

# SECTION B: EU DATA BETWEEN 2015 AND 2017

## IV. Detailed EU tables 2015 - 2017

This section presents the basic consolidated tables used for the conclusions at the EU level.

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### EU statistical tables 2015

#### Part 1: Numbers of animals used for research, testing, routine production and educational purposes in the EU

Table 1: Numbers of animals used for the first time by species (2015)

|  | **Number of animals** | **%** |
| --- | --- | --- |
| **Mammals** | | |
| **Rodents** | | |
| Mice | 5,711,612 | **59.6** |
| Rats | 1,201,189 | **12.5** |
| Guinea-Pigs | 149,328 | **1.6** |
| Hamsters (Syrian) | 20,195 | **0.2** |
| Hamsters (Chinese) | 30 | **0** |
| Mongolian gerbil | 6,199 | **0.1** |
| Other rodents | 26,088 | **0.3** |
| **Rabbits** | | |
| Rabbits | 346,052 | **3.6** |
| **Carnivores** | | |
| Cats | 1,975 | **0** |
| Dogs | 14,501 | **0.2** |
| Ferrets | 2,212 | **0** |
| Other carnivores | 3,648 | **0** |
| **Farm animals** | | |
| Horses, donkeys and cross-breeds | 3,217 | **0** |
| Pigs | 73,895 | **0.8** |
| Goats | 2,233 | **0** |
| Sheep | 20,106 | **0.2** |
| Cattle | 26,763 | **0.3** |
| **Non-human primates** | | |
| Prosimians | 169 | **0** |
| Marmoset and tamarins | 429 | **0** |
| Squirrel monkey | 13 | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | **0** |
| Cynomolgus monkey | 6,221 | **0.1** |
| Rhesus monkey | 211 | **0** |
| Vervets (Chlorocebus spp.) | 56 | **0** |
| Baboons | 37 | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | **0** |
| **Other mammals** | | |
| Other mammals | 9,535 | **0.1** |
| **Birds** | | |
| Domestic fowl | 515,834 | **5.4** |
| Other birds | 119,377 | **1.2** |
| **Reptiles** | | |
| Reptiles | 2,414 | **0** |
| **Amphibians** | | |
| Rana | 4,884 | **0.1** |
| Xenopus | 10,837 | **0.1** |
| Other amphibians | 20,190 | **0.2** |
| **Fish** | | |
| Zebra fish | 338,815 | **3.5** |
| Other fish | 936,252 | **9.8** |
| **Cephalopods** | | |
| Cephalopods | 15,862 | **0.2** |
| **Totals** | | |
| **Total** | **9,590,379** | **100** |
| **%** | **100** |  |

Table 2: Place of birth by species (other than non-human primates) (2015)

|  | **Animals born in the EU at a registered breeder** | **Animals born in the EU but not at a registered breeder** | **Animals born in rest of Europe** | **Animals born in rest of world** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | |
| **Rodents** | | | | | | |
| Mice | 5,466,761 | 170,399 | 38,177 | 36,275 | **5,711,612** | **59.6** |
| Rats | 1,185,595 | 9,656 | 705 | 5,233 | **1,201,189** | **12.5** |
| Guinea-Pigs | 148,500 | 828 | 0 | 0 | **149,328** | **1.6** |
| Hamsters (Syrian) | 19,310 | 83 | 7 | 795 | **20,195** | **0.2** |
| Hamsters (Chinese) | 30 | 0 | 0 | 0 | **30** | **0** |
| Mongolian gerbil | 5,841 | 290 | 0 | 68 | **6,199** | **0.1** |
| Other rodents | 8,501 | 17,130 | 57 | 400 | **26,088** | **0.3** |
| **Rabbits** | | | | | | |
| Rabbits | 337,709 | 5,448 | 173 | 2,722 | **346,052** | **3.6** |
| **Carnivores** | | | | | | |
| Cats | 1,053 | 531 | 0 | 391 | **1,975** | **0** |
| Dogs | 6,109 | 3,752 | 52 | 4,588 | **14,501** | **0.2** |
| Ferrets | 1,796 | 148 | 0 | 268 | **2,212** | **0** |
| Other carnivores | 1,088 | 2,556 | 4 | 0 | **3,648** | **0** |
| **Farm animals** | | | | | | |
| Horses, donkeys and cross-breeds | 700 | 2,517 | 0 | 0 | **3,217** | **0** |
| Pigs | 35,355 | 37,327 | 1,203 | 10 | **73,895** | **0.8** |
| Goats | 805 | 1,428 | 0 | 0 | **2,233** | **0** |
| Sheep | 6,503 | 13,505 | 98 | 0 | **20,106** | **0.2** |
| Cattle | 8,677 | 17,993 | 93 | 0 | **26,763** | **0.3** |
| **Other mammals** | | | | | | |
| Other mammals | 2,078 | 5,967 | 18 | 1,472 | **9,535** | **0.1** |
| **Birds** | | | | | | |
| Domestic fowl | 266,406 | 244,616 | 4,800 | 12 | **515,834** | **5.4** |
| Other birds | 19,867 | 92,967 | 3,244 | 3,299 | **119,377** | **1.2** |
| **Reptiles** | | | | | | |
| Reptiles | 459 | 1,557 | 42 | 356 | **2,414** | **0** |
| **Amphibians** | | | | | | |
| Rana | 3,194 | 1,540 | 150 | 0 | **4,884** | **0.1** |
| Xenopus | 7,952 | 312 | 0 | 2,573 | **10,837** | **0.1** |
| Other amphibians | 1,816 | 17,039 | 247 | 1,088 | **20,190** | **0.2** |
| **Fish** | | | | | | |
| Zebra fish | 320,358 | 15,458 | 812 | 2,187 | **338,815** | **3.5** |
| Other fish | 594,363 | 292,494 | 44,337 | 5,058 | **936,252** | **9.8** |
| **Cephalopods** | | | | | | |
| Cephalopods | 15,840 | 22 | 0 | 0 | **15,862** | **0.2** |
| **Totals** | | | | | | |
| **Total** | **8,466,666** | **955,563** | **94,219** | **66,795** | **9,583,243** | **100** |
| **%** | **88.3** | **10** | **1** | **0.7** | **100** |  |

Table 3: Source of non-human primates by species (2015)

|  | **Animals born at a registered breeder within EU** | **Animals born in rest of Europe** | **Animals born in Asia** | **Animals born in America** | **Animals born in Africa** | **Animals born elsewhere** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-human primates** | | | | | | | | |
| **New World Monkeys** | | | | | | | | |
| Prosimians | 158 | 11 | 0 | 0 | 0 | 0 | **169** | **2.4** |
| Marmoset and tamarins | 429 | 0 | 0 | 0 | 0 | 0 | **429** | **6** |
| Squirrel monkey | 10 | 0 | 0 | 3 | 0 | 0 | **13** | **0.2** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Old World Monkeys** | | | | | | | | |
| Cynomolgus monkey | 146 | 0 | 2,052 | 9 | 3,923 | 91 | **6,221** | **87.2** |
| Rhesus monkey | 175 | 3 | 33 | 0 | 0 | 0 | **211** | **3** |
| Vervets (Chlorocebus spp.) | 4 | 0 | 0 | 52 | 0 | 0 | **56** | **0.8** |
| Baboons | 37 | 0 | 0 | 0 | 0 | 0 | **37** | **0.5** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | |
| **Total** | **959** | **14** | **2,085** | **64** | **3,923** | **91** | **7,136** | **100** |
| **%** | **13.4** | **0.2** | **29.2** | **0.9** | **55** | **1.3** | **100** |  |

Table 4: Generation of non-human primates by species (2015)

|  | **F0** | **F1** | **F2 or greater** | **Self-sustaining colony** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Non-human primates** | | | | | | |
| **New World Monkeys** | | | | | | |
| Prosimians | 0 | 1 | 0 | 168 | **169** | **2.4** |
| Marmoset and tamarins | 0 | 0 | 102 | 327 | **429** | **6** |
| Squirrel monkey | 0 | 8 | 5 | 0 | **13** | **0.2** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | **0** | **0** |
| **Old World Monkeys** | | | | | | |
| Cynomolgus monkey | 1 | 1,737 | 2,420 | 2,063 | **6,221** | **87.2** |
| Rhesus monkey | 0 | 22 | 55 | 134 | **211** | **3** |
| Vervets (Chlorocebus spp.) | 0 | 4 | 0 | 52 | **56** | **0.8** |
| Baboons | 0 | 1 | 32 | 4 | **37** | **0.5** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | |
| **Total** | **1** | **1,773** | **2,614** | **2,748** | **7,136** | **100** |
| **%** | **0** | **24.8** | **36.6** | **38.5** | **100** |  |

#### Part 2: Details of all uses of animals for research, testing, routine production and educational purposes in the EU

Table 5: Uses of animals by species, main categories of scientific purposes and severities (2015)

|  | **Severity** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 249,177 | 121,186 | 10,856 | 2 | 0 | 380 | 14,674 | 4 | 396,279 | 6.9 |
| Mild | 1,521,311 | 551,716 | 578,720 | 3,059 | 3,178 | 6,338 | 38,369 | 36 | 2,702,727 | 46.9 |
| Moderate | 1,047,417 | 663,033 | 284,691 | 16,948 | 200 | 0 | 18,851 | 0 | 2,031,140 | 35.2 |
| Severe | 188,709 | 107,101 | 326,302 | 13,673 | 243 | 0 | 630 | 0 | 636,658 | 11.0 |
| **Total** | **3,006,614** | **1,443,036** | **1,200,569** | **33,682** | **3,621** | **6,718** | **72,524** | **40** | **5,766,804** | **100.0** |
| **Rats** | Non-recovery | 50,257 | 30,045 | 8,639 | 76 | 0 | 32 | 22,163 | 1 | 111,213 | 9.1 |
| Mild | 117,925 | 120,119 | 365,129 | 1,162 | 562 | 127 | 13,426 | 100 | 618,550 | 50.8 |
| Moderate | 132,492 | 118,106 | 176,306 | 36 | 493 | 0 | 6,539 | 0 | 433,972 | 35.7 |
| Severe | 28,512 | 15,030 | 9,007 | 176 | 96 | 0 | 12 | 0 | 52,833 | 4.3 |
| **Total** | **329,186** | **283,300** | **559,081** | **1,450** | **1,151** | **159** | **42,140** | **101** | **1,216,568** | **100.0** |
| **Guinea-Pigs** | Non-recovery | 907 | 16,936 | 1,218 | 270 | 0 | 0 | 245 | 17 | 19,593 | 13.0 |
| Mild | 2,351 | 6,091 | 61,775 | 1,115 | 0 | 0 | 1,834 | 0 | 73,166 | 48.7 |
| Moderate | 1,172 | 2,285 | 38,110 | 45 | 0 | 0 | 277 | 19 | 41,908 | 27.9 |
| Severe | 85 | 702 | 14,690 | 0 | 0 | 0 | 0 | 0 | 15,477 | 10.3 |
| **Total** | **4,515** | **26,014** | **115,793** | **1,430** | **0** | **0** | **2,356** | **36** | **150,144** | **100.0** |
| **Hamsters (Syrian)** | Non-recovery | 525 | 183 | 0 | 0 | 0 | 0 | 17 | 0 | 725 | 3.6 |
| Mild | 246 | 2,089 | 5,946 | 7 | 0 | 0 | 94 | 0 | 8,382 | 41.4 |
| Moderate | 929 | 4,646 | 1,019 | 0 | 0 | 0 | 0 | 0 | 6,594 | 32.6 |
| Severe | 77 | 563 | 3,725 | 173 | 0 | 0 | 0 | 0 | 4,538 | 22.4 |
| **Total** | **1,777** | **7,481** | **10,690** | **180** | **0** | **0** | **111** | **0** | **20,239** | **100.0** |
| **Hamsters (Chinese)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 30 | 100.0 |
| Moderate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **0** | **0** | **30** | **0** | **0** | **0** | **0** | **0** | **30** | **100.0** |
| **Mongolian gerbil** | Non-recovery | 268 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 294 | 4.5 |
| Mild | 644 | 1,570 | 1,489 | 167 | 0 | 0 | 23 | 0 | 3,893 | 59.0 |
| Moderate | 523 | 949 | 110 | 19 | 0 | 0 | 30 | 0 | 1,631 | 24.7 |
| Severe | 112 | 667 | 6 | 0 | 0 | 0 | 0 | 0 | 785 | 11.9 |
| **Total** | **1,547** | **3,186** | **1,605** | **186** | **0** | **0** | **79** | **0** | **6,603** | **100.0** |
| **Other rodents** | Non-recovery | 559 | 0 | 0 | 0 | 0 | 42 | 83 | 0 | 684 | 2.5 |
| Mild | 5,646 | 1,977 | 8,354 | 38 | 647 | 113 | 175 | 0 | 16,950 | 63.1 |
| Moderate | 8,010 | 404 | 82 | 0 | 0 | 160 | 2 | 0 | 8,658 | 32.2 |
| Severe | 81 | 509 | 1 | 0 | 0 | 0 | 0 | 0 | 591 | 2.2 |
| **Total** | **14,296** | **2,890** | **8,437** | **38** | **647** | **315** | **260** | **0** | **26,883** | **100.0** |
| **Rabbits** | Non-recovery | 5,793 | 2,785 | 3,124 | 0 | 0 | 0 | 952 | 0 | 12,654 | 3.5 |
| Mild | 5,867 | 5,401 | 75,619 | 165,138 | 233 | 0 | 837 | 0 | 253,095 | 70.1 |
| Moderate | 7,310 | 6,991 | 23,119 | 48,056 | 0 | 0 | 279 | 0 | 85,755 | 23.7 |
| Severe | 2,926 | 871 | 1,159 | 4,738 | 4 | 0 | 0 | 0 | 9,698 | 2.7 |
| **Total** | **21,896** | **16,048** | **103,021** | **217,932** | **237** | **0** | **2,068** | **0** | **361,202** | **100.0** |
| **Cats** | Non-recovery | 68 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 69 | 2.2 |
| Mild | 635 | 565 | 987 | 0 | 0 | 0 | 48 | 0 | 2,235 | 70.2 |
| Moderate | 100 | 325 | 159 | 18 | 0 | 0 | 1 | 0 | 603 | 18.9 |
| Severe | 0 | 225 | 53 | 0 | 0 | 0 | 0 | 0 | 278 | 8.7 |
| **Total** | **803** | **1,115** | **1,200** | **18** | **0** | **0** | **49** | **0** | **3,185** | **100.0** |
| **Dogs** | Non-recovery | 14 | 219 | 328 | 2 | 6 | 0 | 10 | 0 | 579 | 2.7 |
| Mild | 1,264 | 6,302 | 7,335 | 237 | 6 | 0 | 521 | 0 | 15,665 | 72.1 |
| Moderate | 56 | 1,466 | 3,382 | 0 | 0 | 0 | 14 | 0 | 4,918 | 22.6 |
| Severe | 21 | 365 | 191 | 0 | 0 | 0 | 0 | 0 | 577 | 2.7 |
| **Total** | **1,355** | **8,352** | **11,236** | **239** | **12** | **0** | **545** | **0** | **21,739** | **100.0** |
| **Ferrets** | Non-recovery | 111 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 125 | 5.3 |
| Mild | 61 | 745 | 680 | 6 | 0 | 0 | 70 | 0 | 1,562 | 66.4 |
| Moderate | 172 | 295 | 151 | 0 | 0 | 0 | 17 | 0 | 635 | 27.0 |
| Severe | 0 | 22 | 8 | 0 | 0 | 0 | 0 | 0 | 30 | 1.3 |
| **Total** | **344** | **1,062** | **839** | **6** | **0** | **0** | **101** | **0** | **2,352** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Other carnivores** | Non-recovery | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 7 | 0.2 |
| Mild | 1,583 | 696 | 220 | 0 | 170 | 62 | 0 | 0 | 2,731 | 73.3 |
| Moderate | 169 | 176 | 622 | 0 | 0 | 0 | 0 | 0 | 967 | 26.0 |
| Severe | 9 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0.5 |
| **Total** | **1,766** | **882** | **842** | **2** | **170** | **62** | **0** | **0** | **3,724** | **100.0** |
| **Horses, donkeys and cross-breeds** | Non-recovery | 78 | 35 | 0 | 0 | 0 | 34 | 24 | 0 | 171 | 1.4 |
| Mild | 2,418 | 890 | 141 | 7,669 | 1 | 0 | 265 | 0 | 11,384 | 94.3 |
| Moderate | 100 | 292 | 12 | 107 | 0 | 0 | 0 | 0 | 511 | 4.2 |
| Severe | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0.0 |
| **Total** | **2,596** | **1,217** | **153** | **7,778** | **1** | **34** | **289** | **0** | **12,068** | **100.0** |
| **Pigs** | Non-recovery | 5,366 | 2,719 | 9 | 21 | 0 | 0 | 5,962 | 0 | 14,077 | 18.2 |
| Mild | 14,887 | 15,664 | 12,225 | 255 | 780 | 3 | 2,549 | 0 | 46,363 | 59.9 |
| Moderate | 4,217 | 7,474 | 2,456 | 15 | 8 | 0 | 964 | 0 | 15,134 | 19.6 |
| Severe | 429 | 1,168 | 229 | 0 | 0 | 0 | 0 | 0 | 1,826 | 2.4 |
| **Total** | **24,899** | **27,025** | **14,919** | **291** | **788** | **3** | **9,475** | **0** | **77,400** | **100.0** |
| **Goats** | Non-recovery | 0 | 46 | 0 | 0 | 0 | 0 | 6 | 0 | 52 | 2.0 |
| Mild | 829 | 948 | 115 | 22 | 0 | 0 | 184 | 0 | 2,098 | 79.4 |
| Moderate | 85 | 366 | 6 | 5 | 10 | 0 | 8 | 0 | 480 | 18.2 |
| Severe | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0.4 |
| **Total** | **922** | **1,363** | **121** | **27** | **10** | **0** | **198** | **0** | **2,641** | **100.0** |
| **Sheep** | Non-recovery | 96 | 212 | 16 | 0 | 0 | 0 | 571 | 0 | 895 | 1.4 |
| Mild | 6,412 | 6,717 | 1,892 | 40,923 | 370 | 62 | 756 | 121 | 57,253 | 91.1 |
| Moderate | 1,535 | 2,018 | 73 | 136 | 2 | 0 | 149 | 0 | 3,913 | 6.2 |
| Severe | 398 | 407 | 0 | 0 | 0 | 0 | 0 | 0 | 805 | 1.3 |
| **Total** | **8,441** | **9,354** | **1,981** | **41,059** | **372** | **62** | **1,476** | **121** | **62,866** | **100.0** |
| **Cattle** | Non-recovery | 111 | 32 | 0 | 0 | 0 | 0 | 8 | 0 | 151 | 0.4 |
| Mild | 14,047 | 8,885 | 3,489 | 138 | 715 | 0 | 3,246 | 6 | 30,526 | 84.0 |
| Moderate | 1,610 | 1,629 | 479 | 15 | 11 | 0 | 1,599 | 0 | 5,343 | 14.7 |
| Severe | 23 | 293 | 12 | 0 | 0 | 0 | 9 | 0 | 337 | 0.9 |
| **Total** | **15,791** | **10,839** | **3,980** | **153** | **726** | **0** | **4,862** | **6** | **36,357** | **100.0** |
| **Prosimians** | Non-recovery | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.8 |
| Mild | 189 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 189 | 73.0 |
| Moderate | 65 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 25.5 |
| Severe | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.8 |
| **Total** | **258** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **259** | **100.0** |
| **Marmoset and tamarins** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 147 | 24 | 124 | 84 | 0 | 0 | 6 | 0 | 385 | 62.7 |
| Moderate | 108 | 57 | 38 | 0 | 0 | 0 | 0 | 0 | 203 | 33.1 |
| Severe | 18 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 4.2 |
| **Total** | **273** | **89** | **162** | **84** | **0** | **0** | **6** | **0** | **614** | **100.0** |
| **Squirrel monkey** | Non-recovery | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 30.8 |
| Mild | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 15.4 |
| Moderate | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 53.8 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **13** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **13** | **100.0** |
| **Other species of new world monkeys (Ceboidea)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 100.0 |
| Moderate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **24** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **24** | **100.0** |
| **Cynomolgus monkey** | Non-recovery | 15 | 74 | 8 | 10 | 0 | 0 | 0 | 0 | 107 | 1.1 |
| Mild | 30 | 531 | 3,513 | 2,053 | 0 | 0 | 23 | 0 | 6,150 | 65.4 |
| Moderate | 95 | 460 | 2,336 | 0 | 0 | 0 | 0 | 0 | 2,891 | 30.8 |
| Severe | 0 | 132 | 118 | 1 | 0 | 0 | 0 | 0 | 251 | 2.7 |
| **Total** | **140** | **1,197** | **5,975** | **2,064** | **0** | **0** | **23** | **0** | **9,399** | **100.0** |
| **Rhesus monkey** | Non-recovery | 21 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 4.8 |
| Mild | 81 | 109 | 54 | 32 | 0 | 0 | 5 | 0 | 281 | 61.9 |
| Moderate | 113 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 151 | 33.3 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **215** | **148** | **54** | **32** | **0** | **0** | **5** | **0** | **454** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Vervets (Chlorocebus spp.)** | Non-recovery | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 69.6 |
| Mild | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 23.2 |
| Moderate | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7.1 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **0** | **56** | **0** | **0** | **0** | **0** | **0** | **0** | **56** | **100.0** |
| **Baboons** | Non-recovery | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4.8 |
| Mild | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.4 |
| Moderate | 11 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 69.0 |
| Severe | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 23.8 |
| **Total** | **12** | **30** | **0** | **0** | **0** | **0** | **0** | **0** | **42** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 100.0 |
| Moderate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **9** | **100.0** |
| **Other mammals** | Non-recovery | 997 | 86 | 0 | 0 | 0 | 0 | 0 | 0 | 1,083 | 9.7 |
| Mild | 6,445 | 1,303 | 125 | 34 | 544 | 205 | 73 | 0 | 8,729 | 78.0 |
| Moderate | 990 | 345 | 15 | 0 | 0 | 0 | 0 | 0 | 1,350 | 12.1 |
| Severe | 14 | 6 | 0 | 12 | 0 | 0 | 0 | 0 | 32 | 0.3 |
| **Total** | **8,446** | **1,740** | **140** | **46** | **544** | **205** | **73** | **0** | **11,194** | **100.0** |
| **Domestic fowl** | Non-recovery | 8,840 | 3,226 | 120 | 379 | 0 | 0 | 607 | 0 | 13,172 | 2.5 |
| Mild | 53,827 | 60,665 | 138,520 | 91,027 | 2,485 | 939 | 6,029 | 0 | 353,492 | 67.8 |
| Moderate | 84,815 | 15,538 | 24,207 | 15,283 | 34 | 0 | 526 | 0 | 140,403 | 26.9 |
| Severe | 914 | 7,268 | 5,614 | 231 | 58 | 0 | 0 | 0 | 14,085 | 2.7 |
| **Total** | **148,396** | **86,697** | **168,461** | **106,920** | **2,577** | **939** | **7,162** | **0** | **521,152** | **100.0** |
| **Other birds** | Non-recovery | 1,400 | 20 | 80 | 0 | 0 | 6 | 6 | 0 | 1,512 | 1.2 |
| Mild | 44,392 | 13,725 | 5,186 | 521 | 2,740 | 573 | 602 | 11 | 67,750 | 55.7 |
| Moderate | 6,112 | 3,899 | 429 | 41,031 | 0 | 45 | 18 | 0 | 51,534 | 42.4 |
| Severe | 88 | 160 | 599 | 0 | 1 | 0 | 0 | 0 | 848 | 0.7 |
| **Total** | **51,992** | **17,804** | **6,294** | **41,552** | **2,741** | **624** | **626** | **11** | **121,644** | **100.0** |
| **Reptiles** | Non-recovery | 505 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 505 | 13.2 |
| Mild | 2,274 | 0 | 0 | 300 | 93 | 0 | 33 | 0 | 2,700 | 70.5 |
| Moderate | 581 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 627 | 16.4 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **3,360** | **0** | **0** | **300** | **93** | **46** | **33** | **0** | **3,832** | **100.0** |
| **Rana** | Non-recovery | 25 | 0 | 0 | 0 | 0 | 0 | 206 | 0 | 231 | 4.7 |
| Mild | 85 | 0 | 0 | 0 | 0 | 0 | 789 | 0 | 874 | 17.9 |
| Moderate | 4 | 0 | 132 | 0 | 600 | 0 | 1,865 | 0 | 2,601 | 53.3 |
| Severe | 1,178 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,178 | 24.1 |
| **Total** | **1,292** | **0** | **132** | **0** | **600** | **0** | **2,860** | **0** | **4,884** | **100.0** |
| **Xenopus** | Non-recovery | 528 | 0 | 0 | 0 | 0 | 0 | 188 | 0 | 716 | 3.8 |
| Mild | 13,844 | 703 | 719 | 0 | 8 | 0 | 57 | 0 | 15,331 | 80.7 |
| Moderate | 1,310 | 551 | 0 | 0 | 840 | 0 | 0 | 0 | 2,701 | 14.2 |
| Severe | 241 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 242 | 1.3 |
| **Total** | **15,923** | **1,254** | **720** | **0** | **848** | **0** | **245** | **0** | **18,990** | **100.0** |
| **Other amphibians** | Non-recovery | 1,262 | 0 | 0 | 0 | 5 | 0 | 49 | 0 | 1,316 | 6.4 |
| Mild | 3,966 | 57 | 0 | 0 | 6,692 | 3,881 | 200 | 0 | 14,796 | 72.4 |
| Moderate | 2,560 | 7 | 60 | 0 | 0 | 12 | 2 | 0 | 2,641 | 12.9 |
| Severe | 1,476 | 0 | 0 | 0 | 205 | 0 | 0 | 0 | 1,681 | 8.2 |
| **Total** | **9,264** | **64** | **60** | **0** | **6,902** | **3,893** | **251** | **0** | **20,434** | **100.0** |
| **Zebra fish** | Non-recovery | 7,702 | 585 | 635 | 0 | 21 | 0 | 124 | 0 | 9,067 | 2.6 |
| Mild | 200,713 | 28,169 | 20,063 | 0 | 3,996 | 0 | 1,426 | 0 | 254,367 | 74.1 |
| Moderate | 26,004 | 22,065 | 15,495 | 0 | 200 | 0 | 89 | 0 | 63,853 | 18.6 |
| Severe | 4,172 | 4,931 | 6,872 | 0 | 3 | 0 | 0 | 0 | 15,978 | 4.7 |
| **Total** | **238,591** | **55,750** | **43,065** | **0** | **4,220** | **0** | **1,639** | **0** | **343,265** | **100.0** |
| **Other fish** | Non-recovery | 15,185 | 3,694 | 1,922 | 0 | 10,565 | 3,999 | 1,303 | 0 | 36,668 | 3.9 |
| Mild | 516,527 | 63,729 | 71,130 | 25 | 61,392 | 18,759 | 11,442 | 0 | 743,004 | 79.1 |
| Moderate | 48,780 | 40,111 | 5,524 | 0 | 2,899 | 2,252 | 191 | 0 | 99,757 | 10.6 |
| Severe | 18,371 | 19,884 | 18,216 | 0 | 3,718 | 0 | 20 | 0 | 60,209 | 6.4 |
| **Total** | **598,863** | **127,418** | **96,792** | **25** | **78,574** | **25,010** | **12,956** | **0** | **939,638** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Cephalopods** | Non-recovery | 0 | 8 | 0 | 0 | 0 | 0 | 12 | 0 | 20 | 0.1 |
| Mild | 2 | 15,840 | 0 | 0 | 0 | 0 | 0 | 0 | 15,842 | 99.9 |
| Moderate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **2** | **15,848** | **0** | **0** | **0** | **0** | **12** | **0** | **15,862** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **349,821** | **182,133** | **26,956** | **762** | **10,597** | **4,493** | **47,250** | **22** | **622,034** | **6.4** |
| **Mild** | **2,538,683** | **915,244** | **1,363,580** | **314,012** | **84,612** | **31,062** | **83,082** | **274** | **5,330,549** | **54.5** |
| **Moderate** | **1,377,452** | **893,549** | **579,013** | **121,714** | **5,297** | **2,515** | **31,421** | **19** | **3,010,980** | **30.8** |
| **Severe** | **247,864** | **160,335** | **386,803** | **19,006** | **4,328** | **0** | **671** | **0** | **819,007** | **8.4** |
| **Total** | **4,513,820** | **2,151,261** | **2,356,352** | **455,494** | **104,834** | **38,070** | **162,424** | **315** | **9,782,570** | **100.0** |

