

Drug safety testing drives steep rise in animal experiments in UK

Animal rights campaigners round on government as expansion in biomedical research triggers record increase in medical tests



A marmoset used in animal research climbs up the bars of its cage at a testing centre.
Photograph: Graeme Robertson

The number of medical experiments involving animals has shown its largest rise since modern records began, the latest government figures reveal.

Nearly 3.7m experiments were performed on animals last year, a rise of 454,000 or 14% on the previous year, the Home Office said. The increase marks the greatest leap in animal use in medical research since 1986, when the government introduced new auditing procedures.

The growth in animal experiments reflects an expansion in biomedical research in Britain and is driven by advances in genetics and the development of new drugs that must be tested rigorously in monkeys before they are allowed to be given to humans. The experiments range from small procedures such as taking blood and tissue samples to invasive brain surgery and inducing incurable diseases such as Parkinson's and cancer. Substantial numbers of animals are used to test the safety of new drugs before they are allowed to be used in human trials.

Animal rights campaigners deplored the latest rise, which coincides with the 50th anniversary of landmark proposals to find alternatives to animals in medical research.

Judy MacArthur Clark, chief inspector of the Home Office animals scientific procedures inspectorate, said the rise reflected an increase in "ethically justified research" in Britain. "If the research is ethically justified and has funding, it's not our role to say you can't do it, we've used too many mice this year," she said.

More experiments on rodents and fish account for the vast majority of the rise and make up 97% of all experiments on animals. Of 197,000 more experiments on mice last year, most involve

breeding genetically modified rodents to help scientists understand the role of individual genes in development and disease.

The figures reveal large falls in experiments on rats, domestic fowl, guinea pigs, rabbits and beagles, which together decreased by more than 40,000.

Britain has a longstanding policy that bans the use of great apes such as chimpanzees and gorillas in medical research, but the use of macaques and marmosets rose by more than 600 experiments, up 16%. This masks a reduction of more than half in experiments on marmosets and other new world primates, but the use of old world macaques in 1,000 more experiments, a 33% rise. Macaques have similar immune systems and physiology to humans and are increasingly being used to test advanced antibody-based drugs that target diseases with far more precision than older drugs.

Testing in monkeys has become more extensive after the disastrous clinical trial of an antibody drug at Northwick Park hospital in north London in 2006. The drug, which had been tested in primates, triggered a catastrophic immune reaction in the six trial participants which led to widespread organ failure.

Home Office inspectors investigated 45 cases where scientists had infringed their licences to do animal research. The most minor cases involved poor record keeping and retaining animals after licences had expired. Of the more serious cases, the worst occurred when mice in one study unexpectedly developed gangrene in their legs, causing greater suffering than the licence permitted. Two researchers involved in the study surrendered their licence before the inspectors' investigation was completed.

The figures were met with dismay by animal rights campaigners who rounded on the government and called for a concerted effort to reduce the number of animals used in medical research.

"With the scientific expertise this country has to offer we should have seen far greater progress to replace animals with more advanced techniques," said Dr Sebastien Farnaud of the Dr Hadwen Trust for Humane Research. The organisation called on political parties to agree to a "roadmap to replacement" to drive the use of animals in research down.

The animal rights group, People for the Ethical Treatment of Animals (PETA), said it was "profoundly disappointed" at the statistics and called on the government to be open about the fate of every animal used in experiments. "We have seen increases year on year in contradiction to public sentiment, but the numbers in this year's statistics are shocking by any standards," a spokesperson said.

The science minister, Lord Drayson, defended the figures and said the government was committed to reducing the use of animals in research where possible. "Britain has a high reputation for its standards of regulating research which uses animals. This work, described in today's report from the Home Office, is critical to the development of new medicines and increasing the level of understanding of diseases," he said.