Education and Health Standing Committee

6 July 2024

Dear Committee Members

Re: Support for health and medical research funding and priorities

Further to Animal-Free Science Advocacy's (AFSA) briefing to the Committee on 17th April, I appreciate the opportunity to provide a submission to the Committee on behalf of AFSA.

I understand the Inquiry will investigate:

1. Western Australia's small share of national competitive funding

2. How the state's health and medical research priorities are determined

3. The impact on specific types of research and areas of need.

I am informed that point 3 includes non-animal methods of research as an area of Committee interest and thus our submission is focused on this. However, animal use in health and medical research also has relevance to point 2, 'how the state's health and medical research priorities are determined' and will be addressed in our submission. Additionally, section 2.4 has relevance to term of reference 1.

I will refer to federal initiatives where AFSA see relevance to WA.

1.0 Response to ToR 2: 'How the state's health and medical research priorities are determined'

1.1 The need to assess Research Quality to develop research priorities

According to the NHMRC Research Quality Strategy, The Australian and international community expects research to be conducted responsibly, ethically and with integrity, where "the 'conduct' of research encompasses all stages of the research cycle including development of the research question, design, conduct, analysis and reporting"[1]. One of the NHMRC initiatives to improve research quality involving the use of animals included the publication of the 'Best practice methodology in the use of animals for scientific purposes' (2017)[2]. The report clearly outlined that replacements (or alternatives) to animal use/non-animal models should be considered at all phases of research and that this is what constitutes research best practice:

"Replacement

[1] https://www.nhmrc.gov.au/about-us/publications/nhmrcs-research-quality-strategy
[2] https://www.nhmrc.gov.au/about-us/publications/best-practice-methodology-use-animals-scientific-purposes

> Application of the principle of replacement involves the use of methods that allow the aims of a project to be achieved without the use of animals in all or part of the study (Code, Clauses 1.18–1.20). Techniques to replace the use of animals include the use of epidemiological data; physical and chemical analysis; computer, mathematical and inanimate synthetic models; simulations; in vitro systems; non-sentient organisms; cadavers; and clinical cases" (Code, Clause 1.19).
>
> **The planning phase of a study should involve identification of all feasible methods of testing the study's hypotheses including viable non-animal models** and the use of less sentient alternatives such as invertebrates. **Systematic review of animal-based studies should be considered where appropriate.17-24 The validity and relevance of a proposed animal model must be assessed**. **If there is insufficient evidence to the support the validity of an animal model, its use must be rejected**"

Unfortunately, looking for replacements is sometimes described as a tick box exercise with limited accountability: In 2019 The NHMRC released a follow up paper 'Information paper: The implementation of the 3Rs in Australia' that highlighted a lack of uptake for the 1st R of replacement under the section of "Unrecognised innovations in the 3Rs". [3]The 3Rs are the governing principles of animal research for scientific purposes, first established in 1959: Replacement, Reduction, Refinement of animal use in research. Whilst there is evidence to suggest that research best practice, and ethical standards are not being adhered to, however little action on this topic has resulted. Funding for non-animal models and methods should be a top research priority area, to ensure best practice is upheld in biomedical research at all times and that researchers are encouraged and supported to do this.

Scientific literature is increasingly questioning of the translational value of animal research to human health and such critique is necessary for determining medical research priorities[4]. For example, it may be proposed that with an ageing population, neurodegenerative diseases be a priority area for health and medical research. Yet given the unfortunate reality that a staggering 99.6 percent of Alzheimer's disease drugs that succeed in animal experiments fail in humans; it would be wasteful to continue to invest in animal-based research for this condition.[4] Despite the NHMRC Research Quality Strategy document, 'Best practice methodology in the use of animals for scientific purposes' and the NHMRC 'Information paper: The implementation of the 3Rs in Australia', the action to improve research quality did not include scrutinising animal research or its translation: During June 2017 to July 2023, the NHMRC Partnership Centre for Health System

[3] https://www.nhmrc.gov.au/sites/default/files/documents/attachments/publications/3Rs-Information-Paper-20190930.pdf
[4] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7401509/

Sustainability was funded with four key research themes: 1) using analytics, technology and shared data, 2) reducing waste and low-value care, 3) promoting better value for the health dollar and 4) observatory on health system sustainability[5]. The Centre was jointly governed and funded to the value of $10.75 million AUD over five years by the NHMRC, Bupa Health Foundation, NSW Health, the Western Australia Department of Health, and the University of Notre Dame Australia. Appreciating the broad scope of research quality, it is unfortunate that while biomedical research using animals could have been a third sub stream within Theme 2, this never eventuated[6]. In order to fully scrutinise medical research waste, research quality and translation, scrutiny must be applied to basic research using animals, which could be done through re-funding of the centre for excellence which the WA government could continue to support.