Table 5.1: Uses of animals in all sub-categories of research and testing by severities (2015)

|  | **Non-recovery** | **Mild [up to and including]** | **Moderate** | **Severe** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Basic research** | | | | | | |
| Oncology | 16,863 | 205,653 | 241,475 | 52,413 | **516,404** | **5.3** |
| Cardiovascular Blood and Lymphatic System | 39,624 | 156,509 | 127,681 | 14,792 | **338,606** | **3.5** |
| Nervous System | 103,055 | 411,549 | 289,393 | 53,816 | **857,813** | **8.8** |
| Respiratory System | 4,852 | 30,596 | 46,781 | 3,549 | **85,778** | **0.9** |
| Gastrointestinal System including Liver | 36,535 | 95,497 | 67,130 | 8,871 | **208,033** | **2.1** |
| Musculoskeletal System | 6,569 | 52,664 | 29,437 | 4,000 | **92,670** | **0.9** |
| Immune System | 53,310 | 434,346 | 245,774 | 70,922 | **804,352** | **8.2** |
| Urogenital/Reproductive System | 11,677 | 96,984 | 25,900 | 3,396 | **137,957** | **1.4** |
| Sensory Organs (skin, eyes and ears) | 8,790 | 46,750 | 24,472 | 6,140 | **86,152** | **0.9** |
| Endocrine System/Metabolism | 27,929 | 118,434 | 60,363 | 2,402 | **209,128** | **2.1** |
| Multisystemic | 12,780 | 211,491 | 60,786 | 12,548 | **297,605** | **3** |
| Ethology / Animal Behaviour /Animal Biology | 7,084 | 534,729 | 57,298 | 6,128 | **605,239** | **6.2** |
| Other basic research | 20,753 | 143,481 | 100,962 | 8,887 | **274,083** | **2.8** |
| **Translational and applied research** | | | | | | |
| Human Cancer | 4,050 | 138,664 | 320,931 | 28,675 | **492,320** | **5** |
| Human Infectious Disorders | 16,479 | 116,281 | 107,722 | 41,720 | **282,202** | **2.9** |
| Human Cardiovascular Disorders | 11,671 | 23,742 | 20,640 | 6,110 | **62,163** | **0.6** |
| Human Nervous and Mental Disorders | 18,038 | 182,111 | 127,563 | 18,187 | **345,899** | **3.5** |
| Human Respiratory Disorders | 6,321 | 29,296 | 28,519 | 2,248 | **66,384** | **0.7** |
| Human Gastrointestinal Disorders including Liver | 2,072 | 13,139 | 14,729 | 2,270 | **32,210** | **0.3** |
| Human Musculoskeletal Disorders | 1,323 | 12,085 | 15,687 | 2,179 | **31,274** | **0.3** |
| Human Immune Disorders | 6,168 | 36,602 | 31,252 | 3,228 | **77,250** | **0.8** |
| Human Urogenital/Reproductive Disorders | 1,460 | 5,618 | 9,769 | 1,058 | **17,905** | **0.2** |
| Human Sensory Organ Disorders (skin, eyes and ears) | 2,543 | 24,547 | 18,001 | 1,295 | **46,386** | **0.5** |
| Human Endocrine/Metabolism Disorders | 6,910 | 54,770 | 59,587 | 2,546 | **123,813** | **1.3** |
| Other Human Disorders | 75,126 | 15,772 | 13,396 | 1,479 | **105,773** | **1.1** |
| Animal Diseases and Disorders | 20,537 | 110,959 | 69,339 | 22,978 | **223,813** | **2.3** |
| Animal Welfare | 999 | 70,921 | 6,422 | 173 | **78,515** | **0.8** |
| Diagnosis of diseases | 3,560 | 36,920 | 23,984 | 20,499 | **84,963** | **0.9** |
| Plant diseases | 0 | 455 | 24 | 1 | **480** | **0** |
| Non-regulatory toxicology and ecotoxicology | 4,876 | 43,362 | 25,984 | 5,689 | **79,911** | **0.8** |
| **Regulatory use** | | | | | | |
| **Quality control (incl batch safety and potency testing)** | | | | | | |
| Batch safety testing | 0 | 192,119 | 26,350 | 10,348 | **228,817** | **2.3** |
| Pyrogenicity testing | 923 | 28,448 | 17,178 | 4 | **46,553** | **0.5** |
| Batch potency testing | 8,757 | 407,504 | 310,422 | 305,552 | **1,032,235** | **10.6** |
| Other quality controls | 264 | 21,932 | 1,325 | 1,410 | **24,931** | **0.3** |
| **Toxicity and other safety testing including pharmacology** | | | | | | |
| **Acute and sub-acute toxicity testing methods** | | | | | | |
| LD50, LC50 | 4,688 | 29,893 | 6,651 | 17,079 | **58,311** | **0.6** |
| Other lethal methods | 1,364 | 753 | 1,219 | 494 | **3,830** | **0** |
| Non lethal methods | 412 | 18,621 | 10,784 | 2,303 | **32,120** | **0.3** |
| Skin irritation/corrosion | 249 | 3,603 | 880 | 41 | **4,773** | **0** |
| Skin sensitisation | 3,218 | 42,305 | 3,482 | 544 | **49,549** | **0.5** |
| Eye irritation/corrosion | 269 | 523 | 681 | 45 | **1,518** | **0** |
| **Repeated dose toxicity** | | | | | | |
| up to 28 days | 1 | 45,957 | 25,616 | 2,118 | **73,692** | **0.8** |
| 29 - 90 days | 0 | 20,121 | 7,224 | 678 | **28,023** | **0.3** |
| > 90 days | 884 | 9,690 | 7,010 | 611 | **18,195** | **0.2** |
| Carcinogenicity | 239 | 11,691 | 11,143 | 950 | **24,023** | **0.2** |
| Genotoxicity | 135 | 10,224 | 1,665 | 381 | **12,405** | **0.1** |
| Reproductive toxicity | 586 | 80,724 | 14,188 | 1,428 | **96,926** | **1** |
| Developmental toxicity | 724 | 99,384 | 11,244 | 1,674 | **113,026** | **1.2** |
| Neurotoxicity | 6 | 1,944 | 4,728 | 3,122 | **9,800** | **0.1** |
| Kinetics | 224 | 42,423 | 20,853 | 1,022 | **64,522** | **0.7** |
| Pharmaco-dynamics (incl safety pharmacology) | 1,073 | 65,901 | 37,813 | 5,977 | **110,764** | **1.1** |
| Phototoxicity | 0 | 468 | 122 | 6 | **596** | **0** |
| **Ecotoxicity** | | | | | | |
| Acute toxicity | 2,557 | 43,678 | 2,958 | 10,901 | **60,094** | **0.6** |
| Chronic toxicity | 0 | 13,956 | 4,000 | 2,205 | **20,161** | **0.2** |
| Reproductive ecotoxicity | 0 | 3,637 | 0 | 16 | **3,653** | **0** |
| Endocrine activity | 0 | 2,050 | 7,538 | 322 | **9,910** | **0.1** |
| Bioaccumulation | 0 | 2,058 | 886 | 6 | **2,950** | **0** |
| Other ecotoxicity | 0 | 8,195 | 21 | 161 | **8,377** | **0.1** |
| Safety testing in food and feed area | 0 | 24,702 | 90 | 10,931 | **35,723** | **0.4** |
| Target animal safety | 0 | 11,791 | 3,103 | 224 | **15,118** | **0.2** |
| Other toxicity/safety testing | 141 | 11,383 | 3,686 | 318 | **15,528** | **0.2** |
| **Other efficacy and tolerance testing** | | | | | | |
| Other efficacy and tolerance testing | 242 | 107,902 | 36,153 | 5,932 | **150,229** | **1.5** |
| **Routine production** | | | | | | |
| Blood based products | 762 | 178,344 | 90,831 | 1,456 | **271,393** | **2.8** |
| Monoclonal antibody by mouse ascites method | 0 | 2,027 | 11,633 | 13,673 | **27,333** | **0.3** |
| Other product types | 0 | 133,641 | 19,250 | 3,877 | **156,768** | **1.6** |
| **Other** | | | | | | |
| Protection of the natural environment in the interests of the health or welfare of human beings or animals | 10,597 | 84,612 | 5,297 | 4,328 | **104,834** | **1.1** |
| Preservation of species | 4,493 | 31,062 | 2,515 | 0 | **38,070** | **0.4** |
| Higher education or training for the acquisition, maintenance or improvement of vocational skills | 47,250 | 83,082 | 31,421 | 671 | **162,424** | **1.7** |
| Forensic enquiries | 22 | 274 | 19 | 0 | **315** | **0** |
| **Total** | **622,034** | **5,330,549** | **3,010,980** | **819,007** | **9,782,570** | **100** |
| **%** | **6.4** | **54.5** | **30.8** | **8.4** | **100** |  |

Table 6: Basic research related uses by species and type of research (2015)

|  | **Oncology** | **Cardiovascular Blood and Lymphatic System** | **Nervous System** | **Respiratory System** | **Gastrointestinal System including Liver** | **Musculoskeletal System** | **Immune System** | **Urogenital/Reproductive System** | **Sensory Organs (skin, eyes and ears)** | **Endocrine System/Metabolism** | **Multisystemic** | **Ethology / Animal Behaviour /Animal Biology** | **Other basic research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| Mice | 481,130 | 264,604 | 619,288 | 64,378 | 104,835 | 65,104 | 730,529 | 92,982 | 68,536 | 140,699 | 211,768 | 23,914 | 138,847 | **3,006,614** | **66.6** |
| Rats | 8,219 | 38,373 | 157,662 | 17,464 | 12,094 | 8,302 | 12,199 | 12,845 | 6,200 | 19,790 | 12,405 | 12,477 | 11,156 | **329,186** | **7.3** |
| Guinea-Pigs | 72 | 396 | 350 | 1,664 | 247 | 0 | 222 | 37 | 856 | 0 | 354 | 80 | 237 | **4,515** | **0.1** |
| Hamsters (Syrian) | 466 | 4 | 275 | 0 | 75 | 0 | 169 | 0 | 0 | 520 | 4 | 28 | 236 | **1,777** | **0** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Mongolian gerbil | 0 | 0 | 841 | 0 | 104 | 0 | 74 | 0 | 285 | 0 | 0 | 38 | 205 | **1,547** | **0** |
| Other rodents | 226 | 0 | 267 | 0 | 30 | 0 | 1,203 | 67 | 87 | 535 | 331 | 3,945 | 7,605 | **14,296** | **0.3** |
| **Rabbits** | | | | | | | | | | | | | | | |
| Rabbits | 238 | 2,149 | 285 | 1,184 | 328 | 739 | 1,083 | 640 | 838 | 5,122 | 943 | 2,987 | 5,360 | **21,896** | **0.5** |
| **Carnivores** | | | | | | | | | | | | | | | |
| Cats | 40 | 109 | 81 | 0 | 62 | 31 | 10 | 14 | 61 | 135 | 177 | 55 | 28 | **803** | **0** |
| Dogs | 16 | 54 | 180 | 4 | 98 | 339 | 4 | 75 | 35 | 42 | 270 | 156 | 82 | **1,355** | **0** |
| Ferrets | 0 | 0 | 244 | 18 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 6 | 56 | **344** | **0** |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 330 | 0 | 180 | 9 | 1,237 | 10 | **1,766** | **0** |
| **Farm animals** | | | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 29 | 0 | 45 | 101 | 158 | 322 | 422 | 631 | 318 | 53 | 310 | 207 | **2,596** | **0.1** |
| Pigs | 179 | 1,796 | 531 | 556 | 7,094 | 430 | 1,418 | 845 | 241 | 1,195 | 1,265 | 7,016 | 2,333 | **24,899** | **0.6** |
| Goats | 0 | 22 | 2 | 0 | 55 | 0 | 39 | 138 | 0 | 30 | 53 | 259 | 324 | **922** | **0** |
| Sheep | 31 | 548 | 202 | 177 | 508 | 291 | 265 | 379 | 0 | 183 | 447 | 2,749 | 2,661 | **8,441** | **0.2** |
| Cattle | 16 | 239 | 52 | 41 | 934 | 0 | 965 | 3,113 | 0 | 1,398 | 2,341 | 6,014 | 678 | **15,791** | **0.3** |
| **Non-human primates** | | | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | 138 | 0 | 61 | 0 | **258** | **0** |
| Marmoset and tamarins | 0 | 0 | 87 | 42 | 0 | 38 | 0 | 54 | 0 | 0 | 52 | 0 | 0 | **273** | **0** |
| Squirrel monkey | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **13** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | **24** | **0** |
| Cynomolgus monkey | 4 | 0 | 101 | 0 | 0 | 6 | 15 | 0 | 0 | 5 | 1 | 4 | 4 | **140** | **0** |
| Rhesus monkey | 0 | 61 | 121 | 0 | 0 | 0 | 18 | 0 | 0 | 4 | 0 | 0 | 11 | **215** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 9 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | **12** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | **8** | **0** |
| **Other mammals** | | | | | | | | | | | | | | | |
| Other mammals | 0 | 2 | 200 | 0 | 10 | 726 | 154 | 57 | 9 | 14 | 5 | 7,097 | 172 | **8,446** | **0.2** |
| **Birds** | | | | | | | | | | | | | | | |
| Domestic fowl | 1,026 | 700 | 2,711 | 20 | 24,691 | 31 | 4,326 | 908 | 211 | 4,673 | 7,116 | 29,257 | 72,726 | **148,396** | **3.3** |
| Other birds | 24 | 593 | 470 | 0 | 780 | 52 | 1,897 | 132 | 14 | 446 | 4,060 | 38,279 | 5,245 | **51,992** | **1.2** |
| **Reptiles** | | | | | | | | | | | | | | | |
| Reptiles | 0 | 45 | 332 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2,896 | 53 | **3,360** | **0.1** |
| **Amphibians** | | | | | | | | | | | | | | | |
| Rana | 800 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 482 | 0 | **1,292** | **0** |
| Xenopus | 437 | 371 | 2,990 | 0 | 328 | 45 | 0 | 2,021 | 719 | 664 | 858 | 284 | 7,206 | **15,923** | **0.4** |
| Other amphibians | 0 | 27 | 19 | 0 | 0 | 751 | 0 | 14 | 202 | 0 | 0 | 5,626 | 2,625 | **9,264** | **0.2** |
| **Fish** | | | | | | | | | | | | | | | |
| Zebra fish | 20,341 | 28,026 | 67,207 | 54 | 922 | 15,578 | 24,086 | 15,808 | 7,057 | 11,823 | 29,073 | 6,051 | 12,565 | **238,591** | **5.3** |
| Other fish | 3,139 | 458 | 3,234 | 101 | 54,737 | 49 | 25,351 | 7,076 | 140 | 21,214 | 26,016 | 453,898 | 3,450 | **598,863** | **13.3** |
| **Cephalopods** | | | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | **2** | **0** |
| **Totals** | | | | | | | | | | | | | | | |
| **Total** | **516,404** | **338,606** | **857,813** | **85,778** | **208,033** | **92,670** | **804,352** | **137,957** | **86,152** | **209,128** | **297,605** | **605,239** | **274,083** | **4,513,820** | **100** |
| **%** | **11.4** | **7.5** | **19** | **1.9** | **4.6** | **2.1** | **17.8** | **3.1** | **1.9** | **4.6** | **6.6** | **13.4** | **6.1** | **100** |  |

