



Home Office

# Statistics of Scientific Procedures on Living Animals 2007

HC 933  
£18.55



HOME OFFICE

# Statistics of Scientific Procedures on Living Animals

GREAT BRITAIN  
2007

Presented to Parliament by the Secretary of State for the  
Home Department pursuant to section 21(7) of  
the Animals (Scientific Procedures) Act 1986

*Ordered by the House of Commons  
to be printed 21 July 2008*

HC 933

LONDON: The Stationery Office

£18.55

## CONTENTS

<b>INTRODUCTORY NOTES</b>	<i>Page</i>	
	3	
<b>MAIN POINTS</b>	5	
<b>COMMENTARY</b>	6	
<b>TABLES</b>		
(For an explanation of the terms used in the rows and columns of the tables, see Appendix C)		
Explanatory flow chart	15	
<b>SCIENTIFIC PROCEDURES 2007</b>		
<b>General Tables:</b>		
<b>Table</b>	<b>Table Title</b>	
1	Scientific procedures by species of animal and primary purpose of the procedure	16
1a	Animals by species of animal and primary purpose of the procedure	18
2	Scientific procedures by Schedule 2 listed species and source of animals	20
3	Scientific procedures by species of animal, and genetic status	21
4	Scientific procedures by species of animal and target body system	22
5	Scientific procedures by species of animal and level of anaesthesia	23
<b>Non-toxicology:</b>		
<b>Table</b>	<b>Table Title</b>	
6	Scientific procedures (non-toxicology) by species of animal and field of research	24
6a	Animals (non-toxicology) by species of animal and field of research	28
7	Scientific procedures (non-toxicology) by species of animal and production and breeding	32
<b>Toxicology:</b>		
<b>Table</b>	<b>Table Title</b>	
9	Scientific procedures (toxicology) by species of animal and toxicological purpose	33
9a	Animals (toxicology) by species of animal and toxicological purpose	37
10	Scientific procedures (toxicology) by species of animal, and type of legislation	41
11	Scientific procedures (toxicology) by species of animal and type of toxicological test: All purposes	42
<b>APPENDIX D</b>		45
<b>Changes to publication</b>		

Where a Table is not listed see the Introductory Notes (page 4) for further details. Supplementary tables can be found on the website at: <http://www.homeoffice.gov.uk/rds/scientific1.html>

© Crown Copyright 2008

The text in this document (excluding the Royal Arms and other departmental or agency logos) may be reproduced free of charge in any format or medium providing it is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the document specified.

Where we have identified any third party copyright material you will need to obtain permission from the copyright holders concerned.

For any other use of this material please write to Office of Public Sector Information, Information Policy Team, Kew, Richmond, Surrey TW9 4DU or e-mail: [licensing@opsi.gov.uk](mailto:licensing@opsi.gov.uk)

ISBN: 9780102957440

# STATISTICS OF SCIENTIFIC PROCEDURES ON LIVING ANIMALS GREAT BRITAIN 2007

**Note: The Appendices are now available, along with a comprehensive set of Tables, as separate files on the website: <http://www.homeoffice.gov.uk/rds/scientific1.html>**

## INTRODUCTORY NOTES

1. The statistics in this publication relate to scientific procedures performed on living animals subject to the provisions of the Animals (Scientific Procedures) Act 1986, during the year 2007 in accordance with section 21(7) of the Act. The system of control under the 1986 Act is explained in detail in Appendix A. Under this Act any scientific procedure carried out on any living vertebrate animal, or one species of octopus (*Octopus vulgaris*), which is likely to cause that animal pain, suffering, distress or lasting harm is a regulated procedure requiring licence authority. Recognised veterinary, agricultural or animal husbandry practice and the administration of medicines under an Animal Test Exemption granted under the Medicines Act 1968 are excluded from the controls of the 1986 Act. Statistics of scientific procedures on living animals are annually collected, and published annual by the Home Office.

### Collection procedures

2. The statistics are compiled from returns, submitted by project licence holders at the end of each year, or on the termination of the licence when this occurs during the year. A simplified copy of the form and its instructions can be found in Appendix B. The form provides details of the species of animal used, the main purpose of the procedure and other details as described in Appendix C. Each procedure (which may consist of several stages) for a given purpose on an animal is counted as one returnable procedure for the year in which it commenced. A study involving a procedure using a number of animals is counted once for each animal. Where an animal which has recovered fully from a completed procedure is used again for a further procedure it is counted as a separate procedure, but the animal itself is not re-counted. The circumstances in which this re-use of an animal is permitted are limited.

3. Licence holders are required, as a condition of their licence, to submit a return even if no work has been undertaken (nil returns). A record is kept of all licensees from whom returns have been received. Those who fail to do so are reminded of their obligation under the Animals (Scientific Procedures) Act 1986.

4. To ensure that the published data are as complete as possible the Home Office will not publish the statistics unless the number of missing returns represents less than 0.5 percent of all the returns expected. In 2007, all forms were returned.

5. Details of the work of individual project licence holders are not identifiable in this publication. Where a further breakdown of the 'other' species categories are not given in the commentary this is to safeguard the confidentiality of the establishment and the licence holder.

### Accuracy

6. Verification and subsequent publication of these statistics are done by the Science and Research Group (SRG) of the Home Office.

7. Project licence holders classify their procedures according to a standard coding list, see Appendix B. The current classification system dates from 1995, and was modified in 1999 in those areas relating to source of animals, production and breeding, toxicology and legislation. During the collection and verification process, forms that have been incorrectly coded are referred back to the licensees for correction

8. The Animals (Scientific Procedures) Inspectorate (ASPI) scrutinise the returns and output tables and provide advice to SRG. During this process, Inspectors may contact licensees to discuss and confirm coding, and inform SRG of any amendments that may be necessary.

## **PROCEDURES IN 2007**

9. Additional information comparing the 2007 figures with the previous year has been provided on tables 1, 5 and 9. As a result, some of this information has been removed from the commentary to limit duplication in the report. For the purpose of the commentary most figures have been rounded to the nearest 100 procedures (or animals), in order to simplify the explanation; as such the figures referenced will not be identical to the figures in the tables.

Following a review of the published tables in the 2005 report, it was decided to re-number the tables back into a consecutive order. Where the number of the table has been changed, a note has been added to the table to tell readers the number of the table in previous publications.

## **INFORMATION ONLY AVAILABLE ON THE WEBSITE**

### **A. PROJECT LICENCE HOLDERS AND DESIGNATED PLACES**

10. Project licence holders have been classified according to the type of establishment, which was their main place of employment at the end of the year, although they could be licensed to carry out procedures at more than one place. Procedures are classified according to the type of establishment of the project licence holder reporting them. Details of the number of procedures conducted at each type of establishment can be found in Appendix A.

### **B. HISTORICAL AND TIME-SERIES TABLES**

**These tables are now only available on the website.**

11. Tables 20–27 summarise some selected aspects of the annual statistics collected since the introduction of the Animals (Scientific Procedures) Act 1986 on 1 January 1987. For the reasons explained below, not all the tables refer to the same time period. Some of the historical tables only run from 1995 onwards, when the present system for collecting and presenting data was introduced.

12. Table 25 has replaced tobacco and alcohol safety data with data for pharmaceutical and other safety, but figures for year prior to 1995 are still shown because in this case data in the rest of the table are comparable.

#### **Changes to publication**

Since the 2005 report, some changes have been made to improve the contents and layout of this publication. This was done with the intention of making the report easier to comprehend and follow.

The Tables we have elected to publish now appear in colour, and the numbering has been revised to put the tables in consecutive order. In some cases, the tables in the published form are now a simplified version, compared with previous years. After considering the views of users it was felt to be more efficient to publish a simplified, easier to read version, and give users access to the tables online.

All the tables, in their historical format are available on the website. This facilitates access to comparable data.

It is hoped that these changes improve the report and if you wish to provide feedback please see Appendix D for contact details. The Home Office would welcome comments from users on how well this publication meets their needs, and will consider any suggestions for improving it in future years. Comments should be sent to:

Science and Research Group,  
1st Floor, Seacole Block  
Home Office,  
2 Marsham Street,  
LONDON SW1P 4DF  
or email: [publications.rds@homeoffice.gsi.gov.uk](mailto:publications.rds@homeoffice.gsi.gov.uk)

# MAIN POINTS

1. Just over 3.2 million scientific procedures were started in 2007, a rise of about 189,500 (6%) on 2006. The increased animal use was mainly due to increases in the use of mice, fish and domestic fowl, whilst the use of most other species was down when compared to 2006. The use of mice increased for fundamental research and breeding. There was increased use of fish in applied studies for human medicine and protection of man, animals and the environment. The use of domestic fowl increased for applied veterinary studies.
2. Mice, rats and other rodents were used in the majority of procedures; eighty three percent (83%) of the total. Most of the remaining procedures used fish (10%), and birds (4%).
3. Dogs, cats, horses and non-human primates, afforded special protection by the Act, were collectively used in less than one percent of all procedures.
4. Approximately 4000 procedures used non-human primates, down 240 (6%) from 2006, due to a decrease in both old-world and new-world species (*for details on primate species, see appendix B available on RDS website*).
5. Over a third of all procedures in 2007 were accounted for by breeding procedures (37%), for the production of harmful mutant and genetically modified animals. Mainly mice (93%) and fish (6%) were used in these procedures.
6. Around ninety-nine percent of procedures carried out on animals listed in Schedule 2 of the Act used animals acquired from designated sources in the United Kingdom.
7. Genetically normal animals were used in 1.73 million regulated procedures (54% of all procedures), up 86,200 (5%) on 2006 figures. This increase is associated with mice used in fundamental studies and fish used in safety studies.
8. Species with harmful genetic mutations were used in 315,600 regulated procedures (10% of all procedures), down 11,000 (3%) from 2006. The majority of these procedures used rodents (91%); most of the remainder were fish or amphibians.
9. Genetically modified animals were used in 1.15 million regulated procedures up 114,400 (11%) representing thirty-six percent of all procedures for 2007, compared with thirty-four percent in 2006 and eight percent in 1995. The vast majority (99%) of these procedures used mice and fish.
10. Around thirty-nine percent of all procedures used some form of anaesthesia to alleviate the severity of the interventions. For many of the remaining procedures the use of anaesthesia would have potentially increased the adverse effects of the procedure.
11. Non-toxicological procedures accounted for about eighty-seven percent of the procedures started in 2007. This contrasts with seventy-five percent of such procedures in 1995. The main areas of use were for immunological studies, pharmaceutical research and development, cancer research, anatomy and physiology.
12. Procedures for toxicological purposes accounted for thirteen percent of all procedures started in 2007. This contrasts with twenty-five percent of such procedures in 1995. Since 1995 there has been a fall of thirty-nine percent. In 2007 the majority (78%) of procedures were for pharmaceutical safety and efficacy evaluation. Around seventy eight percent of toxicological procedures in 2007 used rodent species, while non-human primates were used in less than one percent. Of all the toxicological procedures conducted in 2007, eighty-seven percent were performed to conform to legal or regulatory requirements.

COMMENTARY - OVERALL PICTURE

For definitions of some of the terms used in the commentary, please see Appendix C on the website. <http://www.homeoffice.gov.uk/rds/scientific1.html>

Procedures started in 2007

Just over 3.2 million scientific procedures started in 2007 (Table 1), a rise of 189,500 (6%) from 2006. There was a similar rise in the number of animals used (Table 1a), an increase of 179,200 (6%) on 2006. For a historical perspective, see Figure 1 below. The number of scientific procedures declined after 1976. This trend levelled out in the 1990s and in recent years the number of procedures has increased. Since 2000, the number of procedures has risen by eighteen percent, back to around the level recorded in 1990 (*historic tables available online*). For each project licence, the legislation requires that the minimum number of animals is used to achieve satisfactory results. However, the overall number of scientific procedures conducted is determined by a variety of factors, including the economic climate and global trends in scientific endeavour.

