Delivery Plan Reporting Framework
2012/13
Delivery Plan Reporting Framework (formerly Scorecard) 2012/2013

MRC will report on the outputs of activities every six months (in September (Q3) and March (Q1) each year). The following table sets out milestone reports/data and evaluations that will be used to assess progress against delivery plan areas in the first year of the CSR (2011/12). Target dates for delivery of this information are indicated, and results will be summarised at the subsequent six monthly meeting. The expected outcomes, as published in the MRC delivery plan, are included in the table.

The MRC tracks progress with internal projects using information gathered using an online programme and projects management system (PPMS), reporting by exception to MRC’s Management Board. Strategy Board and Council receive summary updates on key projects at each meeting.

Achievements and progress for the first year of the spending review (2011/12) are noted below.

An indication is given of monitoring and evaluation plans for 2012/13, and these plans will be updated each year throughout the CSR.
### Key outputs reported in 2011/12

<table>
<thead>
<tr>
<th>Expected outputs/outcomes 2012/13 – 2014/15</th>
<th>Expected Outcomes by the end of the CSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the Government’s life science strategy the MRC’s £130m commitment to stratified medicine was highlighted. The £130m comprises: £60m for new research in stratified medicine, £60m to address some of the most challenging questions about disease mechanisms, and £10m in collaboration with AstraZeneca who are providing proprietary compounds to academic researchers to help develop medicines.</td>
<td>Outcomes from Biomarker research funded in last CSR to be reported (Q3 2012/13)</td>
</tr>
<tr>
<td>Stratified medicine MRC plans to commit £60m over four years to this area were put into action with the MRC completing a call for outline applications in Jan 2012. The call was to establish disease-focused partnerships to stratify disease for patient benefit. Short-listing will lead to full proposals being considered in June. We expect these consortia to build on existing clinical research infrastructure and have strong links with industry – particularly the diagnostics sector. Those not successful now will have an opportunity to develop their consortia further to make it more competitive in future funding rounds.</td>
<td>Evidence of new research in stratified medicine, and new partnerships reported in 2014/15</td>
</tr>
<tr>
<td>Experimental Medicine Challenge Grants The Experimental Medicine Challenge grant scheme was launched in 2012. This scheme will support ambitious, challenge-led studies of disease mechanisms in humans. These studies will produce major new mechanistic insights into human disease, with potential applicability to new therapeutic approaches and opportunities for “reverse translation” to more basic research. The MRC expects to commit £20m per year to these studies for the next three years.</td>
<td>Outcomes from challenge grants reported in 2014/15</td>
</tr>
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</table>

2. Stratified Medicine – Call for proposals for disease-focused partnerships to stratify disease for patient benefit. [http://www.mrc.ac.uk/Fundingopportunities/Calls/stratified_medicine/MRC008386](http://www.mrc.ac.uk/Fundingopportunities/Calls/stratified_medicine/MRC008386)
MRC/AstraZeneca: Mechanisms of Disease
MRC and AstraZeneca have announced an innovative approach to provide access for UK academic researchers to a high-quality collection of AstraZeneca compounds (announced December 2011). These compounds can be used to support studies to investigate human mechanisms of disease and the development of potential therapeutic interventions. MRC has earmarked up to £10m over three years to support high quality studies that utilise these compounds.

Outcomes from mechanisms of disease call reported in 2012/13

New priorities and activities needed to underpin translation research will be reported. (2013/14)

Summary of progress with and outcomes from regenerative medicine research published as part of the mid-term review of the MRC Strategic Plan (2012/13)

ii) Regenerative Medicine

MRC plans to spend in the region of £130m overall in regenerative medicine (a priority area for TSB) during the spending review period. The MRC will:

- support research into the mechanisms of stem cell renewal and differentiation; predictive models for tissue integration, healing and repair; scaling up and safety of stem cell therapy for clinical practice; and systems for delivering and monitoring cell therapies in the body
- continue to invest in the UK Stem Cell Bank to ensure availability of cell lines and biomaterials to support translational research in regenerative medicine.
- coordinate a cross-RC review of regenerative medicine investments in 2011 and coordinate the next phases of development with other partners. We expect that larger, proactively managed, investments will be needed from 2012 to address preclinical research opportunities with the NHS and with industry
- develop with the MoD and NIHR a pilot initiative in trauma research, to apply regenerative medicine approaches to treatment of traumatic injuries in military and civilian settings

BIS stocktaking report on regenerative medicine published July 2011.

A cross BBSRC, EPSRC, ESRC, MRC and TSB strategy for regenerative medicine was considered by MRC Strategy Board in February 2012 and will be published shortly.

The £21.5m cross-council/TSB regenerative medicine programme is progressing well with £8.5m committed in 2011 to 14 projects to develop new tools and technologies.

