

Quick-Reference Media Guidelines: Reporting on Animal Use in Medical Research

A Resource for Media Professionals

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**Animal-Free
Science
Advocacy**








A guide written by



**Animal-Free
Science
Advocacy**

-  animalfreescienceadvocacy.org.au
-  info@animalfreesci.org.au
-  1800 486 263
-  PO Box 15 Fitzroy VIC 3065

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Introduction

Globally, the use of animals in biomedical research and teaching is commonly reported in the below ways:



1 Profiling potential scientific advances



2 Reporting on the number of animals used in research



3 Highlighting cases of misconduct at research facilities, typically following undercover investigations or citations by regulators

Note that whilst the use of animals in research and teaching in Australia is broader than for biomedical research (for example, conservation research or agricultural research), this resource is focussed on reporting biomedical research specifically, and primarily in relation to profiling potential scientific advances.

The purpose of the guidelines is to encourage informed and accurate reporting on the complex issue of animal use in biomedical research.

What is a 'breakthrough' and what is hype?

According to Oxford's English dictionary, the word breakthrough means "a sudden, dramatic and important discovery or development." This is the common understanding when the term is used to describe medical breakthroughs.

We all desperately want medical breakthroughs. You may notice that the media releases issued by research institutes tailor to that longing. The context of annual deaths from a particular disease or condition and the cost to the economy often precedes the claim of a new research discovery.

However, research outcomes may be overinflated as breakthroughs, particularly when those outcomes are only known in animals (1, 2). **This is pertinent given that approximately 90% of drugs found to be safe and effective in preclinical research, including 'pivotal' animal tests, fail to make it to human clinical use (3). Species differences are key to this failure rate.**

The exaggerated heralding of a 'breakthrough' can be attributed to a number of factors, including the need to secure further research funding or as a means of generating headlines. One of the consequences, however, is false hopes in patients and their families.



In Australia, examples of media hype surrounding 'breakthroughs' was highlighted via Media Watch (4). Analysis of mainstream media reporting concluded that the reporting presented an inaccurate picture of the potential of Alzheimer's research findings to lead to life-changing patient outcomes. The below experts provided comment on the reported 'breakthroughs'.

'Alzheimer's disease is a terrible diagnosis and we all want better treatment. But it's not helpful to misrepresent research as though it's a 'breakthrough' in care when it's clearly not at that point yet, and may never be.'

- Email, Associate Professor Barbara Mintzes, Sydney University, 24 November, 2021 (4)

'There are so many treatments that appear to work in a mouse model but do not translate into humans, that one has to be extremely cautious about making such claims ...'

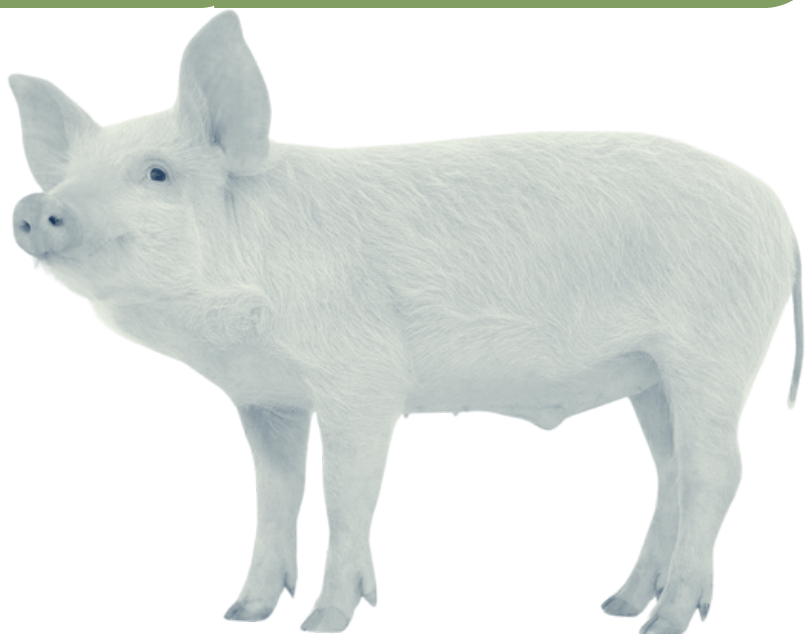
- Email, Professor Perminder Sachdev, UNSW, 24 November, 2021 (4)

