to ensure that the next generation of scientists undertaking translational medicine research is equipped with the necessary skills to maintain the UK’s position.”

One third of adults are eating their greens

A third of men and women in the UK are meeting the ‘five-a-day’ government guideline for fruit and vegetable consumption, data from the first year of the National Diet and Nutrition Survey have shown.

Results from the rolling survey of over 1,000 people, carried out in part by the MRC Collaborative Centre for Human Nutrition Research (HNR), show that on average adults eat 4.4 portions of fruit and vegetables per day, with a third meeting the government guideline of at least five portions. Findings also showed that compared with eating habits from a decade ago, the nation is eating less saturated fat, trans-fat and non-milk extrinsic sugars (sugars added to food and drink, table sugar and those present in fruit juices).

Despite these encouraging signs, intakes of saturated fat and non-milk extrinsic sugars are still above recommended levels, the data show. The survey also revealed that people are not eating enough fibre and oily fish.

Although a recent study carried out by scientists at Mount Sinai Medical Center in New York showed that eating five portions of fruit and vegetables a day only has a small effect in warding off cancer, it is still widely recognised that following the guideline is good for general health.

Dr Alison Lennox, Principal Investigator Scientist at HNR, said: “The National Diet and Nutrition Survey collects both demographic information and biological samples and measures such as blood, urine and weight, so we can look at diet in relation to nutritional status and factors like socioeconomic status, region of the country and the social circumstances of eating. The dietary detail available allows us to examine the sources of nutrients and determine where we should target our efforts at the policy level to reduce or increase the intake of particular nutrients. These features make it one of the most important dietary surveys in the world.”

Commissioned by the Food Standards Agency and the Department of Health, the survey is being carried out by the HNR, the National Centre for Social Research and the Joint Surveys team at University College London. The rolling programme will continue indefinitely, releasing the data it has collected once a year and publishing its first full report at the end of four years.

The full data can be found at www.food.gov.uk/science/dietarysurveys/ndnsdocuments
Spring science festival highlights

After a long cold winter, spring has finally arrived, bringing with it the annual round of science festivals in Brighton, Cambridge, Oxfordshire and Edinburgh. MRC researchers from all over the UK took time out of their labs to explain their research to the public in quirky and original ways – from making cornflakes to moulding brain cells out of play dough.

Down on the south coast, the Brighton Science Festival, which is partly sponsored by the MRC, took place over two weeks in February, and the theme for 2010 was Incredible Science. Staff from the MRC Centre for Genome Damage and Stability at the University of Sussex rose to the challenge, entertaining visitors with optical illusions and hands-on activities about the human brain. Children and parents were invited to put their brains to the test, using lumps of play dough and pipe cleaners to learn how the brain allows us to see, hear, move and remember.

March saw the biggest and busiest Cambridge Science Festival to date, attended by over 30,000 people. Around 100 enthusiastic MRC staff from units and centres in Cambridge took part in organising and manning exhibition stands.

The MRC Collaborative Centre for Human Nutrition Research gave families a chance to make their own cornflakes from the very first steps of separating the bran and germ from the corn kernel, right through to toasting the flakes and putting them in their own cereal box. The aim was to show children and their parents that not all food processing is bad, and that some is needed to provide palatable and nutritious foods as well as highlighting the nutritional importance of a healthy breakfast.

The MRC Cognition and Brain Sciences Unit held an open evening called Exploring Mind and Brain. Visitors learned about functional magnetic resonance imaging in patients in a vegetative state, how complex mental abilities guide our thoughts and behaviours, and why we have emotions – and why we couldn’t manage without them.

Taking a more hands-on approach, painting was the order of the day for experts from the MRC Mitochondrial Biology Unit, who used a gigantic mitochondrion paint-by-numbers wallpaper to explain the crucial role of these powerhouses inside cells. Meanwhile, in Stem Cells: Masters of Diversity, stem cell scientists encouraged youngsters to play a game of stem cell twister. The festival also included activities run by the MRC Laboratory of Molecular Biology, the MRC Epidemiology Unit and the MRC Centre for Nutritional Epidemiology in Cancer Prevention and Survival.

North of the border, 55 PhD students and research scientists from MRC centres and units in Scotland volunteered to share their expertise with the scientists of tomorrow at the Edinburgh International Science Festival, which took place in April. The ‘MRC Lab’ opened to curious kids every day of the festival, offering six activities in a room decorated to look like a giant laboratory. Children were equipped with an MRC lab coat and safety specs and then let loose on the experiments with the guidance of the volunteer demonstrators.

New activities for 2010 included the Cell Signalling Challenge from the MRC Protein Phosphorylation Unit, a puzzle that uses giant cells and electronic connectors to illustrate how cell communication keeps the body healthy. The MRC Centre for Regenerative Medicine ran an activity called Build your own healthy cell in which kids build different types of cells in Petri dishes using play dough.

To coincide with National Science and Engineering Week 2010, the Oxfordshire Science Festival (OSF) celebrated its third birthday with over a hundred science-themed events across the county. The festival kicked off with an all-day science celebration in Oxford city centre, attended by some 5,000 people. The MRC, which is a major sponsor, ran a stand called Designing DNA. Children drew or painted cell structures and DNA helices on to fabric bags to take home while MRC scientists from Harwell, Oxford and Bristol chatted through the ‘science bit’ with parents.

An MRC-sponsored OSF networking event at the Natural History Museum saw partners from science, industry, business and local universities meet to explore opportunities for more joined-up working and support for science within the county. The event was hosted by Professor Andrew Hamilton, Vice-Chancellor of Oxford University.

