

Position Statement on the Use of Animals in Research

1. Summary

The Microbiology Society supports the replacement, refinement and reduction of animals in research. However, when no alternative is available, the use of animals within an approved regulatory framework remains essential. The Society is committed to openness in the reporting of this research.

2. Importance of animal research in microbiology

Research using animals is required to understand how microbes cause disease in human and animal hosts, how hosts respond to infection and the relationship between host microbiomes and health. Such research has been, and continues to be, vital for protecting human and animal health through the discovery and development of safe and effective vaccines, antibiotics and drugs. Through contributing to improved livestock health, research using animals also benefits society through helping to secure food production and the economic impact of agriculture.

3. Replacement, refinement and reduction (3Rs)

The Society supports the principles of the **3Rs** – working towards a reduction in the use of animals in research by refining experiments and developing alternatives to replace animals where possible.

The high complexity of microbial interactions with their human and animal hosts, in both infection and health, provides an exciting challenge for the development of *in vitro* alternatives to the use of animals in research. At present, computer modelling and the use of cell and tissue cultures represent complementary approaches that can reduce the use of animals in research. The Society recognises however that experiments using animals, when carried out in accordance with stringent animal welfare and ethical regulations will remain necessary for the immediate future.

4. Openness on animal research

The Society is actively committed to increasing communication about the use of animals in microbiology, having signed the [Concordat on Openness on Animal Research](#).

The Society and its peer-review journals also endorse the [ARRIVE \(Animal Research: Reporting of *In Vivo* Experiments\) guidelines](#), which are intended to improve the reporting of research using animals.

The Editors of the Society's journals will accept papers describing experiments conducted using animals. However, such experiments must be carried out in accordance with the legal requirements of the relevant local or national authority and authors must provide a statement affirming the approval of these experiments by the relevant ethical committee. Details of the procedures followed must be provided, and must be such that experimental animals do not suffer unnecessarily. The Editors will not accept papers in which, in their opinion, the ethical aspects are open to doubt. Authors are encouraged to consult the [ARRIVE guidelines](#) for reporting experiments involving animals.

5. Further information

The [Animal Science Group](#) (ASG) is a Special Interest Group of the Royal Society of Biology, which represents a diversity of UK organisations and bodies involved in formulating and supporting policy or directly involved in research involving animals. The Microbiology Society is a Member Organisation of the ASG.

The [National Centre for the Replacement, Refinement & Reduction of Animals in Research](#) (NC3Rs) coordinates and funds the development and application of new technologies and approaches to replace, reduce and refine the use of animals in science.

[Understanding Animal Research](#) (UAR) provides accessible information and resources on all aspects of animal research. UAR administers the Concordat on Openness on Animal Research.

The [Home Office *Research and testing using animals*](#) webpage provides information and links concerning UK animal research regulation and policy developments.

6. Contact

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