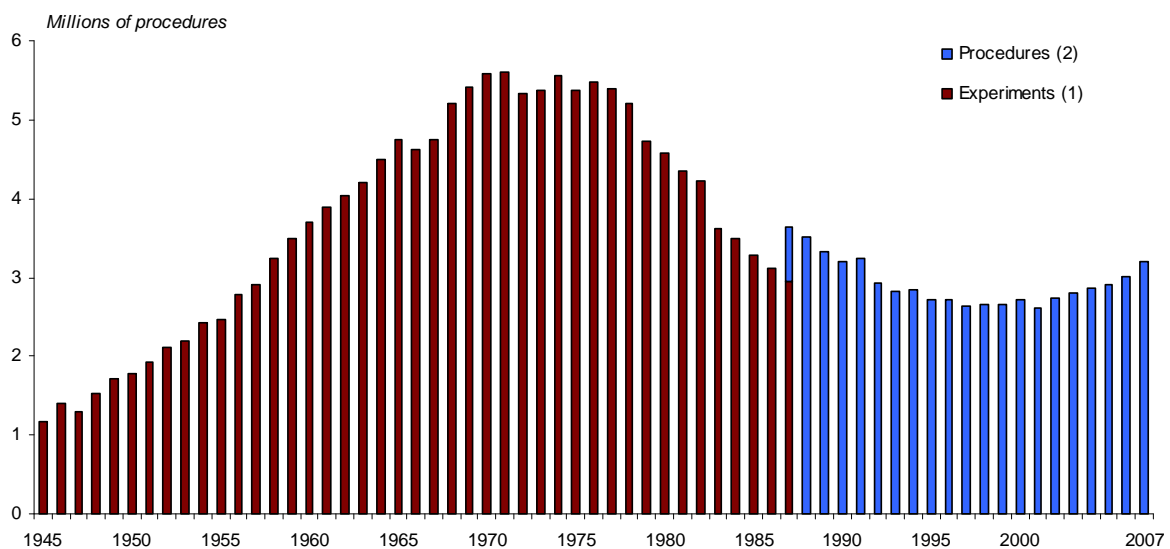


Figure 1: Experiments or procedures commenced each year, 1945-2007(1)

(1) Experiments under the 1876 Act or scientific procedures under the 1986 Act

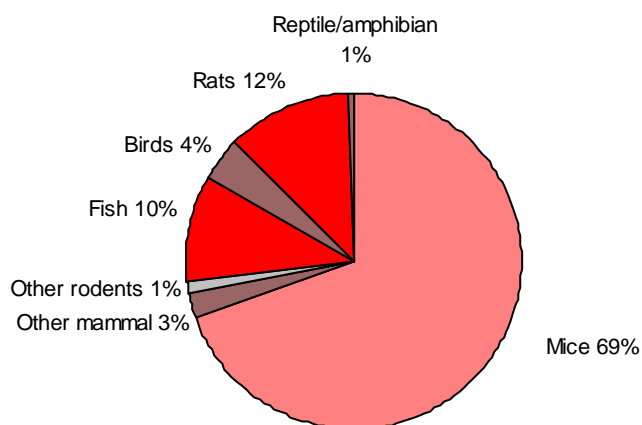
(2) The experiments included in 1987's figures also counted as procedures under the 1986 Act

Species used (Tables 1 and 1a, Figures 2, 3 and 4)

Table 1 gives details of individual species used for procedures, by primary purpose, reported in 2007. Points to note are:

Overall numbers

- Mice (69%), rats (12%), fish (10%), and birds (4%) were involved in the largest numbers of procedures. These proportions are broadly similar to recent years. In most other species, there were decreases.
- Domestic fowl accounted for ninety one percent of all birds used for procedures.
- Dogs, cats and non-human primates combined were used in less than half of one percent of all procedures, with a combined total of 11,700. This was 130 higher than in 2006 and largely due to an increase in dogs which increased by 600 procedures (9%). Meanwhile primate use decreased by 240 procedures (6%) and cats fell by 220 procedures (41%).



**Figure 2: Procedures by species of animal, 2007 (Table 1)**

**Changes in 2006 Figures (Published Tables)**

Since the publication of the annual statistics for the year 2006, some minor changes to the figures have come to light. The changes result in only small alterations in Table 1, 1(a) and Table 8, which describes non-toxicology scientific procedures by species of animal and techniques of particular interest. These amendments can be found in the errata.

Increases

There were increases in procedures using some species compared with 2006, notably:

- Mice, up 155,000 (7%)
  - Fish up 53,500 (20%)
  - Domestic Fowl up 15,800 (16%)
  - Guinea Pig up 1,673 (5%)
  - Dogs, up 600 (9%)
- The increased use of mice in 2007 was associated with fundamental biological research and breeding.
  - The increased use of fish was due primarily to increases in applied studies and protection of man, animals or environment
  - The rise in domestic fowl use was due to increases primarily in applied veterinary studies.
  - The rise in guinea pig use was mainly due to an increase in applied studies.
  - The rise in dog use was due to increases in a number of areas.

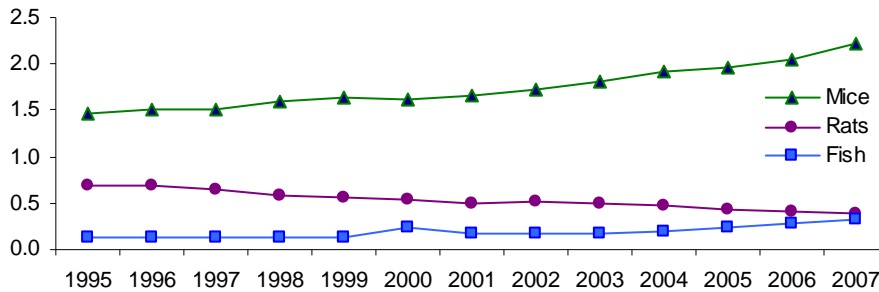
Decreases

There were decreases in some use of species, notably:

- Rat use fell by 20,500 (5%) due to decreases in all areas of research, except for applied studies.
- Cat use fell by 216 (41%) due to decreases in all fields but mainly in applied veterinary studies.
- Turkey use was down 2,728 (71%) primarily in areas of fundamental biological research.
- Cattle were down just over 2,000 procedures (39%) due to decreases primarily in applied veterinary studies.
- Goat use was down 402 procedures (73%) this was primarily due to decreases in fundamental biological research.
- Marmoset and tamarin use was down 140 procedures (15%) due to a reduction in all areas except safety.

Since 1995, there has been a steady decrease in the number of rats used in procedures, while the number of mice used for scientific procedures (primarily genetically modified mice) has steadily increased. The use of fish in procedures had remained relatively steady since 1995 but this has also seen an increase in recent years as Figure 3 below shows.

*millions of procedures*



**Figure 3: Procedures using mice, rats and fish 1995-2007**

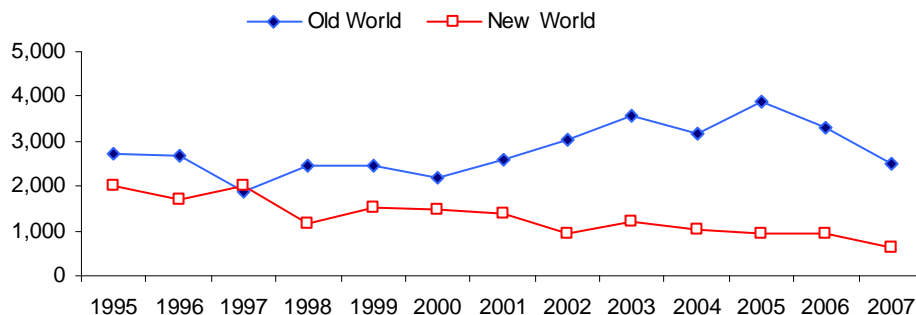
Other category use

- The ‘other carnivore’ category included foxes, badgers and common seals used for research relevant to those species.
- The ‘other mammals’ category included bats, pine martins and bottle nosed dolphins.
- Other rodents used were wood mice, voles, squirrels and chinchillas.
- Other birds used were parakeets and zebra finches as well as various wild garden birds, pigeons, game birds, sea birds and jays.

Primate use

- Figure 4 below shows the changes in use of old-world and new-world primates for procedures since 1995 (*for details on primate species, see appendix B*).
- New-world primate use decreased from 2006 by 140 procedures, (15%) part of a downward trend since 1999.
- Old-world primate use decreased by 100 (3%). These figures have fluctuated over the last few years, as shown by Figure 4.
- Some primates were used more than once since some of the procedures they are involved in only have a mild effect (such as taking blood samples), for which anaesthesia is not required. Approximately 600 primates were re-used for the first time in 2007.

*Number of procedures*



**Figure 4: Procedures on non-human primates, 1995-2007**

Species on which no procedures were started in 2007

No procedures were performed on greyhounds, camelids, *Octopus vulgaris* and a number of primate

species. No great apes have been used since the current legislation (the 1986 Act) was introduced in 1987.

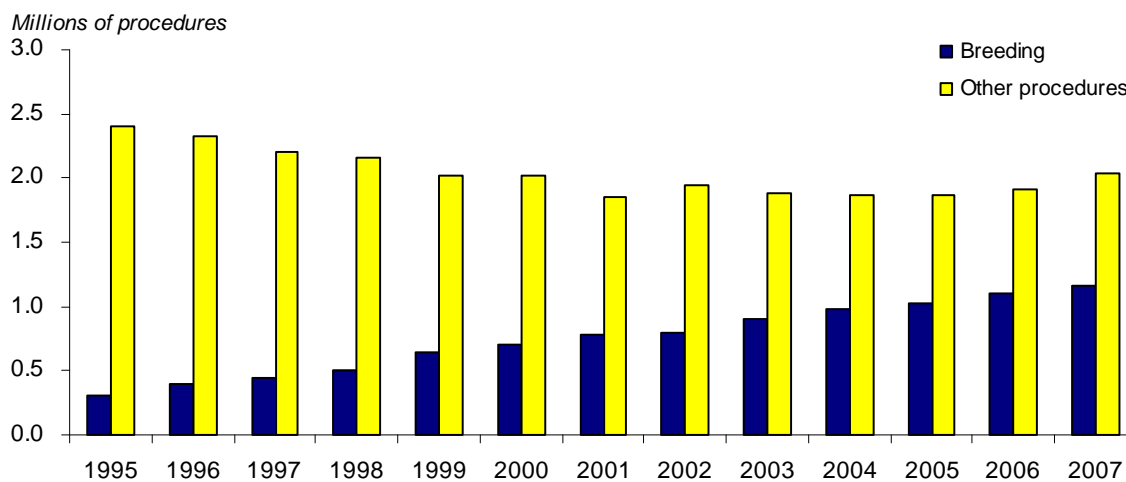
**Primary purpose** (Tables 1 and 1a, Figure 5)

Increases

- The largest single change was the use of animals in maintenance of colonies of mutant and genetically modified animals mainly in support of fundamental research. Breeding accounted for 1.17 million procedures (37%) in 2007, see Figure 5. These procedures were up 67,900 (6%) from 2006 as part of a continuing trend.
- Fundamental biological research accounted for 998,800 (31%) procedures, up 36,000 (4%). The number of procedures used in this field has fluctuated for a number of years.
- Applied studies for human medicine and dentistry accounted for 685,200 (21%) procedures, up 50,900 (8%) from 2006.
- Protection of man, animals and the environment accounted for 150,600 (5%) procedures, up 29,000 (24%) from 2006.
- Applied studies in veterinary medicine accounted for 147,000 (5%) procedures, up 7,600 (5%) from 2006.

Decreases

- Direct diagnosis accounted for 47,900 (1%) procedures down 1,500 (3%) on 2006.
- There were also decreases in education, training and forensic enquires; each category also contributing less than one percent to the total figure for 2007.



**Figure 5: Comparison of breeding with all other procedures, 1995-2007**

**Source** (Table 2)

*Additional information can be found in Tables 2.1 and 2.2 on the website*

Eighty-four percent of all procedures were performed on animals listed in Schedule 2 of the Act. These animals must come from a designated source, unless a special exemption is granted. The animals in Schedule 2 are: mouse, rat, guinea pig, hamster, gerbil, rabbit, cat, dog, ferret, non-human primate, pigs (if genetically modified), sheep (if genetically modified), and quail (*Coturnix coturnix*). The use of animals listed in Schedule 2 and acquired from non-designated sources in the UK was authorised under Section 10(3) of The Act.