Oxford’s MRC Anatomical Neuropharmacology Unit (ANU) and the MRC Mammalian Genetics Unit in Harwell both opened their doors to school children at their annual open days, while the Weatherall Institute of Molecular Medicine hosted public lectures on cancer, swine flu and allergies. ANU Director Professor Peter Somogyi spoke at an MRC-sponsored open day for 80 school students themed around the human brain, and run by the Oxford International Biomedical Centre.

In Southampton, Dr Janis Baird took on the might of a hundred captivated teenagers when she and colleagues from the MRC Epidemiology Resource Centre ran a hands-on stand at a secondary school careers fair. Students got to test their grip strength and learn more about the MRC’s cancer research. The unit also took part in a science open day at the University of Southampton.

This year’s Cheltenham Science Festival takes place from 9 to 13 June and the MRC is looking for scientist volunteers to explain their research to the public. See Events Diary on page 18 for more information.
Two workshops on inflammation and immunology research took place in April and May as part of a £15 million collaboration between the MRC and the Association of the British Pharmaceutical Industry (ABPI) to forge closer links between the MRC and industry. The workshops focused on chronic obstructive pulmonary disease, rheumatoid arthritis and other inflammatory joint diseases – disease areas singled out after joint consultation between academia and industry. People worldwide are affected by these diseases but many fail to respond well to treatment, placing a huge burden on healthcare systems.

Key experts from industry and academia came together at the workshops to come up with clinical and pre-clinical research priorities – for example biomarkers and disease stratification – and to identify ways in which all sectors could work together to address them. Each workshop will take a share of the funding contributed by the MRC to fund the best proposals from researchers working together to answer some of these research questions.

The ABPI/MRC initiative was launched in July 2009 with a jointly sponsored workshop focusing on immunology and inflammation – areas in which the UK academic and industry research base leads the rest of the world. The outcome was an agreement to host smaller, disease-focused workshops as an effective way of bringing together key stakeholders. Other disease areas, potentially including asthma, will be addressed at workshops to be held over the next year.

Six schools went head to head in a debating competition sponsored by the MRC in March. Teenage students argued on the rights and wrongs of research efforts to radically extend the human lifespan, clinical trials in developing countries and other thorny topics. The Debating Matters Competition East Region Final took place at the Cancer Research UK Cancer Research Institute in Cambridge. After a day of fierce debate, Queens’ School in Bushey, Hertfordshire, emerged victorious.

The competition is open to students aged 16 to 19, and seeks to offer an accessible and engaging format for debating contemporary issues. It attracts a diverse range of schools and colleges and is open to students from a wide range of backgrounds – dispensing with the formalities that can sometimes make debating seem old fashioned and irrelevant to those who are new to it.

One of the judges, Professor Sheila Bird of the MRC Biostatistics Unit, said: “I enjoyed the day and was impressed by the effort put in both by the Debating Matters alumni and by students and teachers. The judges have to be as quick-witted as the students in this fast-paced contest – quite a challenge for us too.”
MRC’s HIV trial shortlisted for The Lancet’s paper of the year

Findings from the Development of Anti-Retroviral Therapy in Africa (DART) clinical trial have been named runner-up in The Lancet’s 2009 paper of the year award.

Results from the MRC-sponsored study, published online in December 2009, demonstrated that a third more people could be successfully treated for HIV in Africa if expensive laboratory tests routinely used for monitoring side effects are abandoned.

The paper came second out of eight nominations, chosen for their ability to effectively inform research, clinical practice, and health policy.

In a commentary on the publication in The Lancet, HIV experts Professor Andrew Phillips and Dr Joep van Oosterhout congratulated the DART team for showing that, even in challenging circumstances, excellent trials can be done in Africa with minimal loss of contact with participants during the trial’s follow-up period.

The survival rate in the DART trial is amongst the best reported from any trial, Anti-Retroviral Therapy (ART) programme or study in Africa.

The study began six years ago in Uganda and Zimbabwe when treatment for people with HIV was starting to become more widely available. The report concluded that ART can be delivered safely, without routine laboratory monitoring for toxic effects, but that differences in the progression of the disease suggested monitoring CD4-cell count from the second year of treatment.

New analysis of the DART trial published in March has also shown that a safe, cheap and widely available antibiotic could save the lives of thousands of people starting ART for HIV in Africa and other developing countries (see research roundup, page 20).

New director for MRC/UVRI Uganda Research Unit

Dr Pontiano Kaleebu has been appointed as the new Director of the MRC/UGanda Virus Research Institute (UVRI) Uganda Research Unit on AIDS. He will take up his appointment on 1 July 2010, taking the reins from the unit’s current Director, Professor Heiner Grosskurth.

The announcement follows on from the unit’s twentieth anniversary in February this year as a groundbreaking centre for African clinical research, specialising in virology with a particular focus on HIV/AIDS.

Pontiano is presently Primary Investigator and Assistant Director of research at the UVRI. Following his appointment as unit Director, he will remain directly involved with UVRI, working to build on existing links between the MRC and the Ugandan government. He is also currently Head of the Basic Sciences Programme at the unit and has recently published research papers on understanding the protective immune responses against HIV to contribute to the design of potential HIV vaccines. Other interests are HIV vaccine trials, HIV molecular epidemiology and resistance to anti-retroviral drugs.

Professor Heiner Grosskurth will be leaving Africa to return to the London School of Hygiene and Tropical Medicine. During his tenure as the unit’s Director he has made a dedicated contribution to advancing the MRC’s work in Uganda.

Dr Anotoli Kumani, who currently works as a Primary Investigator in the unit has also been appointed as Deputy Director.

New resource centre to aid bench-to-bedside research

A new Translational Research Resource Centre has been established in London which will improve scientists’ understanding of genetic and infectious diseases at the cellular level and speed the identification of drug targets to treat them.

