Demonstrating impact: fame, funding and the REF

London School of Hygiene & Tropical Medicine
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Wellcome Trust
Wellcome Trust - Current grant portfolio

Total Grants £2,573m

Science £2,200m

Culture & Society £106m
  - Medical Humanities £36m
  - Society & Ethics £20m
  - Research Resources £3m
  - Engaging Science £24m
  - Strategic Awards £13m

Innovations £267m
  - Health Innovation Challenge Fund £32m
  - Affordable Healthcare in India £17m
  - Seeding Drug Discovery £58m
  - Translation Awards £84m
  - Strategic Awards £38m
  - Themed Initiatives £35m
  - Major Awards £1m
  - Sustaining Health £2m

Other £65m

Programme & Project Grants £184m

Investigator Awards, Fellowships & Studentships £1,123m

Major Awards £141m

Themed Initiatives £94m

Major Overseas Programmes £112m

Strategic Awards £316m

UK Centres £57m
Research impact – applying for funding

7. Research summary

**Research summary**
Please provide a summary of your proposed research, including key goals, for an expert audience.

**Lay summary**
Please provide a summary of your proposed research, including key goals, for a non-expert audience.

8. Research vision

Please describe your research vision. You should ensure that this addresses the aims and key research questions, how this research will advance your field and the research approaches you will take (3,000 words maximum).
*Please refer to guidance notes before completing this section.*
Reporting outputs / outcomes / impacts:

- Publications
- Collaborations
- Further Funding
- Infrastructure & Equipment
- Training & Capacity
- Recruitment & Careers
- Technologies & Products
- Clinical Trials & Interventions
- Spin Outs & Companies
- Scientific Communications & Media
- Public Engagement
- Policy
- Prizes & Awards
**Fig 1.2: Volume of Wellcome Trust-associated papers 2006-2013**

**Fig 2.9: Proportion of grants reporting engagement with policy makers and healthcare professionals at ‘end of grant’**

<table>
<thead>
<tr>
<th>Stream</th>
<th>Total EoG Forms</th>
<th>2013/14</th>
<th>Average of 2010/11 to 2012/13 data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genetics &amp; Molecular Sciences</td>
<td>(104)</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Molecules, Genes &amp; Cells *</td>
<td>(443)</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Cellular, Developmental &amp; Physiological Sciences</td>
<td>(125)</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Physiological Sciences *</td>
<td>(219)</td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Infection and Immuno-Biology</td>
<td>(147)</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>(374)</td>
<td></td>
<td>28%</td>
<td></td>
</tr>
<tr>
<td>Neurosciences &amp; Mental Health</td>
<td>(143)</td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>(310)</td>
<td></td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>Population Health</td>
<td>(49)</td>
<td>51%</td>
<td>72%</td>
</tr>
<tr>
<td>(101)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Humanities</td>
<td>(52)</td>
<td>35%</td>
<td>34%</td>
</tr>
<tr>
<td>(225)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovations</td>
<td>(4)</td>
<td>50%</td>
<td>48%</td>
</tr>
<tr>
<td>(223)</td>
<td></td>
<td></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>(625)</strong></td>
<td><strong>24%</strong></td>
<td><strong>28%</strong></td>
</tr>
<tr>
<td><strong>(1706)</strong></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: Data drawn from Wellcome Trust EoG forms returned from 1st October 2013 to 30th September 2014.

Base: 625 EoG report forms returned 1st October 2013-30th September 2014; Total includes 1 non-stream grant.

Base: 1706 EoG report forms returned 1st October 2010-30th September 2013 – data averaged for the three years; Total includes 11 non-stream grants.

* Due to the changes in science funding streams in 2014 relevant benchmarks are used where appropriate.

Assessment Framework 2013/14
Trials for drinkable one-dose typhoid vaccine reach end of phase II

Impact:

- Emergent BioSolutions has completed a phase II trial of a single-dose drinkable typhoid vaccine, which requires health practitioners to see the patients only once to prevent life-threatening typhoid fever.
- Plans for a phase III trial of the vaccine have stalled, as the company has been unable to assemble a funding consortium.

There are 22 million cases of typhoid worldwide each year. Caused by *Salmonella typhi*, the disease is particularly endemic in countries with compromised sanitation and water supplies.

Emergent BioSolutions was previously in 2007/08 for its development of a single-dose drinkable typhoid vaccine. It received a grant in 2005 for its vaccine, a live attenuated vaccine based on the *S. typhi* bacterium. It aims to eliminate virulence by deleting two specific genes.

The phase II study in Vietnam was successful, showing that the vaccine was safe and eliciting an immune response in 97 per cent of children who received a dose. The company then announced plans for a ‘bridge study’ in the USA as a prelude to further clinical trials at population level.

Major malaria study leads WHO to revise treatment guidelines

Impact:

- The AQUAMAT study concluded that the drug artesunate should be the preferred treatment for severe malaria in both children and adults worldwide.
- The study led the WHO to revise its guidelines for the treatment of the disease in African children.

Severe malaria kills nearly 1 million people each year, mainly young children and pregnant women. In 2005, a major trial in patients with severe malaria showed that artesunate, given by injection, reduced the death rate compared with quinine, the standard treatment. However, this trial was conducted in Asia and most of the patients studied were adults, so there was uncertainty over whether artesunate injections should replace quinine as a treatment for children.

Now, the AQUAMAT study (‘African quinine versus artesunate malaria trial’) has recommended that artesunate should be used in both children and adults worldwide. The randomised controlled trial, which involved researchers across Africa and scientists in Thailand and the UK, enrolled 5,425 children hospitalised with severe malaria across nine countries. The results showed a 22.5 per cent reduction in mortality among those treated with artesunate compared with quinine.

The trial was led by Professor Nick White of the Wellcome Trust–Mahidol University–Oxford Tropical Medicine Research Programme in Bangkok, and was funded entirely by the Trust. As a result of the findings, the World Health Organization has changed its treatment guidelines to recommend artesunate as the first-line treatment in the management of severe malaria in African children.
The Wellcome Trust in the REF:

410 mentions of the Wellcome Trust

- Health: 35%
- Technology: 28%
- Societal: 18%
- Political: 8%
- Cultural: 7%
- Environmental: 2%
- Economics: 2%

Figure 30: Different ways that the British Academy and Wellcome Trust have enabled impact

Source: The nature, scale and beneficiaries of research impact (King’s College London and Digital Science, 2015)