Table 7.1: Translational and applied research related uses by species and type of research (Part 1) (2015)

|  | **Human Cancer** | **Human Infectious Disorders** | **Human Cardiovascular Disorders** | **Human Nervous and Mental Disorders** | **Human Respiratory Disorders** | **Human Gastrointestinal Disorders including Liver** | **Human Musculoskeletal Disorders** | **Human Immune Disorders** | **Human Urogenital/Reproductive Disorders** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | |
| **Rodents** | | | | | | | | | |
| Mice | 480,841 | 239,021 | 41,262 | 214,488 | 35,801 | 24,619 | 21,550 | 70,732 | 11,394 |
| Rats | 7,583 | 9,986 | 14,778 | 112,839 | 23,188 | 6,515 | 6,763 | 5,785 | 3,451 |
| Guinea-Pigs | 2 | 930 | 586 | 607 | 5,836 | 55 | 280 | 121 | 53 |
| Hamsters (Syrian) | 390 | 5,109 | 134 | 65 | 0 | 0 | 0 | 0 | 4 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 216 | 1,089 | 0 | 75 | 28 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 2,101 | 0 | 494 | 0 | 0 | 0 | 80 | 0 |
| **Rabbits** | | | | | | | | | |
| Rabbits | 1,283 | 1,164 | 796 | 143 | 875 | 124 | 1,062 | 146 | 18 |
| **Carnivores** | | | | | | | | | |
| Cats | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 |
| Dogs | 54 | 36 | 97 | 747 | 98 | 29 | 86 | 43 | 6 |
| Ferrets | 0 | 885 | 0 | 0 | 0 | 64 | 0 | 0 | 0 |
| Other carnivores | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 92 | 0 | 0 | 0 | 0 | 25 | 5 | 0 |
| Pigs | 250 | 108 | 2,728 | 203 | 417 | 704 | 110 | 274 | 391 |
| Goats | 11 | 0 | 18 | 5 | 0 | 0 | 111 | 0 | 7 |
| Sheep | 24 | 1,781 | 525 | 207 | 38 | 5 | 784 | 0 | 211 |
| Cattle | 0 | 113 | 39 | 0 | 46 | 0 | 0 | 0 | 16 |
| **Non-human primates** | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 4 | 0 | 38 | 0 | 0 | 0 | 4 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 3 | 479 | 38 | 129 | 57 | 57 | 5 | 49 | 1 |
| Rhesus monkey | 3 | 127 | 0 | 12 | 0 | 0 | 0 | 0 | 2 |
| Vervets (Chlorocebus spp.) | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | | |
| Other mammals | 34 | 487 | 6 | 15 | 0 | 0 | 0 | 6 | 21 |
| **Birds** | | | | | | | | | |
| Domestic fowl | 509 | 97 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Other birds | 0 | 6,502 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| **Reptiles** | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 44 | 25 | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | | |
| Zebra fish | 1,113 | 12,082 | 1,106 | 15,788 | 0 | 0 | 498 | 0 | 2,324 |
| Other fish | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cephalopods** | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | | |
| **Total** | **492,320** | **282,202** | **62,163** | **345,899** | **66,384** | **32,210** | **31,274** | **77,250** | **17,905** |
| **%** | **22.9** | **13.1** | **2.9** | **16.1** | **3.1** | **1.5** | **1.5** | **3.6** | **0.8** |

Table 7.2: Translational and applied research related uses by species and type of research (Part 2) (2015)

|  | **Human Sensory Organ Disorders (skin, eyes and ears)** | **Human Endocrine/Metabolism Disorders** | **Other Human Disorders** | **Animal Diseases and Disorders** | **Animal Welfare** | **Diagnosis of diseases** | **Plant diseases** | **Non-regulatory toxicology and ecotoxicology** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | |
| **Rodents** | | | | | | | | | | |
| Mice | 38,408 | 79,739 | 73,176 | 44,132 | 4,092 | 46,755 | 6 | 17,020 | **1,443,036** | **67.1** |
| Rats | 6,095 | 41,142 | 15,021 | 1,549 | 723 | 4,665 | 419 | 22,798 | **283,300** | **13.2** |
| Guinea-Pigs | 403 | 18 | 13,705 | 1,934 | 243 | 1,080 | 0 | 161 | **26,014** | **1.2** |
| Hamsters (Syrian) | 0 | 682 | 218 | 790 | 0 | 78 | 0 | 11 | **7,481** | **0.3** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Mongolian gerbil | 12 | 0 | 0 | 1,704 | 0 | 0 | 0 | 62 | **3,186** | **0.1** |
| Other rodents | 0 | 0 | 0 | 145 | 0 | 0 | 0 | 70 | **2,890** | **0.1** |
| **Rabbits** | | | | | | | | | | |
| Rabbits | 1,006 | 115 | 1,315 | 5,968 | 10 | 862 | 44 | 1,117 | **16,048** | **0.7** |
| **Carnivores** | | | | | | | | | | |
| Cats | 0 | 0 | 0 | 1,028 | 8 | 36 | 0 | 5 | **1,115** | **0.1** |
| Dogs | 28 | 257 | 291 | 5,265 | 19 | 84 | 0 | 1,212 | **8,352** | **0.4** |
| Ferrets | 0 | 0 | 0 | 40 | 52 | 21 | 0 | 0 | **1,062** | **0** |
| Other carnivores | 0 | 0 | 0 | 346 | 532 | 0 | 0 | 0 | **882** | **0** |
| **Farm animals** | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 0 | 0 | 731 | 264 | 100 | 0 | 0 | **1,217** | **0.1** |
| Pigs | 253 | 1,395 | 529 | 15,412 | 3,489 | 136 | 11 | 615 | **27,025** | **1.3** |
| Goats | 0 | 0 | 2 | 1,151 | 51 | 7 | 0 | 0 | **1,363** | **0.1** |
| Sheep | 10 | 0 | 2 | 4,508 | 332 | 895 | 0 | 32 | **9,354** | **0.4** |
| Cattle | 0 | 0 | 264 | 8,016 | 2,156 | 175 | 0 | 14 | **10,839** | **0.5** |
| **Non-human primates** | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** |
| Marmoset and tamarins | 0 | 14 | 12 | 0 | 0 | 0 | 0 | 17 | **89** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 32 | 55 | 1 | 0 | 0 | 0 | 0 | 291 | **1,197** | **0.1** |
| Rhesus monkey | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | **148** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 | **56** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | **30** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** |
| **Other mammals** | | | | | | | | | | |
| Other mammals | 0 | 17 | 0 | 490 | 45 | 619 | 0 | 0 | **1,740** | **0.1** |
| **Birds** | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 271 | 63,761 | 19,857 | 1,825 | 0 | 375 | **86,697** | **4** |
| Other birds | 0 | 0 | 165 | 7,706 | 492 | 2,936 | 0 | 0 | **17,804** | **0.8** |
| **Reptiles** | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Xenopus | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 1,173 | **1,254** | **0.1** |
| Other amphibians | 0 | 0 | 15 | 24 | 7 | 0 | 0 | 0 | **64** | **0** |
| **Fish** | | | | | | | | | | |
| Zebra fish | 127 | 375 | 786 | 888 | 0 | 0 | 0 | 20,663 | **55,750** | **2.6** |
| Other fish | 0 | 0 | 0 | 58,217 | 30,303 | 24,689 | 0 | 14,205 | **127,418** | **5.9** |
| **Cephalopods** | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 8 | 15,840 | 0 | 0 | 0 | **15,848** | **0.7** |
| **Totals** | | | | | | | | | | |
| **Total** | **46,386** | **123,813** | **105,773** | **223,813** | **78,515** | **84,963** | **480** | **79,911** | **2,151,261** | **100** |
| **%** | **2.2** | **5.8** | **4.9** | **10.4** | **3.6** | **3.9** | **0** | **3.7** | **100** |  |

Table 8: Regulatory uses by species and type of use (2015)

|  | **Quality** | | | | **Toxicity** | **Other** |  | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Quality: Batch safety testing** | **Quality: Pyrogenicity testing** | **Quality: Batch potency testing** | **Quality: Other quality controls** | **Toxicity and other safety testing including pharmacology** | **Other efficacy and tolerance testing** | **Total** | **%** |
| **Mammals** | | | | | | | | |
| **Rodents** | | | | | | | | |
| Mice | 131,742 | 10 | 715,180 | 17,685 | 257,936 | 78,016 | **1,200,569** | **51** |
| Rats | 14,935 | 0 | 147,981 | 1,573 | 388,116 | 6,476 | **559,081** | **23.7** |
| Guinea-Pigs | 20,617 | 0 | 62,455 | 1,202 | 30,923 | 596 | **115,793** | **4.9** |
| Hamsters (Syrian) | 2,025 | 0 | 5,326 | 352 | 1,259 | 1,728 | **10,690** | **0.5** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 30 | 0 | **30** | **0** |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 1,581 | 24 | **1,605** | **0.1** |
| Other rodents | 67 | 0 | 0 | 0 | 8,370 | 0 | **8,437** | **0.4** |
| **Rabbits** | | | | | | | | |
| Rabbits | 3,375 | 46,543 | 19,762 | 235 | 30,692 | 2,414 | **103,021** | **4.4** |
| **Carnivores** | | | | | | | | |
| Cats | 145 | 0 | 103 | 0 | 723 | 229 | **1,200** | **0.1** |
| Dogs | 285 | 0 | 17 | 0 | 9,877 | 1,057 | **11,236** | **0.5** |
| Ferrets | 621 | 0 | 0 | 0 | 171 | 47 | **839** | **0** |
| Other carnivores | 556 | 0 | 0 | 0 | 142 | 144 | **842** | **0** |
| **Farm animals** | | | | | | | | |
| Horses, donkeys and cross-breeds | 9 | 0 | 4 | 0 | 47 | 93 | **153** | **0** |
| Pigs | 2,621 | 0 | 2,177 | 109 | 4,285 | 5,727 | **14,919** | **0.6** |
| Goats | 6 | 0 | 48 | 0 | 67 | 0 | **121** | **0** |
| Sheep | 608 | 0 | 567 | 21 | 683 | 102 | **1,981** | **0.1** |
| Cattle | 297 | 0 | 1,584 | 6 | 769 | 1,324 | **3,980** | **0.2** |
| **Non-human primates** | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 162 | 0 | **162** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 18 | 0 | 0 | 0 | 5,954 | 3 | **5,975** | **0.3** |
| Rhesus monkey | 0 | 0 | 0 | 0 | 23 | 31 | **54** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 77 | 63 | **140** | **0** |
| **Birds** | | | | | | | | |
| Domestic fowl | 48,806 | 0 | 72,451 | 3,046 | 16,511 | 27,647 | **168,461** | **7.1** |
| Other birds | 1,884 | 0 | 547 | 180 | 2,585 | 1,098 | **6,294** | **0.3** |
| **Reptiles** | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 132 | 0 | **132** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 720 | 0 | **720** | **0** |
| Other amphibians | 0 | 0 | 0 | 0 | 60 | 0 | **60** | **0** |
| **Fish** | | | | | | | | |
| Zebra fish | 0 | 0 | 0 | 86 | 42,979 | 0 | **43,065** | **1.8** |
| Other fish | 200 | 0 | 4,033 | 436 | 68,713 | 23,410 | **96,792** | **4.1** |
| **Cephalopods** | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | |
| **Total** | **228,817** | **46,553** | **1,032,235** | **24,931** | **873,587** | **150,229** | **2,356,352** | **100** |
| **%** | **9.7** | **2** | **43.8** | **1.1** | **37.1** | **6.4** | **100** |  |

Table 9.1: Toxicity and other safety testing including pharmacology by species and type of use (Part 1) (2015)

|  | **Acute** | | |  | | | **Repeated Dose** | | |  | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **LD50, LC50** | **Other lethal methods** | **Non lethal methods** | **Skin irritation / corrosion** | **Skin sensitisation** | **Eye irritation / corrosion** | **up to 28 days** | **29 - 90 days** | **> 90 days** | **Carcinogenicity** | **Genotoxicity** | **Developmental toxicity** | **Safety testing in food and feed area** |
| **Mammals** | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | |
| Mice | 39,713 | 1,671 | 13,492 | 0 | 21,683 | 0 | 22,683 | 3,722 | 2,159 | 9,083 | 6,165 | 644 | 33,105 |
| Rats | 6,638 | 1,168 | 12,846 | 400 | 69 | 49 | 44,025 | 21,197 | 12,227 | 14,940 | 6,148 | 104,091 | 0 |
| Guinea-Pigs | 342 | 0 | 1,373 | 19 | 27,653 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamsters (Syrian) | 0 | 0 | 334 | 139 | 7 | 0 | 395 | 0 | 200 | 0 | 4 | 0 | 0 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rabbits** | | | | | | | | | | | | | |
| Rabbits | 0 | 0 | 1,165 | 4,182 | 129 | 1,447 | 1,310 | 740 | 224 | 0 | 58 | 6,961 | 32 |
| **Carnivores** | | | | | | | | | | | | | |
| Cats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 |
| Dogs | 0 | 0 | 671 | 0 | 0 | 0 | 2,993 | 1,211 | 1,431 | 0 | 0 | 14 | 38 |
| Ferrets | 0 | 0 | 0 | 0 | 0 | 0 | 146 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pigs | 0 | 0 | 147 | 33 | 8 | 0 | 716 | 376 | 369 | 0 | 0 | 0 | 91 |
| Goats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 344 |
| Cattle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 176 |
| **Non-human primates** | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 36 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 0 | 0 | 128 | 0 | 0 | 0 | 1,421 | 762 | 1,549 | 0 | 0 | 113 | 0 |
| Rhesus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Birds** | | | | | | | | | | | | | |
| Domestic fowl | 3,570 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,505 |
| Other birds | 80 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Reptiles** | | | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | | | | | | |
| Zebra fish | 2,101 | 991 | 1,579 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 800 | 0 |
| Other fish | 5,809 | 0 | 345 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 403 | 432 |
| **Cephalopods** | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | | | | | | |
| **Total** | **58,311** | **3,830** | **32,120** | **4,773** | **49,549** | **1,518** | **73,692** | **28,023** | **18,195** | **24,023** | **12,405** | **113,026** | **35,723** |
| **%** | **6.7** | **0.4** | **3.7** | **0.5** | **5.7** | **0.2** | **8.5** | **3.2** | **2.1** | **2.8** | **1.4** | **13** | **4.1** |

Table 9.2: Toxicity and other safety testing including pharmacology by species and type of use (Part 2) (2015)

|  | | | | | | **EcoToxicity** | | | | | |  | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Target animal safety** | **Neurotoxicity** | **Kinetics** | **Pharmaco - dynamics (incl safety pharmacology)** | **Phototoxicity** | **Acute toxicity** | **Chronic toxicity** | **Reproductive toxicity** | **Endocrine activity** | **Bioaccumulation** | **Other ecotoxicity** | **Other toxicity / safety testing** | **Total** | **%** |
| **Mammals** | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | |
| Mice | 632 | 484 | 29,729 | 60,090 | 420 | 6,495 | 81 | 160 | 0 | 0 | 0 | 5,725 | **257,936** | **29.7** |
| Rats | 60 | 916 | 27,815 | 42,105 | 112 | 1,864 | 896 | 85,462 | 0 | 58 | 0 | 5,030 | **388,116** | **44.6** |
| Guinea-Pigs | 0 | 0 | 102 | 1,111 | 64 | 137 | 0 | 0 | 0 | 0 | 0 | 100 | **30,923** | **3.6** |
| Hamsters (Syrian) | 0 | 0 | 23 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | **1,259** | **0.1** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **30** | **0** |
| Mongolian gerbil | 0 | 0 | 0 | 1,581 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,581** | **0.2** |
| Other rodents | 314 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5,201 | 2,855 | **8,370** | **1** |
| **Rabbits** | | | | | | | | | | | | | | |
| Rabbits | 38 | 0 | 838 | 2,097 | 0 | 27 | 0 | 11,104 | 0 | 0 | 0 | 340 | **30,692** | **3.5** |
| **Carnivores** | | | | | | | | | | | | | | |
| Cats | 155 | 0 | 437 | 78 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 26 | **723** | **0.1** |
| Dogs | 173 | 0 | 2,066 | 942 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 338 | **9,877** | **1.1** |
| Ferrets | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **171** | **0** |
| Other carnivores | 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **142** | **0** |
| **Farm animals** | | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 28 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **47** | **0** |
| Pigs | 871 | 0 | 1,072 | 352 | 0 | 0 | 0 | 9 | 0 | 0 | 6 | 235 | **4,285** | **0.5** |
| Goats | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **67** | **0** |
| Sheep | 20 | 0 | 242 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | **683** | **0.1** |
| Cattle | 23 | 0 | 355 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 195 | **769** | **0.1** |
| **Non-human primates** | | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 0 | 0 | 37 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | **162** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 0 | 0 | 1,013 | 298 | 0 | 0 | 0 | 191 | 0 | 0 | 0 | 479 | **5,954** | **0.7** |
| Rhesus monkey | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **23** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | | | | |
| Other mammals | 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **77** | **0** |
| **Birds** | | | | | | | | | | | | | | |
| Domestic fowl | 10,781 | 0 | 610 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 30 | **16,511** | **1.9** |
| Other birds | 312 | 0 | 78 | 0 | 0 | 1,125 | 0 | 0 | 0 | 0 | 154 | 0 | **1,789** | **0.2** |
| **Reptiles** | | | | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 132 | 0 | 0 | 0 | 0 | 0 | 0 | **132** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 720 | 0 | 0 | 0 | **720** | **0.1** |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | **60** | **0** |
| **Fish** | | | | | | | | | | | | | | |
| Zebra fish | 120 | 8,400 | 0 | 1,410 | 0 | 7,246 | 8,362 | 0 | 8,210 | 591 | 812 | 0 | **40,622** | **4.7** |
| Other fish | 1,430 | 0 | 0 | 512 | 0 | 43,053 | 10,762 | 0 | 980 | 2,283 | 2,204 | 0 | **68,213** | **7.8** |
| **Cephalopods** | | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | | | | | |
| **Total** | **15,118** | **9,800** | **64,522** | **110,764** | **596** | **60,094** | **20,161** | **96,926** | **9,910** | **2,950** | **8,377** | **15,528** | **869,934** | **100** |
| **%** | **1.7** | **1.1** | **7.4** | **12.7** | **0.1** | **6.9** | **2.3** | **11.1** | **1.1** | **0.3** | **1** | **1.8** | **100** |  |