The Translational Research Resource Centre (TRRC) is based at the MRC Laboratory for Molecular Cell Biology at University College London and has been funded largely by a strategic grant from the MRC. The jewel in the centre’s crown is an automated resource for rapidly analysing dangerous pathogens such as HIV and hepatitis C – the first of its kind in the UK. Where manual analysis of genes, cells and protein samples would previously have taken several weeks, the centre will use robotic automation to analyse thousands of samples every day.

The TRRC, which is led by Dr Robin Ketteler, complements other MRC screening facilities and will be accessible to researchers from the MRC and University College London.

For more information email r.ketteler@ucl.ac.uk.
MRC science has shaped policy and clinical practice on everything from swine flu to cardiovascular disease. It’s helped to create and grow 28 new companies and launch 24 new products and interventions over the past four years. And our researchers have attracted more than £550 million of new direct financial investment in UK science.

Measuring success

These are some of the early findings from MRC e-Val, the new online system for collecting outputs, outcomes and impacts from all MRC-funded research. When MRC e-Val was launched last autumn, nearly 85 per cent of principal investigators who had received MRC support since 2006 provided information about the results of their research. Now the MRC is armed with a valuable cache of information about how its research impacts and influences the economy, society and global scientific knowledge.

Economic impact

Recent reports from the House of Commons Select Committee on Science and Technology, the Royal Society and others have emphasised that a strong science base will support the economic recovery and the long-term competitiveness of the UK. It is welcome news, therefore, that MRC research projects are delivering significant and positive economic impact. According to information submitted into MRC e-Val, our research has contributed to the creation or growth of 28 companies since 2006 - from small start-ups to more established enterprises. These include companies that develop new treatments and medical devices, or provide consultancy or access to expertise, services or reagents. Some have acquired significant new investment, or been bought by larger companies in the period surveyed. Hundreds of high value jobs have been created.

Our research has contributed to the development of 24 new products and medical interventions which were launched on to the market between 2006 and 2009. These include 10 new drugs, nine of which are monoclonal antibody therapies for conditions such as psoriasis, age-related macular degeneration and arthritis. Each of these conditions affect up to two per cent of the world population, so large numbers of patients will benefit from these treatments. A further 40 products and interventions are presently being tested in later stage clinical trials, some of which may progress to new treatments in future.

Belimumab (also known as Benlysta) is a monoclonal antibody therapy which has the potential to become the first new treatment for the autoimmune disease lupus in 50 years. Discovered using technology pioneered by the MRC Laboratory of Molecular Biology in Cambridge, this therapy is now being tested in phase III clinical trials by the pharmaceutical giants GlaxoSmithKline and Human Genome Sciences.

The MRC’s commitment to translating research into health benefits is delivering outstanding results. An indication of this active translation of our research is the strong portfolio of intellectual property generated from MRC-funded research projects. Since 2006, over 200 patents have been generated by MRC-funded work. 35 per cent of which have been licensed to industry or other organisations.
MRC funding supports a competitive science base, and MRC e-Val captured the extent to which this successfully attracted new investment to the UK. Researchers with MRC funding reported obtaining a total of £556 million in direct financial contributions from the private sector or funding agencies outside the UK.

**Shaping policy**

A reflection of the excellence of the scientists we fund is that many are called upon to give expert advice and evidence which helps to inform policy setting – both in the UK and internationally. Sixteen per cent of MRC researchers reported that their research was cited in policy documents or that they had contributed directly to a policy-setting process, such as National Institute for Health and Clinical Excellence (NICE) guidance for NHS doctors or *British Medical Journal* clinical reviews.

For example, Dr Martin Dennis and colleagues at the University of Edinburgh carried out a trial which in 2009 showed that surgical stockings are not effective for preventing blood clots from forming in stroke patients. This evidence has impacted on both NICE and international guidelines, saving the NHS time and money.

Research into living a long and healthy life is one of the themes in the MRC’s strategic plan, so it comes as no surprise that our scientists have made a major contribution to advising on clinical guidelines for the care and treatment of people with dementia.

Most newborn babies with Down’s Syndrome are now screened for a pre-cancerous condition thanks to recommendations made by Dr Paresh Vyas from the MRC Molecular Haematology Unit. The MRC team, which is investigating the genetic changes which underlie Down’s syndrome, showed that a condition called transient myeloproliferative disorder (TMD) is more prevalent in Down’s syndrome babies. TMD can develop into leukaemia, but a full blood count test can identify the problem, allowing it to be treated before cancer develops.

MRC Senior Fellow Professor Nick Fox has used techniques he developed for measuring brain cell loss to predict whether people with mild cognitive impairment would go on to develop Alzheimer’s disease. Using a series of Magnetic Resonance Images of patients created over time he showed that rates of brain cell death in the cerebrum correlated with clinical decline in these patients.

Professor Fox has since advised the European Medicines Agency and the US Government’s National Institutes of Health on the use of imaging in dementia and trials. In the US this has contributed to the establishment of the $16 million Dominantly Inherited Alzheimer’s Network.
Furthering knowledge

MRC research generates vast quantities of new knowledge, and one of the aims of MRC e-Val was to capture how our researchers increase the publicly available pool of knowledge, and enhance our ability for this to be exploited.

MRC e-Val gathered details of around 12,000 unique papers published between 2006 and 2008. The evaluation team looked at papers arising from MRC research and, with assistance from Thomson Reuters, calculated their citation impact. This is a measure of citation by other scientists which takes into account the impact factor of the journal, the year of publication and the field of research. They found that MRC-funded research had a citation impact that was twice the world average – a clear mark of how valuable MRC research is to scientists across the world. It also shows that MRC research tends to towards a higher citation impact than UK research in general, which is 1.5 times the world average.