TSB Cell Therapy Catapult was announced in 2011, committing an additional £50m to this area.

The MRC, EPSRC and BBSRC announced the “Regenerative Medicine Technology Platform” a commitment of £25m over five years to research that will strengthen the Cell Therapy Catapult.

- UK stem cell research centres of excellence continue to recruit and retain the best scientific staff, and attract international and private sector funding to the UK
- resolution of issues around scaling up and safety of stem cell therapy for clinical practice
- novel regenerative medicine tools, products and therapies in areas where healthcare costs are high (such as diabetes, cardiology, wound healing, neurodegenerative disease, and orthopaedics)
- development of a variety of new business and service models necessary for the delivery of regenerative medicine by the private sector and the NHS

4 MRC/AstraZeneca: Mechanisms of Disease call for proposals. http://www.mrc.ac.uk/Fundingopportunities/Calls/MoD/MRC008389
6 £8.5 million grant funding to boost UK’s regenerative medicine capabilities. http://www.innovateuk.org/content/competition-announcements/85-million-grant-funding-to-boost-ucks-regenerative.ashx
• continue to work closely with the TSB, BBSRC, EPSRC and ESRC on a joint Regenerative Medicine Programme for multidisciplinary research base and fund significant academic-industry collaborations in areas ripe for pre-competitive development. MRC will commit up to £2.5m to the first phase of this programme in 2011.

• partner with TSB’s initiative in Technology Innovation Centres and international agencies such as the Californian Institute of Regenerative Medicine and work with the Wellcome Trust to align our stem cell programmes in Cambridge.

### Systems Medicine

- support highly collaborative programmes focused on clinical problems
- invest in quantitative skills and supporting informatics, complementing BBSRC investment and building on investment linked to the MRC supported High Throughput Sequencing hubs around the UK
- increase pull-through from new imaging and analytical technologies into cellular and sub-cellular research

Following an assessment of the current systems biology portfolio and initiatives undertaken by other research councils, the MRC announced a call for proposals in systems medicine⁸. The Infections and Immunity Board has held a meeting (January 2012) to discuss “systems immunology across the life-course” and plans a workshop in Q3 2012. Development of this area will be re-visited before the end of the spending review period.

Report strengthened investment in this portfolio area (Q2 2012/13)

By 2014/15 report examples of new research established as a result of MRC investment.

- increased numbers of informaticians and biologists trained in systems medicine
- new insights into complex disease mechanisms, underpinning work on stratification
- projects in the synthetic biology area enter first into human and developmental clinical studies
- faster and more accurate drug target identification and evaluation, increased industry collaboration.
- new cross disciplinary collaborations – e.g. in mathematics

2.1.2. Living a long and healthy life

i) Mental Health and Wellbeing

- promote a ‘cross-symptom’ approach to human studies recognising that the same psycho-pathological processes may be involved in several different conditions
- expand our programmes of exploratory and Phase 1/2 clinical studies and build opportunities for collaboration between academia and industry
- support research to develop biomarkers to support drug development and to identify people at risk of mental illness in order to target preventative or early therapeutic interventions

In parallel, the MRC will support population–based science to accelerate development of early intervention strategies for preventing chronic mental ill health and promoting wellbeing. We will:

- work with ESRC to identify means of evaluating ‘wellbeing’ in the medical and social contexts
- identify mechanisms that confer resilience and vulnerability to inform early interventions to relieve the burden of chronic and relapsing mental illness
- support research into the effects of events in childhood and adolescence to understand the emergence of conduct and emotional problems and the development of ‘adult’ disorders
- support studies in large population cohorts to elucidate how genes interact with environment and social factors in determining risk of mental illness, and identify the causal links between poor mental health and physical disease
- exploit European links and work with ESRC to study environmental and social determinants (including migration) which influence the prevalence of psychiatric disorders such as schizophrenia in different European regions

A facilitator with an industry background was seconded to work with major centres in mental health experimental medicine, and a workshop held to discuss challenges in this area.

Having identified the challenges in the area of mental health research, the following actions were taken:

- a call for exploratory studies in experimental medicine for mental health (EMMH)\(^9\)
- a Population and Patient Data Sharing Initiative for Research into Mental Health\(^10\)
- with funding from the Medical Research Foundation a new flagship fellowship training programme to provide innovative training in key areas of mental health research\(^11\).

By 2012/13 MRC will report examples of early stage clinical studies, with information regarding the programme of research in this area (Q2 2012/13).

Outcomes reported as part of the mid-term review of the MRC strategic plan (2012/13)

Highlight progress against the priorities set out in the 2010 review of mental health research by 2013/14.