Table 10: Regulatory uses by species and type of legislation (2015)

|  | **Legislation on medicinal products for human use** | **Legislation on medicinal products for veterinary use and their residues** | **Medical devices legislation** | **Industrial chemicals legislation** | **Plant protection product legislation** | **Biocides legislation** | **Food legislation including food contact material** | **Feed legislation including legislation for the safety of target animals, workers and environment** | **Other legislation** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | |
| Mice | 988,107 | 124,591 | 16,001 | 13,014 | 10,086 | 1,966 | 41,099 | 3,683 | 2,022 | **1,200,569** | **51** |
| Rats | 349,497 | 12,869 | 3,976 | 152,321 | 31,060 | 1,488 | 4,564 | 223 | 3,083 | **559,081** | **23.7** |
| Guinea-Pigs | 73,760 | 16,106 | 21,660 | 2,432 | 1,412 | 105 | 38 | 0 | 280 | **115,793** | **4.9** |
| Hamsters (Syrian) | 1,212 | 8,866 | 591 | 10 | 0 | 0 | 0 | 0 | 11 | **10,690** | **0.5** |
| Hamsters (Chinese) | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | **30** | **0** |
| Mongolian gerbil | 35 | 1,570 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,605** | **0.1** |
| Other rodents | 67 | 0 | 0 | 0 | 8,370 | 0 | 0 | 0 | 0 | **8,437** | **0.4** |
| **Rabbits** | | | | | | | | | | | |
| Rabbits | 71,027 | 14,746 | 4,527 | 9,792 | 1,390 | 86 | 35 | 4 | 1,414 | **103,021** | **4.4** |
| **Carnivores** | | | | | | | | | | | |
| Cats | 58 | 1,142 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,200** | **0.1** |
| Dogs | 8,843 | 1,906 | 32 | 60 | 158 | 0 | 0 | 12 | 225 | **11,236** | **0.5** |
| Ferrets | 792 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **839** | **0** |
| Other carnivores | 0 | 818 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | **842** | **0** |
| **Farm animals** | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 8 | 121 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | **153** | **0** |
| Pigs | 3,339 | 10,169 | 297 | 0 | 1 | 0 | 98 | 967 | 48 | **14,919** | **0.6** |
| Goats | 52 | 51 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | **121** | **0** |
| Sheep | 13 | 1,385 | 172 | 0 | 0 | 0 | 338 | 16 | 57 | **1,981** | **0.1** |
| Cattle | 0 | 3,303 | 0 | 0 | 123 | 0 | 0 | 406 | 148 | **3,980** | **0.2** |
| **Non-human primates** | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 162 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **162** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 5,962 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | **5,975** | **0.3** |
| Rhesus monkey | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **54** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | |
| Other mammals | 0 | 140 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **140** | **0** |
| **Birds** | | | | | | | | | | | |
| Domestic fowl | 1,547 | 157,170 | 0 | 0 | 525 | 0 | 160 | 9,059 | 0 | **168,461** | **7.1** |
| Other birds | 80 | 3,082 | 0 | 24 | 2,091 | 0 | 57 | 960 | 0 | **6,294** | **0.3** |
| **Reptiles** | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 132 | 0 | 0 | 0 | 0 | **132** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 720 | **720** | **0** |
| Other amphibians | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | **60** | **0** |
| **Fish** | | | | | | | | | | | |
| Zebra fish | 7,946 | 2,511 | 0 | 7,122 | 4,442 | 1,109 | 0 | 1,512 | 18,423 | **43,065** | **1.8** |
| Other fish | 5,562 | 7,978 | 14 | 11,145 | 12,216 | 142 | 953 | 23,410 | 35,372 | **96,792** | **4.1** |
| **Cephalopods** | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | | |
| **Total** | **1,518,123** | **368,571** | **47,270** | **195,950** | **72,084** | **4,896** | **47,342** | **40,252** | **61,864** | **2,356,352** | **100** |
| **%** | **64.4** | **15.6** | **2** | **8.3** | **3.1** | **0.2** | **2** | **1.7** | **2.6** | **100** |  |

Table 11: Regulatory uses by species and origin of regulatory requirement (2015)

|  | **Legislation satisfying EU requirements** | **Legislation satisfying national requirements only [within EU]** | **Legislation satisfying Non-EU requirements only** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | |
| **Rodents** | | | | | |
| Mice | 1,128,543 | 21,105 | 50,921 | **1,200,569** | **51** |
| Rats | 548,222 | 1,121 | 9,738 | **559,081** | **23.7** |
| Guinea-Pigs | 105,812 | 0 | 9,981 | **115,793** | **4.9** |
| Hamsters (Syrian) | 10,353 | 157 | 180 | **10,690** | **0.5** |
| Hamsters (Chinese) | 30 | 0 | 0 | **30** | **0** |
| Mongolian gerbil | 1,605 | 0 | 0 | **1,605** | **0.1** |
| Other rodents | 8,437 | 0 | 0 | **8,437** | **0.4** |
| **Rabbits** | | | | | |
| Rabbits | 90,220 | 15 | 12,786 | **103,021** | **4.4** |
| **Carnivores** | | | | | |
| Cats | 1,198 | 0 | 2 | **1,200** | **0.1** |
| Dogs | 11,183 | 13 | 40 | **11,236** | **0.5** |
| Ferrets | 839 | 0 | 0 | **839** | **0** |
| Other carnivores | 818 | 24 | 0 | **842** | **0** |
| **Farm animals** | | | | | |
| Horses, donkeys and cross-breeds | 153 | 0 | 0 | **153** | **0** |
| Pigs | 13,607 | 69 | 1,243 | **14,919** | **0.6** |
| Goats | 121 | 0 | 0 | **121** | **0** |
| Sheep | 1,974 | 1 | 6 | **1,981** | **0.1** |
| Cattle | 3,966 | 2 | 12 | **3,980** | **0.2** |
| **Non-human primates** | | | | | |
| Prosimians | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 162 | 0 | 0 | **162** | **0** |
| Squirrel monkey | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 5,963 | 0 | 12 | **5,975** | **0.3** |
| Rhesus monkey | 54 | 0 | 0 | **54** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | |
| Other mammals | 140 | 0 | 0 | **140** | **0** |
| **Birds** | | | | | |
| Domestic fowl | 162,369 | 341 | 5,751 | **168,461** | **7.1** |
| Other birds | 6,072 | 206 | 16 | **6,294** | **0.3** |
| **Reptiles** | | | | | |
| Reptiles | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | |
| Rana | 132 | 0 | 0 | **132** | **0** |
| Xenopus | 720 | 0 | 0 | **720** | **0** |
| Other amphibians | 60 | 0 | 0 | **60** | **0** |
| **Fish** | | | | | |
| Zebra fish | 39,955 | 3,110 | 0 | **43,065** | **1.8** |
| Other fish | 79,909 | 15,410 | 1,473 | **96,792** | **4.1** |
| **Cephalopods** | | | | | |
| Cephalopods | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | |
| **Total** | **2,222,617** | **41,574** | **92,161** | **2,356,352** | **100** |
| **%** | **94.3** | **1.8** | **3.9** | **100** |  |

Table 12: Routine production uses by species and product type (2015)

|  | **Blood based products** | **Other product types** | **Monoclonal antibody by mouse ascites method** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | |
| **Rodents** | | | | | |
| Mice | 2,955 | 3,660 | 27,067 | **33,682** | **7.4** |
| Rats | 1,161 | 263 | 26 | **1,450** | **0.3** |
| Guinea-Pigs | 1,397 | 33 | 0 | **1,430** | **0.3** |
| Hamsters (Syrian) | 180 | 0 | 0 | **180** | **0** |
| Hamsters (Chinese) | 0 | 0 | 0 | **0** | **0** |
| Mongolian gerbil | 19 | 167 | 0 | **186** | **0** |
| Other rodents | 38 | 0 | 0 | **38** | **0** |
| **Rabbits** | | | | | |
| Rabbits | 174,320 | 43,372 | 240 | **217,932** | **47.8** |
| **Carnivores** | | | | | |
| Cats | 0 | 18 | 0 | **18** | **0** |
| Dogs | 239 | 0 | 0 | **239** | **0.1** |
| Ferrets | 6 | 0 | 0 | **6** | **0** |
| Other carnivores | 2 | 0 | 0 | **2** | **0** |
| **Farm animals** | | | | | |
| Horses, donkeys and cross-breeds | 7,760 | 18 | 0 | **7,778** | **1.7** |
| Pigs | 34 | 257 | 0 | **291** | **0.1** |
| Goats | 27 | 0 | 0 | **27** | **0** |
| Sheep | 39,517 | 1,542 | 0 | **41,059** | **9** |
| Cattle | 8 | 145 | 0 | **153** | **0** |
| **Non-human primates** | | | | | |
| Prosimians | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 84 | 0 | 0 | **84** | **0** |
| Squirrel monkey | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 2,036 | 28 | 0 | **2,064** | **0.5** |
| Rhesus monkey | 32 | 0 | 0 | **32** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | |
| Other mammals | 31 | 15 | 0 | **46** | **0** |
| **Birds** | | | | | |
| Domestic fowl | 497 | 106,423 | 0 | **106,920** | **23.5** |
| Other birds | 41,050 | 502 | 0 | **41,552** | **9.1** |
| **Reptiles** | | | | | |
| Reptiles | 0 | 300 | 0 | **300** | **0.1** |
| **Amphibians** | | | | | |
| Rana | 0 | 0 | 0 | **0** | **0** |
| Xenopus | 0 | 0 | 0 | **0** | **0** |
| Other amphibians | 0 | 0 | 0 | **0** | **0** |
| **Fish** | | | | | |
| Zebra fish | 0 | 0 | 0 | **0** | **0** |
| Other fish | 0 | 25 | 0 | **25** | **0** |
| **Cephalopods** | | | | | |
| Cephalopods | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | |
| **Total** | **271,393** | **156,768** | **27,333** | **455,494** | **100** |
| **%** | **59.6** | **34.4** | **6** | **100** |  |

Table 13: Reuses of animals by species and main categories of scientific purposes in research, testing routine production and education (2015)

|  | **Reuse** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 16,924 | 11,745 | 19,717 | 72 | 2 | 1,840 | 4,892 | 0 | 55,192 | 1.0 |
| No | 2,989,690 | 1,431,291 | 1,180,852 | 33,610 | 3,619 | 4,878 | 67,632 | 40 | 5,711,612 | 99.0 |
| **Total** | **3,006,614** | **1,443,036** | **1,200,569** | **33,682** | **3,621** | **6,718** | **72,524** | **40** | **5,766,804** | **100.0** |
| **Rats** | Yes | 3,592 | 5,596 | 3,347 | 169 | 0 | 0 | 2,645 | 30 | 15,379 | 1.3 |
| No | 325,594 | 277,704 | 555,734 | 1,281 | 1,151 | 159 | 39,495 | 71 | 1,201,189 | 98.7 |
| **Total** | **329,186** | **283,300** | **559,081** | **1,450** | **1,151** | **159** | **42,140** | **101** | **1,216,568** | **100.0** |
| **Guinea-Pigs** | Yes | 19 | 71 | 469 | 28 | 0 | 0 | 229 | 0 | 816 | 0.5 |
| No | 4,496 | 25,943 | 115,324 | 1,402 | 0 | 0 | 2,127 | 36 | 149,328 | 99.5 |
| **Total** | **4,515** | **26,014** | **115,793** | **1,430** | **0** | **0** | **2,356** | **36** | **150,144** | **100.0** |
| **Hamsters (Syrian)** | Yes | 28 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 44 | 0.2 |
| No | 1,749 | 7,481 | 10,690 | 180 | 0 | 0 | 95 | 0 | 20,195 | 99.8 |
| **Total** | **1,777** | **7,481** | **10,690** | **180** | **0** | **0** | **111** | **0** | **20,239** | **100.0** |
| **Hamsters (Chinese)** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 30 | 100.0 |
| **Total** | **0** | **0** | **30** | **0** | **0** | **0** | **0** | **0** | **30** | **100.0** |
| **Mongolian gerbil** | Yes | 145 | 259 | 0 | 0 | 0 | 0 | 0 | 0 | 404 | 6.1 |
| No | 1,402 | 2,927 | 1,605 | 186 | 0 | 0 | 79 | 0 | 6,199 | 93.9 |
| **Total** | **1,547** | **3,186** | **1,605** | **186** | **0** | **0** | **79** | **0** | **6,603** | **100.0** |
| **Other rodents** | Yes | 757 | 0 | 0 | 0 | 22 | 0 | 16 | 0 | 795 | 3.0 |
| No | 13,539 | 2,890 | 8,437 | 38 | 625 | 315 | 244 | 0 | 26,088 | 97.0 |
| **Total** | **14,296** | **2,890** | **8,437** | **38** | **647** | **315** | **260** | **0** | **26,883** | **100.0** |
| **Rabbits** | Yes | 441 | 895 | 12,477 | 1,004 | 12 | 0 | 321 | 0 | 15,150 | 4.2 |
| No | 21,455 | 15,153 | 90,544 | 216,928 | 225 | 0 | 1,747 | 0 | 346,052 | 95.8 |
| **Total** | **21,896** | **16,048** | **103,021** | **217,932** | **237** | **0** | **2,068** | **0** | **361,202** | **100.0** |
| **Cats** | Yes | 282 | 389 | 492 | 0 | 0 | 0 | 47 | 0 | 1,210 | 38.0 |
| No | 521 | 726 | 708 | 18 | 0 | 0 | 2 | 0 | 1,975 | 62.0 |
| **Total** | **803** | **1,115** | **1,200** | **18** | **0** | **0** | **49** | **0** | **3,185** | **100.0** |
| **Dogs** | Yes | 460 | 3,163 | 2,971 | 231 | 6 | 0 | 407 | 0 | 7,238 | 33.3 |
| No | 895 | 5,189 | 8,265 | 8 | 6 | 0 | 138 | 0 | 14,501 | 66.7 |
| **Total** | **1,355** | **8,352** | **11,236** | **239** | **12** | **0** | **545** | **0** | **21,739** | **100.0** |
| **Ferrets** | Yes | 15 | 46 | 0 | 0 | 0 | 0 | 79 | 0 | 140 | 6.0 |
| No | 329 | 1,016 | 839 | 6 | 0 | 0 | 22 | 0 | 2,212 | 94.0 |
| **Total** | **344** | **1,062** | **839** | **6** | **0** | **0** | **101** | **0** | **2,352** | **100.0** |
| **Other carnivores** | Yes | 36 | 0 | 24 | 2 | 0 | 14 | 0 | 0 | 76 | 2.0 |
| No | 1,730 | 882 | 818 | 0 | 170 | 48 | 0 | 0 | 3,648 | 98.0 |
| **Total** | **1,766** | **882** | **842** | **2** | **170** | **62** | **0** | **0** | **3,724** | **100.0** |
| **Horses, donkeys and cross-breeds** | Yes | 555 | 370 | 46 | 7,679 | 1 | 34 | 166 | 0 | 8,851 | 73.3 |
| No | 2,041 | 847 | 107 | 99 | 0 | 0 | 123 | 0 | 3,217 | 26.7 |
| **Total** | **2,596** | **1,217** | **153** | **7,778** | **1** | **34** | **289** | **0** | **12,068** | **100.0** |
| **Pigs** | Yes | 658 | 1,314 | 507 | 1 | 8 | 3 | 1,014 | 0 | 3,505 | 4.5 |
| No | 24,241 | 25,711 | 14,412 | 290 | 780 | 0 | 8,461 | 0 | 73,895 | 95.5 |
| **Total** | **24,899** | **27,025** | **14,919** | **291** | **788** | **3** | **9,475** | **0** | **77,400** | **100.0** |
| **Goats** | Yes | 235 | 8 | 0 | 3 | 0 | 0 | 162 | 0 | 408 | 15.4 |
| No | 687 | 1,355 | 121 | 24 | 10 | 0 | 36 | 0 | 2,233 | 84.6 |
| **Total** | **922** | **1,363** | **121** | **27** | **10** | **0** | **198** | **0** | **2,641** | **100.0** |
| **Sheep** | Yes | 1,446 | 1,344 | 264 | 39,249 | 53 | 62 | 342 | 0 | 42,760 | 68.0 |
| No | 6,995 | 8,010 | 1,717 | 1,810 | 319 | 0 | 1,134 | 121 | 20,106 | 32.0 |
| **Total** | **8,441** | **9,354** | **1,981** | **41,059** | **372** | **62** | **1,476** | **121** | **62,866** | **100.0** |
| **Cattle** | Yes | 4,128 | 1,309 | 592 | 2 | 17 | 0 | 3,546 | 0 | 9,594 | 26.4 |
| No | 11,663 | 9,530 | 3,388 | 151 | 709 | 0 | 1,316 | 6 | 26,763 | 73.6 |
| **Total** | **15,791** | **10,839** | **3,980** | **153** | **726** | **0** | **4,862** | **6** | **36,357** | **100.0** |
| **Prosimians** | Yes | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 34.7 |
| No | 168 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 169 | 65.3 |
| **Total** | **258** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **259** | **100.0** |
| **Marmoset and tamarins** | Yes | 26 | 9 | 60 | 84 | 0 | 0 | 6 | 0 | 185 | 30.1 |
| No | 247 | 80 | 102 | 0 | 0 | 0 | 0 | 0 | 429 | 69.9 |
| **Total** | **273** | **89** | **162** | **84** | **0** | **0** | **6** | **0** | **614** | **100.0** |
| **Squirrel monkey** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 100.0 |
| **Total** | **13** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **13** | **100.0** |
| **Other species of new world monkeys (Ceboidea)** | Yes | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 100.0 |
| No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **24** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **24** | **100.0** |
| **Cynomolgus monkey** | Yes | 53 | 434 | 1,498 | 1,170 | 0 | 0 | 23 | 0 | 3,178 | 33.8 |
| No | 87 | 763 | 4,477 | 894 | 0 | 0 | 0 | 0 | 6,221 | 66.2 |
| **Total** | **140** | **1,197** | **5,975** | **2,064** | **0** | **0** | **23** | **0** | **9,399** | **100.0** |
| **Rhesus monkey** | Yes | 125 | 30 | 51 | 32 | 0 | 0 | 5 | 0 | 243 | 53.5 |
| No | 90 | 118 | 3 | 0 | 0 | 0 | 0 | 0 | 211 | 46.5 |
| **Total** | **215** | **148** | **54** | **32** | **0** | **0** | **5** | **0** | **454** | **100.0** |
| **Vervets (Chlorocebus spp.)** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 100.0 |
| **Total** | **0** | **56** | **0** | **0** | **0** | **0** | **0** | **0** | **56** | **100.0** |
| **Baboons** | Yes | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11.9 |
| No | 9 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 88.1 |
| **Total** | **12** | **30** | **0** | **0** | **0** | **0** | **0** | **0** | **42** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Yes | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 100.0 |
| No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **9** | **100.0** |
| **Other mammals** | Yes | 1,206 | 453 | 0 | 0 | 0 | 0 | 0 | 0 | 1,659 | 14.8 |
| No | 7,240 | 1,287 | 140 | 46 | 544 | 205 | 73 | 0 | 9,535 | 85.2 |
| **Total** | **8,446** | **1,740** | **140** | **46** | **544** | **205** | **73** | **0** | **11,194** | **100.0** |
| **Domestic fowl** | Yes | 688 | 812 | 2,030 | 173 | 253 | 0 | 1,362 | 0 | 5,318 | 1.0 |
| No | 147,708 | 85,885 | 166,431 | 106,747 | 2,324 | 939 | 5,800 | 0 | 515,834 | 99.0 |
| **Total** | **148,396** | **86,697** | **168,461** | **106,920** | **2,577** | **939** | **7,162** | **0** | **521,152** | **100.0** |
| **Other birds** | Yes | 1,213 | 354 | 236 | 0 | 4 | 0 | 460 | 0 | 2,267 | 1.9 |
| No | 50,779 | 17,450 | 6,058 | 41,552 | 2,737 | 624 | 166 | 11 | 119,377 | 98.1 |
| **Total** | **51,992** | **17,804** | **6,294** | **41,552** | **2,741** | **624** | **626** | **11** | **121,644** | **100.0** |
| **Reptiles** | Yes | 1,099 | 0 | 0 | 300 | 0 | 0 | 19 | 0 | 1,418 | 37.0 |
| No | 2,261 | 0 | 0 | 0 | 93 | 46 | 14 | 0 | 2,414 | 63.0 |
| **Total** | **3,360** | **0** | **0** | **300** | **93** | **46** | **33** | **0** | **3,832** | **100.0** |
| **Rana** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 1,292 | 0 | 132 | 0 | 600 | 0 | 2,860 | 0 | 4,884 | 100.0 |
| **Total** | **1,292** | **0** | **132** | **0** | **600** | **0** | **2,860** | **0** | **4,884** | **100.0** |
| **Xenopus** | Yes | 7,443 | 694 | 0 | 0 | 0 | 0 | 16 | 0 | 8,153 | 42.9 |
| No | 8,480 | 560 | 720 | 0 | 848 | 0 | 229 | 0 | 10,837 | 57.1 |
| **Total** | **15,923** | **1,254** | **720** | **0** | **848** | **0** | **245** | **0** | **18,990** | **100.0** |
| **Other amphibians** | Yes | 115 | 9 | 0 | 0 | 120 | 0 | 0 | 0 | 244 | 1.2 |
| No | 9,149 | 55 | 60 | 0 | 6,782 | 3,893 | 251 | 0 | 20,190 | 98.8 |
| **Total** | **9,264** | **64** | **60** | **0** | **6,902** | **3,893** | **251** | **0** | **20,434** | **100.0** |
| **Zebra fish** | Yes | 4,450 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,450 | 1.3 |
| No | 234,141 | 55,750 | 43,065 | 0 | 4,220 | 0 | 1,639 | 0 | 338,815 | 98.7 |
| **Total** | **238,591** | **55,750** | **43,065** | **0** | **4,220** | **0** | **1,639** | **0** | **343,265** | **100.0** |
| **Other fish** | Yes | 3,337 | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 3,386 | 0.4 |
| No | 595,526 | 127,418 | 96,792 | 25 | 78,574 | 25,010 | 12,907 | 0 | 936,252 | 99.6 |
| **Total** | **598,863** | **127,418** | **96,792** | **25** | **78,574** | **25,010** | **12,956** | **0** | **939,638** | **100.0** |
| **Cephalopods** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **No** | **2** | **15,848** | **0** | **0** | **0** | **0** | **12** | **0** | **15,862** | **100.0** |
| **Total** | **2** | **15,848** | **0** | **0** | **0** | **0** | **12** | **0** | **15,862** | **100.0** |
| **All Species** | **Yes** | **49,601** | **29,307** | **44,781** | **50,199** | **498** | **1,953** | **15,822** | **30** | **192,191** | **2.0** |
| **No** | **4,464,219** | **2,121,954** | **2,311,571** | **405,295** | **104,336** | **36,117** | **146,602** | **285** | **9,590,379** | **98.0** |
| **Total** | **4,513,820** | **2,151,261** | **2,356,352** | **455,494** | **104,834** | **38,070** | **162,424** | **315** | **9,782,570** | **100.0** |