One of the highest scoring papers was published in 2007 by Professor Sir Philip Cohen, Director of the MRC Protein Phosphorylation Unit in Dundee. The paper, on protein kinase inhibitors, was cited almost 50 more times than other papers published in the same journal over the same period.

Dr Ian Viney, Head of Evaluation at the MRC, who has led MRC e-Val’s development and implementation is delighted with the success of the first phase of data collection: “We’d like to thank all the principal investigators who took part in providing us with this incredibly rich and interesting collection of data. This information equips us to better communicate the benefits of MRC funding and will shape the MRC’s future strategy. In fact, the project has been such a success that other research councils and funding bodies are interested in the same approach for their own evaluation programmes.”

The MRC will use MRC e-Val as the primary route for researchers to provide information on their research in future, and intends to ask MRC principal investigators to update their data each year. Now that a baseline of information on MRC outputs and outcomes has been established, progress and trends can be tracked over time. The MRC e-Val team plans to carry out its next survey in Autumn 2010, and each year thereafter.

For more information about MRC e-Val, visit:

www.mrc.ac.uk/eVal
FUNDING

£12.5m ageing research funding up for grabs

New investment of £12.5 million for ageing research is available from 12 May under the third phase of the cross-council lifelong health and wellbeing initiative.

The funding consists of £2.5m for up to 10 pilot or feasibility studies, and £10m for research grants. Successful pilot studies will be funded for two years and will help to establish future cross-disciplinary research projects. The grants will comprise awards of between £300,000 and £2.5m for a three to five year period of research.

Both types of funding are to support high quality, innovative research involving researchers from different disciplines – from engineering to genetics. Together they will address the factors that influence healthy ageing and wellbeing in older age. For example, this might include looking at how cognitive function can be preserved in the elderly, or developing new interventions to help older people stay independent for longer.

The lifelong health and wellbeing initiative was launched in 2008 to address the challenges of our ageing society. Current trends suggest that by 2051, one in four people in the UK will be aged over 65, so research in this field is a priority for the research councils.

European grants help scientists probe the mysteries of our genome

Two MRC scientists have been awarded prestigious European Research Council (ERC) grants to carry out cutting-edge genetics research over the next five years.

Professor Wendy Bickmore of the MRC Human Genetics Unit in Edinburgh and Professor Chris Ponting of the MRC Functional Genomics Unit in Oxford were two of 236 leading investigators across Europe to receive highly prized ERC Advanced Investigator grants this year. The awards are designed to support innovative research projects by leading established investigators in Europe.

Wendy received €1.7 million to find out how the very edge of the cell nucleus affects the functions of the genome. This leads on from Wendy’s original observation 10 years ago, that human chromosomes are not randomly arranged in the nucleus of the cell but that some are preferentially located at the edge of the nucleus, whilst others locate far away.

Half of the grant will be used to follow up recent findings from Wendy’s lab that positioning a gene against the edge of the nucleus can impede that gene’s expression and will ask how important this spatial information is in development. The rest of the grant will tackle the neglected idea that the edge of the nucleus has a role in protecting parts of our genome from DNA damage.

Wendy said: “I am particularly pleased that we can now address the idea about the relationship between nuclear organisation and DNA damage, because it was considered too speculative for funding by some other grant agencies. The ERC award is also a recognition of the quality of the research environment provided by the MRC Human Genetics Unit.”

Professor Chris Ponting received €2.4m to work on the functions and evolution of genes which code for certain ribonucleic acids (RNAs). While many RNAs are involved in translating the instructions from our DNA to make proteins, Chris’s research focuses on the mysterious RNA genes that are not involved in making protein, about which little is known. The ERC grant will shed light on how these parts of genome sequences contribute to animal biology, using various sophisticated approaches to figure out just what these genes do.

Chris commented: “Receiving this new grant is exciting since it will allow us to address some fundamental questions. For example, how important is this ‘dark matter’, and are these exotic RNA genes preserved over the millions of years that separate humans from other animals? We’ll be able to decide whether genes that don’t make proteins are as important as those that do.”

Of all European countries, the UK boasted the highest number of ERC grantees in 2009, reflecting the quality of the UK science base and our large share of excellent scientists who are pursuing innovative and exciting research projects.

The ERC also supports early-career researchers who have completed their PhD and carried out two to 10 years post-doctoral research. The MRC is a sponsor of the UK Research Office, which is based in Brussels and can provide advice to MRC researchers who are interested in ERC funding opportunities.

To date, the initiative has funded three research centres focused on quality of life, frailty and the ageing brain which are based in London, Newcastle and Edinburgh. Last year, the second phase of the initiative established three major research collaboratives to develop interventions for self-management of chronic pain, independence during rehabilitation, and promoting health and wellbeing after retirement.

To find out more about the initiative and how to apply for funding, visit www.mrc.ac.uk/lhbw

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For further information contact erc-uk@bbsrc.ac.uk or phone 00 32 2289 6121.
Changes to MRC grants administration

Plans are underway to transfer grants administration for the MRC and other research councils to the new Research Councils UK Shared Services Centre in Swindon. The MRC will soon be joining Je-S (joint electronic submission), which is the Research Councils UK electronic submission and research administration system.

The switch to Je-S will increase efficiency, bring council grants administration under one roof and meet the government’s policy of transferring work outside London. The MRC expects to begin using Je-S for new competitions towards the end of 2010.

For more information, including updates on progress, see [www.mrc.ac.uk/transfertoJeS](http://www.mrc.ac.uk/transfertoJeS)

**OPPORTUNITIES**

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Clinical Trials Unit Director retires after 26 years

Colleagues and collaborators from around the globe came together on 24 March to celebrate her contribution to the world of clinical trials at a scientific seminar. She said: “I have spent most of my professional life working for the MRC. I look forward to the next phase of my life with excitement and some trepidation but suspect I will find ways to keep myself busy!”

