

Lecture: gentechnology & animal experiments / transgenic animals

Reporting 3Rs parameters in European scientific research papers

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It is 20 years since both the Council of Europe Convention ETS123 and the EU Directive 86/609 were introduced, recommending the implementation of the 3Rs (reduction, replacement and refinement) in animal experiments and providing guidance on animal housing. It might therefore be expected that this might have influenced reports of 3Rs related parameters in animal research papers over time. In order to test this hypothesis, a literature survey of animal-based research reported in 15 key journals was conducted. A randomly selected sample of original research papers arising from European institutions that involved primates or genetically modified mice were identified for the years 1985-6 and 2005-6 (N=50 each). Each paper was reviewed for reports of 10 parameters corresponding to replacement (consideration of non-animal methods), reduction (justification of number of animals required) and refinement (housing – related; size, social, object and food enrichment and procedure-related; the use of training, humane endpoints, anaesthetic and analgesia). Despite increasing reports of adherence to the legislation and codes of practice, reports of reduction and replacement considerations were extremely low (0-6%) with no significant difference between year or species. Reports of refinement related improvements were higher but still low (0-45%) with only a few significant differences between year or species. With increasing provision of supplementary information in online papers it should be more, rather than less, possible to acknowledge 3Rs related parameters within research papers. This is an important issue to be tackled by academics and journal editors if the 3Rs is to be promoted nationally and internationally.

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