

# Animal Experimentation: Working Towards a Paradigm Change

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Legal reforms around the world frequently do not provide sufficient tools to protect even basic animal needs, let alone animal well-being. However, compared to other legislation, Directive 2010/63/EU of the European Parliament on the protection of animals used for scientific purposes appears radical with its statement that the final goal is the replacement of procedures on live animals as soon as it is scientifically feasible (European Parliament, 2010, recital 10).

Unfortunately, the Directive does not provide a plan of action on how to achieve this long-awaited goal. Nonetheless, it is not unrealistic that this crucial shift can be accomplished since we have the necessary arguments against the flawed, misleading and unethical use of animals in science (Archibald, 2018; Archibald et al., 2018; Herrmann and Jayne, in press; Pound and Ritskes-Hoitinga, 2018). These limitations are not yet widely known by the general public, and there is evidence that they are not appreciated or simply ignored by experimenters who base their work on animal use (e.g., Fitzpatrick et al., 2018; Franco et al., 2018). Thus, informing the public about the biomedical industrial complex and its practices in an unbiased way is crucial to enable and foster the much-needed paradigm change in biomedical research, testing and education.

Hence, this paper starts out with discussing some main shortcomings of animal experimentation. Evidence of the failure of animal models to protect humans and to control many diseases will be given (Kramer and Greek, 2018; Part 5, Herrmann and Jayne, 2019) which also demonstrate the waste of resources for such research (Chapter 10, Herrmann and Jayne, 2019). Furthermore, the harms to both non-human animals and humans caused by the reliance on animal-based research will be reported (Archibald, 2018; Chapter 13, Herrmann and Jayne, 2019).

The second part of the paper focuses on ways to work towards an animal-free world of science. Some main obstacles to overcome are the vague provisions regarding animal replacement (especially in the field of basic and applied research) (Chapters 1 and 6, Herrmann and Jayne, 2019), lack of education on animal-free, human-relevant approaches, insufficient funding for the development of non-animal models (Chapters 1 and 24, Herrmann and Jayne, 2019) and entrenchment in science (Chapter 24, Herrmann and Jayne, 2019).

In addition, there is a demand for societal action on the political level which is central to achieving this imperative scientific revolution (Chapters 5 and 7, Herrmann and Jayne, 2019). The paper closes by showing ways that the general public can contribute to a paradigm change away from animal use in research, testing and education.

## References:

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