Connecting research waste using animals to reduced outcomes for humans is perhaps less immediately obvious than research waste involving humans, however a worldwide effort to switch to non-animal models due to acknowledgement of the limitations of animal models and increased scrutiny of the over 60-year-old 3Rs framework[7] implies otherwise. The acknowledgement of the limitations of animal models in Australia have been either lacking or highly conservative, surprising given that almost all other OECD nations have acknowledged the limitations, by establishment of Centres for Alternatives to Animal Testing[8]. Australia is one of only nine (out of 38) OECD countries without a Three Rs centre dedicated to non-animal alternatives. However, the financial benefits of non-animal models have been acknowledged with the CSIRO Non-animal model strategy released in August 2023 identifying 10 key recommendations for Australia (discussed in ToR 2). In summary, AFSA propose animal research be scrutinised when determining research priorities that a **national centre for alternatives to animal testing** be established to support strategic direction, align with international developments, and distribute funding to states and territories for non-animal models.

1.2 National Strategic Documents to support prioritising non-animal models in health and medical research and in pharmaceutical development

Basic biomedical research should always translate to research outcomes for humans – one outcome is medical product development, which is a large driver of animal use in basic research in Australia given the lack of guidance on acceptability of non-animal models at the regulatory level.

The National Health and Medical Research 2021-2024 Research Priorities included 'Identifying emerging technologies in health and medical research and in health care, and promoting their safe, ethical and effective application'[9]. Many emerging technologies are also non-animal methods, and

[5] https://healthsystemsustainability.com.au/structure-and-governance/
[6] https://healthsystemsustainability.com.au/resources/our-publications/
[7] https://journals.sagepub.com/doi/10.1177/02611929241241187
[8] https://pubmed.ncbi.nlm.nih.gov/35578444/
[9] https://www.nhmrc.gov.au/research-policy/research-priorities/nhmrc-health-priorities

have the potential to provide safer, more effective medicines and therapies to patients. In NSW the task force 'Advanced Therapeutics Team' was established within the Ministry of Health in 2018, prior to the release of the NHMRC priorities, but in response to the same research gap. Their team is ongoing currently and no such team exists in other jurisdictions. The Advanced Therapeutics Team led a NSW delegation to BIO24 recently to participate on the panel on non-animal technologies, which was very well attended.

Given the huge investment in non-animal models in Europe, the United Kingdom and The United States, the *FDA Modernization Act 2.0* abolishing the requirement to test on animals, *the US Innovative Science and Technology Approaches for New Drugs (ISTAND) program'*[10], the publication of many non-animal model guidance's at the internationally harmonised (OECD) level [11], the 'tracking system for alternative methods towards regulatory acceptance' (US FDA and European Medicines Agency)[12] and the Australian TGA's ability to adopt international guidelines, alignment with the international movement towards non-animal models would be of national, and state interest. Therefore, prioritising funding and support for non-animal models in all relevant areas of research ***now***, would be a strategic move for Australia, which NSW has already jumped upon.

Support for uptake and identification of emerging technologies, such as NAMs, is also highlighted in the Health Products Regulation Group Regulatory Science Strategy, 2020-2025[13], which is focussed on four key areas:

i. Maintain and build skills in regulatory science
ii. Improve domestic and international collaboration with other government agencies, scientific organisations and regulators
iii. Increase responsiveness to emerging technologies
iv. Improve communication and engagement with stakeholders about regulatory science.

The Australian Government Department of Health and Aged Care also published a 2022 Scoping Report Towards alternatives to animal testing of industrial chemicals in Australia which has some crossover with medical products[14].

