

## Priorities for medical research in the UK

### **Sir Leszek Borysiewicz**

Medical Research Council

The Foundation for Science and Technology, 20 May 2009

## MRC mission

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

## MRC funding

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MRC operating expenditure - **£625.4m** in 07/08

- **300** new grants to researchers  
**£236 million** on grants and training awards in universities and medical schools
- **£343 million** for over 500 programmes in our research units and institutes  
over **2000** publications in peer-reviewed journals
- Licensing income receipts of **£85.4 million** through MRCT  
**£384 million** total cash generated since 1998

People

- Over **4000** people in our own units, institutes and centres
- **£72.2 million** on training and career development  
**107** new fellowships, **450** new post-graduate students

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## The MRC journey: Basic science as the bedrock

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- 28 Nobel prizes spread across the Nobel categories of Physiology or Medicine and Chemistry.

The MRC's core offering:

- World-class basic biomedical research
- Interdisciplinary interface with the Research Councils



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## The MRC journey: Embracing translation

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- What is it? - turning discoveries into clinical benefits, while maintaining the basic research that drives it



- MRC's translational strategy:
  - builds on the MRC's existing role in pushing forward basic knowledge to improve people's health and wealth
  - strengthens the support and oversight of the translational processes

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## The MRC journey: Translational strategy

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- Increasing the scale and pace of discovery from discovery through to first human use or commercialisation
- Strengthening R&D in areas where there are currently translational bottlenecks
- Fostering more flexible working with industry
- Enhancing the quality and scale of infrastructure for translational research
- Developing a strong, internationally unique, programme in research methodology
- Accelerating innovative interventions into late phase II & phase III clinical trials
- Enhancing skills and capacity underpinning these areas.

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## The MRC journey: Health Research Opportunities

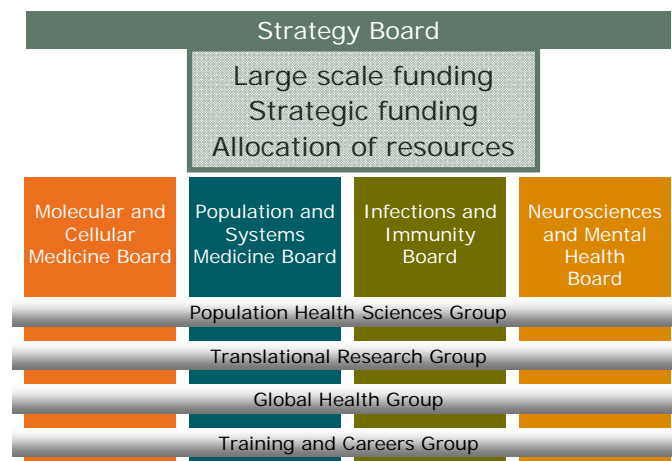
- A Cooksey challenge
- 1: Health Departments review impact of disease
- 2: Meeting to identify scientific opportunities at Mar Hall
- Mar Hall group identified 10 key areas for maximum impact in public health
- Used to inform development of MRC strategic plan

1. Stratification of phenotype
2. Regeneration and replacement
3. Tracking response to intervention
4. Measure, understand and modify environmental and inherited influences on health
5. Exploitation of world leading position in hypothesis-generating science to deliver improved health
6. Early detection of the opportunity for effective intervention
7. Primary prevention
8. Behaviour modification
9. Understanding the burden of illness
10. Development of new interventions

[www.mrc.ac.uk/about/strategy/healthresearchopportunities](http://www.mrc.ac.uk/about/strategy/healthresearchopportunities)

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## The MRC journey: structural change



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## A new Strategic Plan for the MRC

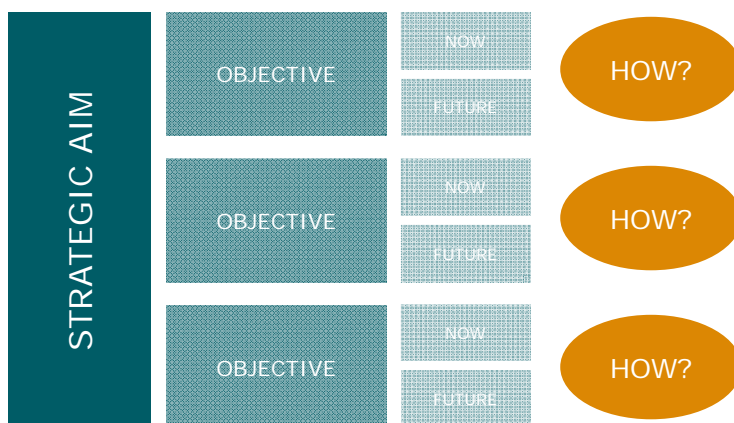


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- Consultation with over 500 stakeholders
- A non-prescriptive agenda
- Leading and influencing
- Partnership agenda

## MRC Strategic Plan for 2009-2014

Hierarchical structure of plan



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## *Research changes lives*

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### **Strategic Aim 1**

*Picking research that delivers:* Setting research priorities which are most likely to deliver 'step changes' in the potential for improved health outcomes

### **Strategic Aim 2**

*Research to people:* Bringing the benefits from excellent research to all sections of society

### **Strategic Aim 3**

*Going global:* Securing progress in international medical research

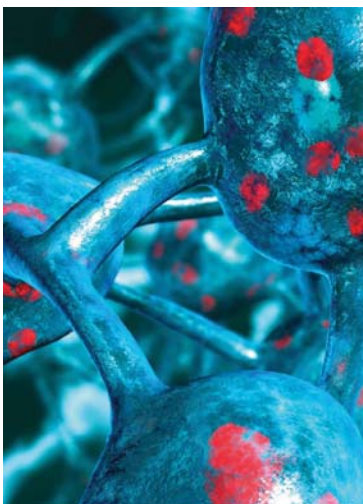
### **Strategic Aim 4**

*Supporting our scientists:* Supporting and sustaining a robust and flourishing environment for world class medical research.