- Use of Schedule 2 listed species increased by 133,300 (5%) on 2006. The number of procedures using these species has fluctuated in recent years.
- In total, 2.7 million (99%) procedures carried out on animals listed in Schedule 2 used animals acquired from designated establishments in the United Kingdom.
- The number of procedures involving Schedule 2 listed animals obtained from sources outside the EU was 11,300 and of these seventy seven percent used mice or rats.
- Acquisition from abroad was mainly due to a lack of suitable animals (mainly harmful mutant and genetically modified rodents).
- The dogs from non-designated sources within the UK were neither beagles nor greyhounds. The research programmes required animals representative of the general pet population, which were not available from the usual designated sources, and which were used for studies relevant to that specific breed or type of dog.

### **Genetic status** (Table 3, Figure 6)

*Additional information can be found in the full version of Table 3 on the website, along with Tables 3.1, 3.2 and 3.3.*

### Genetically normal animals (Table 3, Figure 6)

Some 1.7 million (54%) procedures involved genetically normal animals, up 86,200 (5%) on 2006. The use of normal animals decreased from 2.27 million in 1995 to 1.7 million in 2007, down twenty-three percent over this period.

### Animals with a harmful genetic defect (Table 3, Figure 6)

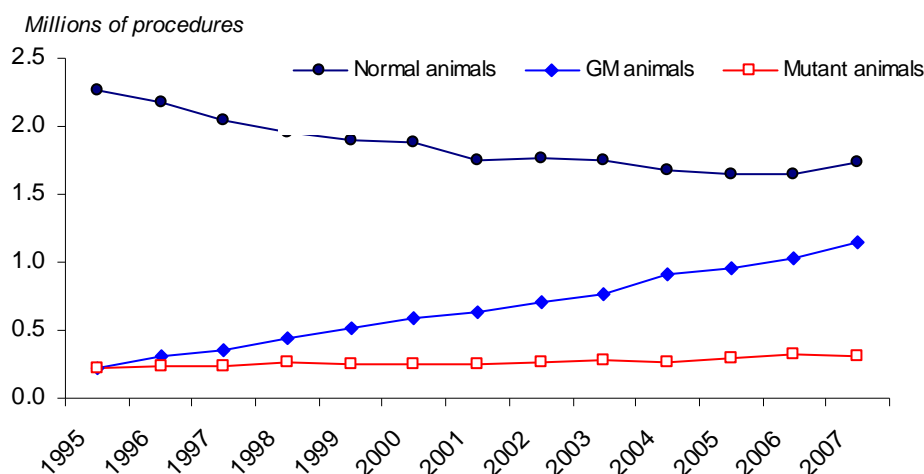
Some 315,600 (10%) procedures involved animals with a harmful genetic defect, down 11,000 (3%) on 2006.

- Use of such animals has risen from eight percent of all procedures in 1995 to ten percent now.
- Mice (86%), rats (5%), and fish (9%) were the animals most frequently used.
- Other than maintaining the breeding colonies, mice and rats were mainly used for fundamental biological research and applied studies.
- Fish with a harmful genetic defect were used primarily for breeding

### Genetically modified animals (Table 3, Figure 6)

Genetically modified animals (GM) were used in 1.15 million (36%) procedures in 2007, some 114,400 (11%) more than in 2006.

- The use of GM animals is more than five times higher than in 1995, see Figure 6.
- About 738,100 (64%) GM animals were used to maintain breeding colonies, slightly down from last year. An additional 388,100 (36%) were used for fundamental biological research.
- Mice and fish were used in ninety nine percent of these procedures.
- Genetically modified fish use rose by 16,500 (36%) while GM amphibian use was down 727 (38%).



**Figure 6: Procedures by genetic status of animal, 1995-2007**

**Target body system** (Table 4 – Formerly Table 4a)

About half (54%) of all procedures were prospectively directed towards one particular body system:

- The Immune system was the largest single category, accounting for 481,600 procedures (15%).
- The Nervous system was the next largest with 364,300 (11%) procedures; mice and rats were the major species used (96%) in this type of procedure.
- Of the singular body system categories, almost all areas saw an increase on 2006, due to overall increases in animal use.
- Procedures conducted where the target body system was ‘not relevant’ accounted for 799,900 (25%), down 70,600 (8%) on 2006.
- The category for ‘multiple’ target body systems accounted for 665,600 (21%) up by 76,400 (13%) on 2006.

**Use of anaesthesia** (Table 5 – Formerly Table 4b)

Procedures are permitted without anaesthesia or analgesic only when the administration of an anaesthetic or analgesic is judged more traumatic than the procedure itself, or when anaesthesia is incompatible with the object of the procedure.

- Sixty-one percent of procedures did not use any anaesthesia.
- Local anaesthesia was used in 286,300 (9%) procedures and mainly used mice (95%).
- Anaesthesia without recovery was used in 319,200 (10%) procedures up 26,600 (9%) from 2006.
- The use of neuromuscular blocking agents (NMBA) was recorded in 3,372 procedures in 2007; all of these used general anaesthesia.

**FUNDAMENTAL AND APPLIED STUDIES OTHER THAN TOXICOLOGY, REGULATORY OR SAFETY PURPOSES**

Just under 2.79 million procedures were conducted for fundamental and applied studies other than toxicology, safety or other regulatory purposes. This accounted for eighty-seven percent all procedures conducted in 2007.

- There was a rise of 193,700 (7%) in the number of such procedures.
- The number of animals used increased by 181,300 (7%), reflecting the rise in the overall number of procedures.
- Some 2.03 million (71%) procedures were performed on mice, a further 260,700 (9%) on rats,

another 120,300 (4%) on birds (mainly domestic fowl) and 271,900 (10%) on fish.

- Dogs, cats and non-human primates were collectively used in 2,670 procedures.

### **Field of research** (Tables 6, 6a, Figures 5 – Formerly Tables 5 and 5a)

For details of the changes in the number of non-toxicology procedures reported for each field of research since 2006, please see Table 6. Points to note are:

- Immunology was the largest single category, accounting for 460,200 (17%) procedures, mainly using rodents.
- Categories where the number of procedures accounted for more than five percent of the total were: Anatomy, Physiology, Immunology, Pharmaceutical Research and Development (R&D), Genetics, and Cancer research

### **Production of biological materials** (Table 7 – Formerly Table 8)

In 2007 some 322,700 procedures, 20,800 (7%) more than in 2006, were performed to produce biological materials.

- About thirty-six percent of these were for the production of infectious agents, accounting for four percent of total non-toxicology procedures; of this particular group the main species used were birds (73%) and mice (23%).
- Vectors, neoplasms and antibody production accounted for a further thirteen percent of these procedures; in all cases a wide range of species was used.
- The remaining fifty-one percent of production procedures were to obtain other biological material such as tissues or blood products, also using a wide range of species.
- Immunisation to produce monoclonal antibodies for *in vitro*<sup>1</sup> use was similar to 2006 with around 2,300 procedures.

## **TOXICOLOGY, OTHER SAFETY OR EFFICACY EVALUATION**

Toxicology procedures or those used for safety and efficacy evaluation accounted for 416,400 (13%) of the total use in 2007. This was about 4,100 fewer procedures than in 2006. In 1995, toxicology procedures accounted for around twenty-five percent of the total use. Since 1995, there has been a decrease of around 260,800 procedures (39%). Figure 7 below shows that since 1997 there has been a divergence between toxicology and non-toxicology procedures although in recent years, the total figure for toxicology procedures has remained relatively stable

### **Species** (Table 9 and Figure 7 – Formerly Table 10)

For details of the changes in the number of toxicology or other safety or efficacy evaluation procedures reported for each field of research in 2007 please see Table 9. Points to note are:

- The majority of animals used were rodents, accounting for 326,300 procedures (78%). The next major use was fish, accounting for some 55,700 procedures (13%).
- There were around 3,120 procedures (less than 1%) that used non-human primates, principally old-world species, mainly for pharmaceutical safety testing
- Birds were used in 7,400 procedures (2%) and rabbits in 14,000 (3%) while the remaining species accounted for only two percent of all toxicology procedures.

---

<sup>1</sup> See Appendix C for more details.

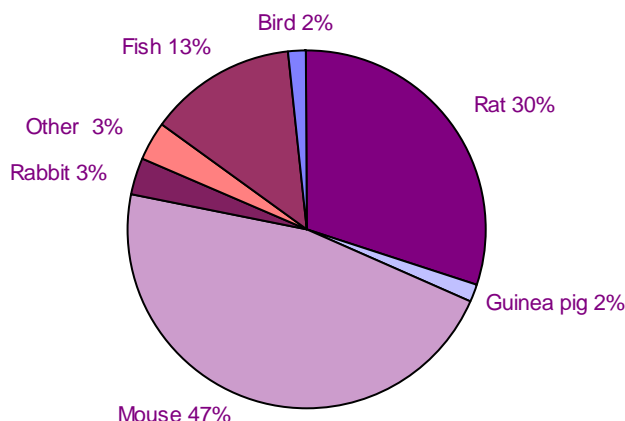


Figure 7: Procedures (toxicology) by species of animal, 2007

**Purpose (Table 9 – formerly Table 10)**

In 2007 the majority (78%) of procedures were for pharmacological safety and efficacy evaluation. A further eighteen percent were for general safety and efficacy evaluation and the remaining five percent were for other purposes.

**Legislative requirements (Table 10, Figure 8 – Formerly Table 11)**

The majority (87%) of the toxicology procedures in 2007 were to fulfil legislative requirements. Some 308,500 procedures (74%) were to satisfy a combination of requirements i.e. avoiding duplication of animal use to fulfil more than one legislative requirement. A further 56,200 procedures (13%) were for purposes other than direct legislative or regulatory requirements.

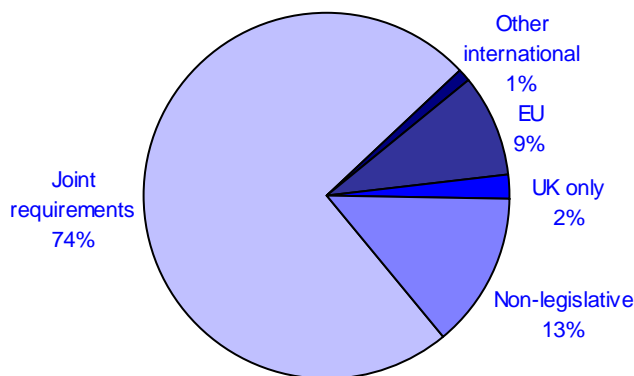


Figure 8: Procedures by legislative requirement (toxicology), 2007 (Table 10)

**Type of Toxicological Test (Table 11 – formerly Table 12)**

- Procedure started for acute lethal toxicity tests accounted for 78,100 procedures, a decrease of 12,800 (14%) from 2006. These tests mainly involved mice (99%) for pharmaceutical safety testing.
- Acute limit setting test procedures increased by 6,800 (26%) mainly due to the use of fish for the safety testing of pharmaceuticals.
- Carcinogenicity tests increased by 4,600 (34%) due to the use of mice and rats mainly for the safety testing of pharmaceuticals and for general safety.
- Sub-chronic and chronic test procedures increased by 4,200 (18%) mainly due to the use of fish for the safety testing of pharmaceuticals and for general safety.

- Increases or decreases across all of the other types of tests varied to a lesser extent

**Rodenticide trials**

It is impracticable to collect accurate figures on the number of animals affected in field trials of rodenticidal substances. However, there were no reports of field trials starting in 2007.

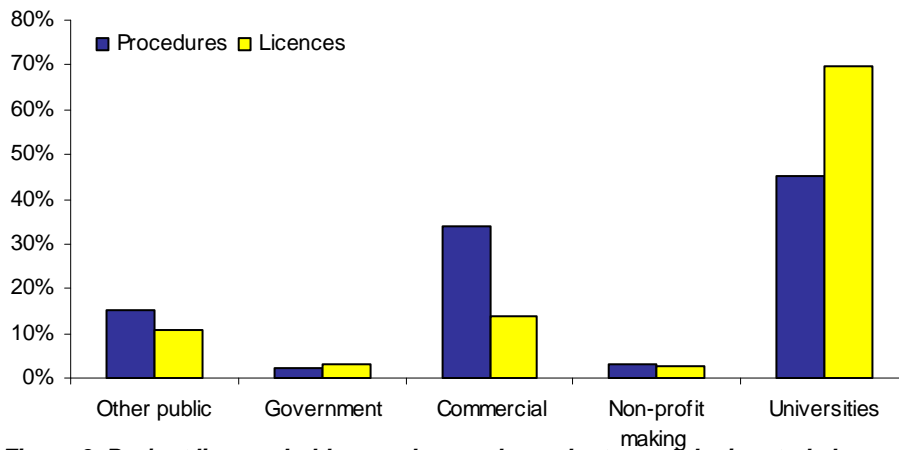
**Use of animals on the CITES list**

Returns were required on the use of animals listed in Appendix 1 of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES) or in Annex C.1 to the Council Regulation (EEC) 3626/82 (see notes in Appendix B). There were 147 procedures performed on animals in this category in 2007, all of which were wild birds.