- new validated biomarkers leading to effective novel differential diagnostics for brain diseases such as dementia and depression
- strengthening of translational clinical neurosciences driving development of new therapeutics and interventions
- early interventions to promote wellbeing over the life course
- new treatments for mental health problems and dementia entering clinical trials
- evidence to inform social and public health policy related to support for vulnerable individuals and families and reducing the economic burden of mental ill health

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\(^9\) Experimental medicine for mental health. http://www.mrc.ac.uk/Fundingopportunities/Calls/Experimentalmedicineformentalhealth/MRC007531
\(^11\) Medical Research Foundation’s mental health clinical research training fellowship programme. http://www.mrc.ac.uk/Fundingopportunities/Calls/MRF/MentalHealthFellowship/index.htm
### ii) Addressing the impact of lifestyle and behaviours on the health of the nation

#### Obesity

MRC will pursue research in the areas in the 2010 MRC obesity research priorities statement:

- understanding the processes leading to obesity, those linking obesity to disease, and the lifestyle, physiological and genetic factors causing differences in susceptibility between individuals.
- investigating the neuroscience of obesity, including appetite regulation, energy homeostasis and reward pathways
- identification of testable interventions to prevent and treat obesity, particularly at population level as a basis for developing effective public health policies.

The main activity addressing the MRC obesity research priorities\(^\text{12}\) is planning for a new investment in Cambridge, involving a major commitment by both the MRC and Wellcome Trust to research in this area.

Strategy Board considered the new vision for obesity and metabolic medicine in Cambridge in May 2011. £12m was approved in principle to support the initiative, and it is expected that detailed proposals will be considered later in 2012.

Report examples of research which provide new therapeutic and preventative opportunities, and likely to have lifestyle and policy impact in 2013/14.

- new therapeutic interventions (pharmacological and behavioural) for prevention and amelioration of obesity
- increased interaction between industry and UK science base to translate discoveries into new therapeutic approaches and economic and societal gain
- evidence to inform policy in relation to preventing & treating drug misuse, excessive drinking and obesity

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#### Addiction

Building on the National Addiction Research strategy MRC will support research to:

- develop new approaches to reduce alcohol abuse
- understand the causes, risk factors and natural history of addiction, focusing on adolescence
- monitor the incidence and prevalence of problem drug use and understanding biological and social harms
- develop and implement new treatments and preventive strategies for addiction and relapse

We will spend over £10m in this area in support of strategic activities and ongoing baseline activities.

Progress with the addiction strategy, including information about changes in the spend in this area, progress in developing new interventions, interactions with industry and evidence of influencing policy, will be captured in a programme stocktake to be conducted in 2012/13.

- increased UK research capacity in addiction
- new therapeutic interventions (pharmacological and behavioural) for prevention and amelioration of addiction
- increased interaction between industry and UK science base to translate discoveries into new therapeutic approaches and economic and societal gain
- evidence to inform policy in relation to preventing & treating drug misuse, excessive drinking and obesity

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\(^{12}\) MRC Obesity research priorities http://www.mrc.ac.uk/OurResearch/Priorities/ObesityResearch/index.htm
### iii) Healthy ageing

| Decision taken on major ARUK/MRC investment in Centres for musculoskeletal ageing\(^{13}\). Two Centres are supported\(^{14}\) |
| The MRC will examine with other stakeholders the impact of ageing initiatives across the Research Councils so examples of return on investment are identified and this learning is applied sooner. 2013/14 Report on maximising the impact of the LLHW programme through multidisciplinary and cross-sector working in physical activity, extending working lives, sensory loss and enhancing mobility and independence. (Q2 2012/13). |
| New preventive interventions to maintain musculoskeletal health & reducing frailty Evidence to underpin policy on extended working lives Increased research towards new treatments for dementia |

MRC will continue to lead the cross-Council Lifelong Health and Wellbeing (LLHW) challenge. We will develop initiatives in neurodegeneration, musculoskeletal ageing and extended working lives. We will:

- promote links between national centres of excellence in neurodegeneration research to develop research into predictive animal models, common platforms for brain imaging, and frameworks for multi-centre clinical studies (in partnership with German and Canadian funding agencies)
- lead UK participation in a new EU-wide Joint Programming initiative in neurodegeneration, aiming for jointly funded activities from 2011
- promote research to translate research into age-related deterioration in bone and muscles into novel diagnostic, prognostic and therapeutic measures
- work with Arthritis Research UK to understand the mechanisms that modify age related changes, including physical activity and diet, to identify preventive interventions to sustain musculoskeletal health and mitigate disease risk
- work with partners through the LLHW programme to understand the changing capabilities of an ageing workforce and investigate the health and socioeconomic impact of working in later life.
- aim to spend at least £150m in neurodegeneration across the full range of activities, including increased funding for dementia research

