

Animal research at the ICR At a glance



The Institute of Cancer Research, London, 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.

“Abiraterone and many other molecularly targeted drugs that are now benefiting cancer patients could not have been developed without the use of vital animal research.”

Professor Kristian Helin,
Chief Executive of The Institute
of Cancer Research, London

The law

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.

REPLACE

REFINE

REDUCE

The Institute of Cancer Research (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.

The animals we use

Animals are used in our research to help us understand the mechanisms that underpin cancer, such as the growth and spread of tumours, and to develop new ways of diagnosing, treating and preventing the disease.



Our work at the ICR mainly uses mice, which can grow tumours which mimic those of human cancer patients. Studies of cancer in mice mimic the complex way tumours grow and spread in people with cancer. Mice can be easily genetically altered to allow us to study the genetic causes of cancer and reproduce tumour types which naturally occur in humans in the correct tissues and body systems. For example, we use mice which have been genetically engineered so they develop the equivalent of children's cancers affecting the brain and nervous system.



GENETICS

We also conduct some studies in rats. We use rats when we need to work on a slightly larger animal if, for example, the research involves surgery, some types of imaging or the study of blood vessels.



19,998
MICE
IN 2021



186
RATS
IN 2021

In 2019, the ICR was selected by Understanding Animal Research as a Leader in Openness, recognising our commitment to communicating clearly and openly about our animal research.

Animal research at the ICR

Continued



Procedures we do

Common procedures we carry out here at the ICR include giving drugs through injections or through a tube into the animal's stomach, and surgical procedures on some mice and rats under anaesthetic, for example to implant tumour cells under the skin.

We will try new treatments in mice before selecting the most promising to take forward into clinical trials in patients. In studies of new cancer treatments, researchers test whether a potential drug can shrink a tumour or slow its growth.



To obtain robust and meaningful data, it is important that scientists can accurately measure the size of tumours in mice to see whether the treatment being tested is having any effect. We often use imaging techniques like MRI, commonly also used for human patients, to measure the size of tumours in mice. The mice will be scanned in small versions of the same machines used for patients in hospital.



MRI

Our facilities

We have state-of-the-art scientific facilities which ensure we carry out high-quality research in controlled conditions. Our animals live in an ultra-clean environment in cages that protect them from pathogens. Our facilities provide filtered air, ultraclean water, and sterile bedding and nesting, carefully monitored to maintain a high-quality environment. We enrich cages with items that our animals can interact and play with, as an important part of looking after their welfare.

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.

Professor Paul Workman, Professor of Pharmacology and Therapeutics at the ICR, chaired a committee sponsored by the National Cancer Research Institute which developed Guidelines for the welfare and use of animals in cancer research which are used by cancer researchers in the UK and worldwide.

Reference:

Guidelines for the welfare and use of animals in cancer research
British Journal of Cancer (2010) 102,
1555–1577
doi:10.1038/sj.bjc.6605642

You can find out more about this work on the ICR website, where you will also find case studies about the research we are doing using animals and the benefit this has brought to patients.

Please visit www.icr.ac.uk/animalresearch for further information