“It has been a great pleasure to work with so many colleagues and friends within the MRC, past and present. I am delighted that the CTU will continue with Max Parmar as the new Director and am sure it will flourish under his leadership.”

Retirement from the MRC will not put a stop to all of Janet’s work commitments, however, as she plans to continue in her role as Joint Director of the National Institute for Health Research Clinical Research Network until the autumn.

Sound success for hearing researcher

The award recognises Bernhard’s contributions to spatial hearing and audiological acoustics. Bernhard’s research focuses on overcoming the hearing limitations experienced by patients with cochlear implants – surgically implanted devices which electronically stimulate the auditory nerve and help deaf people to hear.

Cochlear implant patients find it difficult to understand speech in a noisy room because it is hard for them to distinguish one sound from a mixture of others. Bernhard’s research focuses on the brain processes which help people to single out particular sounds and how these are affected in those with hearing impairments.

His group’s findings suggest that cochlear implant patients use differences in sound level between the ears to work out the direction a sound is coming from. They have discovered that fitting patients with implants in both ears can restore their ability to determine sound direction.

Bernhard has also developed tests for assessing the performance of the implants in a noisy space which includes multiple sound sources and simulated reverberation. This allows him to carry out research into some of the everyday challenges faced by cochlear implant patients, such as trying to follow the speaker in group discussions in a classroom.

Bernhard said: “Winning the prize is a great honour not only because it recognises my work but also because it emphasises the importance of hearing research within the large field of acoustics. Receiving the award as a researcher working outside Germany makes it even more special.”

He received the award in March at the annual meeting of the Acoustical Society of Germany in Berlin, at which he gave the plenary lecture, Binaural hearing with cochlear implants.

Dr Bernhard Seeber, a researcher from the MRC Institute of Hearing Research in Nottingham, has been awarded the Lothar Cremer Award – the highest honour of the German Acoustical Society for a young career scientist.
In March, MRC Protein Phosphorylation Unit Director Professor Sir Philip Cohen garnered the latest in a string of honours and awards when he was invited to give the MRC Basic Science Lecture at the Annual Meeting of the American Society of Toxicology.

Each year the lecture showcases research being carried out by UK scientists who are involved with the MRC in some capacity. Established in 1995, the lecture is sponsored by the MRC Toxicology Unit in Leicester. The American Society for Toxicology made Sir Philip an Honorary Member at the opening session of the meeting, which took place in Salt Lake City, Utah, USA.

Sir Philip was recently named the world’s most quoted biochemist of the past decade in a Times Higher Education survey. His research papers were cited 10,378 times in other scientists’ papers between 1 January 1999 and 31 October 2009, according to data on journal articles indexed by Thomson Reuters.

He commented: “I first entered these scientific ‘pop charts’ many years ago when I was named as the 126th most quoted scientist for papers published between 1973 and 1984. It is gratifying to see that, so many years later, other biochemists around the world still enjoy reading my papers and that they find them sufficiently important to be worth mentioning in their own publications.”

Professor Sheila Bird, a programme leader at the MRC Biostatistics Unit, has been awarded the Royal Statistical Society’s Chambers Medal in recognition of her media engagement work.

Every three years this prestigious medal is awarded to single out scientists who have provided outstanding services to the society. The 2010 medal acknowledges Sheila’s effective engagement with the media, parliamentarians and government bodies to promote understanding of statistics and best practice in their use. In 2007, she established the society’s Statistical Excellence in Journalism Awards, past winners of which include The Guardian’s Ben Goldacre and the BBC’s Mark Easton. She also put in place the society’s statistical seminars for journalists, which are held in high esteem.

Sheila explains: “Journalists write well. The Royal Statistical Society wanted to encourage them to write well about statistics. Of course, journalists and statisticians share common ground – being investigative, the need to ask probing questions, and striving for precision. “The statistics seminars for journalists have been a delight. They have involved excellent speakers, examples based on news stories and lively questioning from journalists and parliamentary researchers, whom we also encourage to attend. Statistical literacy is as important for journalists as it is for doctors – so much so that statistical thinking should perhaps feature in university journalism courses as it long has done in medical curricula.”

The medal will be presented to Sheila at the society’s Awards Ceremony in June.
Dr Patricia Lesley Bidstrup 1916–2010

Dr Patricia Lesley Bidstrup was an internationally renowned consultant occupational physician. She died in January, aged 93.

Born in Adelaide, Australia, Dr Lesley Bidstrup came to Europe in May 1945 after volunteering to serve overseas with the United Nations Relief and Rehabilitation Administration. Her first posting was to the Nazi concentration camp at Belsen, Germany, which had been liberated two months earlier. She stayed until February 1946, helping to treat tuberculosis in the camp’s survivors.

Her connection with the MRC began in December 1947 when she was appointed as assistant to Dr Donald Hunter at the MRC Department for Research in Industrial Medicine at the Royal London Hospital in Whitechapel. Dr Hunter was a leading figure in the then emerging discipline of industrial medicine, and Lesley worked with him at the MRC until 1958, researching the substances used to enhance post-war food production; in some cases exposing their harmful effects. For the following two decades, Lesley was an honorary clinical assistant in the chest department of St Thomas’ Hospital, London.

As an expert in the clinical effects of chromium, mercury, asbestos and many of the pesticides and preservatives once in common use in agriculture and food storage, Lesley was called as an expert witness in many high-profile legal actions. Notably, she gave evidence in the case against Pacific Gas and Electric, in California, which centred on the contamination of the local water supply by hexavalent chromium. This case was the subject of the 2000 feature film Erin Brockovich.