Industry associations are also leading the way in the promotion of NAMS. Belberry, a national organisation providing scientific and ethical review across human research projects, with support of

[10] https://www.fda.gov/drugs/drug-development-tool-ddt-qualification-programs/innovative-science-and-technology-approaches-new-drugs-istand-pilot-program
[11] https://www.icapo.org/test-guidelines
[12] https://tsar.jrc.ec.europa.eu/
[13] https://www.tga.gov.au/resources/publication/publications/health-products-regulation-group-regulatory-science-strategy-2020-2025
[14] https://www.health.gov.au/resources/publications/towards-alternatives-to-animal-testing-of-industrial-chemicals-in-australia-a-scoping-report-0?language=en

The Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists (ASCEPT), are already supportive of the integration of NAMs use by researchers, similar to the approach of the European Federation of Pharmaceutical Industries and Associations (EFPIA) in providing a coordination role to European pharmaceutical industries and associations.

In summary, **the use of non-animal models** is strongly in alignment with national research priorities, which **should also be state based priorities** and AFSA have three recommendations to ensure this priority is acted upon in Australia, where WA could contribute to 1 & 2:

1. The WA Health Minster raise the requirement for a National Centre for Alternatives to Animal Testing when there is a meeting of all AU State Health ministers.
2. Continuation of the Partnerships Centre Research Quality funding scheme with further support from the WA government and including animal research as a priority area for scrutiny in Research Stream 2. Through this centre, updates to the relevant documentation could proceed: The WA Health minister recommends a review of the Code (2013) and subsequently, the Best Practice Guide (2017).
3. An equivalent to the NSW Advanced Therapeutics Team in WA would be highly recommended, to ensure WA can be positioned as a state leader in the field.

2.0 Response to ToR 3: 'The impact on specific types of research and areas of need'

2.1 Overview of Medical Research in WA using animals

In 2021, almost 100,000 animals were used in research in WA (personal correspondence, Department of Primary Industries and Regional Development), although it should be noted that this includes broader research purposes than biomedical research such as agricultural or environmental research. The WA annual animal use statistics are not published, which contrasts with NSW, Tasmania and Victoria, where annual use reports are published and available to the public. This use is despite the fact that *replacement* of animals should be considered prior to establishment of any research protocol, and animals be used *only* when there is no valid alternative, according to the Australian code for the care and use of animals for scientific purposes (NHMRC). In WA, noncompliance with the Code is an offence as per the *Animal Welfare Act 2002.*

2.2 The Need for Investment in Non-Animal Models

2.2.1 Compliance for investors

At the recent BioMelbourne non-animal model event, Australian Ethical Investments highlighted that Australian-based investors want to avoid animal cruelty over ***all*** other types of social and environmental harm [15]. Given that ethical screening of universities and companies is required by

[15] https://responsibleinvestment.org/wp-content/uploads/2024/03/From-Values-to-Riches-2024_RIAA.pdf

Investment Funds to ensure portfolios are compliant, there is impetus for increasing ethical compliance, both internally and externally. Australian Ethical is currently leading a statement of support for non-animal models which has over 25 signatories nationally in industry and academia [16].

2.2.2 Public opinion

The social license for animal testing and research may be diminishing: A 2022 survey revealed that 64% of those surveyed were interested in finding out more about the research being done into alternatives to using animals in research.[17]. Given the requirement for consumer and community engagement in many (if not all) health and medical research projects, and the expectation to be open with communicating about the use of animals in such research projects for those whom are signatories of the Openness Agreement (in WA this is only Edith Cowan University, University of Western Australia and Murdoch University)[18], it is essential that researchers are adhering to the highest ethical standards and best practice of research at all times if to keep a social license for biomedical research. When surveyed, 67% of people support allocating a proportion of medical research grants to finding scientific alternatives to animal experiments[19], and these views should be strongly considered when determining research priorities, particularly as awareness of animal research and testing increases with more signatories to the Openness Agreement.

2.2.3 Work Health and Safety

The model work health and safety (WHS) laws now include regulations on psychosocial hazards[20]. The use of animals in biomedical research causes significant psychological harm to animal care workers: compassion fatigue and mental health issues are common since animal care workers frequently experience the 'caring-killing paradox': where they provide ongoing care to animals and form attachments, but can also be asked to euthanise the very animals they care for, an incredibly challenging and painful experience[21].