**RETURNS, PROJECT LICENSEES AND DESIGNATED PLACES**

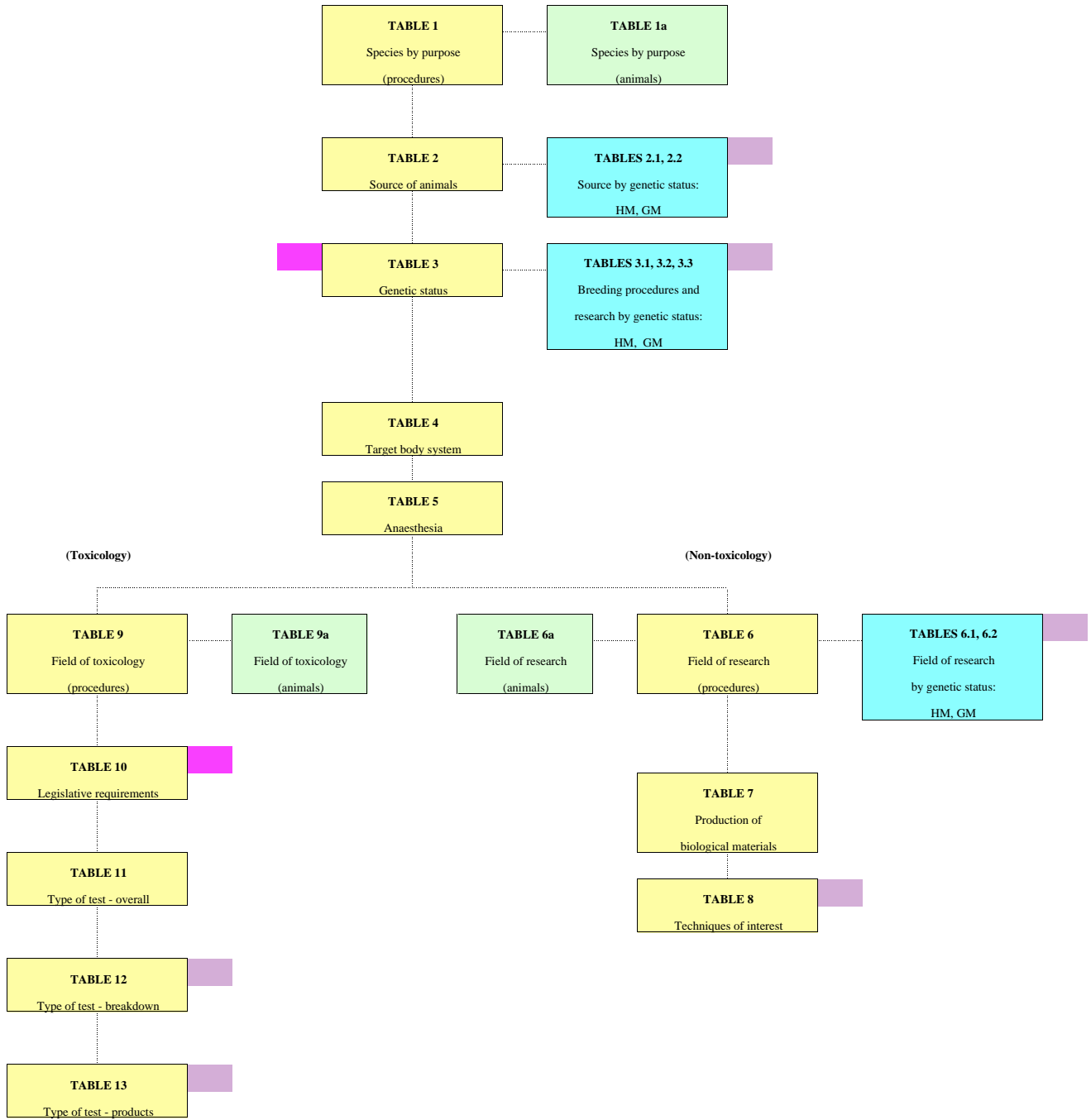
*(See Appendix A on the website for more details)*

Returns were received for all of the 3,375 project licences valid in 2007. Of which 2,458 licenses reported starting procedures. Of these 978 (40%) reported starting more than fifty procedures. There were 826 project licence holders, 24% of all licenses, reported starting no procedures in 2007.



**Figure 9 Project licence holders and procedures, by type of designated place**

**Organisation Chart: Relationship between the tables, 2007**



**Notes**

GM = genetically modified

HM = harmful mutant

Counts the number of animals used

Counts the number of procedures conducted

Counts the number of procedures conducted by genetic status of animal (HM and GM)

These tables are only available on the website

Full version available on website

Descriptions of the terms used in the tables can be found in the Introductory Notes, available on the website

<http://www.homeoffice.gov.uk/rds/scientific1.html>

Table 1 Scientific procedures by species of animal and primary purpose of the procedure, page 1 of 2

Species of animal	Primary purpose of the procedure							Number of procedures			
	Fundamental biological research	Applied studies - human medicine or dentistry	Applied studies -veterinary medicine	Protection of man, animals or environment	Education	Training	Forensic enquiries	Direct diagnosis	Breeding	Total	
<b>Mammal</b>											
Mouse	744,745	344,683	14,114	24,132	814	-	-	9,946	1,083,547	2,221,981	
Rat	100,190	239,380	2,492	28,500	595	687	-	946	12,864	385,654	
Guinea pig	1,796	28,414	1,352	97	99	-	-	99	-	31,857	
Hamster	1,987	759	501	124	-	-	-	-	-	3,371	
Gerbil	413	518	-	-	-	-	-	-	138	1,069	
Other rodent	887	-	-	150	-	-	-	-	-	1,037	
Rabbit	1,404	12,353	1,588	2,249	34	-	-	1,950	-	19,578	
Cat	57	-	251	-	-	-	-	-	-	308	
Dog											
Beagle	-	6,996	114	150	-	-	-	16	-	7,276	
Greyhound	-	-	-	-	-	-	-	-	-	-	
Other inc cross-breeds	-	-	188	-	-	-	-	-	-	188	
Ferret	192	197	2	-	14	-	-	36	-	441	
Other carnivore	485	-	330	89	-	-	-	-	-	904	
Horse and other equids	145	-	204	-	-	-	22	8,424	-	8,795	
Pig	1,186	1,013	882	48	-	-	-	-	63	3,192	
Goat	24	23	12	74	-	-	-	14	-	147	
Sheep	5,882	667	1,720	60	-	-	-	24,387	25	32,741	
Cattle	1,447	2	1,760	56	-	-	-	2	-	3,267	
Deer	85	-	-	-	-	-	-	-	-	85	
Camelid	-	-	-	-	-	-	-	-	-	-	
Other ungulate	-	-	-	-	-	-	-	-	-	-	
Primate											
Prosimian	-	-	-	-	-	-	-	-	-	-	
<b>New World monkey</b>											
marmoset, tamarin	133	609	-	39	-	-	-	-	-	781	
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-	-	
Other New World monkey	-	-	-	-	-	-	-	-	-	-	

Table 1 Scientific procedures by species of animal and primary purpose of the procedure, page 2 of 2

Species of animal	Primary purpose of the procedure							Number of procedures			
	Fundamental biological research	Applied studies - human medicine or dentistry	Applied studies -veterinary medicine	Protection of man, animals or environment	Education	Training	Forensic enquiries	Direct diagnosis	Breeding	Total	
<b>Old World monkey</b>											
Macaque	125	2,923	-	135	-	-	-	-	-	3,183	
Baboon	-	-	-	-	-	-	-	-	-	-	
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	
<b>Ape</b>											
Gibbon	-	-	-	-	-	-	-	-	-	-	
Great ape	-	-	-	-	-	-	-	-	-	-	
<b>Other mammal</b>	1,573	-	-	22	-	-	-	-	-	1,595	
<b>Bird</b>											
Domestic fowl ( <i>Gallus domesticus</i> )	14,591	123	98,706	197	155	-	1,489	507	-	115,768	
Turkey	244	151	607	6	-	-	107	-	-	1,115	
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	
Quail (not <i>Coturnix coturnix</i> )	-	-	-	188	-	-	-	-	-	188	
Other bird	9,366	-	212	472	-	-	516	-	-	10,566	
<b>Reptile</b>											
Any reptilian species	29	733	-	101	-	-	-	-	-	863	
<b>Amphibian</b>											
Any amphibian species	14,756	-	-	1,341	-	-	-	1,948	-	18,045	
<b>Fish</b>											
Any fish species	97,140	45,673	21,943	92,365	60	-	10	70,395	-	327,586	
<b>Cephalopod</b>											
<i>Octopus vulgaris</i>	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>	<b>998,882</b>	<b>685,217</b>	<b>146,978</b>	<b>150,595</b>	<b>1,771</b>	<b>687</b>	<b>32</b>	<b>47,932</b>	<b>1,169,487</b>	<b>3,201,581</b>	
<b>Increase on 2006</b>	36,048	50,874	7,567	29,117	-156	-213	-18	-1,542	67,872	189,549	
<b>Percentage change from 2006</b>	4%	8%	5%	24%	-8%	-24%	-36%	-3%	6%	6%	
<b>Percent of total for 2007</b>	31%	21%	5%	5%	<1%	<1%	<1%	1%	37%	100%	
2006 Totals	962,834	634343	139411	121478	1927	900	50	49474	1,101,615	3,012,032	

Table 1a Animals by species of animal and primary purpose of the procedure, page 1 of 2

Species of animal	Primary purpose of the procedure							Number of animals			
	Fundamental biological research	Applied studies - human medicine or dentistry	Applied studies -veterinary medicine	Protection of man, animals or environment	Education	Training	Forensic enquiries	Direct diagnosis	Breeding	Total	
<b>Mammal</b>											
Mouse	732,760	342,356	14,114	24,127	814	-	-	1,084,947	9,896	-	2,209,014
Rat	97,217	234,180	2,492	28,500	595	687	-	12,863	946	-	377,480
Guinea pig	1,750	28,170	1,352	97	99	-	-	-	79	-	31,547
Hamster	1,420	759	501	124	-	-	-	-	-	-	2,804
Gerbil	413	518	-	-	-	-	-	138	-	-	1,069
Other rodent	887	-	-	150	-	-	-	-	-	-	1,037
Rabbit	1,226	7,681	848	2,245	18	-	-	-	1,802	-	13,820
Cat	57	-	122	-	-	-	-	-	-	-	179
Dog											
Beagle	-	-	102	143	-	-	-	-	-	-	5,599
Greyhound	-	5,354	-	-	-	-	-	-	-	-	-
Other including cross-bred dogs	-	-	49	-	-	-	-	-	-	-	49
Ferret	192	197	2	-	14	-	-	-	36	-	441
Other carnivore	485	-	330	89	-	-	-	-	-	-	904
Horse, and other equids											
Pig	92	-	126	-	-	-	-	-	63	-	281
Pig	1,186	964	882	48	-	-	-	63	-	-	3,143
Goat	24	23	12	74	-	-	-	-	14	-	147
Sheep	5,812	601	1,674	60	-	-	-	25	476	-	8,648
Cattle	1,277	-	1,662	40	-	-	-	-	2	-	2,981
Deer	85	-	-	-	-	-	-	-	-	-	85
Camelid	-	-	-	-	-	-	-	-	-	-	-
Other ungulate	-	-	-	-	-	-	-	-	-	-	-
Primate											
Prosimian	-	-	-	-	-	-	-	-	-	-	-
New World monkey											
marmoset, tamarin	120	452	-	39	-	-	-	-	-	-	611
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-	-	-
Other New World monkey	-	-	-	-	-	-	-	-	-	-	-

Table 1a Animals by species of animal and primary purpose of the procedure, page 2 of 2

