Pioneering Change: The Ethics Committee's Role in Animal Research Replacement

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Keywords: AEC, Replacement, Monitoring

Abstract:

Public acceptance of animal use in research is generally regarded as "conditional," contingent on two key factors: the absence of viable alternatives and the minimisation of unnecessary suffering. [1] While Animal Ethics Committees (AECs) are well-versed in addressing the latter, they face significant challenges in evaluating the former—namely, the existence and suitability of replacement methods.

The Australian NHMRC Code mandates that opportunities for replacement be considered before any assessment of animal-based protocols. However, this requirement is complicated by several factors. There is often an overreliance on literature review techniques to identify alternatives, which presumes a level of information science literacy that many researchers and AEC members may not possess. Moreover, many emerging replacement strategies originate from disciplines such as artificial intelligence, machine learning, and photonics—fields that are often unfamiliar to those with traditional biomedical training. As a result, our ability to identify and evaluate replacement opportunities may be limited, and we may even be searching in the wrong databases.

This raises the question: should AECs include members with expertise in information science, physics, or evidence synthesis? Alternatively, could a dedicated peer-review step—comprising experts from these disciplines—be introduced to assess scientific validity and replacement potential prior to ethical review?

Beyond committee composition, systemic issues also hinder the promotion and recognition of replacement. Decisions to use non-animal methods often occur before AEC involvement, meaning such efforts go undocumented and unacknowledged. Institutions may be making significant strides in promoting replacement, yet these contributions remain invisible within current reporting frameworks. Furthermore, when replacements arise from outside the biomedical sciences, they may not even be recognised as such by the researchers themselves.

To truly advance the principle of replacement, we must rethink not only how AECs assess alternatives, but also how our systems recognise and reward the decision not to use animals at all.

References

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