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## MRC Strategic Plan 2009-2014

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### **Strategic aim 1**

*Picking research that delivers:*

Setting research priorities which are most likely to deliver 'step changes' in the potential for improved health outcomes

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## Strategic aim 1

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### **Research priority theme 1:** *Resilience, Repair and Replacement*

#### **Natural protection**

To explore built-in resilience to disease and degeneration, determining how such mechanisms might be used to produce new interventions for ameliorating disease processes

#### **Tissue disease and degeneration**

To advance knowledge in the biology of ageing and degeneration of human tissue

#### **Repair and replacement**

To translate the burgeoning knowledge in stem cell biology and other replacement and regeneration mechanisms into new treatment strategies

#### **Mental health and wellbeing**

To explore the inter-relationship between mental wellbeing and resilience to disease processes

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## Strategic aim 1

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### **Research priority theme 2:** *Living a long and healthy life*

#### **Genetics and disease**

Using next generation genetics with more sophistication and lower cost, imaging, and biomarkers to:

- Understand genetic predispositions for disease, in the setting of 'complex' traits and in the modulation of simple ones
- Align the development and use of treatments with specific subtypes of disease

#### **Lifecourse**

To drive forward inter-disciplinary working in life-course research

#### **Lifestyles affecting health**

Determining the most effective strategies for tackling lifestyles which are detrimental to health

#### **Environment and health**

Exploring the impacts of changes in our environment on health and wellbeing

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## MRC Strategic Plan 2009-2014

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### Strategic aim 2

*Research to People:*

Bringing the benefits of excellent research to all sections of society

## Strategic aim 2

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***Research to people: Bringing the benefits from excellent research to all sections of society.***

**Translation of research**

Ensuring translation of the research effort into health and commercial outcomes: new products, policies, procedures

**Regulation, ethics, governance and working with decision-makers**

To uphold and guide ethical research practice and the highest standards of research governance, to enhance the regulatory process by providing innovative approaches

**Communication**

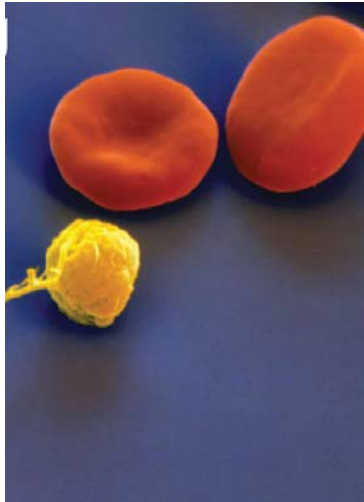
Enhancing communication between scientists, policy makers, advocates and the public

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## MRC Strategic Plan 2009-2014

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### Strategic aim 3

*Going global:*

Securing progress in international medical research

## Strategic aim 3

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***Going global: Securing progress in international medical research***

### **Partnerships and agenda shaping**

To provide international leaderships in partnerships which enhance the competitiveness of the UK knowledge and health base

### **Global health**

To support global health research that addresses the inequalities in health which arise particularly in developing countries

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## MRC Strategic Plan 2009-2014

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### Strategic aim 4

*Supporting scientists:*

Sustaining a robust and flourishing environment for world-class medical research

## Strategic aim 4

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*Supporting our scientists: Sustaining a robust and flourishing environment for world-class medical research*

### **Capacity**

To strengthen research capacity through training and development

### **Use of population-based data**

To fully exploit the complexity and benefits of population data, to maximise sharing and linkage of data and to develop data collection and storage

### **Research environment**

Providing a world-class research environment

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## Measuring success

- A new approach to capturing output
- We will deliver a minimum of four major strategic evaluations a year
- We will work in partnership with universities to offer information needed to maximise the value of the support they receive from the MRC.

<p><b>STRATEGIC AIM 1</b> <i>Picking research that delivers</i></p>	<p>Setting research priorities which are most likely to deliver improved health outcomes.</p>	<p>Demonstrable advancement of the national and international knowledge base in health and medical science, and positive economic impact generated.</p> <p>Pushing forward new frontiers in medical research through encouraging research proposals of the highest excellence.</p> <p>Funding profile aligned with research priorities.</p>
<p><b>STRATEGIC AIM 2</b> <i>Research to people</i></p>	<p>Bringing the benefits of excellent research to all sections of society.</p>	<p>Measurable impact on the development of new policy and practice in the health research domain.</p> <p>New products, policies and procedures leading to improved prevention, diagnosis and treatment of disease.</p> <p>Increased involvement of community sectors in health research debates and discussion.</p>
<p><b>STRATEGIC AIM 3</b> <i>Going global</i></p>	<p>Securing progress in international medical research.</p>	<p>Participation in global health research policy making and implementation.</p> <p>A leading role in defining the agenda for support of the science base in the UK and Europe.</p> <p>Playing a key role in the implementation and evaluation of major research programmes in resource-poor settings.</p>
<p><b>STRATEGIC AIM 4</b> <i>Supporting scientists</i></p>	<p>Sustaining a robust and flourishing environment for world-class medical research.</p>	<p>A measurable increase in skilled people working in health and medical research and development.</p> <p>Major infrastructure projects completed on time and to budget.</p> <p>New technologies, methods and tools brought into practice and benefiting medical research and development.</p>

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## More information



[www.mrc.ac.uk](http://www.mrc.ac.uk)

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