Species of animal	Primary purpose of the procedure						Number of animals			
	Fundamental biological research	Applied studies - human medicine or dentistry	Applied studies - veterinary medicine	Protection of man, animals or environment	Education	Training	Forensic enquiries	Direct diagnosis	Breeding	Total
<b>Old World monkey</b>										
Macaque	117	2,330	-	67	-	-	-	-	-	2,514
Baboon	-	-	-	-	-	-	-	-	-	-
Other Old World monkey	-	-	-	-	-	-	-	-	-	-
<b>Ape</b>										
Gibbon	-	-	-	-	-	-	-	-	-	-
Great ape	-	-	-	-	-	-	-	-	-	-
<b>Other mammal</b>	1,456	-	-	14	-	-	-	-	-	1,470
<b>Bird</b>										
Domestic fowl ( <i>Gallus domesticus</i> )	14,504	123	98,706	197	155	-	1,489	507	-	115,681
Turkey	244	19	607	6	-	-	5	-	-	881
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-
Quail (not <i>Coturnix coturnix</i> )	-	-	-	188	-	-	-	-	-	188
Other bird	8,462	-	212	472	-	-	308	-	-	9,454
<b>Reptile</b>										
Any reptilian species	29	214	-	101	-	-	-	-	-	344
<b>Amphibian</b>										
Any amphibian species	6,158	-	-	1,341	-	-	-	1,755	-	9,254
<b>Fish</b>										
Any fish species	96,237	45,673	21,461	92,365	60	-	10	70,395	-	326,201
<b>Cephalopod</b>										
<i>Octopus vulgaris</i>	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>972,210</b>	<b>669,614</b>	<b>145,254</b>	<b>150,487</b>	<b>1,755</b>	<b>687</b>	<b>10</b>	<b>15,116</b>	<b>1,170,693</b>	<b>3,125,826</b>
Increase on 2006	25,848	48,713	9,186	29,125	-142	-213	-8	-6741	73,434	179,202
Percentage change from 2006	3%	8%	7%	24%	-7%	-24%	-44%	-31%	7%	6%
Percent of total for 2007	31%	21%	5%	5%	<1%	<1%	<1%	<1%	37%	100%
2006 Totals	945,613	620901	136068	121362	1897	900	18	21857	1,098,008	2,946,624

<1% Less than one percent.

**Table 2 Scientific procedures by Schedule 2 listed species and source of animals**

Species of animal	Source of animals							Number of procedures	
	Animals acquired from within own designated establishment	Animals acquired from another designated breeding or supplying establishment in the UK	Animals acquired from non-designated sources in the UK	Animals acquired from sources within the EU (outside the UK)	Animals acquired from Council of Europe countries who are signatories to ETS123	Animals acquired from other sources	Animals not listed in schedule 2	Total	
Mouse	1,659,829	548,137	-	5,610	2,152	6,253	-	2,221,981	
Rat	69,262	315,199	53	775	-	365	-	385,654	
Guinea pig	528	30,957	-	372	-	-	-	31,857	
Hamster	782	1,960	-	621	-	8	-	3,371	
Gerbil	303	234	-	518	-	14	-	1,069	
Rabbit	6,293	11,124	-	1,603	-	558	-	19,578	
Cat	170	14	2	122	-	-	-	308	
Dog	1,882	4,692	84	191	-	615	-	7,464	
Ferret	63	378	-	-	-	-	-	441	
Pig (genetically modified)	63	-	-	-	-	-	-	63	
Sheep (genetically modified)	-	-	-	-	-	-	-	-	
Primate	386	2,119	-	87	-	1,372	-	3,964	
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	
Animals not listed	-	-	-	-	-	-	525,831	525,831	
<b>Total</b>	<b>1,739,561</b>	<b>914,814</b>	<b>139</b>	<b>9,899</b>	<b>2,152</b>	<b>9,185</b>	<b>525,831</b>	<b>3,201,581</b>	

(1) The total number of procedures using animals listed in schedule 2 were 2,675,750

**Table 3 Scientific procedures by species of animal, and genetic status**

Summary Version

(1) For procedure 'by purpose' please see full table available on the website

Great Britain 2007

Number of procedures

Species of animal	Genetic status			Total
	Normal animal	Animal with harmful genetic defect	Genetically modified animal	
<b>Mammal</b>				
<b>Mouse</b>	871,054	270,961	1,079,966	<b>2,221,981</b>
<b>Rat</b>	365,024	15,027	5,603	<b>385,654</b>
<b>Guinea pig</b>	31,857	-	-	<b>31,857</b>
<b>Hamster</b>	3,371	-	-	<b>3,371</b>
<b>Gerbil</b>	1,069	-	-	<b>1,069</b>
<b>Other rodent</b>	1,037	-	-	<b>1,037</b>
<b>Rabbit</b>	19,578	-	-	<b>19,578</b>
<b>Cat</b>	308	-	-	<b>308</b>
<b>Dog</b>				
Beagle	7,276	-	-	<b>7,276</b>
Greyhound	-	-	-	<b>-</b>
Other inc cross-breds	188	-	-	<b>188</b>
<b>Ferret</b>	441	-	-	<b>441</b>
<b>Other carnivore</b>	904	-	-	<b>904</b>
<b>Horse and other equids</b>	8,795	-	-	<b>8,795</b>
<b>Pig</b>	3,129	-	63	<b>3,192</b>
<b>Goat</b>	147	-	-	<b>147</b>
<b>Sheep</b>	32,741	-	-	<b>32,741</b>
<b>Cattle</b>	3,267	-	-	<b>3,267</b>
<b>Deer</b>	85	-	-	<b>85</b>
<b>Other ungulate</b>	-	-	-	<b>-</b>
<b>Primate</b>				
Prosimian	-	-	-	<b>-</b>
<b>New World monkey</b>				
marmoset, tamarin	781	-	-	<b>781</b>
Squirrel, owl, spider monkey	-	-	-	<b>-</b>
Other New World monkey	-	-	-	<b>-</b>
<b>Old World monkey</b>				
Macaque	3,183	-	-	<b>3,183</b>
Baboon	-	-	-	<b>-</b>
Other Old World monkey	-	-	-	<b>-</b>
<b>Ape</b>				
Gibbon	-	-	-	<b>-</b>
Great ape	-	-	-	<b>-</b>
<b>Other mammal</b>	1,595	-	-	<b>1,595</b>
<b>Bird</b>				
Domestic fowl ( <i>Gallus domesticus</i> )	115,179	267	322	<b>115,768</b>
Turkey	1,115	-	-	<b>1,115</b>
Quail ( <i>Coturnix coturnix</i> )	-	-	-	<b>-</b>
Quail (not <i>Coturnix coturnix</i> )	188	-	-	<b>188</b>
Other bird	10,566	-	-	<b>10,566</b>
<b>Reptile</b>	863	-	-	<b>863</b>
<b>Amphibian</b>	14,747	2,101	1,197	<b>18,045</b>
<b>Fish</b>	237,748	27,237	62,601	<b>327,586</b>
<b>Cephalopod</b>	-	-	-	<b>-</b>
<b>Total</b>	<b>1,736,236</b>	<b>315,593</b>	<b>1,149,752</b>	<b>3,201,581</b>
Proportion	54%	10%	36%	100%

**Table 4 Scientific procedures by species of animal and target body system**  
Previously Table 4a

Species of animal	Body systems										Number of procedures		
	Respiratory	Cardiovascular	Nervous	Senses	Alimentary	Skin	Musculo - skeletal	Reproductive	Immune and reticulo - endothelial	Other system	Multiple systems	System not relevant	Total
<b>Mammal</b>													
Mouse	45,788	61,338	229,587	34,074	58,078	33,825	48,371	176,046	443,410	34,859	495,931	560,674	2,221,981
Rat	33,967	18,909	119,015	3,673	13,750	2,865	1,650	29,156	15,873	13,519	78,600	54,677	385,654
Other rodent	19,624	1,070	1,984	257	586	361	20	170	4,984	165	5,266	2,847	37,334
Rabbit	24	869	284	171	19	1,237	281	3,511	2,332	736	8,468	1,646	19,578
Cat	-	10	18	41	30	-	-	-	42	-	143	24	308
Dog	166	664	25	-	139	-	-	31	34	37	3,363	3,005	7,464
Ferret	28	38	39	57	-	-	-	-	43	-	199	37	441
Other carnivore	-	7	-	-	-	-	-	-	-	-	330	567	904
Pig	129	259	146	9	297	119	-	57	877	110	314	875	3,192
Sheep	192	347	178	-	1,157	114	428	1,038	1,055	22,979	3,501	1,752	32,741
Horse and other equids	42	29	14	-	22	-	6	34	64	5,756	77	2,751	8,795
Other ungulate	615	16	7	-	324	17	49	612	725	145	621	368	3,499
<b>Primate</b>													
New World monkey	-	36	22	-	-	-	152	59	109	-	203	200	781
Old World monkey	39	53	121	15	-	2	-	-	14	-	1,276	1,663	3,183
<b>Other mammal</b>													
Bird	90	4,524	3,300	566	8,336	2	230	916	4,463	88,046	7,911	9,253	127,637
Reptile / Amphibian	-	92	26	151	-	314	420	12,887	-	733	533	3,752	18,908
Fish	262	1,868	9,524	4,502	20,172	3,825	36,802	21,019	7,537	7,439	58,875	155,761	327,586
<b>Total</b>	<b>100,966</b>	<b>90,539</b>	<b>364,290</b>	<b>43,516</b>	<b>102,910</b>	<b>43,434</b>	<b>88,409</b>	<b>245,536</b>	<b>481,562</b>	<b>174,934</b>	<b>665,623</b>	<b>799,862</b>	<b>3,201,581</b>

**Table 5 Scientific procedures by species of animal and level of anaesthesia**  
Previously Table 4b

Species of animal	No anaesthesia	Type of anaesthesia			Number of procedures	
		General anaesthesia, with recovery	Local anaesthesia		General anaesthesia at end of procedure, without recovery	Total
			General anaesthesia, with recovery	General anaesthesia at end of procedure, without recovery		
<b>Mammal</b>						
Mouse	1,473,587	353,972	273,197	84,558	36,667	2,221,981
Rat	191,284	118,092	1,421	42,784	32,073	385,654
Other rodent	14,091	18,139	206	2,694	2,204	37,334
Rabbit	14,859	804	569	1,861	1,485	19,578
Cat	157	109	-	35	7	308
Dog	5,068	558	942	474	422	7,464
Ferret	2	349	-	64	26	441
Other carnivore	384	520	-	-	-	904
Pig	2,020	803	11	92	266	3,192
Sheep	30,838	1,239	557	98	9	32,741
Horse and other equids	265	1	8,529	-	-	8,795
Other ungulate	3,244	177	43	20	15	3,499
<b>Primate</b>						
New World monkey	508	214	-	39	20	781
Old World monkey	2,795	245	-	105	38	3,183
<b>Other mammal</b>						
	556	219	820	-	-	1,595
<b>Bird</b>						
	43,211	404	-	83,224	798	127,637
<b>Reptile / Amphibian</b>						
	17,704	1,079	-	-	125	18,908
<b>Fish</b>						
	157,642	140,915	8	27,696	1,325	327,586
<b>Total</b>	<b>1,958,215</b>	<b>637,839</b>	<b>286,303</b>	<b>243,744</b>	<b>75,480</b>	<b>3,201,581</b>

Neuromuscular blocking agents (NMBA) were used in 3,372 procedures in 2007. All of these procedures involved the use of general anaesthesia.