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\(^{13}\) [http://www.mrc.ac.uk/Fundingopportunities/Calls/Centreofexcellencemusculoskeletalageingresearch/MRC007574](http://www.mrc.ac.uk/Fundingopportunities/Calls/Centreofexcellencemusculoskeletalageingresearch/MRC007574)

\(^{14}\) [MRC-ARUK Centres for Musculoskeletal Ageing (Birmingham/Nottingham, Liverpool/Newcastle/Sheffield)](http://www.liv.ac.uk/media/livacuk/ageingandchronicdisease/brochure.pdf)
### 2.1.3. Health research is a global issue

#### i) International leadership

- develop and sustain strategic partnerships with key international players, particularly in South East and Southern Asia, exploring opportunities for technology transfer and innovation
- play a leading role in influencing the European scientific agenda, leading the development of EU Joint Programming on Neurodegeneration, and contributing to joint programming in ageing, antibiotic resistance and food for health
- engage with negotiations relating to the Framework Programme and the development of the European Science Foundation, and contribute to negotiations on European Directives affecting research

MRC developed the Joint Programme in Neurodegenerative Diseases (JPND) Strategic Research Agenda on behalf of the 23 JPND member countries, and the strategic research agenda was launched in Feb 2012\[^{15}\]. This provides a roadmap for aligned national and EU-wide investments over the next decade that seeks to address the growing burden of age-related neurodegenerative disorders. MRC’s role in its implementation has been discussed at Strategy Board in Q1 2012.

Publication of EMRC special policy briefing on the analysis of research portfolios (MRC chair)\[^{16}\], and reports from the ESF members forum for evaluation (MRC lead)\[^{17}\]. Will help set agenda for international joint evaluation of health research portfolios.

Report progress on discussions with international partners (2013/14)

An overview of the involvement of MRC funded groups in EC funded programmes will be included in the publication of MRC e-Val data later in 2012. MRC researchers have reported involvement in more than 450 programmes funded through FP6 and FP7, totalling more than £130m in value. In addition 100 awards via Marie Curie Actions totalling £34m, 40 awards via the HFSP totalling £7m, and 50 awards from the ERC totalling £88m.

- increased funding leveraged from international partners to support UK scientists
- alignment of international biomedical science policies and funding strategies with UK priorities
- increased inward investment from strategic partnerships in Europe and globally
- access to international research consortia and infrastructure

#### ii) Global Health

- continue our joint scheme for global health clinical trials with DFID and the Wellcome Trust, focussing on trials addressing health inequalities likely to make the biggest impact delivering both practical interventions and improved policy advice
- work through our Units in The Gambia and Uganda to harness the value-added from our population–based and laboratory programmes addressing global health issues such as tuberculosis, HIV and chronic non-communicable disease.
- provide support for research leadership in Africa to help reverse the brain drain of qualified biomedical researchers
- run a joint call to study chronic non communicable disease with the Indian Council for Medical Research
- as a founding member of the new Global Alliance for Chronic Diseases, MRC will support a global approach to research on chronic diseases including hypertension and mental health.

The Global Health Group considered draft metrics for the Gambia Unit in June 2011. The Unit is working on finalising and implementing these.

The MRC Infections and Immunity Board supported proposals from the new Director of the Uganda Unit in November 2011.

Summary of progress with global health research will be published as part of the mid-term review of the MRC Strategic Plan (2012/13).

Reporting of spend and commitment to specific global health schemes (2014/15)

- new strategies for tackling global health threats impacting on UK
- strengthened and progressive science leadership in MRC African Units working in the local research environment for a sustainable future
- improved evidence base for targeting overseas aid budgets for health and for provision of healthcare in the UK setting (e.g. for HIV and TB)
- new evidenced based treatment for the major global health threats moved into policy and practice in low and middle income countries

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\[^{15}\] Launch of JPND Research Strategy (February 2012) [http://www.neurodegenerationresearch.eu/initiatives/strategic-research-agenda/str-launch/](http://www.neurodegenerationresearch.eu/initiatives/strategic-research-agenda/str-launch/)


2.1.4. Harnessing the value of population health sciences for the public health agenda

Maximising the impact of large scale population-based cohorts

Over the next CSR period the MRC will exploit the rich data resource of large cohorts, such as the UK Biobank, by supporting both initial cross-sectional analyses of the baseline data to assess associations between the environment and disease prevalence (e.g. asthma or obesity) and genetic and biochemical analyses, linked to environmental data, of new disease cases within the cohort to provide unique insights into mechanisms and causes of diseases that are a major public health burden.

We will support the development of a new 2012 birth cohort and its linkage to existing birth cohorts to ensure maximum impact on both health and social policy is realised.