2.2.4 Environmental impact of animal use

Reducing the use of animals also decreases environmental impact. Environmental impact concerns with animal use are primarily due to; 1) over breeding and genetic modification with implications for

[16] https://www.australianethical.com.au/why-ae/ethical-stewardship/animal-research/statement-of-support-for-non-animal-research-models/
[17] https://anzccart.adelaide.edu.au/publications/anzccart-survey
[18] https://anzccart.adelaide.edu.au/openness-agreement#signatories-of-the-openness-agreement
[19] https://www.humaneresearch.org.au/wp-content/uploads/2019/10/AwarenessofanimalexperimentationisincreasingE2809andAustraliansarenothappy-May2018.pdf
[20] https://www.safeworkaustralia.gov.au/media-centre/news/new-model-whs-regulations-and-code-practice-help-prevent-psychological-harm-work
[21] https://animalfreescienceadvocacy.org.au/how-to-manage-the-emotional-toll-of-animal-advocacy/

disposal of these animals, 2) The increased need for resources to house animals, up to ten times more per square metre than common office buildings[22]. Non-animal methods also offer an advantage in reduced environmental impact. There are environmental consequences of both animal and non-animal-based research. However, animal-based research generates additional environmental costs, which is often an overlooked issue when considering the harms of animal research[23].

It should also be noted that non-animal models can benefit other sectors such as synthetic biology (e.g. lab grown meat) and industrial chemicals testing, bringing additional economic returns and reducing environmental impacts.

2.2.5 Economic Benefit to Australia

In August 2023 a landmark report was released by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Futures, the strategic advisory arm of Australia's national science organisation, titled 'Non-animal models: A strategy for maturing Australia's medical product development capabilities'[9]. This report assesses the potential of emerging non-animal models to complement or replace traditional approaches over the next 15 years and recognised that non-animal models are becoming increasingly sophisticated and are surpassing the performance of traditional animal models at anticipating the safety and efficacy of novel medical products. The report foresees that over the next 15 years, there will be a significant rise in the global use of non-animal models across all stages of the medical product development pipeline and suggests that Australia has the opportunity to play a key role in this emerging global capability by leveraging its research expertise and infrastructure.

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

- 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

In financial terms, the report identified that complex in vitro models such as organoids are estimated to return 1.28 billion AUD in revenue for Australia by 2040, with and organ-on-chip technologies returning 310 million AUD in revenue[9].

[22] https://animalfreescienceadvocacy.org.au/issues/environmental-impact/
[23] https://animalfreescienceadvocacy.org.au/wp-content/uploads/2024/03/Animal-Free_Science_Advocacy_Bulletin-23-Web.pdf

The report made 10 recommendations:

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

Whilst the CSIRO recommendations are primarily at a national level, recommendations 7 and 8 could be implemented at a statewide level via funding or scholarship programs in WA (see recommendations).

It should also be noted that non-animal models can benefit other sectors such as synthetic biology (e.g. lab grown meat) and industrial chemicals testing, bringing additional economic returns.

2.3 Existing (non-WA) State level funding and sponsorship for non-animal models

The release of the CSIRO report was followed with a discussion panel titled 'Animal model alternatives: the future of drug screening is driven by human biology' at Australia's leading life sciences conference, AusBioTech, in November 2023, sponsored by the Queensland Government[24]. The BioMelbourne network also held a non-animal models bioforum in February 2024, supported by

[24] https://www.ausbiotech.org/news/non-animal-models-could-deliver-15b-growth

the State Government of Victoria[25] On an international level, the NSW Government hosted a panel at Bio24 held in San Diego in June 2024[26]. A WA government supported NAMs event, or government investment to hold the AusBioTech conference, who are supportive of NAMs[17] would increase investment and discussion in this space in WA. To increase international collaboration and tourism, as a gateway to Europe, Western Australia would be uniquely suited to host the World Congress on Alternatives and Animal Use in the Life Sciences (now in its 13th year). Australia has never hosted a World Congress and this would position WA as a leader in the NAMs space.

2.4 Federal investment in non-animal models that WA receives

WA currently has a very small representation of funding for the NAMs fields; funding for The ARC Centre for Personalised Therapeutics Technologies (which has a UWA 'Hub' and focusses on micro-physiological (non-animal model) systems) expires in 2024, and there is an i*n vitro* WA hub as part of Phenomics Australia (which does have continued funding), however both are federally funded and neither are specifically designated as being alternatives to animal models.

