

Thoughts relating to the Cooksey review, based on my experience of MRC funding as a grant holder, as a Department Head within an independent postgraduate institution, and as a member of the MRC Infections and Immunity Board, and its representative on the MRC training and career Development Board, and a career of more than 30 years in UK biomedical research.

Q1. A major strength of MRC programmes has been the funding of internationally competitive centres of excellence and individuals, as well as grant awards to other scientists within the UK university system. Institutes such as the National Institute of Medical Research allow scientists to concentrate on their research without the demands of university teaching or the need to raise research grant funding. Another strength has been the investment in the MRC Laboratories in The Gambia and the UVRI in Entebbe, Uganda, giving UK scientists the opportunity to work on infectious disease problems that are global rather than just national priorities. It is imperative that this international work is supported and I note with concern that the Department of Health does not have any remit for international health.

The MRC plays a significant role in training needs for UK medical research through its PhD studentships, which are regarded as the most prestigious PhD studentships that are available. Project and Programme grants also provide training for young post-doctoral fellows. Trainees not only work in academia but also move into industry. Training within the NHS is much less academic and I do not see how these functions could be merged.

The significant income the MRC derives from inventions it has funded, patented or developed indicates how much exploitable material has been developed with MRC funding.

Over the last few years, the MRC has changed very significantly under the leadership of Professor Colin Blakemore; it is now more proactive, much more strategic, and is systematically tackling difficult questions about how best to devolve funding decisions, how to foster academic careers etc. It would be a great pity if this more effective organisation were completely reorganised.

Q2. I consider the most significant challenge to be the relatively low standing of scientists within the UK, and the many pressures now put on research scientists, such that many senior researchers now say they could not advise young scientists to enter or remain in university academia.

The recent priority given to any research that is “strategic” or “translational” makes those working in more basic biomedical scientific research feel that their work is not valued or appreciated. A strong basic science base is essential in order that strategic and translational research can be developed.

The Government should aim to fund scientific research that is internationally recognised, but that will also provide training opportunities for young scientists.

Another challenge is that within the UK, the funding for medical research which used to be divided between the MRC and the Wellcome Trust, with many scientists having a grant portfolio primarily from one or the other, has now tipped in favour of the Wellcome Trust. A monopoly in funding may not be a good thing and the limited funds the MRC has recently had available with which to fund research has meant that many researchers with a long history of MRC funding have now lost MRC funding and replaced it with Wellcome Trust funding. Although I favour funding high quality research, the fact that only 16% of applications coming to my MRC Board get funded means that many very good scientists' applications get rejected and that it is not possible to fund all the internationally competitive science.

I also query whether the science base in the UK can be sustained if only those highflying scientists writing high impact papers in Nature and other high impact journals are funded. The RAE process has a lot to answer for here, but to be a good scientist is currently not good enough, despite the fact that such scientists are the product of much investment, make very valuable contributions to the knowledge base, and help to train through undergraduate teaching and PhD supervision, the future generations of UK scientists.

Q3. I do not see what could be reduced within the remit of the MRC, and the MRC requires more funding in order to be able to adequately fund both strategic priorities and also keep investigator-led research funded at a reasonable level. I am not knowledgeable about what is funded within the NHS. It is being said that much of the NHS R and D budget is not funding research; if so, this would be an area for economies, but if this money currently underpins clinical centres of excellence such as Great Ormond Street, withdrawing this money would have very unfortunate consequences.

4. Both a high quality biomedical research base and research to improve health care and other public services are essential. Economies could perhaps be found elsewhere, by reducing reorganisations or by minimal increases in taxes.

Both priority led and investigator led research are needed. The recent introduction of thematic calls for research by the MRC, such as on flu, are a good way of enhancing research in an area identified as a priority but this cannot be at the expense of the basic biomedical research base.

The terms translation and applied research need to be defined, there is much confusion as to what they mean among different groups. A Research Council such as the MRC has a Council that should, in combination with Board Chairs, be able to identify the appropriate balance and priorities that require investment.

Q5. The MRC have produced many inventions that have directly led to new treatments. However all such inventions build on the general broad science base, without which they would not be possible. Development of a new drug would be possible without the basic undergraduate and postgraduate training of the researchers who ultimately design or select the new drug. Improving

the uptake of advances in science and medicine is an area outside my experience but would require a favourable climate for both SMEs and big pharma to thrive and to invest in new ideas and products.

Q6. Links across the basic, translational and applied divides are very difficult to forge. Such links will only be useful and productive in particular areas. Where needed, such links will be forged if there are schemes that either retrain scientists in the other discipline, or that provide grant funding for pairings of different disciplinary groups.

Q7. Innovation and entrepreneurship require bright motivated scientists, and therefore rely on good training pathways. It is not clear to me whether this recent focus on “translation” is a result of data showing that advances have not been exploited, or that such translation is necessary to convince the politicians or the public that money invested in science and research is well spent?

Q8. Some more joined up mechanisms between NHS research and more basic research might help here, also I understand that for example, NICE can identify areas where there is a paucity of evidence but not encourage research in these areas.

Q9. The UK should move cautiously and not assume that other countries will provide us with easy solutions. A lot has been invested in the UK system of research councils and more recently in forging better links and harmonisation of practices between the different research councils and this should not be lost.

Q10. I would favour a mechanism through which the essence of the MRC is maintained, albeit with better links to R and D in the NHS.

Q11. This is outside my area of experience.

Q12. The work of a research council cannot be devolved to the regions, as this would favour funding less competitive research in areas currently receiving less funding. I see this as a challenge for the new body, but do not favour different areas/regions having to independently duplicate effort.

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