The UK Biobank is a major national health resource\(^ {18} \), successfully recruiting 500,000 people aged between 40-69 years in 2006-2010 from across the country to take part in this project. Participants have undergone measures, provided blood, urine and saliva samples for future analysis, detailed information about themselves and agreed to have their health followed. Over many years this will build into a powerful resource to help scientists discover why some people develop particular diseases and others do not.

The UK Biobank has additional funding of £6m for extra baseline measurements (such as eye measures and saliva samples) and £25m for the next 5 years, 2011-2016 (to support storage of samples, and developing the online access facility that will allow scientists to use the Resource).

The MRC Data Sharing Service (DSS) is in its third phase. During phase 1, the MRC, STFC, UCL and Oxford University, in collaboration with five MRC-funded case studies, developed a prototype online “gateway” for the discovery of MRC-funded population and patient studies. The Gateway\(^ {19} \) provides access to 45,000 variables from four of the largest population cohort studies. In phase 3 the service is expanding its work to 15 of the largest MRC funded (and co-funded) population cohorts which in 2009/10 had combined expenditure of £10.4m.

The DSS will work closely with the new ESRC/MRC Cohort Resources Facility, set up to integrate and augment data from new and existing UK cohort studies.

An innovative new ESRC/MRC funded Birth Cohort Study designed by multidisciplinary team from key UK universities, was awarded in 2011 following tender and international peer review. The study will receive £28.5m from BIS via the large facilities capital fund, £3m from ESRC and £2m from the MRC.

| Update on Biobank progress and utilisation in Q2 2012 and Q2 2014. | • greater understanding of environmental and genetic determinants of disease, leading to novel approaches for prevention and therapy |
| Progress with the third phase of the DSS reported 2012/13 | • increased national capability in quantitative skills in population data management and analysis |
| Summary of progress in maximising the use of population data published as part of the mid-term review of the MRC Strategic Plan (2012/13) | • increased ability to respond to new and re-emerging infections |
| | • ability to target infectious disease interventions to vulnerable groups |

\(^ {18} \) About UK Biobank http://www.ukbiobank.ac.uk/about-biobank-uk/  
\(^ {19} \) MRC Research Data Gateway http://www.mrc.ac.uk/Ourresearch/Ethicsresearchguidance/datasharing/Gateway/index.htm
Increasing economic and societal gain through E-health research

<table>
<thead>
<tr>
<th>The MRC, in partnership with Government and charity funders, will invest in:</th>
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<tbody>
<tr>
<td>• support for methodological development and the integration of medical informatics</td>
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<tr>
<td>• outstanding research environments to deliver training and skills in data management, analysis and statistics</td>
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<tr>
<td>• co-ordination of best practice, collaboration and interdisciplinary culture</td>
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| MRC led a mapping exercise on behalf of the UK research funders and the Association of the British Pharmaceutical Industry (ABPI) to review the existing UK capability in using e-health records for research. The aim being to maintain the UK as a world leader in health informatics report published in May 2011. Following this prioritisation the MRC launched a call, jointly with 10 other UK funders of health informatics research, to support new e-Health Informatics Research Centres. Awards are expected in Q2 2012. |

| An update of spend and commitment in this area starting 2012/13. |

| significant contributions to medical informatics, leading to improvements in the utilisation of medical data |

Public health infections research

| MRC will address the need to have a robust rapid response capability for outbreaks and epidemics of new or re-emerging infections, refresh the approach to antimicrobial resistance, identify and target effective prevention and treatment strategies towards the most vulnerable groups in society and foster innovation in detection, treatment, and prevention. Research approaches will include partnership with BBSRC to deliver strong, multidisciplinary virology programmes, translational vaccine and anti-infective work as a priority, and development of work on the ecology of infection, modelling, and dataset integration. |

| MRC support for the Centre for Virus Research in Glasgow has helped established a greatly strengthened capacity for research on viruses that affect humans and animals. The CVR encompasses both the MRC Virology Unit and the University of Glasgow’s Institute of Comparative medicine, and has strategic links with institutions across the UK including the BBSRC’s Institute for Animal Health and the Health Protection Agency in Colindale. The CVR has recently won £4.8m of infrastructure investment from the Wellcome Trust and Wolfson Foundation. |

| The infections and immunity board will examine the scope for a potential joint programme in antimicrobial research, or opportunities for other investments in this area. 2012/13 |

| Decision taken on the future of the MRC Centre for Outbreak Analysis and Modelling 2012/13 |

| Significant contributions to preparedness for new disease outbreaks and monitoring and treatment of existing infectious disease. |

| The infections and immunity board will examine the scope for a potential joint programme in antimicrobial research, or opportunities for other investments in this area. 2012/13 |

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| Significant contributions to preparedness for new disease outbreaks and monitoring and treatment of existing infectious disease. |