Lesley married fellow industrial medicine specialist Dr Ronald Frank Guymer in 1952, but was widowed in 1977.

Dr Jennifer Gunning 1944–2010

Researcher and administrator Dr Jennifer Gunning played a leading role in the development of medical ethics in the UK and developed the working model which is now followed by the Human Fertilisation and Embryology Authority. She died of cancer in January, aged 65.

Born in Wales, Jennifer went to school in Gloucestershire and trained as a secretary. She made the leap into science in 1971, signing up for one of the first Open University courses, and ultimately gained a PhD in the crystallography of nerve structure at Birkbeck College, London.

After her PhD, Jennifer embarked on a career in science administration at the MRC, specialising in the ethical and social implications of biological research. When the MRC set up the Voluntary Licensing Authority (VLA) in the mid-1980s to look into how in vitro fertilisation could be regulated, she was appointed as its secretary.

At the VLA, Jennifer used her considerable energy, charm, humour and administrative skills to gain the support of professionals in the IVF field for the regulation of clinics offering IVF. She was responsible for amassing large volumes of paperwork, organising meetings and keeping members fully briefed on new developments.

Jennifer went on to produce the Department of Health’s 1990 report on the practice and regulation of IVF worldwide, which provided the factual basis for the passage of the Human Fertilisation and Embryology Act through Parliament. She also published guidance on a wide range of topics, including pre-implantation diagnosis and umbilical cord cell banking, and was much in demand as a consultant in bioethics.

Her former VLA colleague Dr Veronica English, now Deputy Head of Bioethics at the British Medical Association, paid tribute to her talents: “The success of the VLA was in no small part due to Jenny’s amazing administrative and inter-personal skills. She was an inspirational leader and I learnt a huge amount from her. She was also great fun to work with – a wonderful colleague and a dear friend.”

Jennifer settled in Dorset and married Peter Gunning, a quantity surveyor, in 1965. She is survived by Peter and their two sons, Alexander and Barnaby.

Correction

The obituary of Professor Sir Donald Acheson published in the March/April issue of Network incorrectly stated that the MRC Environmental Epidemiology Unit was set up to study the causes of chronic disease by epidemiological methods; in fact its focus on the developmental origins of health and disease was a later development. Also, Sir Donald’s research was not the first to establish a link between asbestos and cancer as implied in the obituary. A full-length amended obituary can be found on the MRC website at:

www.mrc.ac.uk/Newspublications/News/MRC006582

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DIARY

Max Perutz Science Writing Award 2010

If you are an MRC-funded PhD student with an interest in communicating your science to a wider audience, the Max Perutz Science Writing Award is for you.

We want you, in no more than 800 words, to tell us about your research in a way that would interest a lay audience. Why is it important? Why does it interest you? And why should it interest the reader?

The winner will receive £1,000 and have their winning entry published in the Guardian newspaper. Long-listed entrants will be invited to an awards evening on 25 August 2010 at 40/30 St Mary Axe (the Gherkin) in London.

The competition is open from 17 May and the deadline for entries is 28 June. All MRC-funded research students are eligible to apply. For more information, go to www.mrc.ac.uk/sciencesociety/awards

Help explain the brain at Cheltenham Science Festival

Scientists who would like to have a go at engaging with the public about MRC research are invited to come along to this year’s Cheltenham Science Festival, which takes place from 9 to 13 June.

The MRC's theme for 2010 is The Brain. In conjunction with the new MRC brain exhibition, which highlights the achievements of MRC scientists in neuroscience, we are running a number of interactive activities to show how the brain works and what happens when it goes wrong. We will be focusing on diseases such as Alzheimer's and Parkinson's and explaining how the MRC is addressing the scientific challenges of mental health research.

If you’d like to take part, contact Jude Eades, MRC Regional Communications Manager, at j.eades@har.mrc.ac.uk

MRC science at the Royal Society summer exhibition

Each summer, the Royal Society throws open its doors to the public to showcase some of the UK’s best science and technology research. This year's exhibition runs between 25 June and 4 July at the Royal Festival Hall's Clore Ballroom in London, and is part of the See Further festival held jointly with the Southbank Centre. Visitors can try out new imaging methods which are helping researchers to explore how we remember, think, speak and feel with help from scientists from the MRC Cognition and Brain Sciences Unit. MRC Laboratory of Molecular Biology researchers will let visitors try out a new giant microscope lens which makes it possible zoom in from a view of the large scale structure of a specimen right down to its sub-cellular detail. With support from several UK partners, the MRC Centre for Regenerative Medicine will run an exhibit on stem cells and blood transfusion which will show how stem cells develop into red blood cells and explain possible stem cell treatments of the future. Entry is free. For more information go to http://royalsociety.org

Summer Mill Hill lectures

Each year the MRC National Institute for Medical Research (NIMR) holds a series of lectures given by eminent scientists from around the world. The Medawar Lecture, Constructing sensory-motor circuits, takes place on 26 May and on 21 July there will be a talk on Molecular architecture on circuits underlying genetically pre-programmed behaviours in rodents. All lectures take place at 4pm in NIMR’s Fletcher Hall. For more information and to register, contact enquiries@mrcri.nimr.ac.uk
RESEARCH ROUNDUP

Cell discovery may shed light on asthma

Scientists at the MRC Laboratory of Molecular Biology have discovered a new type of immune cell which could point the way to new preventative treatments for asthma. The cells, named nuocytes by the scientists, produce a chemical called interleukin-13 (IL-13). IL-13 is used in the body’s immune defence against invading parasites and is also involved in causing inflammation of the airways in asthma patients – the symptom which causes breathing difficulties. The scientists hope that the discovery of nuocytes, a previously unknown source of IL-13, may improve our understanding of what happens in our immune systems at the beginning of an asthma attack. The research was co-funded by Asthma UK and led by Dr Andrew McKenzie. He explained: “We have identified a new immune cell type which is a major source of IL-13 – an important mediator in asthma. My group is now investigating the role of nuocytes in models of asthma with the goal of translating our research into new treatments.”