Table 14: Genetic status of animals used by species and main categories of scientific purposes (2015)

|  | **Genetic status** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Not altered | 1,341,777 | 991,245 | 1,152,221 | 33,666 | 3,621 | 583 | 66,939 | 4 | 3,590,056 | 62.3 |
| Non harmful | 1,411,193 | 331,031 | 46,407 | 16 | 0 | 6,063 | 5,059 | 0 | 1,799,769 | 31.2 |
| Harmful | 253,644 | 120,760 | 1,941 | 0 | 0 | 72 | 526 | 36 | 376,979 | 6.5 |
| **Total** | **3,006,614** | **1,443,036** | **1,200,569** | **33,682** | **3,621** | **6,718** | **72,524** | **40** | **5,766,804** | **100.0** |
| **Rats** | Not altered | 310,741 | 274,782 | 555,923 | 1,450 | 1,151 | 159 | 41,984 | 101 | 1,186,291 | 97.5 |
| Non harmful | 14,917 | 3,755 | 3,024 | 0 | 0 | 0 | 120 | 0 | 21,816 | 1.8 |
| Harmful | 3,528 | 4,763 | 134 | 0 | 0 | 0 | 36 | 0 | 8,461 | 0.7 |
| **Total** | **329,186** | **283,300** | **559,081** | **1,450** | **1,151** | **159** | **42,140** | **101** | **1,216,568** | **100.0** |
| **Guinea-Pigs** | Not altered | 4,515 | 25,923 | 115,793 | 1,430 | 0 | 0 | 2,356 | 36 | 150,053 | 99.9 |
| Non harmful | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 91 | 0.1 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **4,515** | **26,014** | **115,793** | **1,430** | **0** | **0** | **2,356** | **36** | **150,144** | **100.0** |
| **Hamsters (Syrian)** | Not altered | 1,777 | 7,481 | 10,690 | 180 | 0 | 0 | 111 | 0 | 20,239 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,777** | **7,481** | **10,690** | **180** | **0** | **0** | **111** | **0** | **20,239** | **100.0** |
| **Hamsters (Chinese)** | Not altered | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 30 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **0** | **0** | **30** | **0** | **0** | **0** | **0** | **0** | **30** | **100.0** |
| **Mongolian gerbil** | Not altered | 1,547 | 3,186 | 1,605 | 186 | 0 | 0 | 79 | 0 | 6,603 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,547** | **3,186** | **1,605** | **186** | **0** | **0** | **79** | **0** | **6,603** | **100.0** |
| **Other rodents** | Not altered | 14,296 | 2,890 | 8,437 | 38 | 647 | 315 | 260 | 0 | 26,883 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **14,296** | **2,890** | **8,437** | **38** | **647** | **315** | **260** | **0** | **26,883** | **100.0** |
| **Rabbits** | Not altered | 21,851 | 15,968 | 103,021 | 180,133 | 237 | 0 | 2,067 | 0 | 323,277 | 89.5 |
| Non harmful | 22 | 34 | 0 | 37,799 | 0 | 0 | 0 | 0 | 37,855 | 10.5 |
| Harmful | 23 | 46 | 0 | 0 | 0 | 0 | 1 | 0 | 70 | 0.0 |
| **Total** | **21,896** | **16,048** | **103,021** | **217,932** | **237** | **0** | **2,068** | **0** | **361,202** | **100.0** |
| **Cats** | Not altered | 803 | 1,115 | 1,200 | 18 | 0 | 0 | 49 | 0 | 3,185 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **803** | **1,115** | **1,200** | **18** | **0** | **0** | **49** | **0** | **3,185** | **100.0** |
| **Dogs** | Not altered | 1,338 | 8,350 | 11,236 | 239 | 12 | 0 | 545 | 0 | 21,720 | 99.9 |
| Non harmful | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0.0 |
| Harmful | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0.1 |
| **Total** | **1,355** | **8,352** | **11,236** | **239** | **12** | **0** | **545** | **0** | **21,739** | **100.0** |
| **Ferrets** | Not altered | 344 | 1,062 | 839 | 6 | 0 | 0 | 101 | 0 | 2,352 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **344** | **1,062** | **839** | **6** | **0** | **0** | **101** | **0** | **2,352** | **100.0** |
| **Other carnivores** | Not altered | 1,766 | 882 | 842 | 2 | 170 | 62 | 0 | 0 | 3,724 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,766** | **882** | **842** | **2** | **170** | **62** | **0** | **0** | **3,724** | **100.0** |
| **Horses, donkeys and cross-breeds** | Not altered | 2,596 | 1,217 | 153 | 7,778 | 1 | 34 | 289 | 0 | 12,068 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **2,596** | **1,217** | **153** | **7,778** | **1** | **34** | **289** | **0** | **12,068** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Pigs** | Not altered | 24,821 | 26,759 | 14,919 | 291 | 788 | 3 | 9,475 | 0 | 77,056 | 99.6 |
| Non harmful | 48 | 135 | 0 | 0 | 0 | 0 | 0 | 0 | 183 | 0.2 |
| Harmful | 30 | 131 | 0 | 0 | 0 | 0 | 0 | 0 | 161 | 0.2 |
| **Total** | **24,899** | **27,025** | **14,919** | **291** | **788** | **3** | **9,475** | **0** | **77,400** | **100.0** |
| **Goats** | Not altered | 922 | 1,363 | 121 | 27 | 10 | 0 | 198 | 0 | 2,641 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **922** | **1,363** | **121** | **27** | **10** | **0** | **198** | **0** | **2,641** | **100.0** |
| **Sheep** | Not altered | 8,434 | 9,354 | 1,981 | 41,059 | 372 | 62 | 1,476 | 121 | 62,859 | 100.0 |
| Non harmful | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8,441** | **9,354** | **1,981** | **41,059** | **372** | **62** | **1,476** | **121** | **62,866** | **100.0** |
| **Cattle** | Not altered | 15,790 | 10,839 | 3,980 | 153 | 726 | 0 | 4,862 | 6 | 36,356 | 100.0 |
| Non harmful | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **15,791** | **10,839** | **3,980** | **153** | **726** | **0** | **4,862** | **6** | **36,357** | **100.0** |
| **Prosimians** | Not altered | 258 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 259 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **258** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **259** | **100.0** |
| **Marmoset and tamarins** | Not altered | 273 | 89 | 162 | 84 | 0 | 0 | 6 | 0 | 614 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **273** | **89** | **162** | **84** | **0** | **0** | **6** | **0** | **614** | **100.0** |
| **Squirrel monkey** | Not altered | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **13** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **13** | **100.0** |
| **Other species of new world monkeys (Ceboidea)** | Not altered | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **24** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **24** | **100.0** |
| **Cynomolgus monkey** | Not altered | 140 | 1,197 | 5,975 | 2,064 | 0 | 0 | 23 | 0 | 9,399 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **140** | **1,197** | **5,975** | **2,064** | **0** | **0** | **23** | **0** | **9,399** | **100.0** |
| **Rhesus monkey** | Not altered | 215 | 148 | 54 | 32 | 0 | 0 | 5 | 0 | 454 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **215** | **148** | **54** | **32** | **0** | **0** | **5** | **0** | **454** | **100.0** |
| **Vervets (Chlorocebus spp.)** | Not altered | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **0** | **56** | **0** | **0** | **0** | **0** | **0** | **0** | **56** | **100.0** |
| **Baboons** | Not altered | 12 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **12** | **30** | **0** | **0** | **0** | **0** | **0** | **0** | **42** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Not altered | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **9** | **100.0** |
| **Other mammals** | Not altered | 8,446 | 1,740 | 140 | 46 | 544 | 205 | 73 | 0 | 11,194 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8,446** | **1,740** | **140** | **46** | **544** | **205** | **73** | **0** | **11,194** | **100.0** |
| **Domestic fowl** | Not altered | 148,143 | 86,678 | 168,461 | 106,920 | 2,577 | 939 | 7,162 | 0 | 520,880 | 99.9 |
| Non harmful | 139 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 158 | 0.0 |
| Harmful | 114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 | 0.0 |
| **Total** | **148,396** | **86,697** | **168,461** | **106,920** | **2,577** | **939** | **7,162** | **0** | **521,152** | **100.0** |
| **Other birds** | Not altered | 51,992 | 17,804 | 6,294 | 41,552 | 2,741 | 624 | 626 | 11 | 121,644 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **51,992** | **17,804** | **6,294** | **41,552** | **2,741** | **624** | **626** | **11** | **121,644** | **100.0** |
| **Reptiles** | Not altered | 3,360 | 0 | 0 | 300 | 93 | 46 | 33 | 0 | 3,832 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **3,360** | **0** | **0** | **300** | **93** | **46** | **33** | **0** | **3,832** | **100.0** |
| **Rana** | Not altered | 1,292 | 0 | 132 | 0 | 600 | 0 | 2,860 | 0 | 4,884 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,292** | **0** | **132** | **0** | **600** | **0** | **2,860** | **0** | **4,884** | **100.0** |
| **Xenopus** | Not altered | 14,326 | 1,163 | 720 | 0 | 848 | 0 | 245 | 0 | 17,302 | 91.1 |
| Non harmful | 1,597 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 1,688 | 8.9 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **15,923** | **1,254** | **720** | **0** | **848** | **0** | **245** | **0** | **18,990** | **100.0** |
| **Other amphibians** | Not altered | 9,143 | 64 | 60 | 0 | 6,902 | 3,893 | 251 | 0 | 20,313 | 99.4 |
| Non harmful | 121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 | 0.6 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **9,264** | **64** | **60** | **0** | **6,902** | **3,893** | **251** | **0** | **20,434** | **100.0** |
| **Zebra fish** | Not altered | 92,424 | 24,740 | 42,465 | 0 | 1,758 | 0 | 1,381 | 0 | 162,768 | 47.4 |
| Non harmful | 135,171 | 30,883 | 600 | 0 | 2,462 | 0 | 258 | 0 | 169,374 | 49.3 |
| Harmful | 10,996 | 127 | 0 | 0 | 0 | 0 | 0 | 0 | 11,123 | 3.2 |
| **Total** | **238,591** | **55,750** | **43,065** | **0** | **4,220** | **0** | **1,639** | **0** | **343,265** | **100.0** |
| **Other fish** | Not altered | 595,637 | 122,491 | 96,792 | 25 | 78,574 | 25,010 | 12,956 | 0 | 931,485 | 99.1 |
| Non harmful | 2,620 | 4,927 | 0 | 0 | 0 | 0 | 0 | 0 | 7,547 | 0.8 |
| Harmful | 606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 606 | 0.1 |
| **Total** | **598,863** | **127,418** | **96,792** | **25** | **78,574** | **25,010** | **12,956** | **0** | **939,638** | **100.0** |
| **Cephalopods** | Not altered | 2 | 15,848 | 0 | 0 | 0 | 0 | 12 | 0 | 15,862 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **2** | **15,848** | **0** | **0** | **0** | **0** | **12** | **0** | **15,862** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **All Species** | **Harmful** | **268,950** | **125,829** | **2,075** | **0** | **0** | **72** | **563** | **36** | **397,525** | **4.1** |
| **Non harmful** | **1,565,844** | **370,966** | **50,031** | **37,815** | **2,462** | **6,063** | **5,437** | **0** | **2,038,618** | **20.8** |
| **Not altered** | **2,679,026** | **1,654,466** | **2,304,246** | **417,679** | **102,372** | **31,935** | **156,424** | **279** | **7,346,427** | **75.1** |
| **Total** | **4,513,820** | **2,151,261** | **2,356,352** | **455,494** | **104,834** | **38,070** | **162,424** | **315** | **9,782,570** | **100.0** |

#### Part 3: Numbers and uses of animals for the creation and maintenance of genetically altered animals in the EU

Table 15: Use of animals for the creation of new genetically altered animal lines by research type species and severity (2015)

|  | **Severity** | **Basic research** | **Translational and applied research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 12,455 | 3,643 | 16,098 | 3.4 |
| Mild | 382,665 | 13,727 | 396,392 | 83.0 |
| Moderate | 52,476 | 9,094 | 61,570 | 12.9 |
| Severe | 2,949 | 774 | 3,723 | 0.8 |
| **Total** | **450,545** | **27,238** | **477,783** | **100.0** |
| **Rats** | Non-recovery | 146 | 0 | 146 | 3.3 |
| Mild | 1,363 | 438 | 1,801 | 41.1 |
| Moderate | 1,895 | 264 | 2,159 | 49.3 |
| Severe | 275 | 0 | 275 | 6.3 |
| **Total** | **3,679** | **702** | **4,381** | **100.0** |
| **Rabbits** | Non-recovery | 90 | 0 | 90 | 33.1 |
| Mild | 0 | 0 | 0 | 0.0 |
| Moderate | 101 | 81 | 182 | 66.9 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **191** | **81** | **272** | **100.0** |
| **Pigs** | Non-recovery | 0 | 14 | 14 | 4.0 |
| Mild | 138 | 12 | 150 | 42.9 |
| Moderate | 166 | 0 | 166 | 47.4 |
| Severe | 20 | 0 | 20 | 5.7 |
| **Total** | **324** | **26** | **350** | **100.0** |
| **Sheep** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 15 | 0 | 15 | 48.4 |
| Moderate | 16 | 0 | 16 | 51.6 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **31** | **0** | **31** | **100.0** |
| **Other mammals** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 0 | 0 | 0.0 |
| Moderate | 4 | 0 | 4 | 100.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **4** | **0** | **4** | **100.0** |
| **Domestic fowl** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 177 | 102 | 279 | 100.0 |
| Moderate | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **177** | **102** | **279** | **100.0** |
| **Xenopus** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 6,976 | 0 | 6,976 | 96.1 |
| Moderate | 283 | 0 | 283 | 3.9 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **7,259** | **0** | **7,259** | **100.0** |
| **Zebra fish** | Non-recovery | 657 | 0 | 657 | 0.5 |
| Mild | 104,439 | 1,512 | 105,951 | 85.2 |
| Moderate | 12,584 | 130 | 12,714 | 10.2 |
| Severe | 4,724 | 313 | 5,037 | 4.1 |
| **Total** | **122,404** | **1,955** | **124,359** | **100.0** |
| **Other fish** | Non-recovery | 26 | 0 | 26 | 1.0 |
| Mild | 2,516 | 0 | 2,516 | 98.4 |
| Moderate | 14 | 0 | 14 | 0.5 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **2,556** | **0** | **2,556** | **100.0** |
|  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **13,374** | **3,657** | **17,031** | **2.8** |
| **Mild** | **498,289** | **15,791** | **514,080** | **83.3** |
| **Moderate** | **67,539** | **9,569** | **77,108** | **12.5** |
| **Severe** | **7,968** | **1,087** | **9,055** | **1.5** |
| **Total** | **587,170** | **30,104** | **617,274** | **100.0** |

Table 16: Use of animals for the creation of new genetically altered animal lines by research type species and severity (2015)

|  | **Reuse** | **Basic research** | **Translational and applied research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 1,864 | 151 | 2,015 | 0.4 |
| No | 448,681 | 27,087 | 475,768 | 99.6 |
| **Total** | **450,545** | **27,238** | **477,783** | **100.0** |
| **Rats** | Yes | 0 | 0 | 0 | 0.0 |
| No | 3,679 | 702 | 4,381 | 100.0 |
| **Total** | **3,679** | **702** | **4,381** | **100.0** |
| **Rabbits** | Yes | 0 | 0 | 0 | 0.0 |
| No | 191 | 81 | 272 | 100.0 |
| **Total** | **191** | **81** | **272** | **100.0** |
| **Pigs** | Yes | 5 | 0 | 5 | 1.4 |
| No | 319 | 26 | 345 | 98.6 |
| **Total** | **324** | **26** | **350** | **100.0** |
| **Sheep** | Yes | 0 | 0 | 0 | 0.0 |
| No | 31 | 0 | 31 | 100.0 |
| **Total** | **31** | **0** | **31** | **100.0** |
| **Other mammals** | Yes | 0 | 0 | 0 | 0.0 |
| No | 4 | 0 | 4 | 100.0 |
| **Total** | **4** | **0** | **4** | **100.0** |
| **Domestic fowl** | Yes | 0 | 0 | 0 | 0.0 |
| No | 177 | 102 | 279 | 100.0 |
| **Total** | **177** | **102** | **279** | **100.0** |
| **Xenopus** | Yes | 5 | 0 | 5 | 0.1 |
| No | 7,254 | 0 | 7,254 | 99.9 |
| **Total** | **7,259** | **0** | **7,259** | **100.0** |
| **Zebra fish** | Yes | 24,216 | 0 | 24,216 | 19.5 |
| No | 98,188 | 1,955 | 100,143 | 80.5 |
| **Total** | **122,404** | **1,955** | **124,359** | **100.0** |
| **Other fish** | Yes | 0 | 0 | 0 | 0.0 |
| No | 2,556 | 0 | 2,556 | 100.0 |
| **Total** | **2,556** | **0** | **2,556** | **100.0** |
|  |  |  |  |  |  |
| **All Species** | **Yes** | **26,090** | **151** | **26,241** | **4.3** |
| **No** | **561,080** | **29,953** | **591,033** | **95.7** |
| **Total** | **587,170** | **30,104** | **617,274** | **100.0** |