The NHMRC announced "Funding for innovations to replace, reduce and refine animal use" in the 3rd June Tracker newsletter[27]. Although the pathway to do this is yet unclear, it shows that funding of non-animal models has achieved national significance, which should be then be supported at the state level. Other NHMRC funding for technologies and methods that could be considered replacements to animal use has historically been through funding calls for stem cell technologies such as the current MRFF funded, 'Stem Cell Therapies Mission – 2024 Stem Cell Therapies Grant Opportunity' some of which has been awarded to researchers in WA (personal communications with Murdoch University researchers). However, generally speaking WA receives a far lower allocation of nationally awarded grant funding, and there since no designated non-animal model/method funding scheme, it is difficult to measure progress in this space. A Medical Research Future Fund, Frontier Health and Medical Research initiative call would be uniquely placed to fund non-animal model research, given that its objective is to explore bold and innovative ideas and something the WA government could request from the federal health minister.

2.5 Existing statewide funded infrastructure to develop non-animal models and methods

Some state governments have established their own non-animal model initiatives. The New South Wales government delivers The Emerging Industries and Infrastructure fund which received funding

[25] https://biomelbourne.org/event/bioforum-advancing-non-animal-models-in-biomedical-research/

[26] https://lu.ma/vt5pdh0z

[27] https://www.nhmrc.gov.au/research-policy/ethics/animal-ethics/3rs

of $2.5 million for the NSW Organoid Innovation Centre in 2023[28]. This announcement was followed by a funding announcement of $7 million by the NSW government: $4.5 million for research that replaces or significantly reduces the use of animals in experimentation and $2.5 million rehoming of laboratory animals, because of a parliamentary inquiry the year previously[29].

AFSA were pleased to hear of the recent funding announcement in May 2024 that Curtin University had been awarded $500,000 from the WA Government's Future Health Research and Innovation (FHRI) Fund – Enabling Scheme to develop new, personalised medical treatments at the new Western Australian Organoid Innovation Hub (WAOIH)[30]. Whilst five times less than NSW received to establish their NSW Organoids Innovation Centre – it is a step in the right direction and demonstrates an appetite for research in this area in WA.

Whilst there has been minimal funding allocated to non-animal methods, **there are no specific funding programs *only* for the development and validation of non-animal methods which are urgently required to expand their use**. Currently, Australian researchers interested in the field of alternatives to animals are reliant on very limited overseas funding and whilst there are some exciting projects underway in Australia, additional funding would facilitate more innovative research of this nature. Researchers will 'follow the money' yet currently there is stagnation as no institution is taking responsibility for funding alternatives, despite a legislative obligation to only conduct research for which there is no alternative. If no funding is committed to develop, refine and validate alternatives, progress will remain stalled. Whilst it is argued that Australian researchers can rely on international alternatives data, a cultural change is needed to encourage adoption of alternatives and that can only be achieved through leadership, commitment and mentorship of Australian researchers, leading to generational change in research practices. **Funding is a crucial first step. Many of the new research technologies require expertise in areas such as bioengineering or computational systems and may fall outside the skills set of biomedical researchers; therefore, investment is required to develop this specialist workforce and infrastructure. Incentives could include scholarships, grants and sponsorships to attend relevant conferences and mentoring.**

Specific recommendations for supportive sponsorship, funding schemes and infrastructure in WA

The West Australian Government is a sponsor of the WA Life Sciences Innovation Hub (similar in some ways to BioMelbourne) and sponsored AusBioTech in Perth in 2022. Whilst both are excellent

[28] https://www.sydney.edu.au/news-opinion/news/2023/03/01/nsw-government-backs-usyd-led-consortium-drug-discovery-organoids-innovation-centre.html

[29] Funding available for scientific researchers

[30] https://www.curtin.edu.au/news/media-release/miniature-lab-created-human-organs-to-fast-track-new-disease-treatments/

initiatives with the potential for government to inadvertently financially support discussions and sessions on non-animal models, no specific event with a focus on non-animal models has been sponsored by the Western Australian Government. **Specific asks for funding for replacements to animal use include the following, open to further discussion:**