Table 6 Scientific procedures (non-toxicology) by species of animal and field of research, page 1 of 4  
Previously Table 5

Species of animal	Field of research										Number of procedures			
	Anatomy	Physiology	Biochemistry	Psychology	Pathology	Immunology	Microbiology	Parasitology	Pharmacology	Pharmaceutical R&D	Therapeutics	Clinical medicine	Clinical surgery	
<b>Mammal</b>														
Mouse	200,785	212,424	33,092	29,547	44,656	433,095	32,711	24,474	29,797	155,260	16,018	9,355	113	
Rat	10,600	39,933	2,679	10,915	2,155	6,597	549	1,571	22,732	136,444	2,315	4,876	1,708	
Guinea pig	-	381	2	-	-	1,116	460	72	2,088	20,613	45	-	-	
Hamster	-	389	21	-	-	4	313	869	-	88	-	-	-	
Gerbil	-	4	-	-	-	39	-	257	-	518	-	-	-	
Other rodent	-	7	-	32	1	-	115	-	-	-	-	-	-	
Rabbit	24	848	154	-	66	2,095	749	64	121	1,134	71	102	16	
Cat	-	47	-	-	-	42	24	4	10	60	-	-	-	
Dog	-	-	-	-	-	-	-	-	-	-	-	-	-	
Beagle	-	-	-	-	-	34	-	-	-	1,221	-	-	-	
Greyhound	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other including cross-bred dogs	-	-	-	-	-	-	-	-	-	19	-	21	-	
Ferret	3	102	-	15	-	98	180	-	14	10	2	-	-	
Other carnivore	-	39	-	-	-	-	-	-	-	-	-	-	-	
Horse and other equids	-	64	-	48	-	89	8,442	-	27	14	-	2	4	
Pig	66	229	-	218	84	493	61	-	13	204	54	94	104	
Goat	-	-	24	-	-	14	12	-	-	6	-	14	3	
Sheep	97	886	386	151	264	606	24,472	379	8	202	140	350	66	
Cattle	-	568	-	-	24	504	175	189	14	119	-	-	-	
Deer	-	-	-	-	-	-	-	-	-	-	-	-	-	
Camelid	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other ungulate	-	-	-	-	-	-	-	-	-	-	-	-	-	
Primate	-	-	-	-	-	-	-	-	-	-	-	-	-	
Prosimian	-	-	-	-	-	-	-	-	-	-	-	-	-	
New World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	
marmoset, tamarin	-	59	-	72	10	2	14	-	12	343	-	-	-	
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other New World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 6 Scientific procedures (non-toxicology) by species of animal and field of research, page 2 of 4  
Previously Table 5

Species of animal	Field of research											Number of procedures		
	Anatomy	Physiology	Biochemistry	Psychology	Pathology	Immunology	Microbiology	Parasitology	Pharmacology	Pharmaceutical R&D	Therapeutics	Clinical medicine	Clinical surgery	
<b>Old World monkey</b>														
Macaque	2	73	-	1	-	14	55	-	-	127	-	-	-	
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Ape</b>														
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-	
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other mammal	-	-	-	-	-	-	12	-	-	-	-	-	-	
<b>Bird</b>														
Domestic fowl ( <i>Gallus domesticus</i> )	611	380	213	2,965	703	7,417	8,428	84,496	-	511	1,266	-	-	
Turkey	-	-	-	-	-	-	402	-	-	707	-	-	-	
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	
Quail (not <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other bird	-	228	-	309	50	777	231	3,117	-	90	-	-	-	
<b>Reptile</b>														
Any reptilian species	-	29	-	-	-	-	-	-	-	-	733	-	-	
<b>Amphibian</b>														
Any amphibian species	9,377	663	517	-	-	33	2,741	261	40	-	-	-	-	
<b>Fish</b>														
Any fish species	70,186	25,074	-	1,018	977	7,100	14,484	6,819	188	31,724	60	-	-	
<b>Cephalopod</b>														
<i>Octopus vulgaris</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>	<b>291,751</b>	<b>282,427</b>	<b>37,088</b>	<b>45,291</b>	<b>48,990</b>	<b>460,169</b>	<b>94,618</b>	<b>122,584</b>	<b>55,064</b>	<b>349,414</b>	<b>20,704</b>	<b>14,814</b>	<b>2,014</b>	
Increase on 2006	28,219	53,942	2,544	8,269	3,467	-42,267	9,376	7,197	-13,061	-32,047	7,607	4,196	591	
Percentage change from 2006	12%	25%	7%	18%	7%	-9%	11%	7%	-19%	-9%	45%	30%	30%	
Percent of total for 2007	10%	10%	2%	2%	2%	17%	4%	4%	2%	12%	1%	1%	<1%	

<1% Less than one percent.

Table 6 Scientific procedures (non-toxicology) by species of animal and field of research, page 3 of 4  
Previously Table 5

Species of animal	Field of research										Number of procedures			
	Dentistry	Genetics	Molecular biology	Cancer research	Nutrition	Zoology	Botany	Animal science	Ecology	Animal welfare	Other	Tobacco	Alcohol	Total
<b>Mammal</b>														
Mouse	-	201,226	150,048	323,316	3,487	-	66	5,541	-	178	123,381	-	153	2,028,723
Rat	6	1,259	2,606	5,910	3,097	-	4	-	-	561	4,118	-	90	260,725
Guinea pig	-	-	5	-	-	-	-	80	-	-	-	-	-	24,862
Hamster	-	-	314	-	100	270	-	-	-	-	-	-	-	2,368
Gerbil	-	-	-	251	-	-	-	-	-	-	-	-	-	1,069
Other rodent	-	-	-	-	.	181	-	-	583	34	-	-	-	953
Rabbit	14	-	9	-	-	-	3	-	4	-	36	-	-	5,510
Cat	-	-	-	-	121	-	-	-	-	-	-	-	-	308
Dog	-	-	-	-	-	-	-	-	-	-	-	-	-	1,338
Beagle	-	-	-	65	-	-	-	-	-	-	18	-	-	-
Greyhound	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other including cross-bred dogs	-	-	-	-	148	-	-	-	-	-	-	-	-	188
Ferret	-	-	-	-	-	-	-	-	-	-	-	-	-	424
Other carnivore	-	-	-	-	-	54	-	-	481	-	-	-	-	574
Horse and other equids	-	24	-	-	-	-	-	-	-	22	-	-	-	8,736
Pig	-	62	-	-	32	-	-	29	-	40	8	-	-	1,791
Goat	-	-	-	-	-	-	-	-	-	-	-	-	-	73
Sheep	-	445	-	-	592	-	-	2,837	-	185	-	-	-	32,066
Cattle	-	-	-	-	85	-	-	216	2	-	-	-	-	1,896
Deer	-	78	-	-	7	-	-	-	-	-	-	-	-	85
Camelid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other ungulate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Primate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prosimian	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-
marmoset, tamarin	-	-	48	-	-	-	-	-	-	-	7	-	-	567
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other New World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6 Scientific procedures (non-toxicology) by species of animal and field of research, page 4 of 4  
Previously Table 5

Great Britain 2007 Species of animal	Field of research											Number of procedures			
	Dentistry	Genetics	Molecular biology	Cancer research	Nutrition	Zoology	Botany	Animal science	Ecology	Animal welfare	Other	Tobacco	Alcohol	Total	
<b>Old World monkey</b>															
Macaque	-	-	-	-	-	-	-	-	-	-	-	-	-	272	
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Ape</b>															
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Other mammal</b>	-	12	1,230	-	-	-	-	-	341	-	-	-	-	1,595	
<b>Bird</b>															
<b>Domestic fowl (Gallus domesticus)</b>															
Turkey	-	328	14	-	816	-	-	48	-	492	-	-	-	108,688	
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	1,109	
Quail (not <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Other bird</b>	-	-	-	-	-	1,976	-	-	3,628	72	-	-	-	10,478	
<b>Reptile</b>															
<b>Any reptilian species</b>	-	-	-	-	-	-	-	-	101	-	-	-	-	863	
<b>Amphibian</b>															
<b>Any amphibian species</b>	-	1,965	53	1,363	-	-	5	-	1,027	-	-	-	-	18,045	
<b>Fish</b>															
<b>Any fish species</b>	-	18,016	989	5,188	3,608	2,134	-	-	84,252	89	10	-	-	271,916	
<b>Cephalopod</b>															
<b>Octopus vulgaris</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>	20	223,415	155,316	336,093	12,093	4,615	78	8,751	90,419	1,673	127,578	-	243	2,785,222	
Percentage change from 2006	-1%	0	0	0	0	-0	4	-1	0	-0	-0	N/A	-1	193,675	
Percent of total for 2007	<1%	8%	6%	12%	<1%	<1%	<1%	<1%	3%	<1%	5%	N/A	<1%	7%	
2006 Totals	<1%	8%	6%	12%	<1%	<1%	<1%	<1%	3%	0%	5%	<1%	<1%	100%	
<1% Less than one percent.	-	0	0	0	0	0	0	0	-	-	-	0	0	0	
<1% Less than one percent.	-	0	0	0	0	0	0	0	-	-	-	0	0	0	
N/A = No comparable figures for 2006	-	0	0	0	0	0	0	0	-	-	-	0	0	0	

Table 6a Animals (non-toxicology) by species and field of research, page 1 of 4  
Previously Table 5a

Species of animal	Field of research											Number of animals		
	Anatomy	Physiology	Biochemistry	Psychology	Pathology	Immunology	Microbiology	Parasitology	Pharmacology	Pharmaceutical R&D	Therapeutics	Clinical medicine	Clinical surgery	
<b>Mammal</b>														
Mouse	200,654	211,161	32,984	29,547	42,418	426,924	32,641	24,474	29,677	152,991	16,018	9,201	113	
Rat	10,600	39,514	2,639	10,204	2,155	6,597	549	1,071	22,289	131,300	2,315	4,069	1,678	
Guinea pig	-	381	2	-	-	1,116	440	26	2,088	20,373	45	-	-	
Hamster	-	389	21	-	-	4	313	544	-	88	-	-	-	
Gerbil	-	4	-	-	-	39	-	257	-	518	-	-	-	
<b>Other rodent</b>	-	7	-	32	1	-	115	-	-	-	-	-	-	
Rabbit	24	848	13	-	66	2,095	601	27	121	1,134	71	102	15	
Cat	-	47	-	-	-	42	24	4	10	40	-	-	-	
Dog	-	-	-	-	-	-	-	-	-	-	-	-	-	
Beagle	-	-	-	-	-	6	-	-	-	555	-	-	-	
Greyhound	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other including cross-bred dogs	-	-	-	-	-	-	-	-	-	19	-	21	-	
<b>Ferret</b>	3	102	-	15	-	98	180	-	14	10	2	-	-	
<b>Other carnivore</b>	-	39	-	-	-	-	-	-	-	-	-	-	-	
<b>Horse and other equids</b>	-	52	-	48	-	29	63	-	-	-	-	2	4	
Pig	66	229	-	218	84	493	61	-	13	191	54	94	104	
Goat	-	14	24	-	-	14	12	-	-	6	-	14	3	
Sheep	97	848	386	151	264	566	563	379	8	136	140	348	66	
Cattle	-	568	-	-	24	419	169	135	14	119	-	-	-	
Deer	-	-	-	-	-	-	-	-	-	-	-	-	-	
Camelid	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Other ungulate</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Primate</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	
Prosimian	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>New World monkey</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	
marmoset, tamarin	-	50	-	72	6	2	14	-	12	208	-	-	-	
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other New World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 6a Animals (non-toxicology) by species and field of research, page 2 of 4  
Previously Table 5a

Species of animal	Field of research											Number of animals		
	Anatomy	Physiology	Biochemistry	Psychology	Pathology	Immunology	Microbiology	Parasitology	Pharmacology	Pharmaceutical R&D	Therapeutics	Clinical medicine	Clinical surgery	
Old World monkey	2	65	-	1	-	14	55	-	-	26	-	-	-	
Macaque	-	-	-	-	-	-	-	-	-	-	-	-	-	
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ape	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-	
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other mammal	-	-	-	-	-	-	12	-	-	-	-	-	-	
Bird	611	380	213	2,965	703	7,330	8,428	84,496	-	511	1,266	-	-	
Domestic fowl ( <i>Gallus domesticus</i> )	-	-	-	-	-	-	257	-	-	618	-	-	-	
Turkey	-	-	-	-	-	-	-	-	-	-	-	-	-	
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	
Quail (not <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other bird	-	193	-	290	50	569	231	2,267	-	90	-	-	-	
Reptile	-	-	-	-	-	-	-	-	-	-	-	-	-	
Any reptilian species	-	29	-	-	-	-	-	-	-	-	214	-	-	
Amphibian	2,631	209	34	-	-	33	2,741	261	40	-	-	-	-	
Any amphibian species	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fish	70,186	25,074	-	1,018	977	7,100	14,484	6,819	188	31,724	60	-	-	
Any fish species	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cephalopod	-	-	-	-	-	-	-	-	-	-	-	-	-	
Octopus vulgaris	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	284,874	280,189	36,316	44,561	46,748	453,490	61,941	120,772	54,474	340,657	20,185	13,851	1,983	

Table 6a Animals (non-toxicology) by species and field of research, page 3 of 4  
Previously Table 5a

