

27th September 2023

HUMANE RESEARCH AUSTRALIA'S RESPONSE TO THE DRAFT NATIONAL SCIENCE AND RESEARCH PRIORITIES

Humane Research Australia (HRA) is a not-for-profit organisation advocating for scientifically valid, animal-free methods of research. We champion the benefits of realistic, scientifically effective alternatives to animal use in research which in turn leads to human-relevant health outcomes. We appreciate the opportunity to respond to the National Science and Research Priorities document.

We note that since the national consultation commenced, Australia's National Science Agency, the CSIRO, in collaboration with industry, research, and government has, in September 2023, released a report that assesses the potential of emerging non-animal models for medical product development across Australia.

<https://www.csiro.au/en/work-with-us/services/consultancy-strategic-advice-services/csiro-futures/health-and-biosecurity/non-animal-models>

Non-animal models are becoming increasingly sophisticated and for some applications are surpassing the performance of traditional animal models and we believe this CSIRO Report holds valid relevance to the National Science Statement and its priorities.

The report identifies four opportunities for applying non-animal models to medical product development that align Australia's strengths with global need, namely:

- Complex in vitro models for drug discovery
- Organ-specific models for pre-clinical development
- Personalised models for trial participant and clinical treatment selection
- On-shore production of model components

Further, the following 10 recommendations and Research and Development Priorities were identified by CSIRO Futures:

1. Establish a national consortium that coordinates and promotes Australia's non-animal model capabilities
2. Develop national data collection standards on the use of animals in scientific research, teaching and testing
3. Align TGA processes and industry guidance with new FDA procedures for accepting non-animal model data
4. Develop a national biobanking and tissue collection network
5. Integrate outputs from NCRIS platforms into a coordinated pipeline for non-animal models
6. Facilitate IP management and material access for research and industry collaborations
7. Enhance commercial skillsets across the non-animal model sector

8. Update biomedical R&D infrastructure to support non-animal model capabilities
9. Conduct retrospective studies that compare animal and non-animal model predictivity
10. Conduct systematic reviews of locally and internationally developed non-animal models

HRA submits that these recommendations could address translation challenges and bring economic gains to Australia by enabling a productive and innovative economy. For example, the CSIRO report notes that there is a **\$1.5 billion** growth potential in non-animal models and it outlines a strategic pathway for Australia to solidify its role in advancing medical product development.

The report also notes that these emerging models will also be critical to protect and further strengthen Australia's \$1.4 billion **clinical trials sector**.

These investments in human-relevant research would maximise benefits from science for all Australians.

Therefore, we submit these CSIRO recommendations be referred to in the national statement. By harnessing these emerging technologies within a nationally coordinated structure, we believe it will enable a productive and innovative economy for science in Australia and in turn help deliver social, economic and environmental benefits for all Australians.

Rachel Smith,
Chief Executive Officer
Humane Research Australia