Statement on Government response to petition on phasing out animal experiments

We fully support the need for scientific research and medical progress but using animals in experiments represents an outdated approach. A fundamental and intractable issue is that the results from research and testing using animals cannot be reliably translated to humans, meaning that data from animal research is often misleading. This is due to significant differences in our genetic makeup and wider biology.[1] Even looking at some everyday items illustrates how differently people and animals can react. Chocolate, for example, is poisonous to dogs, while paracetamol is poisonous to cats.

It is often stated that animal research is only carried out when there is no non-animal method available, and this principle is enshrined in the law that governs animal experiments, the Animals (Scientific Procedures) Act 1986. However, in practice we do not believe that this legal requirement is adequately enforced. The Home Office publishes non-technical summaries of licences that have been granted for animal experiments and these include a question about the applicant's strategy for searching for non-animal methods. [2] The inadequate responses in these summaries would suggest that this important question is not being treated with sufficient gravity. In addition, there are some cases where animal tests are licensed despite the existence of animal free methods. In 2020, for example, 452 skin sensitisation tests were carried out on mice, even though validated non-animal tests are available.[3] The Government continues to license batch potency tests on tens of thousands of mice for botulinum products despite the availability of a non-animal method AND the fact that the majority of these products are used for cosmetic purposes.

The Government points to the regulatory requirements for animal testing and yet a large proportion of animal research is not carried out to satisfy regulatory requirements. In 2020, 11 per cent of all procedures were for regulatory purposes, whereas 26 per cent were for basic research (meaning that there would not have been any legal requirement to use animals) and 50 per cent were the breeding of GM mice.[4] The majority of animal research conducted in the UK is done so on an entirely voluntary basis. It is our opinion that the actual benefit of animal research should be assessed as well as the availability of non-animal methods, and this would show that a phase-out is entirely possible.

The difficulties in translating data from animal experiments to humans mean that drugs which have appeared safe in animal tests can go on to cause significant harm to people. This can result in disasters such as the TGN1412 trial, where six volunteers were left in a life-threatening condition. The volunteers had been given a dose of the drug 500 times smaller than that which appeared safe in animal tests.[5] Subsequently, these disastrous effects were shown to have been predicted in cell based

[1] https://journals.sagepub.com/doi/abs/10.1177/026119291404200504
[2] https://www.gov.uk/government/publications/non-technical-summaries-granted-in-2020
[3] https://www.crueltyfreeinternational.org/what-we-do/latest-news-and-updates/uk%E2%80%99s-2020-figures-show-much-more-needs-be-done-reduce-and-replace
[4] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1002895/annual-statistics-scientific-procedures-living-animals-2020.pdf
[5] https://www.sciencedirect.com/science/article/abs/pii/S0975148310230248?via%3Dihub

tests.[6] It is also acknowledged that drugs that may have been safe and effective in humans may have been abandoned because they appeared unsafe in animal tests. For example, cancer drug Gleevec caused serious adverse effects in animals, but the drug proceeded to clinical trials following tests on human cells that did not show the same toxicity.[7] Most animal tests have not been validated to modern standards to prove that they do predict effects in humans and there is reluctance on the part of government and regulators to do this.

However, we can agree that non-animal approaches are the way forward.

The Government says that since their launch NC3Rs has committed £100 million to 3Rs approaches. It is important to note that this is the total funding since 2004, some 16 years. It is also important to note that only a proportion of this funding has gone to the replacement of animal testing. According to the NC3Rs, 16 per cent of grants have focused on refinement, with 20 per cent focusing on reduction.[8] The project to develop devices for recording in the brains of mice would be an example of refinement work[9], as would the development of 'grimace scales' as tools to assess pain in animals used in experiments.[10] While we welcome any measures that will reduce the suffering of animals in laboratories, we believe that the focus should be on the full replacement of animals with cutting-edge methods that have far greater relevance to people. We believe that more funding is urgently needed to accelerate this process. In addition, bold policy action must be taken to ensure that these new technologies are phased in, while animal research is phased out. This approach will prevent animal suffering, produce major benefits for public health and give Britain the best possible chance of becoming a global leader in medical research.

[6] 'The Duff Report' London: Expert Scientific Group on Phase One Clinical Trials, 2006 November 30;
[7] https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1013&context=acwp_all
[8] Presentation given at meeting of All-Party Parliamentary Group on Human Relevant Science, May 2021
[9] https://www.nc3rs.org.uk/news/new-device-refined-neural-recording-mice-could-transform-dementia-and-brain-research
[10] https://nc3rs.org.uk/grimacescales#why