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Science and Technology Select Committee
Committee Office
House of Lords
London
SW1A 0PW

House of Lords Science and Technology Committee report
"Life Sciences Industrial Strategy: Who's driving the bus?"

Dear Lord Patel,

We, the undersigned, wish to express our great disappointment at the lack of recognition of the importance of seeking and implementing humane alternatives to animal experiments within the "Life Sciences and Industrial Strategy" inquiry. None of the available evidence regarding the advantages to science, business and innovation of using advanced non-animal technologies (NATs), that are biologically relevant to humans, was cited within the report.

The Life Sciences Industrial Strategy inquiry was provided with evidence, submitted to the Committee by the undersigned, on the public health, scientific, ethical and economic costs of animal research, and the benefits of moving away from *in vivo* techniques in many fields. However, none of this evidence was referred to in the report and, despite seven independent animal protection organisations submitting to the inquiry (four of which submitted evidence jointly), none were called upon to give oral evidence to the Committee.

This is especially surprising given that NATs are widely recognised as more reliable and cheaper than animal-based methods, providing faster results in a number of different fields. For example, Innovate UK published "A Non-Animal Technologies Roadmap for the UK" [1], supported by British scientific industry organisations, which designed a 2030 roadmap for the UK to lead the way in NATs. This economic-based report identified NATs as "disruptive technologies" with the potential to drive economic growth and attract business investment. Despite endorsements such as these, the Life Sciences Industrial Strategy report ignores how the UK pharmaceutical sector, consumer goods and personal care companies, contract research organisations and academic institutions have all been identified as having the ability to deploy NATs and thereby position the UK as a "global powerhouse in this area" [1].

Furthermore, the Medicines Discovery Catapult and the BioIndustry Association's "State of the Discovery Nation 2018" [2], comprising opinions from drug discovery experts, states that animal models in both disease studies and toxicology are "poor approximations of humans". This report recommends the adoption of emerging technologies that "humanise" research, instead of relying on animal use. The Life Sciences Industrial Strategy should likewise note that the UK needs to be scientifically and strategically prepared for humanised drug discovery.

Internationally, NATs are being recognised as a priority for investment, and roadmaps are being developed to move away from animal models. These include a strategy developed by the Netherlands National Committee for the protection of animals used for scientific purposes [3], the NTP Interagency Center for the Evaluation of Alternative Toxicological Methods (NICEATM) Strategic Roadmap for Establishing New Approaches to Evaluate the Safety of Chemicals and Medical Products in the United States [4], the Frank R. Lautenberg Chemical Safety for the 21st Century Act as implemented by the US Environmental Protection Agency [5], and the US Food and Drug Administration predictive toxicology roadmap [6].

Taking all of the above into account, please would you let us know whether these issues are scheduled to be addressed in a future report? If not, would you please explain their omission.

With the approach of Brexit, we believe that it is essential for the UK life sciences sector to recognise the importance and relevance of NATs and to invest in more human-relevant research methods that will benefit UK science, business and the economy, as well as public health. The UK is otherwise at risk of losing pace with international developments towards more advanced, innovative, translatable and humane life sciences.

Yours sincerely,

Signatories:
Animal Aid
Cruelty Free International
Humane Society International
National Anti-Vivisection Society
Naturewatch Foundation
People for the Ethical Treatment of Animals
Royal Society for the Prevention of Cruelty to Animals

Supporting signatories:
Animal Defenders International
Animal Free Research UK
Catholic Concern for Animal
Lord Dowding Fund for Humane Research
Run Free Alliance

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