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Dear Grahame,

Thank you for your letter dated 14 January 2021 addressed to myself and Minister Nadhim Zahawi MP, regarding New Approach Methodologies (NAMs). I am responding as this matter falls within my ministerial portfolio. Congratulations on establishing the new APPG for Human Relevant Science and for your Chairmanship of this Group. I very much enjoyed our meeting last year where we were able to touch on this important issue.

You have asked some specific questions in your letter which I have responded to below.

- What proportion of overall government science, research and innovation funding is devoted to NAMs?
- What is the current level of government financial support for the development and uptake of NAMs?
- Are there any metrics and/or criteria employed to specifically track funding of innovative, human relevant research? Is there a target for this? What are these metrics and criteria and who has overall responsibility and accountability for meeting these metrics and targets? If not, does the Government think that there is scope to adapt an existing, successful mechanism to do this?
- What is the regional distribution of institutes receiving funding through Government sources for NAMs development and application?

UK Research and Innovation (UKRI), through their Medical Research Council (MRC), encourages the development of new methodologies in all areas of health research and funds the development of non-animal technologies both directly through MRC funding rounds and by its funding commitment to the National Centre for 3Rs (NC3Rs).

MRC has provided core funding for NC3Rs since the organisation was founded 15 years ago, with MRC support for the NC3Rs totalling £35.6 million between 2015 to 2020. The combined support of UKRI's Biotechnology and Biological Sciences Research Council and MRC for the Centre over the same period was £45.8 million. Roughly two thirds of the NC3Rs supported work focused on replacement technologies including *in silico* and *in vitro* methods.

It is not possible to provide accurate financial data on how much research MRC funds on NAMs outside of the contribution to NC3Rs, without some additional analysis, as research is not routinely categorised in this way. MRC awards are categorised using a

variety of automated coding approaches based on the text of the award abstract. This allows for the provision of data to answer broad questions, such as the effort focused on addressing a particular disease. One approach attaches multiple Medical Subject Headings (MeSH) terms to each award. MeSH is a controlled thesaurus curated by the US National Library of Medicine<sup>1</sup> which includes approximately 30,000 major terms. However, it should be noted that the extent to which the underlying research methods used in each project can be determined is limited, without reading the full text of the application. As a first step to determining a NAMs portfolio, a robust definition for NAMs (what is included and excluded) would need to be agreed upon, built up of specific terms from the MeSH thesaurus, and then this definition used to attempt to identify relevant awards. This would also be necessary to determine the regional distribution of institutes receiving funding for NAMs development and application.

MRC grants are selectively categorised where they involve a clinical trial or where they involve animals whose use is regulated by the Animals (Scientific Procedures) Act 1986, concepts which are easier to pick up from the abstract or from other information provided by applicants. This allows us to know that approximately 1/3 of MRC grants are for research that involves the use of animals. However, grants very rarely exclusively fund animal research and most will additionally include *in silico* and *in vitro* methods. It is therefore difficult with the data available to accurately determine the level of funding of animal methods compared to non-animal methods.

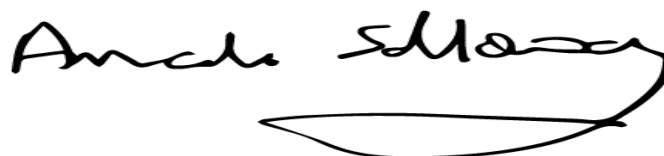
A small proportion of MRC's portfolio is dedicated to regulatory and toxicological studies, as NAM is generally understood to refer to.

- What are the sources of this funding i.e. which research bodies and organisations?
- Is the Government able to give an approximation of how much of this research in the UK is funded by non-governmental organisations e.g. through European, charity or collaborative funding with industry?

The most relevant figure that we can provide as to the funding involvement of non-governmental sources is the external funding for the NC3Rs, which totalled £7.25 million over the last five years, coming from charity, university and industry sources. UKRI do not hold any information on other funding for the development of NAMs from non-UKRI sources. However, the APPG may be interested in the 2018 [UK Health Research Analysis](#) which includes details of the health relevant research funded in the UK by 140 UK-based public sector and charity funders. This provides the most comprehensive picture of health research funding from government and non-government (excluding private sector) sources available.

Thank you once again for writing on this matter. I hope this information is helpful and I look forward to working with the APPG going forward.

Yours ever,

A handwritten signature in black ink, appearing to read 'Amanda Solloway', with a large, sweeping flourish underneath.

**AMANDA SOLLOWAY MP**

Parliamentary Under Secretary of State - Minister for Science, Research and Innovation

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<sup>1</sup> <https://www.nlm.nih.gov/mesh/meshhome.html>