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20 Cancer Research UK (CRUK), Chief Scientist’s Office, Scottish Government Health Directorates (CSO), Engineering and Physical Sciences Research Council (EPSRC), Economic and Social Research Council (ESRC), Medical Research Council (MRC), National Institute for Health Research (NIHR), The Wellcome Trust, National Institute for Social Care and Health Research (NISCHR)


22 E-Health Informatics Research Centres (E-HIRCs) Call http://www.mrc.ac.uk/Fundingopportunities/Calls/E-HealthInformaticsResearch/index.htm (MRC, in partnership with Arthritis Research UK, the British Heart Foundation, Cancer Research UK, the Economic and Social Research Council, the Engineering and Physical Sciences Research Council, the National Institute of Health Research, the National Institute for Social Care and Health Research (Welsh Assembly Government), the Chief Scientist Office (Scottish Government Health Directorates) and the Wellcome Trust).

23 Glasgow’s Centre for Virus Research receives £4.8 million http://www.gla.ac.uk/researchinstitutes/wcl/cvs/news/pressreleases/Id.en.154258
2.2. National Capability

- Continue to develop the Francis Crick Institute as a key element of our strategy to increase the impact of basic science on health now and for decades to come.

  Council considered the QQR for NIMR in December 2011. Continued funding at the level of £200m between 2012 and 2017 was approved.

  Kings College and Imperial College join the Frances Crick Institute, and the vision for the initiative is praised by the House of Commons Science and Technology Select Committee as "comprehensive, ambitious and ground-breaking".

  Work to manage the transition of NIMR to the new Institute has commenced, starting with appointing team leaders, defining the scope of work streams, and costs for transition.

- The new Laboratory of Molecular Biology building will be complete in 2012, providing modern infrastructure to maintain LMB’s leading role in supporting innovation and translation of fundamental research discoveries into new technologies.

  Council considered the QQR for LMB in December 2011. Continued funding at the level of £170m between 2012 and 2017 was approved.

- UK Biobank and other longitudinal cohorts are key resources for population health studies. Investment will be focussed on maintaining effective usage of these cohorts and making data available for widespread use across the UK and internationally.

- Development of the national capability in experimental medicine, including development of new methodology for clinical studies, and to support the work of the National Institute of Clinical Excellence. Investment will be co-ordinated with NIHR, adding value to anticipated additional NIHR investment in Biomedical Research Centres and Units.

  For BIOPARTNER see 2.1.4
  For Data Sharing Service see 2.1.4.

  For experimental medicine challenge grants see 2.1.1.

  MRC evaluated the options for future University Units. From October 2011 the MRC Human Genetics Unit joined the University of Edinburgh and CRUK to form one of the largest centres for human genetics and molecular medicine in Europe. 200 staff and students have transferred formally from the MRC to the Institute of Genetics and Molecular Medicine24.

  In April 2011 the MRC established an innovative partnership with three London Universities (Imperial College, Kings College and UCL). The independent company which resulted (Imanova25) now owns and manages the Clinical Imaging Centre (CIC) located at Imperial College London’s Hammersmith Hospital campus. The CIC will be operated as a leading centre for imaging research and training and currently employs 50 staff.

  Update on the programme of work to manage the transition from the NIMR 2012/13.
  Complete the transition to the New LMB Building and commence full operations in Q3 2012.

  Update on further MRC/University Units Q2 2012/13

  Report outcomes arising as the result of establishing Imanova (2014/15)

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24 The Institute of Genetics and Molecular Medicine http://www.gmm.ac.uk/index.htm
25 Imanova Limited – a centre of excellence in imaging sciences http://www.imanova.co.uk/company/
### 2.3. Cross Council Themes

#### 2.3.1. Lifelong Health and Wellbeing

LLHW is core to MRC’s strategy in ageing research. See section 2.1.2.

### 2.4. Other Government research and development initiatives

#### 2.4.1. Translational Medicine

The overall spending in this area is likely to reach £250m over the spending period, including an increase in spending on the managed programmes to £50m pa by 2014/5. MRC will:

- sustain investment in the Developmental Pathway Funding Scheme (DPFS) and increase funding for the Developmental Clinical Studies (DCS) scheme, for preclinical and clinical development of novel interventions, including stem cells
- enhance support of experimental medicine through co-ordination of national and regional resources and facilities, and the training of researchers, ensuring investment is aligned to add value to NIHR funding for translation
- further develop productive alignments between basic and experimental clinical research in academia and industry, based on the successful model of the Immunology and Inflammation initiative
- evaluate and further develop novel ways of supporting translational activities, building on Translators and Devolved Portfolios Awards
- provide the cross-Council lead for relationships across the pharmaceutical sector, to simplify and speed up policy dialogue and maximise the impact from RC investments
- lead a stocktaking of RC and TSB regenerative medicine investments and their alignment with changing business models and pathways from research to impact
- promote best use of research resources across academia and industry, including imaging facilities, tissue and informatics resources

MRC’s translational research initiatives are creating a large increase in the opportunities for developing new treatments and devices, which is key to growth for the UK life sciences industry. MRC e-Val data highlighted 360 projects developing new products and interventions out of MRC research, including 40 that had reached the market since 2006. MRC’s translational research investment since 2009/10 will add almost 100 further projects to this pipeline, when these projects report via e-Val for the first time in 2011.

