



## Department of Primary Industries

### ANIMAL RESEARCH REVIEW PANEL

#### Advances and Institutional Approaches in Alternatives to Animal Testing Webinar - 28 May 2024

The introduction to the [Australian Code for the Care and Use of Animals for Scientific Purposes](#) (the Australian Code) promotes the ethical, humane and responsible care and use of animals for scientific purposes. A governing principle of the Code is that 'respect for animals must underpin all decisions and actions involving the care and use of animals for scientific purposes' (section 1.1). One way this is achieved is through applying the 3Rs:

- *the Replacement of animals with other methods*
- *the Reduction in the number of animals used*
- *the Refinement of techniques used to minimise the adverse impact on animals*

#### During the webinar we heard from three presenters:

- *Dr Natalie Anderson from Animal Free Science Advocacy*
- *Dr Josephine Joya from the University of NSW*
- *Professor Wojciech Chrzanowski from the University of Sydney*

#### Questions submitted during the webinar:

##### Question 1: How is Animal-Free Science Advocacy funded?

**Answer (Dr Anderson):** *The service is funded by Animal-Free Science Advocacy, we are a not-for-profit, member-based and committee-run organisation. A link to our annual financial reporting page at ACNC website is on our About Us page, along with specific information about our funding (at very bottom):*

<https://animalfreescienceadvocacy.org.au/about-us/about/>

##### Question 2: Has any consideration been given to assist ARCs on this important requirement under the scientific code?

**Answer (Dr Anderson):** *Yes, AEC members can send us an email and we will tailor the search service for their needs, I can meet to discuss this as well, the service is confidential.*

##### Question 3: Could you share some more detail as to the IP implications of the 3Rs strategy implementation, could you give a specific example of where there was an IP implication?

**Answer (Dr Joya):** *A researcher group could not share tissues from in-house generated GM mice, were not sure the final fate of tissues and they did not want to go through legal to create agreement.*

Question 4: Could Dr Joya please explain a bit more about the effective comms platform?

**Answer (Dr Joya):** *The current communication platform is a manual process through emails. We need an efficient electronic platform that will communicate with the new animal ethics online form, so that the tissue sharing form is auto-filled with information from the animal ethics application*

Question 5: Reporting on use of NAMs – in terms of being able to demonstrate progress in reducing use of animals; is this something that the AEC records and reports on to the institution?

**Answer (Dr Joya):** *Yes, it is. The RECS Veterinary Animal Care team submits an annual report to the ACEC on our 3Rs initiatives including the number of people who have completed the animal care and ethics courses. The information is then included into the annual report of the ACEC to the University.*

Question 6: What regulatory science contradicts ethics; How do you respond to a regulator that requires further lethal endpoint testing purely to refine confidence levels for predicting efficacy?

**Answer (Dr Joya):** *We would need to know which regulator and what type of test and what level of efficacy (i.e. are they comparing to the animal test) to give a better answer, but the International Committee for Animal Protection in OECD programs <https://www.icao.org/> publishes the non-animal models that exist at OECD level to replace some toxicity tests and works with regulators to get the required confidence levels. The European Federation for Pharmaceutical Industries and Associations (EFPIA) represents and works with pharma to develop confidence in NAMs, pharma would be a key player to work with regulator this is a good EFPIA webinar: <https://www.efpia.eu/news-events/events/efpia-event/how-the-pharmaceutical-industry-is-working-to-avoid-and-replace-the-use-of-animals-for-scientific-purposes>. We have a webpage for regulators too that gives an overview: <https://animalfreescienceadvocacy.org.au/resources/regulation-of-human-medicines/>*

## References used in the presentation by Dr Natalie Anderson

### Database

[Adverse Outcome Pathway Knowledge Base](#)

[Non-animal technology database](#)

[Re-PLACE database](#)

[3Ranker](#)

[ALT-BIB – Alternatives to Animal Testing](#)

[SMAFIRA](#)

### Educational materials

[EURL-ECVAM biomedical research series](#)

[PETA science consortium](#)

[OECD case studies](#)

[CSIRO Non animal models](#)

### Key AFSA Webpages

[Replacing Animals: better Ways to Do research](#)

[For Researchers](#)

[For Students and Educators](#)

[Guidance for Animal Ethics Committees](#)

[Regulation of Human Medicines:](#)

## References used in the presentation by Dr Josephine Joya

Jung, M., Skhinas, J.N., Du, E.Y., Tolentino, M.K., Utama, R.H., Engel, M., Volkerling, A., Sexton, A., O'Mahony, A.P., Ribeiro, J.C. and Gooding, J.J., 2022. A high-throughput 3D bioprinted cancer cell migration and invasion model with versatile and broad biological applicability. *Biomaterials Science*, 10(20), pp.5876-5887. [A high-throughput 3D bioprinted cancer cell migration and invasion model with versatile and broad biological applicability - PubMed \(nih.gov\)](#)

Cox, R.X., Kingsford, R.T., Suthers, I. and Felder, S., 2023. Fish injury from movements across hydraulic structures: A review. *Water*, 15(10), p.1888.

Biological Resources Imaging Laboratory: <https://www.analytical.unsw.edu.au/facilities/bril>

Campbell, N.E. and Ord, T.J., 2023. Wild kangaroos become more social when caring for young and may maintain long-term affiliations with popular individuals. *Animal Behaviour*, 205, pp.183-195.

Lisa Schwanz. Non-destructive sex-id technology in reptiles. Presented at 2024 Animal Welfare Symposium, UNSW

UNSW Veterinary Guidelines, Monitoring Sheets and Templates: <https://research.unsw.edu.au/unsw-veterinary-guidelines-monitoring-sheets-and-templates>

UNSW 3Rs Grant: Contact [pvcresin@unsw.edu.au](mailto:pvcresin@unsw.edu.au) , [k.brennan@unsw.edu.au](mailto:k.brennan@unsw.edu.au)

## References used in the presentation by Professor Wojciech Chrzanowski

Phan, T.H., Shi H., Denes, C.E., Cole, A.J., Wang, Y., Cheng, Y.Y., Hesselson, D., Roelofs, S.H., Neely, Jang, J., G.G., Chrzanowski, W 2023 **Advanced pathophysiology mimicking lung models for accelerated drug discovery:** <https://spj.science.org/doi/full/10.1186/s40824-023-00366-x>

**Australian Scientists grow replica human lungs and call for end to animal testing:** <https://www.theguardian.com/science/2023/apr/11/australian-scientists-grow-replica-human-lungs-and-call-for-end-to-animal-testing>

**A breath of fresh air: novel approaches to human lung disease modelling:** <https://www.ddw-online.com/a-breath-of-fresh-air-novel-approaches-to-human-lung-disease-modelling-15926-202203/>

**Australian scientists grow replica human lungs and call for end to animal testing:** <https://alumni.csiro.au/australian-scientists-grow-replica-human-lungs-and-call-for-end-to-animal-testing/>

D. Khanal, H. Hau, A. Kondyurin, D. Fu, I. Ramzan and W. Chrzanowski 2017 **Nanotoxicity of nanodiamond in two and three dimensional liver models:** [Nanotoxicity of nanodiamond in two and three dimensional liver models | International Journal of Nanotechnology \(inderscienceonline.com\)](#)