Published online ahead of print at www.nature.com, 3 March 2010

Testing for HPV during smears doesn’t help predict cancer

Routine testing for the human papilloma virus (HPV) as part of the NHS Cervical Screening Programme does not help doctors identify which women are at risk of cervical cancer, findings from an MRC-funded clinical trial have shown. TOMBOLA (Trial of Management of Borderline and Other Low-Grade Abnormal Smears) included 4,000 women who had had an initial smear test which classified them as ‘borderline’ or ‘mild’ – meaning that there were minor cell changes in the cervix. Of these women 1,755 (43.5 per cent) had a positive HPV test, yet 1,234 (70 per cent) remained free of pre-cancerous disease over the course of the three-year trial. The study found that it is difficult to distinguish minor cell changes which might progress to cancer and those that do not. Findings also showed that a single test for 14 types of HPV strongly associated with a higher risk of cervical cancer did not help decide the best form of follow-up treatment, except perhaps in women over 40 years. One of the study’s authors, Dr Maggie Cruickshank of the University of Aberdeen, said: “For younger women, HPV testing after a low grade smear could lead to unnecessary investigations and intervention.”

Published online ahead of print at www.bjog.org, 18 March 2010
Hormone injections may reverse infertility

Twice weekly injections of the hormone kisspeptin can restore fertility in some women, MRC-funded research suggests. The team from Imperial College London studied 10 women with hypothalamic amenorrhoea – a condition caused by sex hormone deficiency which prevents menstruation, resulting in infertility. The women received injections of kisspeptin or control injections of saline. Regular blood samples were taken to measure levels of luteinising hormone and follicle stimulating hormone, the two sex hormones essential for ovulation and fertility. The women demonstrated a large increase in circulating sex hormones the first day, which was halved on day 14. However, after day 14, their responsiveness to the kisspeptin treatment remained steady. On the last day of the trial, women who had been given kisspeptin injections showed a 16-fold increase in their hormonal response compared with controls. This is the first study to show this effect can be maintained over the long term and it may lead to new therapies for women whose infertility is due to low sex hormone levels. Dr Waljit Dhillo of Imperial College London, who led the study, said: “Our next step is to perform a much bigger clinical study with a larger number of participants to see if kisspeptin administration can enable women with hypothalamic amenorrhea to regain fertility.”

Abstract published online at www.endocrine-abstracts.org, March 2010

Cheap antibiotic halves deaths in HIV patients on ART

A new analysis of the MRC’s Developing Antiretroviral Therapy in Africa (DART) trial has shown that a safe, cheap and widely available antibiotic could save the lives of thousands of people starting anti-retroviral treatment for HIV in developing countries. The analysis of 3,179 trial participants, who were followed for four years, showed that a daily dose of the antibiotic co-trimoxazole (trimethoprim-sulfamethoxazole) in combination with Anti-Retroviral Therapy (ART) cuts the risk of death by 50 per cent in the first 18 months of treatment. ART alone cuts mortality risk by more than 90 per cent and co-trimoxazole provides additional benefit. Co-trimoxazole is used in countries with limited resources to treat and prevent common infections. In HIV patients, it effectively treats and prevents pneumonia, bacterial infections and the parasitic infection Isospora belli. The antibiotic also reduced the occurrence of malaria by 26 per cent. Lead author Dr Sarah Walker from the MRC Clinical Trials Unit, said: “This compelling evidence reinforces the existing World Health Organization (WHO) guidelines, which have been variably implemented in developing countries. The benefits of this treatment far outweigh the risk of side effects, so healthcare workers can be confident in its effectiveness and help save more lives.”

Published online ahead of print at www.thelancet.com, 29 March 2010

Songbird genome aids research on learning and memory

Sequencing the genome of a tiny songbird, the zebra finch, has shed light on the genetics behind human learning and memory, as well as fertility. The collaborative study involved experts from the MRC Functional Genomics Unit in Oxford, and from 24 other research teams from around the world. Songbirds share an important trait with humans: they learn to converse with each other. By comparing the genome of the zebra finch with that of the chicken, which does not learn to sing, the scientists were able to pinpoint the genes involved in vocal learning. One of the research team, Professor Chris Ponting of the MRC Functional Genomics Unit, said: “Normally we think of genomes providing a blueprint for making only proteins, but there are indications here that song stimulates the zebra finch to turn off the production of RNA molecules.” The next stage will be to investigate the role of RNAs in learning and memory for the zebra finch, or even humans. The research has also revealed a genetic component to zebra finches’ sperm length and speed. It is now possible to identify genes that explain these differences in fertility, so the scientists think it is likely that the same genes will have similar effects in humans.

Brain training games don’t make you cleverer

Computer-based brain training doesn’t improve overall intellectual function according to a national study carried out by the MRC with the BBC science programme Bang Goes the Theory. Brain Test Britain monitored 11,430 adults across the UK as they followed a six-week training regimen. At least three times a week, 10 minutes a day, participants completed tasks on the BBC’s website that were designed to improve reasoning, memory, planning, visuo-spatial skills and attention. The aim was to discover whether brain training really can improve overall cognitive function in the general population. Brain function was measured before and after training with computer-based benchmark tests. Trainees got better at the individual tasks they practised, but couldn’t apply these improvements to other, untrained tasks – even when they tapped into similar areas of the brain as those used during training. The control group, who had practised no specific training tasks, benefitted by just as much as the brain-trained participants and sometimes by more. Dr Adrian Owen of the MRC Cognition and Brain Sciences Unit, who led the research, said: “Our findings will no doubt surprise millions of people worldwide who do some form of brain training every day in the belief that ‘exercising’ their brain makes them better at everyday thinking tasks.”

