
Research using animals

Position Statement from The Institute of Cancer Research, London

Summary

The Institute of Cancer Research (ICR) believes that animal research is essential to understand how cancer develops and behaves within a whole organism, and how to treat it effectively. We use animal studies alongside many other experimental approaches and they are crucial in building up a complete picture of cancer biology. Our research using animals has helped drive advances in cancer treatment that are benefiting people with cancer all over the world today.

Under UK law, animals can only be used for research if there is no appropriate alternative. All our research proposals are thoroughly assessed before approval to ensure that there is no alternative to the use of animals, and that the studies will provide valuable information that will ultimately help cancer patients.

The ICR is strongly committed to the highest standards of animal welfare in all research studies, and has led the development of best practice in this area. We also support the principles of the 3Rs – replacement, refinement and reduction of use of animals for research – and are working to develop alternative experimental techniques.

We are signatories to the Concordat on Openness on Animal Research, and are helping to drive best practice in how we communicate about our research using animals with the public and in our scientific publications.

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Background Information

Animals are used in research to help us understand the mechanisms that underpin disease, such as the growth and spread of tumours, and to develop new methods for diagnosis, treatment and prevention. Animal studies are crucial for testing the safety of new treatments, and are required by law before drugs can go into clinical trials of patients.

Animal research has played a vital role in many of the most significant discoveries in medical research. The ICR's landmark discovery that the basic cause of cancer is damage to DNA would not have been possible without research on mice. We have also used studies in mice to assess whether drugs we have discovered – including the pioneering prostate cancer drug abiraterone – are effective and safe before they are given to patients.

Animal research in the UK is governed by strict laws. The Animals (Scientific Procedures) Act passed in 1986 sets out specific controls over the way research is conducted. An EU Directive, revised in 2010, also governs the protection of animals used for scientific purposes. Animal research can only be carried out when authorised by the Home Office. Each research project requires a licence, as do the researchers carrying out the procedures and the host institution. The Home Office will only grant licences where the potential results can justify the use of animals, the research can't be done without use of animals and when their discomfort is kept to a minimum. All institutions must have veterinary facilities and look after animals properly, and all work must be carried out by highly trained staff.

The research community is always looking for ways to improve welfare and minimise use of animals in research, and has embraced the principles of the '3Rs' – replacement, refinement and reduction. Replacement means using alternative experimental techniques that don't involve animals, refinement involves improving the way experiments are carried out to enhance animal welfare, and reduction involves using fewer animals or getting more information from the same number.

All organisations which use animals in research must have processes for reviewing the ethics of proposed projects and the adoption of the 3Rs. At the ICR this is done by our Animal Welfare and Ethical Review Body, which includes independent lay members not employed by the ICR

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Key ICR positions on research using animals

- The ICR believes that animal research is essential to understand how cancer develops and behaves within a whole organism, and how to treat it effectively. Although alternative techniques such as computer modelling and growing cancer cells in culture can provide valuable information, they cannot mimic the complexity of a living organism or the behaviour of cancers in that environment. Research at the ICR uses mice and rats to provide a fuller picture of how cancers develop and spread throughout the body, and to establish how different types of cancer respond to new treatments. This research is vital for bringing forward more effective treatments for people with cancer.
- Animal research is essential for discovering and developing safe new cancer treatments. It has played a vital role in developing many of the cancer treatments used today, and has made a real difference to patients' lives. For example, the ICR's work in mice showed that the drug abiraterone was powerfully effective at blocking testosterone production – driving its development as a treatment that has gone on to transform care for men with advanced prostate cancer.
- Wherever alternatives exist to animal research, the ICR is using them. Under UK law animals can only be used if there is no suitable alternative, and we review all our animal research regularly to make sure there are no other options. Project licence applications must show that all alternatives to animals have been considered and provide detailed evidence of the potential benefits of the research for human health.
- The ICR strongly supports the principles of the 3Rs – replacement, refinement and reduction of use of animals in research. Wherever we can we replace the use of animals in research with alternative options, refine experimental procedures to improve welfare, and reduce the number of animals used in experiments. We work closely with organisations such as the National Centre for 3Rs [to develop new approaches and technologies to minimise the use of animals and improve animal welfare](#).
- The ICR is strongly committed to the highest standards of animal welfare in all research studies, and has driven the development of best practice in this area. We played a leading role in developing the National Cancer Research Institute [Guidelines for the welfare and use](#)

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of animals in cancer research which are used by cancer researchers worldwide. All ICR projects comply with these guidelines.

- All research projects at the ICR using animals are reviewed by our Animal Welfare and Ethical Review Body, which includes members of the public. The group examines the ethics of all research projects proposed and ensures they consider the 3Rs principles. It must agree that the proposed work is necessary and has sufficient potential benefits before we can do any research using animals.
- The ICR strongly endorses the ARRIVE guidelines (Animal Research: Reporting of *In Vivo* Experiments), a checklist of best practice for designing animal experiments and publishing the results. We encourage all ICR publications to conform to this best practice and promote use of the ARRIVE guidelines to our staff.
- The ICR has signed the Concordat on Openness on Animal Research, which commits signatories to be more open about their use of animals in research, and to ensure that members of the public have accurate information about what animal research involves and the role it plays in science and medicine. We have gone beyond the requirements of the Concordat in helping drive best practice in open communication about our research using animals.