Exaggerated claims of animal-based medical research

The results of animal-based preclinical research studies are commonly overstated in media reports, to prematurely imply imminent 'breakthroughs' relevant to human medicine. A 2020 report published in BMJ Open Science (5) looked at 27 examples of animal research that were highly publicised in the UK national media in 1995, and which were claimed to provide a "breakthrough" for human health. Each study was followed up more than 20 years later to determine if any actual human benefit had transpired. Overspeculation and exaggeration of human relevance was evident in all the articles examined. Of 27 unique published 'breakthroughs', only one had clearly resulted in human benefit. Twenty were classified as failures, three were inconclusive and three were partially successful.

Xenotransplantation

There was global media focus on the pig-human heart transport of patient David Bennett, with the procedure heralded as a milestone for those awaiting heart transplants. However, there was less coverage when the patient unfortunately later died, and a clear underplaying of the ability to mitigate risks associated with xenotransplantation (6). Discussion of alternative methods that could be developed to assist the shortage of organs available was a neglected angle.



Reporting on harms and benefits

The use of animals in research is evaluated on a cost-benefit analysis, with the costs typically considered to be incurred by the animal test subjects, and the benefits to humans. However, there is a case for this consideration to be extended to factor in human costs.

Direct harms can result when new drugs approved after preclinical trials (including animal testing), lack efficacy and/or have serious adverse side-effects when tested in humans (7).

There are also indirect harms result, for example, from the non-availability of drugs which might have been sufficiently safe and effective in humans, the development of which was stopped by lack of efficacy or adverse effects in animals (8).

Not all research is to develop life-saving medical cures and much research is driven by scientific curiosity. Termed basic or fundamental research, such research may generate knowledge which contributes to subsequent cures, but it is difficult to make this predictive assessment at the point of project approval. Lack of translation between animals and humans can impact on the relevance of results. Therefore, reporting should exercise caution in claiming human benefit.

What are 'highest standards?'

When analysing the costs to the animals used in research, be wary of terminology such as 'highest possible animal welfare standards', 'all animal experimentation is conducted according to rigorous ethical standards' or 'animal welfare is paramount'. This simply means adherence to regulatory standards, and the currently regulatory framework in Australia exempts animals used in science from practices which in other circumstances would be considered cruelty offences.

The definition of paramount is '*more important than anything else; supreme.*' Did this mean that the interests of animals outweigh all else? An example from the University of Newcastle demonstrates this paradox.

University of Newcastle Animal Research Monitoring and Adverse Events Guidelines (9):
'*The immediate welfare of research animals is paramount*'

*'if it is discovered that a problem affects animal wellbeing **beyond what is planned for in the approved research project**, quick actions must occur to remove obvious causes'*

Therefore, if animal wellbeing is negatively **impacted by the planned research proposal**, this can continue, despite the claim that the welfare of research animals is paramount, and thus more important than anything else.



DOs and DON'Ts

The language used when writing about or reporting on animal research is important. Below are some tips and some suggestions as to what to avoid.