MRC and TSB will work together closely to deliver the £180m Biomedical Catalyst fund investments announced in the Government’s Life Science Strategy. The work involves aligning MRC’s current translational programme with £90m of additional funding via TSB.

For experimental medicine challenge grants see 2.1.1. For regenerative medicine see 2.1.1.  ii)

Update on progress with the Biomedical Catalyst fund (2014/15)

Report on re-launch of DPFS devolved portfolios taking a thematic approach (Q4 2012/13)

Analysis of EME pipeline to examine the strategic positioning of this portfolio, and maximise impact to be carried out in 2013/14.

Evaluation of new mechanisms for support starting with DPFS in Q1 2013/14 and then methodology in Q1 2014/15

Evaluation of Biomarker research (see above 2.1.1. i).

- quicker realisation of health and economic impact from basic research investment
- UK remains an attractive environment for R & D investment for the pharmaceutical and biotechnology sector.
- an increase in the number and diversity of new therapies, devices and diagnostics in development at all stages from validation of new targets to clinical trials
- meeting academic & industry expectations for a pipeline of innovative, commercialisable research assets with high health impact
- better tools and resources to facilitate more rapid development of novel therapeutics
• explore and fund innovative models of pre-competitive and collaborative research partnerships with industry through the MRC Industry Collaboration Awards and CASE studentships, specifically targeting support for experimental medicine, biomarkers & stem cell medicine

• form new partnerships with other industry sectors (e.g. food industry)

2.5. Safeguarding the skill base for UK biomedicine

**PhD studentship provision**

We will maintain our overall investment, reducing the number of students slightly but increasing the research training support provided to each, with the aim of enhancing the ability to attract the best students. We will sustain our recent increase in support for CASE PhD students at 35 pa. We will work with universities, industry and the TSB to enable CASE graduates to continue to act as agents of innovation in their host companies. Options include participating in the TSB’s Knowledge Transfer Partnership scheme and extending MRC’s existing People Exchange Scheme.

**Research masters**

MRC does not fund taught masters, but supports research masters places, targeted at building capacity in strategic skills gaps identified by industry and academia. We will consult to ensure this scheme meets industry needs and plan to support 50 pa over the CSR period, to enable outstanding candidates aiming for PhD training to “re-route” their interests from their first degree discipline.

**Fellowships**

We plan to increase the number of early and intermediate career fellowships. We shall align the new fellowships with Strategic Plan priorities – for example, to develop the following capabilities:

- MRC reform of Doctoral Training Grants completed. Information on the numbers of CASE studentships supported, analysis of other aspects of private sector involvement, and overall analysis of available next destination data included in the 2010 e-Val report and Economic Impact Report.

- Changes in reported skill shortages will be evaluated toward the end of the spending review period, in order that reforms to training provision feed through to delivering skilled people in key areas (2014/15).

- more CASE studentships, involving a wider range of users, delivering a new cohort of innovators in research used to working across disciplinary and sectoral boundaries to boost economic impact

- closer alignment between academic research programmes and industry – with a greater proportion of students and staff supported on MRC grants finding employment in the private sector

- expansion of fellowships to deliver 20 new early career entrepreneurial researchers.

- increased supply of researchers with scarce quantitative & experimental skills to industry, academia & healthcare

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26 MRC Doctoral Training Grant competition [http://www.mrc.ac.uk/Fundingopportunities/Studentships/DTG/index.htm](http://www.mrc.ac.uk/Fundingopportunities/Studentships/DTG/index.htm)

• development and integration of biological and engineering technologies to provide insights and solutions to the challenges of tissue repair and regeneration

• development and application of innovative mathematical and statistical methods to understand disease mechanisms, predispositions to disease and the interplay of genetics, development, lifestyle and environment in health and disease – working across a range of complex data sources

• innovative research methods at the interface of preclinical and clinical medicine and population health sciences, developing researchers able to accelerate the translation of research knowledge towards practical applications for better health.