Species of animal	Field of research											Number of animals			
	Dentistry	Genetics	Molecular biology	Cancer research	Nutrition	Zoology	Botany	Animal science	Ecology	Animal welfare	Other	Tobacco	Alcohol	Total	
<b>Mammal</b>															
Mouse	-	201,135	152,098	321,051	3,487	-	66	5,541	-	178	123,263	-	153	2,015,775	
Rat	6	1,259	2,606	5,857	3,097	-	4	-	-	561	4,117	-	90	292,577	
Guinea pig	-	-	5	-	-	-	-	80	-	-	-	-	-	24,556	
Hamster	-	-	314	-	100	28	-	-	-	-	-	-	-	1,801	
Gerbil	-	-	-	251	-	-	-	-	-	-	-	-	-	1,069	
<b>Other rodent</b>	-	-	-	-	-	181	-	-	583	34	-	-	-	953	
Rabbit	14	-	9	-	-	-	3	-	4	-	20	-	-	5,167	
Cat	-	-	-	-	12	-	-	-	-	-	-	-	-	179	
Dog	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Beagle	-	-	-	17	-	-	-	-	-	2	-	-	-	580	
Greyhound	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other including cross-bred dogs	-	-	-	-	9	-	-	-	-	-	-	-	-	49	
Ferret	-	-	-	-	-	-	-	-	-	-	-	-	-	424	
<b>Other carnivore</b>	-	-	-	-	-	54	-	-	481	-	-	-	-	574	
<b>Horse and other equids</b>	-	24	-	-	-	-	-	-	-	-	-	-	-	222	
Pig	-	62	-	-	32	-	-	29	-	40	8	-	-	1,778	
Goat	-	-	-	-	-	-	-	-	-	-	-	-	-	73	
Sheep	-	445	-	-	572	-	-	2,825	-	185	-	-	-	7,979	
Cattle	-	-	-	-	58	-	-	124	2	-	-	-	-	1,632	
Deer	-	78	-	-	7	-	-	-	-	-	-	-	-	85	
Camelid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Other ungulate</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Primate</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Prosimian	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>New World monkey</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
marmoset, tamarin	-	-	48	-	-	-	-	-	-	-	7	-	-	419	
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other New World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 6a Animals (non-toxicology) by species of animal and field of research, page 4 of 4  
Previously Table 5a

Species of animal	Field of research											Number of animals			
	Dentistry	Genetics	Molecular biology	Cancer research	Nutrition	Zoology	Botany	Animal science	Ecology	Animal welfare	Other	Tobacco	Alcohol	Total	
Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	163	
Macaque	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other mammal	-	12	1,230	-	-	-	-	216	-	-	-	-	-	1,470	
Bird	-	328	14	-	816	-	-	48	-	492	-	-	-	108,601	
Domestic fowl ( <i>Gallus domesticus</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	875	
Turkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Quail (not <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Other bird	-	-	-	-	-	1,976	-	-	3,628	72	-	-	-	9,366	
Reptile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Any reptilian species	-	-	-	-	-	-	-	-	101	-	-	-	-	344	
Amphibian	-	1,849	50	377	-	-	2	-	1,027	-	-	-	-	9,254	
Any amphibian species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Fish	-	18,016	989	5,188	2,626	2,042	-	-	83,953	77	10	-	-	270,531	
Any fish species	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cephalopod	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Octopus vulgaris	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>	<b>20</b>	<b>223,208</b>	<b>157,363</b>	<b>332,741</b>	<b>10,816</b>	<b>4,281</b>	<b>75</b>	<b>8,647</b>	<b>89,995</b>	<b>1,639</b>	<b>127,427</b>	<b>243</b>	<b>-</b>	<b>2,716,496</b>	

**Table 7 Scientific procedures (non-toxicology) by species of animal and production of biological materials**  
Previously Table 8

Species of animal	Production							Number of procedures	
	Infectious agents	Vectors	Neoplasms	Monoclonal antibodies (ascites model)	Monoclonal antibodies (initial immunisation)	Polyclonal antibodies	Other biological materials	Other <sup>(1)</sup>	Total
<b>Mammal</b>									
Mouse	26,196	5,409	12,279	-	2,097	15,688	96,071	1,870,983	<b>2,028,723</b>
Rat	1,189	600	165	-	155	43	19,580	238,993	<b>260,725</b>
Other rodent	884	709	2	-	-	174	494	26,989	<b>29,252</b>
Rabbit	258	37	-	-	42	1,957	768	2,448	<b>5,510</b>
Cat	-	-	-	-	-	-	4	304	<b>308</b>
Dog	-	-	-	-	-	2	422	1,102	<b>1,526</b>
Ferret	48	-	-	-	-	49	159	168	<b>424</b>
Other carnivore	-	-	-	-	-	-	7	567	<b>574</b>
Horse and other equids	-	-	-	-	-	-	5,817	2,919	<b>8,736</b>
Other ungulate	301	2	-	-	35	464	23,665	11,444	<b>35,911</b>
<b>Primate</b>									
New World monkey	-	-	-	-	-	-	64	503	<b>567</b>
Old World monkey	-	-	-	-	-	4	66	202	<b>272</b>
Other mammal	-	-	-	-	-	-	-	1,595	<b>1,595</b>
<b>Bird</b>									
Reptile / Amphibian	84,737	-	-	-	-	893	3,590	31,055	<b>120,275</b>
Fish	2,139	-	759	-	-	-	6,155	262,863	<b>271,916</b>
<b>Total</b>	<b>115,752</b>	<b>6,757</b>	<b>13,205</b>	<b>-</b>	<b>2,329</b>	<b>19,274</b>	<b>165,375</b>	<b>2,462,530</b>	<b>2,785,222</b>

(1) Includes breeding procedures which are now detailed in Tables 3.1 - 3.3 on the website



Table 9 Scientific procedures (toxicology) by species of animal and toxicological purpose, page 2 of 4  
Previously Table 10

Great Britain 2007 Species of animal	Toxicology or other safety/efficacy evaluation										Number of procedures		
	General safety/efficacy evaluation										Finished cosmetics	Cosmetics ingredients	
	Pollution	Agriculture	Industry	Household	Food additives	Other foodstuffs							
<b>Old World monkey</b>													
Macaque	-	-	-	-	-	-	-	-	-	-	-	-	-
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Ape</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Other mammal</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bird</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Domestic fowl (Gallus domesticus )</b>	-	197	-	-	-	-	-	-	-	-	-	-	-
<b>Turkey</b>	-	6	-	-	-	-	-	-	-	-	-	-	-
<b>Quail (Coturnix coturnix )</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Quail (not Coturnix coturnix )</b>	-	188	-	-	-	-	-	-	-	-	-	-	-
<b>Other bird</b>	-	88	-	-	-	-	-	-	-	-	-	-	-
<b>Reptile</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Any reptilian species</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Amphibian</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Any amphibian species</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Fish</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Any fish species</b>	17,350	2,218	5,242	-	-	-	-	-	-	-	-	-	-
<b>Cephalopod</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Octopus vulgaris</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>17,894</b>	<b>17,006</b>	<b>28,958</b>	<b>1</b>	<b>766</b>	<b>8,380</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Increase on 2006	-1,295	-5,536	285	1	-3,272	903	0	0	0	0	0	0	0
Percentage change from 2006	-7%	-25%	1%	0%	-81%	12%	0%	0%	0%	0%	0%	0%	0%
Percent of total for 2007	4%	4%	7%	<1%	<1%	2%	<1%	<1%	<1%	<1%	<1%	<1%	<1%
<b>2006 Totals</b>	<b>19,189</b>	<b>22,542</b>	<b>28,673</b>	<b>0</b>	<b>4038</b>	<b>7477</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<1% Less than one percent.

N/A = No comparable figures for 2006

Table 9 Scientific procedures (toxicology) by species of animal and toxicological purpose, page 3 of 4  
Previously Table 10

Species of animal	Toxicology or other safety/efficacy evaluation										Number of procedures	
	Pharmaceutical safety/efficacy evaluation					Other purposes					Total	
	Safety testing	Efficacy testing	Quality control	ADME and residue	Toxicology research	Tobacco safety	Medical device safety	Method development	Other			
<b>Mammal</b>												
Mouse	48,550	7,847	93,293	14,222	4,805	-	170	2,433	1,585		193,258	
Rat	75,119	193	1,309	17,953	850	-	151	2,363	2,199		124,929	
Guinea pig	2,304	1,127	3,271	181	50	-	-	62	-		6,995	
Hamster	446	501	-	12	-	-	-	8	-		1,003	
Gerbil	-	-	-	-	-	-	-	-	-		-	
Other rodent	-	-	-	-	-	-	-	-	-		84	
Rabbit	8,940	84	2,148	132	24	-	158	462	11		14,068	
Cat	-	-	-	-	-	-	-	-	-		-	
Dog												
Beagle	4,878	-	3	882	-	-	-	36	4		5,938	
Greyhound	-	-	-	-	-	-	-	-	-		-	
Other including cross-bred dogs	-	-	-	-	-	-	-	-	-		-	
Ferret	-	8	-	9	-	-	-	-	-		17	
Other carnivore	311	19	-	-	-	-	-	-	-		330	
Horse and other equids	35	-	-	24	-	-	-	-	-		59	
Pig	616	615	2	65	27	-	1	2	56		1,401	
Goat	-	-	-	-	-	-	-	-	-		74	
Sheep	86	360	138	13	-	-	5	13	-		675	
Cattle	146	959	40	90	-	-	5	75	-		1,371	
Deer	-	-	-	-	-	-	-	-	-		-	
Camelid	-	-	-	-	-	-	-	-	-		-	
Other ungulate	-	-	-	-	-	-	-	-	-		-	
Primate												
Prosimian	-	-	-	-	-	-	-	-	-		-	
New World monkey												
marmoset, tamarin	164	-	-	22	-	-	-	28	-		214	
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-		-	
Other New World monkey	-	-	-	-	-	-	-	-	-		-	

Table 9 Scientific procedures (toxicology) by species of animal and toxicological purpose, page 4 of 4  
Previously Table 10

Species of animal	Toxicology or other safety/efficacy evaluation										Number of procedures		
	Pharmaceutical safety/efficacy evaluation					Other purposes					Total		
	Safety testing	Efficacy testing	Quality control	ADME and residue	Toxicology research	Tobacco safety	Medical device safety	Method development	Other				
<b>Old World monkey</b>													
Macaque	2,443	-	-	313	-	-	-	145	-	-	-	10	2,911
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Ape</b>													
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Other mammal</b>													
<b>Bird</b>													
Domestic fowl ( <i>Gallus domesticus</i> )	1,109	5,031	544	199	-	-	-	-	-	-	-	-	7,080
Turkey	-	-	-	-	-	-	-	-	-	-	-	-	6
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-
Quail (not <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	188
Other bird	-	-	-	-	-	-	-	-	-	-	-	-	88
<b>Reptile</b>													
Any reptilian species	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Amphibian</b>													
Any amphibian species	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Fish</b>													
Any fish species	23,262	2,713	-	700	964	-	-	3,221	-	-	-	-	55,670
<b>Cephalopod</b>													
Octopus vulgaris	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>168,409</b>	<b>19,457</b>	<b>100,748</b>	<b>34,817</b>	<b>6,720</b>	<b>-</b>	<b>490</b>	<b>8,848</b>	<b>3,865</b>	<b>416,359</b>	<b>416,359</b>	<b>-4,126</b>	
Increase on 2006	26,334	-9,755	-5,131	1,301	-6,318	0	-49	-1,567	-27	-4,126			
Percentage change from 2006	19%	-33%	-5%	4%	-48%	0%	-9%	-15%	-1%	-1%			
Percent of total for 2007	40%	5%	24%	8%	2%	<1%	<1%	2%	1%	100%			
2006 Totals	142075	29212	105879	33516	13038	0	539	10415	3892	420485			

<1% Less than one percent.  
N/A = No comparable figures for 2006

Table 9a Animals (toxicology) by species of animal and toxicological purpose, page 1 of 4  
Previously Table 10a