Table 17: Uses of animals for the creation of new genetically altered animal lines in basic research by species and type of research (2015)

|  | **Oncology** | **Cardiovascular Blood and Lymphatic System** | **Nervous System** | **Respiratory System** | **Gastrointestinal System including Liver** | **Musculoskeletal System** | **Immune System** | **Urogenital/Reproductive System** | **Sensory Organs (skin, eyes and ears)** | **Endocrine System/Metabolism** | **Multisystemic** | **Ethology / Animal Behaviour /Animal Biology** | **Other basic research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| Mice | 59,475 | 11,835 | 34,962 | 17,196 | 7,257 | 4,114 | 29,805 | 16,561 | 6,702 | 13,612 | 137,627 | 266 | 111,133 | **450,545** | **76.7** |
| Rats | 133 | 133 | 700 | 0 | 72 | 0 | 100 | 0 | 43 | 0 | 1,702 | 0 | 796 | **3,679** | **0.6** |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Rabbits** | | | | | | | | | | | | | | | |
| Rabbits | 0 | 59 | 0 | 0 | 0 | 62 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | **191** | **0** |
| **Farm animals** | | | | | | | | | | | | | | | |
| Pigs | 0 | 0 | 4 | 40 | 0 | 0 | 95 | 0 | 0 | 6 | 179 | 0 | 0 | **324** | **0.1** |
| Sheep | 0 | 0 | 0 | 0 | 8 | 5 | 0 | 2 | 0 | 0 | 16 | 0 | 0 | **31** | **0** |
| **Non-human primates** | | | | | | | | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | **4** | **0** |
| **Birds** | | | | | | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 117 | 0 | 0 | **177** | **0** |
| **Amphibians** | | | | | | | | | | | | | | | |
| Xenopus | 0 | 541 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,200 | 0 | 518 | **7,259** | **1.2** |
| **Fish** | | | | | | | | | | | | | | | |
| Zebra fish | 3,139 | 19,911 | 20,531 | 0 | 380 | 15,988 | 3,598 | 2,069 | 549 | 2,879 | 39,075 | 1,800 | 12,485 | **122,404** | **20.8** |
| Other fish | 0 | 0 | 26 | 0 | 0 | 248 | 0 | 0 | 1,565 | 0 | 701 | 0 | 16 | **2,556** | **0.4** |
| **Totals** | | | | | | | | | | | | | | | |
| **Total** | **62,747** | **32,479** | **56,223** | **17,236** | **7,717** | **20,417** | **33,598** | **18,766** | **8,859** | **16,497** | **185,617** | **2,066** | **124,948** | **587,170** | **100** |
| **%** | **10.7** | **5.5** | **9.6** | **2.9** | **1.3** | **3.5** | **5.7** | **3.2** | **1.5** | **2.8** | **31.6** | **0.4** | **21.3** | **100** |  |

Table 18.1: Uses of animals for the creation of new genetically altered animal lines in basic, translational and applied research by species and type of research (Part 1) (2015)

|  | **Human Cancer** | **Human Infectious Disorders** | **Human Cardiovascular Disorders** | **Human Nervous and Mental Disorders** | **Human Respiratory Disorders** | **Human Gastrointestinal Disorders including Liver** | **Human Musculoskeletal Disorders** | **Human Immune Disorders** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | |
| **Rodents** | | | | | | | | |
| Mice | 15,348 | 396 | 4,887 | 2,301 | 263 | 574 | 304 | 836 |
| Rats | 44 | 0 | 0 | 264 | 0 | 0 | 44 | 0 |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rabbits** | | | | | | | | |
| Rabbits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | |
| Pigs | 0 | 0 | 0 | 4 | 0 | 0 | 5 | 0 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Non-human primates** | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Birds** | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | |
| Zebra fish | 0 | 1,256 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | |
| **Total** | **15,392** | **1,652** | **4,887** | **2,569** | **263** | **574** | **353** | **836** |
| **%** | **51.5** | **5.5** | **16.4** | **8.6** | **0.9** | **1.9** | **1.2** | **2.8** |

Table 18.2: Uses of animals for the creation of new genetically altered animal lines in basic translational and applied research by species and type of research (Part 2) (2015)

|  | **Human Urogenital/Reproductive Disorders** | **Human Sensory Organ Disorders (skin, eyes and ears)** | **Human Endocrine/Metabolism Disorders** | **Other Human Disorders** | **Animal Diseases and Disorders** | **Animal Welfare** | **Diagnosis of diseases** | **Non-regulatory toxicology and ecotoxicology** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | |
| **Rodents** | | | | | | | | | | |
| Mice | 262 | 377 | 815 | 84 | 577 | 0 | 157 | 57 | **27,238** | **90.5** |
| Rats | 0 | 0 | 0 | 0 | 167 | 111 | 72 | 0 | **702** | **2.3** |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Rabbits** | | | | | | | | | | |
| Rabbits | 0 | 0 | 0 | 0 | 81 | 0 | 0 | 0 | **81** | **0.3** |
| **Farm animals** | | | | | | | | | | |
| Pigs | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | **26** | **0.1** |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Non-human primates** | | | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 11 | 91 | 0 | 0 | 0 | **102** | **0.3** |
| **Amphibians** | | | | | | | | | | |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Fish** | | | | | | | | | | |
| Zebra fish | 0 | 695 | 0 | 4 | 0 | 0 | 0 | 0 | **1,955** | **6.5** |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | |
| **Total** | **262** | **1,072** | **832** | **99** | **916** | **111** | **229** | **57** | **30,104** | **100** |
| **%** | **0.9** | **3.6** | **2.8** | **0.3** | **3** | **0.4** | **0.8** | **0.2** | **100** |  |

Table 19: Uses of animals for the maintenance of colonies of established genetically altered animal lines by species, severity and genetic status (2015)

|  | **Severity** | **Genetically altered with a harmful phenotype** | **Genetically altered without a harmful phenotype** | **Not genetically altered** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 49 | 700 | 105 | 854 | 0.1 |
| Mild | 291,597 | 430,173 | 52,600 | 774,370 | 85.0 |
| Moderate | 45,136 | 32,800 | 3,843 | 81,779 | 9.0 |
| Severe | 29,156 | 24,346 | 219 | 53,721 | 5.9 |
| **Total** | **365,938** | **488,019** | **56,767** | **910,724** | **100.0** |
| **Rats** | Non-recovery | 0 | 104 | 0 | 104 | 1.2 |
| Mild | 4,916 | 2,035 | 507 | 7,458 | 82.8 |
| Moderate | 203 | 253 | 0 | 456 | 5.1 |
| Severe | 842 | 134 | 9 | 985 | 10.9 |
| **Total** | **5,961** | **2,526** | **516** | **9,003** | **100.0** |
| **Dogs** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 0 | 0 | 0 | 0.0 |
| Moderate | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 7 | 0 | 0 | 7 | 100.0 |
| **Total** | **7** | **0** | **0** | **7** | **100.0** |
| **Domestic fowl** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 231 | 0 | 231 | 71.7 |
| Moderate | 58 | 0 | 0 | 58 | 18.0 |
| Severe | 33 | 0 | 0 | 33 | 10.2 |
| **Total** | **91** | **231** | **0** | **322** | **100.0** |
| **Xenopus** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 56 | 0 | 56 | 29.8 |
| Moderate | 0 | 91 | 0 | 91 | 48.4 |
| Severe | 0 | 41 | 0 | 41 | 21.8 |
| **Total** | **0** | **188** | **0** | **188** | **100.0** |
| **Zebra fish** | Non-recovery | 0 | 4,679 | 153 | 4,832 | 6.0 |
| Mild | 3,065 | 52,585 | 4,600 | 60,250 | 74.7 |
| Moderate | 567 | 2,426 | 94 | 3,087 | 3.8 |
| Severe | 199 | 11,896 | 368 | 12,463 | 15.5 |
| **Total** | **3,831** | **71,586** | **5,215** | **80,632** | **100.0** |
| **Other fish** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 0 | 0 | 0 | 0.0 |
| Moderate | 32 | 278 | 0 | 310 | 100.0 |
| Severe | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **32** | **278** | **0** | **310** | **100.0** |
|  |  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **49** | **5,483** | **258** | **5,790** | **0.6** |
| **Mild** | **299,578** | **485,080** | **57,707** | **842,365** | **84.1** |
| **Moderate** | **45,996** | **35,848** | **3,937** | **85,781** | **8.6** |
| **Severe** | **30,237** | **36,417** | **596** | **67,250** | **6.7** |
| **Total** | **375,860** | **562,828** | **62,498** | **1,001,186** | **100.0** |

Table 20: Uses of animals for the maintenance of colonies of established genetically altered animal lines by species, reuse and genetic status (2015)

|  | **Reuse** | **Not genetically altered** | **Genetically altered without a harmful phenotype** | **Genetically altered with a harmful phenotype** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 56,767 | 488,019 | 365,938 | 910,724 | 100.0 |
| **Total** | **56,767** | **488,019** | **365,938** | **910,724** | **100.0** |
| **Rats** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 516 | 2,526 | 5,961 | 9,003 | 100.0 |
| **Total** | **516** | **2,526** | **5,961** | **9,003** | **100.0** |
| **Dogs** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 0 | 7 | 7 | 100.0 |
| **Total** | **0** | **0** | **7** | **7** | **100.0** |
| **Domestic fowl** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 231 | 91 | 322 | 100.0 |
| **Total** | **0** | **231** | **91** | **322** | **100.0** |
| **Xenopus** | Yes | 0 | 188 | 0 | 188 | 100.0 |
| No | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **0** | **188** | **0** | **188** | **100.0** |
| **Zebra fish** | Yes | 1,750 | 2,217 | 38 | 4,005 | 5.0 |
| No | 3,465 | 69,369 | 3,793 | 76,627 | 95.0 |
| **Total** | **5,215** | **71,586** | **3,831** | **80,632** | **100.0** |
| **Other fish** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 278 | 32 | 310 | 100.0 |
| **Total** | **0** | **278** | **32** | **310** | **100.0** |
|  |  |  |  |  |  |  |
| **All Species** | **Yes** | **1,750** | **2,405** | **38** | **4,193** | **0.4** |
| **No** | **60,748** | **560,423** | **375,822** | **996,993** | **99.6** |
| **Total** | **62,498** | **562,828** | **375,860** | **1,001,186** | **100.0** |

### EU statistical tables 2016

#### Part 1: Numbers of animals used for research, testing, routine production and educational purposes in the EU

Table 1: Numbers of animals used for the first time by species (2016)

|  | **Number of animals** | **%** |
| --- | --- | --- |
| **Mammals** | | |
| **Rodents** | | |
| Mice | 5,989,413 | **61** |
| Rats | 1,173,135 | **11.9** |
| Guinea-Pigs | 150,985 | **1.5** |
| Hamsters (Syrian) | 18,614 | **0.2** |
| Hamsters (Chinese) | 519 | **0** |
| Mongolian gerbil | 5,645 | **0.1** |
| Other rodents | 13,712 | **0.1** |
| **Rabbits** | | |
| Rabbits | 350,405 | **3.6** |
| **Carnivores** | | |
| Cats | 1,951 | **0** |
| Dogs | 15,691 | **0.2** |
| Ferrets | 1,530 | **0** |
| Other carnivores | 1,444 | **0** |
| **Farm animals** | | |
| Horses, donkeys and cross-breeds | 3,474 | **0** |
| Pigs | 80,029 | **0.8** |
| Goats | 1,365 | **0** |
| Sheep | 21,240 | **0.2** |
| Cattle | 22,782 | **0.2** |
| **Non-human primates** | | |
| Prosimians | 44 | **0** |
| Marmoset and tamarins | 285 | **0** |
| Squirrel monkey | 8 | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | **0** |
| Cynomolgus monkey | 6,503 | **0.1** |
| Rhesus monkey | 318 | **0** |
| Vervets (Chlorocebus spp.) | 19 | **0** |
| Baboons | 62 | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | **0** |
| **Other mammals** | | |
| Other mammals | 3,637 | **0** |
| **Birds** | | |
| Domestic fowl | 500,920 | **5.1** |
| Other birds | 94,804 | **1** |
| **Reptiles** | | |
| Reptiles | 3,240 | **0** |
| **Amphibians** | | |
| Rana | 4,482 | **0** |
| Xenopus | 18,511 | **0.2** |
| Other amphibians | 19,558 | **0.2** |
| **Fish** | | |
| Zebra fish | 513,011 | **5.2** |
| Other fish | 791,726 | **8.1** |
| **Cephalopods** | | |
| Cephalopods | 8,884 | **0.1** |
| **Totals** | | |
| **Total** | **9,817,946** | **100** |
| **%** | **100** |  |

Table 2: Place of birth by species (other than non-human primates) (2016)

|  | **Animals born in the EU at a registered breeder** | **Animals born in the EU but not at a registered breeder** | **Animals born in rest of Europe** | **Animals born in rest of world** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | |
| **Rodents** | | | | | | |
| Mice | 5,740,868 | 191,446 | 20,197 | 36,902 | **5,989,413** | **61** |
| Rats | 1,147,202 | 17,123 | 3,641 | 5,169 | **1,173,135** | **12** |
| Guinea-Pigs | 149,831 | 1,076 | 0 | 78 | **150,985** | **1.5** |
| Hamsters (Syrian) | 18,055 | 77 | 0 | 482 | **18,614** | **0.2** |
| Hamsters (Chinese) | 519 | 0 | 0 | 0 | **519** | **0** |
| Mongolian gerbil | 5,367 | 255 | 6 | 17 | **5,645** | **0.1** |
| Other rodents | 1,749 | 11,733 | 104 | 126 | **13,712** | **0.1** |
| **Rabbits** | | | | | | |
| Rabbits | 341,786 | 6,283 | 210 | 2,126 | **350,405** | **3.6** |
| **Carnivores** | | | | | | |
| Cats | 897 | 694 | 5 | 355 | **1,951** | **0** |
| Dogs | 5,527 | 5,424 | 33 | 4,707 | **15,691** | **0.2** |
| Ferrets | 1,298 | 82 | 6 | 144 | **1,530** | **0** |
| Other carnivores | 423 | 961 | 23 | 37 | **1,444** | **0** |
| **Farm animals** | | | | | | |
| Horses, donkeys and cross-breeds | 576 | 2,894 | 2 | 2 | **3,474** | **0** |
| Pigs | 40,755 | 39,257 | 17 | 0 | **80,029** | **0.8** |
| Goats | 591 | 646 | 128 | 0 | **1,365** | **0** |
| Sheep | 8,311 | 12,872 | 57 | 0 | **21,240** | **0.2** |
| Cattle | 8,541 | 14,140 | 101 | 0 | **22,782** | **0.2** |
| **Other mammals** | | | | | | |
| Other mammals | 623 | 2,823 | 187 | 4 | **3,637** | **0** |
| **Birds** | | | | | | |
| Domestic fowl | 366,599 | 134,321 | 0 | 0 | **500,920** | **5.1** |
| Other birds | 27,337 | 60,933 | 5,168 | 1,366 | **94,804** | **1** |
| **Reptiles** | | | | | | |
| Reptiles | 1,239 | 1,650 | 82 | 269 | **3,240** | **0** |
| **Amphibians** | | | | | | |
| Rana | 2,466 | 2,016 | 0 | 0 | **4,482** | **0** |
| Xenopus | 16,096 | 708 | 177 | 1,530 | **18,511** | **0.2** |
| Other amphibians | 2,478 | 15,523 | 1,363 | 194 | **19,558** | **0.2** |
| **Fish** | | | | | | |
| Zebra fish | 488,212 | 23,535 | 0 | 1,264 | **513,011** | **5.2** |
| Other fish | 489,106 | 226,656 | 50,712 | 25,252 | **791,726** | **8.1** |
| **Cephalopods** | | | | | | |
| Cephalopods | 8,400 | 484 | 0 | 0 | **8,884** | **0.1** |
| **Totals** | | | | | | |
| **Total** | **8,874,852** | **773,612** | **82,219** | **80,024** | **9,810,707** | **100** |
| **%** | **90.5** | **7.9** | **0.8** | **0.8** | **100** |  |

Table 3: Source of non-human primates by species (2016)

|  | **Animals born at a registered breeder within EU** | **Animals born in rest of Europe** | **Animals born in Asia** | **Animals born in America** | **Animals born in Africa** | **Animals born elsewhere** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-human primates** | | | | | | | | |
| **New World Monkeys** | | | | | | | | |
| Prosimians | 44 | 0 | 0 | 0 | 0 | 0 | **44** | **0.6** |
| Marmoset and tamarins | 285 | 0 | 0 | 0 | 0 | 0 | **285** | **3.9** |
| Squirrel monkey | 2 | 0 | 0 | 6 | 0 | 0 | **8** | **0.1** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Old World Monkeys** | | | | | | | | |
| Cynomolgus monkey | 97 | 2 | 2,045 | 0 | 4,340 | 19 | **6,503** | **89.8** |
| Rhesus monkey | 159 | 0 | 143 | 0 | 16 | 0 | **318** | **4.4** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 6 | 13 | 0 | **19** | **0.3** |
| Baboons | 57 | 0 | 0 | 0 | 5 | 0 | **62** | **0.9** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | |
| **Total** | **644** | **2** | **2,188** | **12** | **4,374** | **19** | **7,239** | **100** |
| **%** | **8.9** | **0** | **30.2** | **0.2** | **60.4** | **0.3** | **100** |  |

Table 4: Generation of non-human primates by species (2016)

|  | **F0** | **F1** | **F2 or greater** | **Self-sustaining colony** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Non-human primates** | | | | | | |
| **New World Monkeys** | | | | | | |
| Prosimians | 0 | 0 | 7 | 37 | **44** | **0.6** |
| Marmoset and tamarins | 0 | 0 | 19 | 266 | **285** | **3.9** |
| Squirrel monkey | 0 | 6 | 2 | 0 | **8** | **0.1** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | **0** | **0** |
| **Old World Monkeys** | | | | | | |
| Cynomolgus monkey | 1 | 1,451 | 3,210 | 1,841 | **6,503** | **89.8** |
| Rhesus monkey | 0 | 47 | 144 | 127 | **318** | **4.4** |
| Vervets (Chlorocebus spp.) | 0 | 2 | 17 | 0 | **19** | **0.3** |
| Baboons | 4 | 22 | 36 | 0 | **62** | **0.9** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | |
| **Total** | **5** | **1,528** | **3,435** | **2,271** | **7,239** | **100** |
| **%** | **0.1** | **21.1** | **47.5** | **31.4** | **100** |  |