Published online ahead of print at www.nature.com, 20 April 2010

Brain structure changes shed light on autistic traits

Autism-like behaviour in healthy people is linked with structural changes in the part of the brain which deals with social interactions, MRC scientists have discovered. Autism has long been known to consist of a spectrum of psychological disorders, with some people having more pronounced autistic traits than others. However the new findings suggest that rather than there being a precise cut-off, the spectrum extends seamlessly into the general population. Healthy volunteers underwent a Magnetic Resonance Imaging brain scan and completed a questionnaire which assessed how much their social behaviour and habits resembled those seen in people with autism. The scientists looked at the structure of a part of their brains called the posterior superior temporal sulcus (pSTS), which is linked to social functions such as monitoring changes in gaze direction and empathising with others. People with autism tend to show abnormal brain activity in the pSTS when asked to perform these tasks as well as abnormal brain structure this region. Findings from the study showed that there was less white brain matter in the pSTS in those healthy people with a greater number of autistic traits. Dr Andy Calder of the MRC Cognition and Brain Sciences Unit, who co-led the research, said: “This suggests that traits associated with the autism spectrum affect the brains of healthy volunteers in much the same way as they do in people with a diagnosis of autism.”

Published online ahead of print at http://cercor.oxfordjournals.org, April 2010
Eight years ago, the Science Media Centre (SMC) embarked on a mission to improve communication between scientists and journalists. Fiona Fox, the centre’s director, says the benefits for scientists of engaging with the media are clear, and should encourage more scientists to get their message out there.

It’s good to talk – especially to the media

I must say I am not a fan of the notion that every scientist must be compelled to engage with the media. Some will quite simply never be very good at it and many others working in areas of basic research will rarely be in demand to a media obsessed with the ‘so what?’ question. But I passionately believe that some scientists need to engage and the rest of us have to support those that do.

Ten years ago the sentiment that scientists do not need to know anything about PR probably prevailed in the scientific community. But media frenzies over GM crops and the MMR vaccine have convinced many that perpetually steering clear of the media fray is no longer an option for scientists who need public and political support in order to pursue their research. It is no longer realistic for prominent scientists to assume that can get by without some understanding of the ways of the media.

"It is no longer realistic for prominent scientists to assume they can get by without some understanding of the ways of the media."

The GM story that raged throughout 1999 and 2000 was easily the most significant illustration of what can happen if scientists choose to ignore sensational headlines and inaccurate reporting. While campaigners, MPs and newspaper editors waded in to warn of the dangers of the new technology, the one group of people who barely raised their heads were the excellent plant scientists developing this new approach to plant breeding.

The result was that a nation turned against a promising new technology after an ill-informed debate in which the voices of those with the most knowledge and understanding of the benefits and risks of this new approach were not heard. Ten years on, when the Government moved to ban stem cell research using human-animal hybrid embryos purely because of public distaste, scientists – MRC-funded
researchers among them – proved they had learned the lessons of the GM saga.

Over a period of a year in which the media, the public and finally Parliament debated the pros and cons of closing the door on this specific avenue of research, scientists left their labs repeatedly to patiently explain their research to journalists, MPs and the public. They even debated with Catholic bishops at an event recorded for BBC Radio 4. There were two outcomes to this approach – a national debate informed by accurate, evidence-based science, and a vote in the Commons allowing this research to continue.

The Science Media Centre now has a beautiful bunch of slides that show how engaging with a controversial story can actually transform what the public sees and hears. One of my favourite examples involves a series of bogus human cloning claims which hit the headlines a few years ago. Several maverick fertility experts and even a US religious sect hogged the headlines with claims that they had cloned the first human being. Despite the fact that no evidence was presented and that the claims were made in London hotel rooms rather than the scientific literature, newspaper editors terrified of missing the first human clone story rushed to splash the bogus claims on their front pages.

To my horror, I discovered that many respected regenerative medicine experts were so frustrated by the media’s treatment of the story that they refused to comment. However, their principled ‘no comment’ position simply allowed the media to suggest that mainstream scientists were lining up to condemn maverick cloners. For the first time in the sorry saga of media stories on this topic, the public learned that responsible scientists are not interested in human cloning.

Similarly, when Prince Charles spoke out a couple of years ago to blame GM for climate change and worldwide environmental degradation, we approached the plant scientist community, which had remained largely silent during the 1999 furor. This time, some of the UK’s leading plant scientists spoke to the press and were rewarded with a glut of headlines which made it very clear that they were not impressed by Prince Charles’s arguments.

After eight years of working on the front-line between science and the media – the very place where things are supposed to go wrong – the Science Media Centre has virtually no examples of serious misreporting. There are risks involved in engaging with the media on controversial issues – but like so many other risks they are highly exaggerated. And the benefits for science, not to mention society, are tremendous.

The MRC Press Office works hand-in-hand with the Science Media Centre to improve the way MRC research is communicated to the public in the media. The MRC Press Office offers MRC-funded scientists personal media management support, advice on likely media interest in their research, and training in talking to journalists.

If you have an exciting research story you want to tell the world, please contact your Regional Communications Manager at the earliest opportunity who can guide and advise you on which communication tool is right for you and your research.

Cambridge and Midlands: Adrian Penrose (apenrose@mrc-centre.cam.ac.uk)

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Or if publication of your research is imminent and you think it would definitely be of interest to the media, contact the MRC press office:
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