1. Funding for replacement, whether at state or federal level should be explicitly stated as being for the purpose of replacement of animals. If this is not the case, measurement of reduction in animal use in Australia is not possible as animal use for such schemes cannot be excluded. For example; Stem Cell projects can still involve the use of animals and some medical technologies, such as digital twins (or the Virtual Human), may result in a reduction for the need for animal testing, but this cannot be measured if not explicitly stated as being conducted for the purpose of replacement. As such **a 'Fund for replacement of animals in biomedical research' should be established**. If a specifically titled fund cannot be committed to, then criteria for all types of research that could be considered alternatives (i.e. organoids, Organ-chip, in silico) must explicitly stating that they must either exclude the use of animals or focus on development or validation of a replacement method. This way, once nationally coordinated animal use statistics have begun to be publicly reported, measurement of reduction in animal use will be more streamlined.
2. At least some of the proportion of funding for replacements be conducted in partnership with Universities to support a smooth transition to animal-free research for future generations: the majority of animal use occurs in the university setting through basic research. This precedent is established because animal use begins in high school and continues at undergraduate level, therefore replacements need to occur at all levels of education. A co-funding scheme with universities, where if the University researcher was successful in achieving a grant from the 'Fund for Replacement of Animals in Biomedical Research' a small co-contribution from the University was required, such as to fund scholarships for PhD, masters or Honors students in non-animal model work or for lecturers to help develop new course work streams with a focus on non-animal models. At the moment, there no national internal 3Rs funding that can be used for the development of replacement methods, with the exception being The University of New South Wales, awarding $500,000 AUD in the 2023-34 3Rs round[31]. No University in WA currently offers a financial incentivised 3Rs scheme, although University of Western Australia do offer a 3Rs award[32] similar to Griffith University and University of Sydney.
3. At least some of the proportion of funding should be available to support industry initiatives in non-animal models: one of the key reasons that biomedical researchers continue to use animals after first demonstrating proof-of-concept for a therapy or treatment, is that there

[31] https://research.unsw.edu.au/unsw-3rs-grant-scheme
[32] https://www.research.uwa.edu.au/staff/animals/animals-and-research#3r-s-award

will be a requirement to test in animals for regulatory application/commercialise their therapeutic. Animal testing is no longer mandated in Europe and The United States, and was never mandated in Australia, however animal use is heavily implied to be necessary in guidelines adopted by the Therapeutic Goods Administration[33]. Ideally the Australian Therapeutic Goods Administration would fund development of non-animal model initiatives designed to improve their acceptance by this regulator, one international example can be seen where the Critical Path Institute was funded by the US FDA to develop a model informed drug development training course[34].

4. Although Funding is required for all types of non-animal models, in all disease areas, some disease conditions or non-animal models have an increased relevance given policy developments in Australia recently: in 2023 the NHMRC released two policy statements outlining that funding would no longer be given to support two specific tests which were deemed scientifically invalid, and to cause significant harm and suffering to animals used: the forced swim test and the forced inhalation test[35]. Guidance at the regulatory level is particularly required for alternatives for the forced swim test[36] and funding is necessary to support development of alternatives for both tests. Although WA has not yet prohibited the tests, as the NSW government has, a proactive approach by the WA government would support researchers in transitioning if such a prohibition eventuated.

SUMMARY and KEY RECOMMENDATIONS

SUMMARY

- Funding for non-animal models and methods should be a top research priority area, to ensure best practice (of Replacement) is always upheld in biomedical research and that researchers are encouraged and supported to do this.
- Australia has nationally acknowledged the need for identifying non-animal models (or emerging technologies) both in the animal welfare space and in the health and medical space
- **The use of non-animal models** is strongly in alignment with national research priorities (NHMRC and AHPRG), which **should also be state based priorities**
- It is necessary to question the translational value of animal research to human health when determining medical research priorities and this can be done by the expansion of previous partnership centres which the WA government supported.