• post-doctoral researchers developing careers in cross-industry/academia or translational areas, with long-term awards to complement the shorter MRC Research Leader Fellowships

**Senior Fellowships**
We will sustain investment in Senior Fellowships at the current level.

**Research Careers and Diversity**
we shall continue to work closely with other Research Councils both directly and through the RCUK Research Careers programme, including supporting implementation of the Concordat for Researcher Development and managing the transition of the Vitae programme towards a self-sustaining position.

**Clinical Research Training**
MRC will rebalance the investment in clinical research training, increasing the number of intermediate Clinician Scientist Fellowships.
3.0. Economic Impact

3.2. Implementing the vision

MRC actions include:

• Targeting investment in areas expected to have greatest societal impact and where UK research strengths can be leveraged (e.g. addiction, mental health and dementia) see 2.1.2 above

• Sustain translational research (e.g. by building on the success of DPFS and DCS) see 2.4.1. above

• Raise the profile and impact of public health research. See 2.1.4. above.

• Meeting industry needs and building enduring links with industry and TSB. See 2.4.1. above.

3.3. Measuring and disseminating the impact of MRC research

The third annual MRC e-Val data gathering exercise was completed in December 2011. Compliance was improved to 98%, and the additional information appears to significantly add to our understanding of progress, productivity and quality of MRC research.

2010 MRC e-Val data published28 and will shortly be followed up with analysis of the 2011 data.

MRC e-Val data has been used routinely to support strategic discussions with Universities, highlighting strengths and opportunities.

MRC launched a consultation and held a workshop on the 26th of October to examine this area29. We are now setting up an expert group to oversee commissioning new research, in collaboration with other partners.

MRC will launch a joined up approach to collecting output data across all major UK health research funders by Q4 2012/13

Publish analysis of 2011 e-Val data (Q2 2012/13)

By 2014/15 the MRC e-Val dataset will encompass almost ten years of progress from MRC research, and we will have leveraged benefit from this evidence base across all areas of MRC strategy development and decision making.

A programme of economic impact studies will be developed to examine pathways to innovation, and mechanisms of translation, aimed at delivering results in 2013/14 – 2014/15

Analysis of UK health research portfolios (in partnership with Wellcome Trust, NIHR, ARUK, CRUK, BHF, AMRC) completed Q2 2012/13.

Evidence of the progress, productivity and quality of MRC research. In particular quantitative and qualitative evidence of progress with the MRC strategic plan.

MRC will use this evidence, plus feedback from the users and beneficiaries of research, to ensure that assumptions about what leads to impact can be tested, and that there is a sound evidence base upon which to develop future strategy.

The MRC will work with NIHR, the devolved administrations, major medical research charities, the major research intensive Universities, HEFCE and other research councils to analyse the impact of medical research on the economy and society.

28 2010 MRC e-Val data  www.mrc.ac.uk/e-val2010
29 http://www.mrc.ac.uk/About/Consultations/index.htm
## 4.0. Delivery Analysis

### 4.2.1. Managing expenditure – resource

| Council and Management Board will review expenditure during the course of the year to ensure that this remains within budget. | MRC will manage its expenditure as set out in its delivery plan, and report performance against budget regularly to BIS. | MRC will ensure that funding is deployed to areas of work that support the delivery plan objectives. |

### 4.2.2. Capital projects and programmes

| i) Judicial Review Period following Planning Permission complete and construction commenced Q1 2011/12. 2nd Stage procurement started Q1 2011/12.  
ii) Construction project complete and building handed over to MRC Q4 2011/12. | i) Construction work will be on-going throughout whole period. All construction procurement complete and Main Contractor appointed Q2 2012/13. Transition planning and implementation at advanced stages by the end of the period.  
ii) New building fully occupied and functioning. |

| i) The Francis Crick Institute  
ii) New LMB |  |

### 4.2.3. Managing new MRC commitments

| Strategy Board and Management Board undertake stock-takes of commitment progress during the course of the year to ensure the commitment programme stays on course. MRC introduced new processes for robust scrutiny of capital commitments, given the need to work to a significantly reduced capital budget Q1 2011/12. | MRC will manage new commitments as set out in its delivery plan. Progress toward achieving these commitments will be outlined in MRC’s financial reports. | MRC will ensure that funding is deployed to areas of work that support the delivery plan objectives. |

### 4.3. Efficiency

- Commitment to the Wakeham Agenda  
- Maximising funding value  
- MRC operational efficiency

| The MRC is on target to re-direct £7.4m of overhead costs to front-line research across its intramural and extramural research programmes through a combination of procurement savings and wage restraint. MRC introduced redundancy terms for its staff, compliant with new Government policy, following a ballot via the national trade union side.  
| Over the spending review period a total of £106m will be re-directed to front-line science.  
| Enhance and encourage the optimal use of resources provided through full economic costing in Universities and MRC Units and Institutes. |