#### Part 2: Details of all uses of animals for research, testing, routine production and educational purposes in the EU

Table 5: Uses of animals by species, main categories of scientific purposes and severities (2016)

|  | **Severity** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 308,547 | 48,480 | 3,808 | 78 | 591 | 718 | 14,214 | 4 | 376,440 | 6.2 |
| Mild | 1,571,423 | 575,186 | 554,409 | 1,859 | 771 | 13,676 | 46,507 | 128 | 2,763,959 | 45.7 |
| Moderate | 1,160,958 | 679,490 | 247,412 | 22,432 | 839 | 0 | 15,063 | 0 | 2,126,194 | 35.2 |
| Severe | 232,177 | 204,637 | 312,304 | 27,703 | 51 | 16 | 466 | 0 | 777,354 | 12.9 |
| **Total** | **3,273,105** | **1,507,793** | **1,117,933** | **52,072** | **2,252** | **14,410** | **76,250** | **132** | **6,043,947** | **100.0** |
| **Rats** | Non-recovery | 64,754 | 22,406 | 11,851 | 71 | 0 | 65 | 24,369 | 1 | 123,517 | 10.4 |
| Mild | 96,936 | 115,346 | 361,982 | 1,421 | 552 | 159 | 14,475 | 30 | 590,901 | 49.6 |
| Moderate | 135,599 | 99,351 | 166,458 | 167 | 1,084 | 0 | 4,588 | 23 | 407,270 | 34.2 |
| Severe | 37,560 | 14,766 | 13,402 | 483 | 2,895 | 0 | 16 | 0 | 69,122 | 5.8 |
| **Total** | **334,849** | **251,869** | **553,693** | **2,142** | **4,531** | **224** | **43,448** | **54** | **1,190,810** | **100.0** |
| **Guinea-Pigs** | Non-recovery | 18,286 | 1,388 | 1,704 | 242 | 0 | 0 | 371 | 0 | 21,991 | 14.5 |
| Mild | 3,616 | 4,381 | 64,014 | 440 | 0 | 0 | 1,207 | 0 | 73,658 | 48.6 |
| Moderate | 1,568 | 2,918 | 32,523 | 89 | 0 | 0 | 285 | 0 | 37,383 | 24.6 |
| Severe | 38 | 548 | 18,077 | 12 | 0 | 0 | 0 | 0 | 18,675 | 12.3 |
| **Total** | **23,508** | **9,235** | **116,318** | **783** | **0** | **0** | **1,863** | **0** | **151,707** | **100.0** |
| **Hamsters (Syrian)** | Non-recovery | 127 | 10 | 0 | 0 | 0 | 0 | 11 | 0 | 148 | 0.8 |
| Mild | 431 | 2,988 | 6,719 | 11 | 0 | 0 | 204 | 0 | 10,353 | 55.4 |
| Moderate | 1,988 | 1,095 | 554 | 0 | 0 | 0 | 4 | 0 | 3,641 | 19.5 |
| Severe | 307 | 589 | 3,396 | 238 | 0 | 0 | 0 | 0 | 4,530 | 24.3 |
| **Total** | **2,853** | **4,682** | **10,669** | **249** | **0** | **0** | **219** | **0** | **18,672** | **100.0** |
| **Hamsters (Chinese)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0.4 |
| Mild | 0 | 287 | 91 | 0 | 0 | 0 | 0 | 0 | 378 | 72.8 |
| Moderate | 0 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 138 | 26.6 |
| Severe | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0.2 |
| **Total** | **0** | **287** | **230** | **0** | **0** | **0** | **2** | **0** | **519** | **100.0** |
| **Mongolian gerbil** | Non-recovery | 308 | 6 | 0 | 0 | 0 | 0 | 33 | 0 | 347 | 5.7 |
| Mild | 467 | 715 | 1,952 | 167 | 0 | 0 | 42 | 0 | 3,343 | 55.1 |
| Moderate | 784 | 1,285 | 8 | 31 | 0 | 0 | 10 | 0 | 2,118 | 34.9 |
| Severe | 2 | 261 | 1 | 0 | 0 | 0 | 0 | 0 | 264 | 4.3 |
| **Total** | **1,561** | **2,267** | **1,961** | **198** | **0** | **0** | **85** | **0** | **6,072** | **100.0** |
| **Other rodents** | Non-recovery | 489 | 37 | 0 | 0 | 0 | 0 | 2 | 0 | 528 | 3.8 |
| Mild | 8,134 | 383 | 3,184 | 0 | 316 | 38 | 17 | 0 | 12,072 | 85.9 |
| Moderate | 995 | 55 | 50 | 0 | 128 | 0 | 0 | 0 | 1,228 | 8.7 |
| Severe | 35 | 84 | 100 | 0 | 0 | 2 | 0 | 0 | 221 | 1.6 |
| **Total** | **9,653** | **559** | **3,334** | **0** | **444** | **40** | **19** | **0** | **14,049** | **100.0** |
| **Rabbits** | Non-recovery | 2,793 | 2,917 | 7,884 | 0 | 0 | 0 | 848 | 0 | 14,442 | 4.0 |
| Mild | 16,076 | 4,054 | 53,617 | 132,741 | 174 | 0 | 1,019 | 0 | 207,681 | 57.0 |
| Moderate | 5,550 | 6,446 | 27,776 | 50,850 | 22 | 0 | 230 | 0 | 90,874 | 25.0 |
| Severe | 2,539 | 2,029 | 1,633 | 44,934 | 0 | 0 | 0 | 0 | 51,135 | 14.0 |
| **Total** | **26,958** | **15,446** | **90,910** | **228,525** | **196** | **0** | **2,097** | **0** | **364,132** | **100.0** |
| **Cats** | Non-recovery | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0.7 |
| Mild | 733 | 1,116 | 819 | 27 | 0 | 0 | 214 | 0 | 2,909 | 78.7 |
| Moderate | 45 | 406 | 171 | 0 | 0 | 0 | 0 | 0 | 622 | 16.8 |
| Severe | 0 | 97 | 40 | 0 | 0 | 0 | 0 | 0 | 137 | 3.7 |
| **Total** | **805** | **1,619** | **1,030** | **27** | **0** | **0** | **214** | **0** | **3,695** | **100.0** |
| **Dogs** | Non-recovery | 64 | 138 | 447 | 2 | 0 | 0 | 1 | 0 | 652 | 2.8 |
| Mild | 1,472 | 7,764 | 7,427 | 141 | 0 | 0 | 372 | 0 | 17,176 | 73.2 |
| Moderate | 254 | 1,272 | 3,666 | 29 | 0 | 0 | 30 | 0 | 5,251 | 22.4 |
| Severe | 0 | 80 | 293 | 0 | 0 | 0 | 0 | 0 | 373 | 1.6 |
| **Total** | **1,790** | **9,254** | **11,833** | **172** | **0** | **0** | **403** | **0** | **23,452** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Ferrets** | Non-recovery | 96 | 2 | 11 | 0 | 0 | 0 | 8 | 0 | 117 | 7.3 |
| Mild | 38 | 407 | 410 | 14 | 0 | 0 | 54 | 0 | 923 | 57.3 |
| Moderate | 55 | 300 | 40 | 0 | 0 | 0 | 2 | 0 | 397 | 24.7 |
| Severe | 7 | 166 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | 10.7 |
| **Total** | **196** | **875** | **461** | **14** | **0** | **0** | **64** | **0** | **1,610** | **100.0** |
| **Other carnivores** | Non-recovery | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0.2 |
| Mild | 282 | 294 | 195 | 0 | 68 | 47 | 0 | 0 | 886 | 48.2 |
| Moderate | 500 | 38 | 336 | 0 | 1 | 4 | 0 | 0 | 879 | 47.8 |
| Severe | 15 | 53 | 0 | 0 | 0 | 1 | 0 | 0 | 69 | 3.8 |
| **Total** | **797** | **385** | **531** | **3** | **69** | **52** | **0** | **0** | **1,837** | **100.0** |
| **Horses, donkeys and cross-breeds** | Non-recovery | 0 | 26 | 0 | 0 | 0 | 0 | 23 | 0 | 49 | 0.4 |
| Mild | 2,278 | 1,650 | 218 | 8,070 | 2 | 20 | 258 | 0 | 12,496 | 95.2 |
| Moderate | 127 | 237 | 68 | 110 | 10 | 0 | 20 | 0 | 572 | 4.4 |
| Severe | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 7 | 0.1 |
| **Total** | **2,405** | **1,913** | **286** | **8,187** | **12** | **20** | **301** | **0** | **13,124** | **100.0** |
| **Pigs** | Non-recovery | 4,128 | 1,826 | 40 | 70 | 0 | 0 | 7,491 | 0 | 13,555 | 16.3 |
| Mild | 10,209 | 20,186 | 10,138 | 162 | 447 | 0 | 1,505 | 62 | 42,709 | 51.3 |
| Moderate | 4,299 | 13,493 | 3,477 | 5 | 75 | 0 | 2,323 | 0 | 23,672 | 28.5 |
| Severe | 511 | 2,470 | 265 | 8 | 0 | 0 | 0 | 0 | 3,254 | 3.9 |
| **Total** | **19,147** | **37,975** | **13,920** | **245** | **522** | **0** | **11,319** | **62** | **83,190** | **100.0** |
| **Goats** | Non-recovery | 0 | 165 | 0 | 0 | 0 | 0 | 7 | 0 | 172 | 7.8 |
| Mild | 998 | 96 | 72 | 76 | 30 | 0 | 145 | 0 | 1,417 | 63.9 |
| Moderate | 239 | 268 | 14 | 0 | 20 | 0 | 64 | 0 | 605 | 27.3 |
| Severe | 16 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 23 | 1.0 |
| **Total** | **1,253** | **532** | **90** | **76** | **50** | **0** | **216** | **0** | **2,217** | **100.0** |
| **Sheep** | Non-recovery | 118 | 441 | 53 | 0 | 0 | 0 | 630 | 0 | 1,242 | 1.8 |
| Mild | 6,779 | 7,096 | 1,530 | 44,966 | 2 | 0 | 613 | 90 | 61,076 | 90.0 |
| Moderate | 2,164 | 2,078 | 240 | 145 | 27 | 0 | 154 | 0 | 4,808 | 7.1 |
| Severe | 192 | 450 | 112 | 0 | 12 | 0 | 0 | 2 | 768 | 1.1 |
| **Total** | **9,253** | **10,065** | **1,935** | **45,111** | **41** | **0** | **1,397** | **92** | **67,894** | **100.0** |
| **Cattle** | Non-recovery | 15 | 0 | 0 | 0 | 0 | 0 | 23 | 0 | 38 | 0.1 |
| Mild | 9,118 | 9,994 | 2,531 | 134 | 1,992 | 28 | 3,995 | 25 | 27,817 | 83.5 |
| Moderate | 850 | 1,529 | 527 | 15 | 34 | 0 | 2,189 | 0 | 5,144 | 15.4 |
| Severe | 57 | 208 | 26 | 0 | 7 | 0 | 6 | 0 | 304 | 0.9 |
| **Total** | **10,040** | **11,731** | **3,084** | **149** | **2,033** | **28** | **6,213** | **25** | **33,303** | **100.0** |
| **Prosimians** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 117 | 99.2 |
| Moderate | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.8 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **117** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **118** | **100.0** |
| **Marmoset and tamarins** | Non-recovery | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 8.5 |
| Mild | 73 | 48 | 0 | 16 | 0 | 0 | 1 | 0 | 138 | 36.7 |
| Moderate | 136 | 41 | 18 | 0 | 0 | 0 | 0 | 0 | 195 | 51.9 |
| Severe | 2 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 2.9 |
| **Total** | **243** | **98** | **18** | **16** | **0** | **0** | **1** | **0** | **376** | **100.0** |
| **Squirrel monkey** | Non-recovery | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 87.5 |
| Mild | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Moderate | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12.5 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **8** | **100.0** |
| **Cynomolgus monkey** | Non-recovery | 26 | 9 | 12 | 4 | 0 | 0 | 17 | 0 | 68 | 0.7 |
| Mild | 424 | 680 | 3,108 | 1,018 | 0 | 0 | 19 | 0 | 5,249 | 56.6 |
| Moderate | 111 | 524 | 3,167 | 0 | 0 | 0 | 9 | 0 | 3,811 | 41.1 |
| Severe | 0 | 7 | 146 | 0 | 0 | 0 | 0 | 0 | 153 | 1.6 |
| **Total** | **561** | **1,220** | **6,433** | **1,022** | **0** | **0** | **45** | **0** | **9,281** | **100.0** |
| **Rhesus monkey** | Non-recovery | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1.9 |
| Mild | 104 | 92 | 54 | 3 | 0 | 0 | 5 | 0 | 258 | 45.6 |
| Moderate | 138 | 116 | 42 | 0 | 0 | 0 | 0 | 0 | 296 | 52.3 |
| Severe | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.2 |
| **Total** | **254** | **208** | **96** | **3** | **0** | **0** | **5** | **0** | **566** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Vervets Chlorocebus spp** | Non-recovery | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 13 | 31.7 |
| Mild | 6 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 58.5 |
| Moderate | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9.8 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **6** | **22** | **0** | **13** | **0** | **0** | **0** | **0** | **41** | **100.0** |
| **Baboons** | Non-recovery | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2.0 |
| Mild | 46 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 49 | 49.0 |
| Moderate | 15 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 37.0 |
| Severe | 8 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 12.0 |
| **Total** | **71** | **29** | **0** | **0** | **0** | **0** | **0** | **0** | **100** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 8 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 100.0 |
| Moderate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **18** | **0** | **0** | **0** | **0** | **0** | **0** | **26** | **100.0** |
| **Other mammals** | Non-recovery | 99 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 109 | 2.8 |
| Mild | 2,121 | 157 | 0 | 12 | 182 | 259 | 84 | 0 | 2,815 | 72.1 |
| Moderate | 925 | 28 | 0 | 9 | 0 | 0 | 3 | 0 | 965 | 24.7 |
| Severe | 1 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 17 | 0.4 |
| **Total** | **3,146** | **195** | **8** | **29** | **182** | **259** | **87** | **0** | **3,906** | **100.0** |
| **Domestic fowl** | Non-recovery | 5,165 | 1,024 | 120 | 377 | 0 | 0 | 317 | 0 | 7,003 | 1.4 |
| Mild | 82,586 | 77,224 | 123,546 | 90,123 | 3,012 | 709 | 2,155 | 536 | 379,891 | 74.9 |
| Moderate | 47,122 | 21,681 | 21,456 | 15,158 | 0 | 0 | 838 | 0 | 106,255 | 20.9 |
| Severe | 2,298 | 6,624 | 4,660 | 211 | 269 | 0 | 200 | 0 | 14,262 | 2.8 |
| **Total** | **137,171** | **106,553** | **149,782** | **105,869** | **3,281** | **709** | **3,510** | **536** | **507,411** | **100.0** |
| **Other birds** | Non-recovery | 946 | 50 | 0 | 0 | 0 | 0 | 109 | 0 | 1,105 | 1.1 |
| Mild | 51,121 | 14,527 | 7,251 | 354 | 1,527 | 839 | 516 | 14 | 76,149 | 78.2 |
| Moderate | 8,091 | 610 | 514 | 9,875 | 20 | 16 | 90 | 0 | 19,216 | 19.7 |
| Severe | 53 | 359 | 527 | 0 | 0 | 0 | 0 | 0 | 939 | 1.0 |
| **Total** | **60,211** | **15,546** | **8,292** | **10,229** | **1,547** | **855** | **715** | **14** | **97,409** | **100.0** |
| **Reptiles** | Non-recovery | 246 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 246 | 2.9 |
| Mild | 6,017 | 0 | 0 | 300 | 65 | 0 | 27 | 0 | 6,409 | 74.7 |
| Moderate | 1,831 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 1,847 | 21.5 |
| Severe | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 0.9 |
| **Total** | **8,167** | **16** | **0** | **300** | **65** | **0** | **27** | **0** | **8,575** | **100.0** |
| **Rana** | Non-recovery | 0 | 0 | 0 | 0 | 850 | 0 | 1,056 | 0 | 1,906 | 42.5 |
| Mild | 51 | 0 | 0 | 0 | 0 | 0 | 220 | 0 | 271 | 6.0 |
| Moderate | 0 | 0 | 0 | 0 | 600 | 0 | 1,000 | 0 | 1,600 | 35.7 |
| Severe | 625 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 705 | 15.7 |
| **Total** | **676** | **0** | **80** | **0** | **1,450** | **0** | **2,276** | **0** | **4,482** | **100.0** |
| **Xenopus** | Non-recovery | 456 | 0 | 0 | 0 | 0 | 0 | 102 | 0 | 558 | 2.0 |
| Mild | 23,594 | 1,296 | 0 | 0 | 8 | 0 | 25 | 0 | 24,923 | 89.3 |
| Moderate | 955 | 285 | 0 | 0 | 600 | 0 | 4 | 0 | 1,844 | 6.6 |
| Severe | 374 | 0 | 205 | 0 | 0 | 0 | 0 | 0 | 579 | 2.1 |
| **Total** | **25,379** | **1,581** | **205** | **0** | **608** | **0** | **131** | **0** | **27,904** | **100.0** |
| **Other amphibians** | Non-recovery | 151 | 0 | 0 | 0 | 557 | 0 | 117 | 0 | 825 | 4.1 |
| Mild | 3,076 | 3,219 | 72 | 0 | 1,733 | 6,202 | 164 | 0 | 14,466 | 72.6 |
| Moderate | 3,714 | 0 | 0 | 0 | 0 | 69 | 0 | 0 | 3,783 | 19.0 |
| Severe | 688 | 19 | 0 | 0 | 0 | 146 | 0 | 0 | 853 | 4.3 |
| **Total** | **7,629** | **3,238** | **72** | **0** | **2,290** | **6,417** | **281** | **0** | **19,927** | **100.0** |
| **Zebra fish** | Non-recovery | 12,794 | 993 | 400 | 0 | 140 | 0 | 328 | 0 | 14,655 | 2.8 |
| Mild | 308,999 | 19,907 | 15,700 | 0 | 566 | 127 | 1,067 | 0 | 346,366 | 66.8 |
| Moderate | 65,328 | 61,458 | 11,207 | 0 | 144 | 0 | 0 | 0 | 138,137 | 26.6 |
| Severe | 4,082 | 4,373 | 10,771 | 0 | 5 | 0 | 0 | 0 | 19,231 | 3.7 |
| **Total** | **391,203** | **86,731** | **38,078** | **0** | **855** | **127** | **1,395** | **0** | **518,389** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Other fish** | Non-recovery | 27,864 | 5,489 | 1,505 | 0 | 3,027 | 2,074 | 1,035 | 0 | 40,994 | 5.1 |
| Mild | 389,915 | 28,218 | 51,364 | 0 | 20,153 | 43,240 | 10,686 | 0 | 543,576 | 67.9 |
| Moderate | 39,875 | 41,798 | 4,719 | 0 | 22,303 | 3,395 | 176 | 0 | 112,266 | 14.0 |
| Severe | 17,504 | 48,069 | 25,962 | 0 | 12,492 | 2 | 0 | 0 | 104,029 | 13.0 |
| **Total** | **475,158** | **123,574** | **83,550** | **0** | **57,975** | **48,711** | **11,897** | **0** | **800,865** | **100.0** |
| **Cephalopods** | Non-recovery | 0 | 29 | 0 | 0 | 0 | 0 | 15 | 0 | 44 | 0.5 |
| Mild | 352 | 8,488 | 0 | 0 | 0 | 0 | 0 | 0 | 8,840 | 99.5 |
| Moderate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **352** | **8,517** | **0** | **0** | **0** | **0** | **15** | **0** | **8,884** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **447,551** | **85,446** | **27,835** | **860** | **5,165** | **2,857** | **51,129** | **5** | **620,848** | **6.2** |
| **Mild** | **2,597,600** | **905,838** | **1,270,403** | **282,055** | **31,600** | **65,344** | **85,596** | **885** | **5,239,321** | **52.2** |
| **Moderate** | **1,484,217** | **936,845** | **524,581** | **98,915** | **25,907** | **3,484** | **27,082** | **23** | **3,101,054** | **30.9** |
| **Severe** | **299,165** | **285,905** | **392,013** | **73,604** | **15,731** | **167** | **688** | **2** | **1,067,275** | **10.6** |
| **Total** | **4,828,533** | **2,214,034** | **2,214,832** | **455,434** | **78,403** | **71,852** | **164,495** | **915** | **10,028,498** | **100.0** |