[33] https://animalfreescienceadvocacy.org.au/resources/regulation-of-human-medicines/
[34] https://c-path.org/training/model-informed-drug-development-training-course/
[35] https://www.nhmrc.gov.au/research-policy/ethics/statements-forced-swim-test-and-smoke-inhalation-procedures-rodent-models
[36] https://www.sciencedirect.com/science/article/pii/S0273230024001077

- Funding and support for non-animal models is required for a wealth of social and environmental reasons: responsible investment, to reduce environmental impact, to uphold workplace duty of care, to benefit the Australian economy and importantly, for responsible, quality research.
- To support the cultural change of transitioning to non-animal models, support for small scale events by the WA government would be encouraging, such as have been held in Melbourne and Queensland. These could be expanded to large scale international events that WA can host, which may also benefit the tourism sector.
- A dedicated 'Fund for Replacement of Animals in Biomedical Research' is required to ensure that the reduction in animal use in biomedical research can be measured and this fund should be distributed through a national coordinating 'Centre for Alternatives to Animal Testing' to ensure that Australia is respectably amongst the other 23 OECD nations to have a Centre.

KEY RECOMMENDATIONS

To ensure the potential of non-animal models are realised in WA, AFSA recommend that the WA government could contribute as follows:

1. The WA Health Minster raise the requirement for a National Centre for Alternatives to Animal Testing, at a meeting of all AU State Health ministers.
2. The WA Government re-invest the NHMRC Partnerships Centre for Research Quality and including animal research as a priority area for scrutiny in Research Stream 2. Through this centre, updates to the relevant documentation could proceed: The WA Health minister recommends a review of the *Australian code for the care and use of animals for scientific purposes* (the Code) (2013) and subsequently, the *Best practice methodology in the use of animals for scientific purposes* (2017).
3. WA establish the equivalent to the NSW Advanced Therapeutics Team, to ensure WA aligns with other leading state initiatives.
4. The WA government consider supporting some small-scale events, with a specific focus on non-animal model development.
5. The WA government consider hosting larger scale events such as the World Congress on Alternatives and Animal Use in the Life Sciences.
6. The WA government negotiate with federal ministers to ensure the 'Fund for Replacement of Animals in Biomedical Research' is supportive of future generations in WA (has a funding component for education), considers industry support in WA (has a funding component for industry or to support commercialisation using non-animal models) and is proactive of national policy developments that may become applicable to WA (such as the forced swim test and forced inhalation test) where appropriate.

Yours sincerely,

[redacted]

Rachel Smith
Chief Executive Officer
Animal-Free Science Advocacy

Attachment - Example of existing state government funding

Media releases

NSW Health

2024

2023

2022

2021

2020

The Hon. Ryan Park, MP

2024

2023

The Hon. Rose Jackson, MP

2024

2023

The Hon. David Harris, MP

2024

2023

Archive

NSW Government invests $4.5 million to help reduce and replace animals in medical research

18 July 2024

The Minns Labor Government has announced a $4.5 million funding package that will be a significant step in helping reduce and replace animals in medical research.

The funding will be used to establish the Non-Animal Technologies Network (NAT-Net), a NSW-led body that will work to develop innovative alternatives to using animals and advise on the required medical research infrastructure and regulations to support these as alternatives.

Non-animal technologies, such as using human cells or tissues, are more biologically similar to the patients being treated, and so medicines being tested are less likely to fail in clinical trials. These technologies are beginning to exceed the performance of animal models in drug development and medical research.

NAT-Net will include experts from the University of NSW, University of Wollongong, University of Technology Sydney, University of Sydney and the University of Newcastle, as well as the Victor Chang Cardiac Research Institute, Children's Medical Research Institute and the Hunter Medical Research Institute.

The funding comprises three pillars. The first, a research pillar to accelerate research progress, which will include a competitive research grant program, with recipients set to focus on developing solutions to reduce animals in medical research. The second, to develop infrastructure to establish NAT-Net and the third to set up a working group to develop regulatory approaches for non-animal technologies.

This may include complex multi-organ models, organs-on-chips, or approaches using machine learning and artificial intelligence.

Minister for Medical Research David Harris said:

"This is the first time a network of this kind has been established for non-animal technologies in NSW, and it will significantly enhance the state's ability to make scientific breakthroughs. I am excited to announce this wonderful initiative alongside our partner institutions.

"By investing in cutting-edge, non-animal technologies, researchers may be able to better predict which therapies work in humans, accelerating discoveries that could save people's lives.

"We know that non-animal technologies in medical research are the way forward and NAT-Net will be a driving force behind these exciting Australian-first developments led by NSW."