Comment

The Latest Statistics of Scientific Procedures on Living Animals Reveal Little Three Rs Progress in Great Britain in 2010

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Summary — The 2010 Statistics of Scientific Procedures on Living Animals showed that the level of animal experimentation in Great Britain continues to rise, with just over 3.7 million procedures being conducted. This is almost exclusively due to the sustained increase in the breeding and utilisation of genetically-altered animals. Here, the general trends in the species used and the numbers and types of procedures are reviewed. In addition, the impact of the recent Government announcement to ban testing of household products on animals is discussed, along with the implications of the fish becoming the second most frequently used animal in scientific research. Finally, concerns about primate use, the REACH System, cosmetics testing and the new EU Directive on the protection of laboratory animals are explained.

Key words: experimental animals, genetically-altered animals, household products, mice, primates, toxicology, UK statistics, zebrafish.

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General Considerations

The Statistics of Scientific Procedures on Living Animals in Great Britain in 2010 (1) show that the level of animal experimentation and testing in Great Britain continues to rise, despite a slight decrease in 2009. In 2010, just over 3.7 million procedures were conducted on 3.6 million animals (Figure 1). This is 3% more than in 2009, but more worryingly, it is the greatest number of procedures conducted since the Animals (Scientific Procedures) Act 1986 (ASPA) came into force, and represents over a million more procedures than were conducted in 2001 — the year which saw the lowest number of procedures since they began to be included in the publication of the annual statistics, in 1987.

This decade-long trend of increasing experimentation can almost exclusively be attributed to the breeding and use of genetically-altered (GA) animals (i.e. genetically-modified [GM] animals and animals with harmful genetic defects [HGDs]), especially mice, which is discussed in more detail below.

The main types of animal used are mice, fish and rats, which together are involved in 93% of all procedures. The largest increases in procedures in 2010 involved fish (up 23% to 490,944), birds (up 12% to 142,034), and primates (up 10% to 4,688). The largest decreases were in procedures involving cats (down 32% to 187), guinea-pigs (down 29% to 13,660), and reptiles and amphibians (down 27.5% to 15,356). Other changes in use, by animal type, are shown in Table 1.

As noted above, the majority of the procedures were conducted for the breeding of GA animals (44%, Figure 2), which increased by 6% in 2010. This is closely followed by procedures for fundamental biological research purposes (35%), which have risen by 10% since 2009. These include studies on cancer, genetics, immunology and physiology. This is indicative of the continued increase in the level of experimentation conducted in universities. In 2002, for the first time, the number of procedures conducted in universities and medical schools overtook the number conducted in commercial organisations. Since then, university-based procedures have continued to increase, whilst those in the commercial sector have declined. This decline in commercial sector procedures is reflected in the downward trend in toxicological procedures, which fell again by 11% compared to 2009. Most of the toxicological procedures were for pharmaceutical safety and efficacy evaluation (68%), and involved mostly