Species of animal	Toxicology or other safety/efficacy evaluation											Number of animals		
	General safety/efficacy evaluation											Finished cosmetics	Cosmetics ingredients	
	Pollution	Agriculture	Industry	Household	Food additives	Other foodstuffs								
<b>Mammal</b>														
Mouse	417	4,013	7,413	-	130	8,380	-	-	-	-	-	-	-	-
Rat	127	9,705	14,327	-	633	-	-	-	-	-	-	-	-	-
Guinea pig	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hamster	-	-	36	-	-	-	-	-	-	-	-	-	-	-
Gerbil	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other rodent	-	84	-	-	-	-	-	-	-	-	-	-	-	-
Rabbit	-	190	1,911	1	3	-	-	-	-	-	-	-	-	-
Cat	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dog	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beagle	-	110	23	-	-	-	-	-	-	-	-	-	-	-
Greyhound	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other including cross-bred dogs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ferret	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other carnivore	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Horse and other equids	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pig	-	17	-	-	-	-	-	-	-	-	-	-	-	-
Goat	-	74	-	-	-	-	-	-	-	-	-	-	-	-
Sheep	-	60	-	-	-	-	-	-	-	-	-	-	-	-
Cattle	-	40	-	-	-	-	-	-	-	-	-	-	-	-
Deer	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Camelid	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other ungulate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Primate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prosimian	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>New World monkey</b>														
marmoset, tamarin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Squirrel, owl, spider monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other New World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9a Animals (toxicology) by species of animal and toxicological purpose, page 2 of 4  
Previously Table 10a

Species of animal	Toxicology or other safety/efficacy evaluation										Number of animals		
	General safety/efficacy evaluation										Finished cosmetics	Cosmetics ingredients	
	Pollution	Agriculture	Industry	Household	Food additives	Other foodstuffs							
<b>Old World monkey</b>													
Macaque	-	-	-	-	-	-	-	-	-	-	-	-	-
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Ape</b>													
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Other mammal</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Bird</b>													
Domestic fowl ( <i>Gallus domesticus</i> )	-	197	-	-	-	-	-	-	-	-	-	-	-
Turkey	-	6	-	-	-	-	-	-	-	-	-	-	-
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-
Quail (not <i>Coturnix coturnix</i> )	-	188	-	-	-	-	-	-	-	-	-	-	-
<b>Other bird</b>	-	88	-	-	-	-	-	-	-	-	-	-	-
<b>Reptile</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Any reptilian species</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Amphibian</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Any amphibian species</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Fish</b>													
Any fish species	17,350	2,218	5,242	-	-	-	-	-	-	-	-	-	-
<b>Cephalopod</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Octopus vulgaris</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>17,894</b>	<b>16,990</b>	<b>28,952</b>	<b>1</b>	<b>766</b>	<b>8,380</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>



Table 9a Animals (toxicology) by species of animal and toxicological purpose, page 4 of 4  
Previously Table 10a

Species of animal	Great Britain 2007											Number of animals									
	Pharmaceutical safety/efficacy evaluation					Toxicology or other safety/efficacy evaluation					Total										
	Safety testing	Efficacy testing	Quality control	ADME and residue	Toxicology research	Tobacco safety	Medical device safety	Method development	Other	Total											
<b>Old World monkey</b>																					
Macaque	2,166	-	-	-	99	-	-	-	-	-	-	77	-	-	-	-	9				2,351
Baboon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Old World monkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Ape</b>																					
Gibbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Great ape	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Other mammal</b>																					
<b>Bird</b>																					
<b>Domestic fowl</b> ( <i>Gallus domesticus</i> )	1,109	5,031	544	199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,080
Turkey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Quail ( <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quail (not <i>Coturnix coturnix</i> )	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	188
<b>Other bird</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88
<b>Reptile</b>																					
<b>Any reptilian species</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Amphibian</b>																					
<b>Any amphibian species</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Fish</b>																					
<b>Any fish species</b>	23,262	2,713	-	700	-	-	-	-	964	-	-	-	3,221	-	-	-	-	-	-	-	55,670
<b>Cephalopod</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Octopus vulgaris</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>164,890</b>	<b>19,457</b>	<b>98,712</b>	<b>33,931</b>	<b>6,720</b>	<b>-</b>	<b>344</b>	<b>8,431</b>	<b>3,862</b>	<b>409,330</b>											

**Table 10 Scientific procedures (toxicology) by species of animal and type of legislation**

**Summary version - Previously Table 11**

(1) For procedure 'by purpose' please see full table available on the website

**Great Britain 2007**

Species of animal	UK requirements only	One EU country only (not UK)	EU requirements, incl. European Pharmacopoeia	Requirements of (non-EU) Council of Europe	Requirements of other countries	Any combination of legislative requirements	Non-legislative purposes	Number of procedures	
								Total	Total
<b>Mammal</b>									
Mouse	2,119	17	15,490	-	1,618	156,193	17,821	193,258	
Rat	523	32	4,306	7	1,568	107,857	10,636	124,929	
Other rodent	2,717	-	2,090	-	256	2,739	280	8,082	
Rabbit	622	3	5,129	-	220	7,993	101	14,068	
Cat	-	-	-	-	-	-	-	-	
Dog	17	-	-	-	-	5,451	470	5,938	
Ferret	-	-	-	-	-	9	8	17	
Other carnivore	330	-	-	-	-	-	-	330	
Horse and other equids	-	-	59	-	-	-	-	59	
Other ungulate	8	-	1,616	-	30	1,666	201	3,521	
<b>Primate</b>									
New World monkey	-	-	-	-	-	210	4	214	
Old World monkey	-	-	-	-	-	2,843	68	2,911	
<b>Other mammal</b>									
Bird	40	-	248	-	45	7,029	-	7,362	
<b>Reptile / Amphibian</b>									
Fish	2,677	-	9,127	-	800	16,483	26,583	55,670	
<b>Total</b>	<b>9,053</b>	<b>52</b>	<b>38,065</b>	<b>7</b>	<b>4,537</b>	<b>308,473</b>	<b>56,172</b>	<b>416,359</b>	

Table 11 Scientific procedures (toxicology) by species of animal and type of toxicological test: all purposes, page 1 of 2  
 Previously Table 12

Species of animal	Type of toxicological test or procedure										Number of procedures			
	Acute lethal toxicity	Acute lethal concentration	Acute limit setting	Acute non - lethal clinical sign	Subacute limit-setting or dose ranging	Subacute toxicity	Subchronic and chronic	Cardinogenicity	Genetic toxicology (includes mutagenicity)	Teratogenicity				
<b>Mammal</b>														
Mouse	77,720	729	9,409	3,183	4,081	3,658	5,051	8,525	2,659	260				
Rat	288	1,491	1,387	5,537	9,685	13,823	11,134	9,390	5,550	3,904				
Other rodent	50	-	-	113	50	-	-	-	-	-				
Rabbit	-	-	-	78	216	624	288	-	-	3,328				
Cat	-	-	-	-	-	-	-	-	-	-				
Dog	-	-	-	211	601	1,907	1,809	-	-	-				
Ferret	-	-	-	-	-	-	-	-	-	-				
Other carnivore	-	-	-	-	-	-	-	-	-	-				
Horse and other equids	-	-	-	-	-	-	-	-	-	-				
Other ungulate	-	-	-	21	12	228	204	-	-	-				
<b>Primate</b>														
New World monkey	-	-	-	-	59	37	68	-	-	-				
Old World monkey	-	-	-	34	435	674	1,041	-	-	-				
<b>Other mammal</b>														
<b>Bird</b>	60	60	48	-	-	794	-	-	-	-				
<b>Reptile / Amphibian</b>	-	-	-	-	-	-	-	-	-	-				
<b>Fish</b>	-	6,246	22,019	-	691	5,123	7,440	-	-	-				
<b>Total</b>	<b>78,118</b>	<b>8,526</b>	<b>32,863</b>	<b>9,177</b>	<b>15,830</b>	<b>26,868</b>	<b>27,035</b>	<b>17,915</b>	<b>8,209</b>	<b>7,492</b>				

Table 11 Scientific procedures (toxicology) by species of animal and type of toxicological test: all purposes, page 2 of 2

Previously Table 12

Species of animal	Type of toxicological test or procedure										Number of procedures	
	Other reproductive toxicity	In eyes	For skin irritation	For skin sensitisation	Toxicokinetics	Pyrogenicity	Biocompatibility	Enzyme induction for <i>in vitro</i> tests	Immunotoxicology	Other toxicology	Total	
<b>Mammal</b>												
Mouse	1,032	-	12	762	13,750	-	170	2	7,218	55,037	193,258	
Rat	25,939	-	-	-	15,022	-	62	262	404	21,051	124,929	
Other rodent	-	-	-	-	-	-	-	36	70	7,763	8,082	
Rabbit	52	763	1,146	-	74	7,080	24	-	12	383	14,068	
Cat	-	-	-	-	-	-	-	-	-	-	-	
Dog	-	-	-	-	549	-	-	-	-	861	5,938	
Ferret	-	-	-	-	-	-	-	-	-	17	17	
Other carnivore	-	-	-	-	-	-	-	-	-	330	330	
Horse and other equids	-	-	-	-	-	-	-	-	-	59	59	
Other ungulate	-	-	4	-	172	-	58	-	36	2,786	3,521	
<b>Primate</b>												
New World monkey	-	-	-	-	13	-	-	-	-	37	214	
Old World monkey	-	-	-	-	290	-	-	-	-	437	2,911	
<b>Other mammal</b>												
<b>Bird</b>	176	-	-	-	214	-	-	-	-	6,010	7,362	
<b>Reptile / Amphibian</b>												
Fish	4,407	-	-	-	540	-	-	-	-	9,204	55,670	
<b>Total</b>	<b>31,606</b>	<b>763</b>	<b>1,162</b>	<b>762</b>	<b>30,624</b>	<b>7,080</b>	<b>314</b>	<b>300</b>	<b>7,740</b>	<b>103,975</b>	<b>416,359</b>	

## **ERRATA IN 2006 PUBLISHED TABLES**

Since the publication of the annual statistics for the year 2006, some minor changes to the figures have come to light. The changes result in only small alterations in Table 1, 1(a) and Table 8, which describes non-toxicology scientific procedures by species of animal and techniques of particular interest.

- The number of procedures on beagles for 2006 is now 6,682.
- The new total of all dogs used in 2006 is 6,875.
- 720 fewer dogs were used in inhalation procedures in 2006.
- The combined dog, cat and non-human primate figure is now 11,603.

## APPENDIX D

### PREVIOUS RETURNS

Annual publications giving detailed figures for scientific procedures under the Animals (Scientific Procedures) Act 1986 were published (by HMSO) as “Statistics of scientific procedures on living animals” as follows:

Year	Command Paper	Year	Command Paper
2006	Cm 7153		
2005	Cm 6877	1995	Cm 3516
2004	Cm 6713	1994	Cm 3012
2003	Cm 6291	1993	Cm 2746
2002	Cm 5886	1992	Cm 2356
2001	Cm 5581	1991	Cm 2023
2000	Cm 5244	1990	Cm 1574
1999	Cm 4841	1989	Cm 1152
1998	Cm 4418	1988	Cm 743
1997	Cm 4025	1987	Cm 515
1996	Cm 3722		

Detailed figures for experiments on living animals under the Cruelty to Animals Act 1876 were published (by HMSO) as “Statistics of experiments on living animals” as follows:

Year	Command Paper	Year	Command Paper
1986	Cm 187	1981	Cmnd 8657
1985	Cmnd 9839	1980	Cmnd 8301
1984	Cmnd 9574	1979	Cmnd 8069
1983	Cmnd 9311	1978	Cmnd 7628
1982	Cmnd 8986	1977	Cmnd 7333

Less detailed information about experiments on living animals for the years prior to 1977 was published in the form of a “Return to an Address of the Honourable the House of Commons”.

#### Feedback

The Home Office would welcome comments from users on how well this publication meets their needs, and will consider any suggestions for improving it in future years. Comments and suggestions should be sent to the address below by 31 March 2009 if they are to be taken into account in time for the next publication (covering procedures started in 2007).

Comments should be sent to:  
Science and Research Group,  
1st Floor, Seacole Block  
Home Office,  
2 Marsham Street,  
LONDON SW1P 4DF  
or email: [asps.london@homeoffice.gsi.gov.uk](mailto:asps.london@homeoffice.gsi.gov.uk)

Printed in the UK by The Stationery Office Limited  
on behalf of the Controller of Her Majesty's Stationery Office  
ID 5872107 07/08

Printed on Paper containing 75% recycled fibre content minimum.