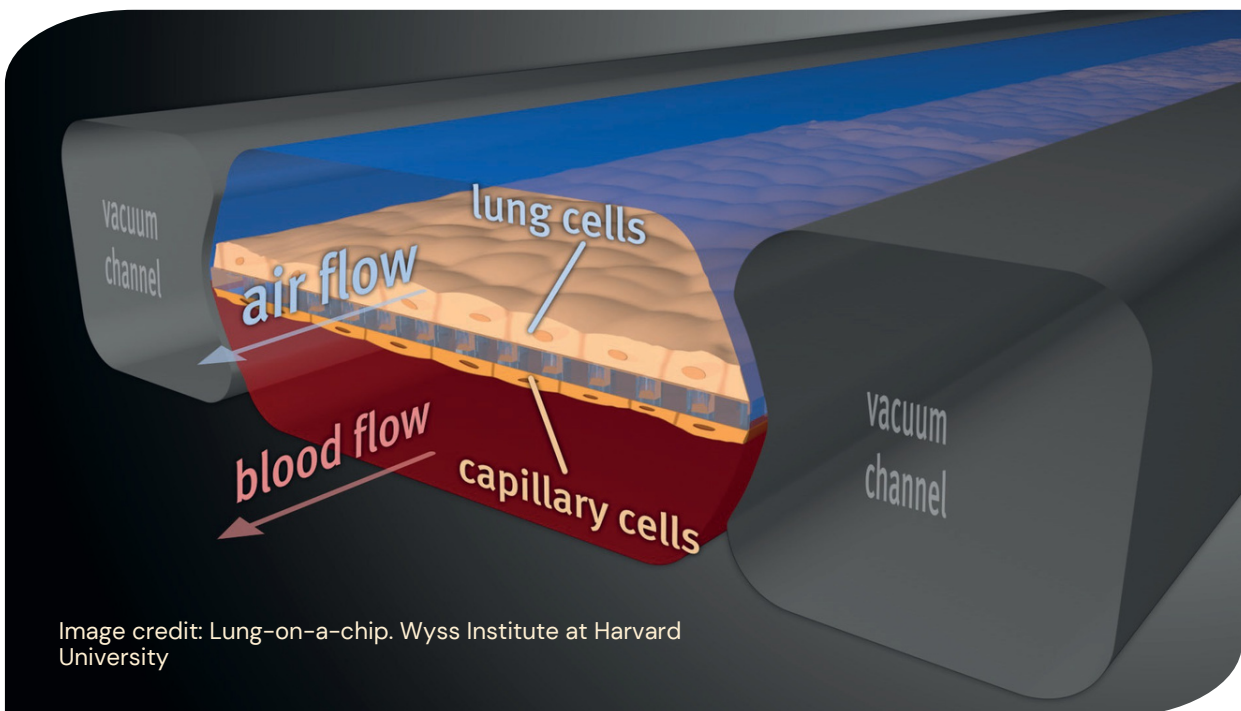
- ✓ If your story examines research conducted on animals, make sure neither the headline nor the first sentence implies the findings apply to humans, and that it clearly states that the findings are in animals
- ✓ Focus on the specific study, rather than the importance of the broad research area
- ✓ When reporting on animal suffering, remember that noble intent does not negate animal suffering
- ✓ Request footage or images of the actual procedures conducted on animals
- ✓ Consider neglected angles such as transparency in animal research or new technologies to replace animals
- ✓ If the information you are seeking is not in the public domain, file a Freedom of Information Request
- ✗ Don't use euphemisms such as sacrificed or euthanised
- ✗ Language matters- don't use 'lab animals', 'lab rat' etc but instead use 'animal used in experimentation or research or animal from a laboratory'

Replacing animals: the terminology

There are several terms that can be used to describe non-animal research including alternatives, replacements and new approach methodologies (NAMs). They are not applicable to all contexts, for example, epidemiology or human population studies are not new; but are a valid non-animal method. Replacement is the most fitting term and stronger than alternative, which suggest animals could still be used as another option. **'Replacement methods based on human-biology'** is the simplest and clearest explanation. **'Human-relevant'** research is also increasingly used to describe research without animals.

Just what is meant by human-relevant research?

Human-relevant research techniques include (among others) **organs-on-a-chip** (microdevices containing cells and fluids intended to simulate physiological processes in organs); **organoids** (three-dimensional spheroids containing multiple cell types and intended to simulate physiological processes); **high-throughput systems** (rapid screening of large numbers of chemicals for biological activity); **induced pluripotent stem cells** (adult cells that have been genetically reprogrammed to an embryonic stem cell-like state); and **computational modelling** (using computation to study the behaviour of complex systems).



For more information, see Animal-Free Science Advocacy's document *Better Ways to Do Research*, a guide to non-animal methods.

Further information

Should you require further information or comment on animal experimentation in Australia, please [contact Animal-Free Science Advocacy](#).

[An Openness Agreement on Animal Research in Australia](#) was created in 2023. Contact details are available for all signatory research institutes for direct enquiries.

The [Australian & New Zealand Council for the Care of Animals in Research and Teaching \(ANZCCART\)](#) is a further reference source.

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