Table 5.1: Uses of animals in all sub-categories of research and testing by severities (2016)

|  | **Non-recovery** | **Mild [up to and including]** | **Moderate** | **Severe** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Basic research** | | | | | | |
| Oncology | 18,053 | 221,369 | 276,394 | 56,301 | **572,117** | **5.7** |
| Cardiovascular Blood and Lymphatic System | 44,899 | 157,648 | 128,554 | 20,535 | **351,636** | **3.5** |
| Nervous System | 100,504 | 422,312 | 345,194 | 72,443 | **940,453** | **9.4** |
| Respiratory System | 5,961 | 32,168 | 34,551 | 2,897 | **75,577** | **0.8** |
| Gastrointestinal System including Liver | 23,199 | 69,479 | 51,109 | 9,964 | **153,751** | **1.5** |
| Musculoskeletal System | 2,729 | 51,884 | 33,571 | 5,203 | **93,387** | **0.9** |
| Immune System | 46,007 | 410,447 | 239,413 | 57,429 | **753,296** | **7.5** |
| Urogenital/Reproductive System | 14,288 | 69,827 | 23,952 | 4,227 | **112,294** | **1.1** |
| Sensory Organs (skin, eyes and ears) | 6,715 | 39,853 | 23,183 | 2,809 | **72,560** | **0.7** |
| Endocrine System/Metabolism | 30,750 | 172,010 | 82,806 | 16,161 | **301,727** | **3** |
| Multisystemic | 25,389 | 300,429 | 86,195 | 11,214 | **423,227** | **4.2** |
| Ethology / Animal Behaviour /Animal Biology | 8,762 | 458,325 | 87,390 | 9,565 | **564,042** | **5.6** |
| Other basic research | 120,295 | 191,849 | 71,905 | 30,417 | **414,466** | **4.1** |
| **Translational and applied research** | | | | | | |
| Human Cancer | 3,991 | 192,456 | 304,964 | 36,850 | **538,261** | **5.4** |
| Human Infectious Disorders | 6,570 | 108,222 | 132,578 | 35,728 | **283,098** | **2.8** |
| Human Cardiovascular Disorders | 12,029 | 21,025 | 26,146 | 5,305 | **64,505** | **0.6** |
| Human Nervous and Mental Disorders | 16,522 | 150,818 | 119,040 | 20,707 | **307,087** | **3.1** |
| Human Respiratory Disorders | 4,012 | 30,615 | 27,559 | 3,671 | **65,857** | **0.7** |
| Human Gastrointestinal Disorders including Liver | 3,041 | 16,688 | 18,545 | 5,413 | **43,687** | **0.4** |
| Human Musculoskeletal Disorders | 444 | 14,179 | 18,390 | 3,129 | **36,142** | **0.4** |
| Human Immune Disorders | 3,952 | 25,683 | 37,496 | 4,424 | **71,555** | **0.7** |
| Human Urogenital/Reproductive Disorders | 1,318 | 5,748 | 5,382 | 231 | **12,679** | **0.1** |
| Human Sensory Organ Disorders (skin, eyes and ears) | 2,185 | 27,707 | 22,294 | 791 | **52,977** | **0.5** |
| Human Endocrine/Metabolism Disorders | 5,868 | 58,661 | 40,233 | 2,942 | **107,704** | **1.1** |
| Other Human Disorders | 7,978 | 8,268 | 17,307 | 4,975 | **38,528** | **0.4** |
| Animal Diseases and Disorders | 7,019 | 115,958 | 72,702 | 64,307 | **259,986** | **2.6** |
| Animal Welfare | 1,681 | 57,019 | 14,321 | 733 | **73,754** | **0.7** |
| Diagnosis of diseases | 4,627 | 22,664 | 51,776 | 91,671 | **170,738** | **1.7** |
| Plant diseases | 0 | 42 | 84 | 0 | **126** | **0** |
| Non-regulatory toxicology and ecotoxicology | 4,209 | 50,085 | 28,028 | 5,028 | **87,350** | **0.9** |
| **Regulatory use** | | | | | | |
| **Quality control (incl batch safety and potency testing)** | | | | | | |
| Batch safety testing | 2 | 127,240 | 15,546 | 9,655 | **152,443** | **1.5** |
| Pyrogenicity testing | 606 | 16,985 | 21,840 | 3 | **39,434** | **0.4** |
| Batch potency testing | 9,518 | 395,222 | 247,356 | 292,917 | **945,013** | **9.4** |
| Other quality controls | 300 | 63,430 | 11,096 | 6,454 | **81,280** | **0.8** |
| **Toxicity and other safety testing including pharmacology** | | | | | | |
| **Acute and sub-acute toxicity testing methods** | | | | | | |
| LD50, LC50 | 1,885 | 29,619 | 9,252 | 22,396 | **63,152** | **0.6** |
| Other lethal methods | 0 | 513 | 2,595 | 2,050 | **5,158** | **0.1** |
| Non lethal methods | 2,508 | 16,542 | 10,952 | 1,404 | **31,406** | **0.3** |
| Skin irritation/corrosion | 175 | 2,501 | 536 | 10 | **3,222** | **0** |
| Skin sensitisation | 3,588 | 43,284 | 3,782 | 991 | **51,645** | **0.5** |
| Eye irritation/corrosion | 131 | 516 | 364 | 64 | **1,075** | **0** |
| **Repeated dose toxicity** | | | | | | |
| up to 28 days | 0 | 34,908 | 18,760 | 1,655 | **55,323** | **0.6** |
| 29 - 90 days | 96 | 21,041 | 12,439 | 982 | **34,558** | **0.3** |
| > 90 days | 3,187 | 11,816 | 6,439 | 397 | **21,839** | **0.2** |
| Carcinogenicity | 20 | 2,506 | 2,629 | 173 | **5,328** | **0.1** |
| Genotoxicity | 156 | 7,407 | 1,741 | 293 | **9,597** | **0.1** |
| Reproductive toxicity | 342 | 78,858 | 17,144 | 6,471 | **102,815** | **1** |
| Developmental toxicity | 1,401 | 82,578 | 26,871 | 6,585 | **117,435** | **1.2** |
| Neurotoxicity | 3 | 1,799 | 1,138 | 126 | **3,066** | **0** |
| Kinetics | 10 | 39,085 | 21,178 | 644 | **60,917** | **0.6** |
| Pharmaco-dynamics (incl safety pharmacology) | 1,109 | 68,601 | 40,924 | 3,574 | **114,208** | **1.1** |
| Phototoxicity | 33 | 340 | 94 | 2 | **469** | **0** |
| **Ecotoxicity** | | | | | | |
| Acute toxicity | 2,305 | 31,655 | 2,510 | 10,111 | **46,581** | **0.5** |
| Chronic toxicity | 0 | 13,568 | 6,472 | 3,195 | **23,235** | **0.2** |
| Reproductive ecotoxicity | 0 | 2,583 | 1,486 | 6 | **4,075** | **0** |
| Endocrine activity | 0 | 7,597 | 0 | 172 | **7,769** | **0.1** |
| Bioaccumulation | 0 | 3,111 | 1,147 | 0 | **4,258** | **0** |
| Other ecotoxicity | 0 | 1,685 | 341 | 235 | **2,261** | **0** |
| Safety testing in food and feed area | 0 | 25,786 | 528 | 13,996 | **40,310** | **0.4** |
| Target animal safety | 0 | 11,698 | 287 | 37 | **12,022** | **0.1** |
| Other toxicity/safety testing | 171 | 5,328 | 3,520 | 940 | **9,959** | **0.1** |
| **Other efficacy and tolerance testing** | | | | | | |
| Other efficacy and tolerance testing | 289 | 122,601 | 35,614 | 6,475 | **164,979** | **1.6** |
| **Routine production** | | | | | | |
| Blood based products | 646 | 160,868 | 60,197 | 38,517 | **260,228** | **2.6** |
| Monoclonal antibody by mouse ascites method | 0 | 814 | 20,475 | 27,645 | **48,934** | **0.5** |
| Other product types | 214 | 120,373 | 18,243 | 7,442 | **146,272** | **1.5** |
| **Other** | | | | | | |
| Protection of the natural environment in the interests of the health or welfare of human beings or animals | 5,165 | 31,600 | 25,907 | 15,731 | **78,403** | **0.8** |
| Preservation of species | 2,857 | 65,344 | 3,484 | 167 | **71,852** | **0.7** |
| Higher education or training for the acquisition, maintenance or improvement of vocational skills | 51,129 | 85,596 | 27,082 | 688 | **164,495** | **1.6** |
| Forensic enquiries | 5 | 885 | 23 | 2 | **915** | **0** |
| **Total** | **620,848** | **5,239,321** | **3,101,054** | **1,067,275** | **10,028,498** | **100** |
| **%** | **6.2** | **52.2** | **30.9** | **10.6** | **100** |  |

Table 6: Basic research related uses by species and type of research (2016)

|  | **Oncology** | **Cardiovascular Blood and Lymphatic System** | **Nervous System** | **Respiratory System** | **Gastrointestinal System including Liver** | **Musculoskeletal System** | **Immune System** | **Urogenital/Reproductive System** | **Sensory Organs (skin, eyes and ears)** | **Endocrine System/Metabolism** | **Multisystemic** | **Ethology / Animal Behaviour /Animal Biology** | **Other basic research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| Mice | 530,789 | 262,594 | 630,425 | 59,649 | 107,302 | 75,232 | 685,471 | 83,617 | 57,134 | 177,404 | 322,640 | 25,055 | 255,793 | **3,273,105** | **67.8** |
| Rats | 5,544 | 37,296 | 163,296 | 11,429 | 14,249 | 5,692 | 7,346 | 7,907 | 6,426 | 19,442 | 12,915 | 17,038 | 26,269 | **334,849** | **6.9** |
| Guinea-Pigs | 26 | 286 | 364 | 1,308 | 213 | 77 | 1,971 | 4 | 549 | 487 | 136 | 116 | 17,971 | **23,508** | **0.5** |
| Hamsters (Syrian) | 230 | 183 | 296 | 0 | 113 | 0 | 107 | 26 | 0 | 45 | 282 | 25 | 1,546 | **2,853** | **0.1** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Mongolian gerbil | 0 | 0 | 536 | 0 | 14 | 17 | 124 | 0 | 541 | 0 | 0 | 0 | 329 | **1,561** | **0** |
| Other rodents | 81 | 0 | 408 | 74 | 27 | 20 | 989 | 74 | 105 | 364 | 374 | 6,331 | 806 | **9,653** | **0.2** |
| **Rabbits** | | | | | | | | | | | | | | | |
| Rabbits | 177 | 1,399 | 546 | 1,408 | 289 | 801 | 2,913 | 505 | 456 | 260 | 553 | 9,850 | 7,801 | **26,958** | **0.6** |
| **Carnivores** | | | | | | | | | | | | | | | |
| Cats | 0 | 24 | 71 | 4 | 156 | 76 | 32 | 14 | 14 | 58 | 230 | 89 | 37 | **805** | **0** |
| Dogs | 0 | 81 | 85 | 2 | 252 | 364 | 157 | 57 | 9 | 15 | 242 | 44 | 482 | **1,790** | **0** |
| Ferrets | 0 | 0 | 145 | 15 | 8 | 0 | 0 | 0 | 6 | 0 | 14 | 8 | 0 | **196** | **0** |
| Other carnivores | 0 | 0 | 0 | 0 | 30 | 0 | 323 | 6 | 0 | 0 | 11 | 419 | 8 | **797** | **0** |
| **Farm animals** | | | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 81 | 0 | 315 | 30 | 147 | 250 | 486 | 3 | 645 | 0 | 291 | 157 | **2,405** | **0** |
| Pigs | 258 | 1,708 | 358 | 434 | 5,691 | 421 | 1,793 | 308 | 77 | 844 | 753 | 5,068 | 1,434 | **19,147** | **0.4** |
| Goats | 0 | 44 | 9 | 0 | 184 | 0 | 37 | 77 | 0 | 47 | 62 | 749 | 44 | **1,253** | **0** |
| Sheep | 20 | 518 | 108 | 149 | 903 | 271 | 291 | 650 | 2 | 262 | 501 | 2,156 | 3,422 | **9,253** | **0.2** |
| Cattle | 0 | 202 | 5 | 95 | 500 | 3 | 620 | 307 | 0 | 1,868 | 1,852 | 3,650 | 938 | **10,040** | **0.2** |
| **Non-human primates** | | | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 87 | 0 | **117** | **0** |
| Marmoset and tamarins | 1 | 0 | 71 | 60 | 0 | 0 | 0 | 0 | 0 | 23 | 88 | 0 | 0 | **243** | **0** |
| Squirrel monkey | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **8** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 0 | 0 | 150 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 28 | 0 | 377 | **561** | **0** |
| Rhesus monkey | 0 | 54 | 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 22 | **254** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | **6** | **0** |
| Baboons | 0 | 3 | 4 | 0 | 0 | 2 | 26 | 0 | 0 | 0 | 2 | 34 | 0 | **71** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | **8** | **0** |
| **Other mammals** | | | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 155 | 0 | 12 | 0 | 17 | 136 | 35 | 26 | 34 | 2,489 | 242 | **3,146** | **0.1** |
| **Birds** | | | | | | | | | | | | | | | |
| Domestic fowl | 0 | 86 | 4,002 | 0 | 16,244 | 92 | 6,401 | 16 | 479 | 3,293 | 4,687 | 76,657 | 25,214 | **137,171** | **2.8** |
| Other birds | 0 | 459 | 441 | 0 | 160 | 40 | 900 | 55 | 31 | 521 | 54 | 47,231 | 10,319 | **60,211** | **1.2** |
| **Reptiles** | | | | | | | | | | | | | | | |
| Reptiles | 0 | 43 | 268 | 0 | 0 | 0 | 73 | 0 | 3 | 0 | 39 | 7,331 | 410 | **8,167** | **0.2** |
| **Amphibians** | | | | | | | | | | | | | | | |
| Rana | 0 | 0 | 400 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 231 | 23 | **676** | **0** |
| Xenopus | 1,456 | 398 | 4,532 | 0 | 0 | 254 | 8 | 2,492 | 195 | 4,051 | 2,037 | 3,504 | 6,452 | **25,379** | **0.5** |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 470 | 10 | 410 | 22 | 0 | 0 | 3,760 | 2,957 | **7,629** | **0.2** |
| **Fish** | | | | | | | | | | | | | | | |
| Zebra fish | 31,513 | 45,789 | 132,591 | 419 | 424 | 9,015 | 22,605 | 14,017 | 5,946 | 74,203 | 24,291 | 14,640 | 15,750 | **391,203** | **8.1** |
| Other fish | 2,022 | 388 | 1,012 | 216 | 6,950 | 393 | 20,826 | 1,118 | 496 | 17,869 | 51,370 | 336,841 | 35,657 | **475,158** | **9.8** |
| **Cephalopods** | | | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 340 | 0 | **352** | **0** |
| **Totals** | | | | | | | | | | | | | | | |
| **Total** | **572,117** | **351,636** | **940,453** | **75,577** | **153,751** | **93,387** | **753,296** | **112,294** | **72,560** | **301,727** | **423,227** | **564,042** | **414,466** | **4,828,533** | **100** |
| **%** | **11.8** | **7.3** | **19.5** | **1.6** | **3.2** | **1.9** | **15.6** | **2.3** | **1.5** | **6.2** | **8.8** | **11.7** | **8.6** | **100** |  |

Table 7.1: Translational and applied research related uses by species and type of research (Part 1) (2016)

|  | **Human Cancer** | **Human Infectious Disorders** | **Human Cardiovascular Disorders** | **Human Nervous and Mental Disorders** | **Human Respiratory Disorders** | **Human Gastrointestinal Disorders including Liver** | **Human Musculoskeletal Disorders** | **Human Immune Disorders** | **Human Urogenital/Reproductive Disorders** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | |
| **Rodents** | | | | | | | | | |
| Mice | 528,247 | 214,815 | 44,272 | 195,670 | 40,621 | 34,274 | 24,367 | 65,790 | 9,270 |
| Rats | 6,413 | 4,236 | 15,489 | 101,259 | 20,944 | 8,318 | 8,653 | 4,763 | 2,419 |
| Guinea-Pigs | 148 | 1,111 | 444 | 430 | 3,392 | 42 | 8 | 152 | 106 |
| Hamsters (Syrian) | 387 | 2,325 | 32 | 47 | 0 | 0 | 0 | 0 | 36 |
| Hamsters (Chinese) | 0 | 287 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 1,406 | 0 | 88 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 312 | 0 | 0 | 71 | 0 | 0 | 0 | 0 |
| **Rabbits** | | | | | | | | | |
| Rabbits | 1,985 | 847 | 937 | 100 | 311 | 247 | 1,082 | 239 | 31 |
| **Carnivores** | | | | | | | | | |
| Cats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dogs | 45 | 32 | 87 | 416 | 21 | 45 | 91 | 85 | 4 |
| Ferrets | 0 | 689 | 0 | 0 | 4 | 98 | 0 | 2 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 6 | 0 |
| Pigs | 175 | 379 | 2,594 | 220 | 342 | 416 | 216 | 220 | 507 |
| Goats | 6 | 15 | 18 | 4 | 0 | 0 | 43 | 0 | 1 |
| Sheep | 26 | 157 | 520 | 115 | 0 | 7 | 710 | 47 | 238 |
| Cattle | 0 | 75 | 4 | 0 | 40 | 0 | 0 | 0 | 0 |
| **Non-human primates** | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 8 | 0 | 0 | 24 | 0 | 0 | 0 | 16 | 2 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 14 | 397 | 31 | 106 | 10 | 0 | 21 | 64 | 58 |
| Rhesus monkey | 0 | 168 | 0 | 11 | 0 | 0 | 0 | 0 | 3 |
| Vervets (Chlorocebus spp.) | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 22 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | | |
| Other mammals | 58 | 9 | 10 | 8 | 3 | 0 | 0 | 0 | 0 |
| **Birds** | | | | | | | | | |
| Domestic fowl | 404 | 325 | 0 | 0 | 90 | 240 | 0 | 10 | 0 |
| Other birds | 0 | 6,166 | 0 | 0 | 8 | 0 | 0 | 0 | 0 |
| **Reptiles** | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | | |
| Zebra fish | 345 | 49,277 | 64 | 8,544 | 0 | 0 | 943 | 161 | 0 |
| Other fish | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 |
| **Cephalopods** | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | | |
| **Total** | **538,261** | **283,098** | **64,505** | **307,087** | **65,857** | **43,687** | **36,142** | **71,555** | **12,679** |
| **%** | **24.3** | **12.8** | **2.9** | **13.9** | **3** | **2** | **1.6** | **3.2** | **0.6** |

Table 7.2: Translational and applied research related uses by species and type of research (Part 2) (2016)

|  | **Human Sensory Organ Disorders (skin, eyes and ears)** | **Human Endocrine/Metabolism Disorders** | **Other Human Disorders** | **Animal Diseases and Disorders** | **Animal Welfare** | **Diagnosis of diseases** | **Plant diseases** | **Non-regulatory toxicology and ecotoxicology** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | |
| **Rodents** | | | | | | | | | | |
| Mice | 43,784 | 70,396 | 24,306 | 30,301 | 1,135 | 157,985 | 28 | 22,532 | **1,507,793** | **68.1** |
| Rats | 6,709 | 34,075 | 12,093 | 1,842 | 412 | 3,967 | 56 | 20,221 | **251,869** | **11.4** |
| Guinea-Pigs | 438 | 0 | 186 | 993 | 0 | 1,411 | 0 | 374 | **9,235** | **0.4** |
| Hamsters (Syrian) | 0 | 698 | 0 | 1,036 | 0 | 9 | 0 | 112 | **4,682** | **0.2** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **287** | **0** |
| Mongolian gerbil | 0 | 0 | 0 | 773 | 0 | 0 | 0 | 0 | **2,267** | **0.1** |
| Other rodents | 0 | 0 | 0 | 86 | 0 | 0 | 0 | 90 | **559** | **0** |
| **Rabbits** | | | | | | | | | | |
| Rabbits | 1,436 | 158 | 309 | 6,398 | 319 | 632 | 42 | 373 | **15,446** | **0.7** |
| **Carnivores** | | | | | | | | | | |
| Cats | 0 | 0 | 0 | 1,486 | 34 | 96 | 0 | 3 | **1,619** | **0.1** |
| Dogs | 17 | 154 | 13 | 6,216 | 47 | 94 | 0 | 1,887 | **9,254** | **0.4** |
| Ferrets | 0 | 0 | 0 | 81 | 0 | 1 | 0 | 0 | **875** | **0** |
| Other carnivores | 0 | 0 | 0 | 218 | 167 | 0 | 0 | 0 | **385** | **0** |
| **Farm animals** | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 0 | 0 | 1,535 | 227 | 129 | 0 | 0 | **1,913** | **0.1** |
| Pigs | 476 | 1,589 | 245 | 17,018 | 12,824 | 507 | 0 | 247 | **37,975** | **1.7** |
| Goats | 0 | 0 | 0 | 219 | 169 | 55 | 0 | 2 | **532** | **0** |
| Sheep | 4 | 49 | 55 | 5,854 | 1,365 | 861 | 0 | 57 | **10,065** | **0.5** |
| Cattle | 0 | 290 | 0 | 8,981 | 2,118 | 209 | 0 | 14 | **11,731** | **0.5** |
| **Non-human primates** | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** |
| Marmoset and tamarins | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 24 | **98** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 61 | 17 | 38 | 0 | 0 | 0 | 0 | 403 | **1,220** | **0.1** |
| Rhesus monkey | 24 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | **208** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **22** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **29** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **18** | **0** |
| **Other mammals** | | | | | | | | | | |
| Other mammals | 0 | 0 | 8 | 82 | 0 | 17 | 0 | 0 | **195** | **0** |
| **Birds** | | | | | | | | | | |
| Domestic fowl | 28 | 0 | 0 | 72,941 | 30,251 | 2,149 | 0 | 115 | **106,553** | **4.8** |
| Other birds | 0 | 0 | 0 | 6,671 | 2,447 | 86 | 0 | 168 | **15,546** | **0.7** |
| **Reptiles** | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | **16** | **0** |
| **Amphibians** | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Xenopus | 0 | 117 | 0 | 19 | 0 | 0 | 0 | 1,420 | **1,581** | **0.1** |
| Other amphibians | 0 | 0 | 24 | 79 | 0 | 0 | 0 | 3,135 | **3,238** | **0.1** |
| **Fish** | | | | | | | | | | |
| Zebra fish | 0 | 120 | 1,227 | 648 | 99 | 0 | 0 | 25,303 | **86,731** | **3.9** |
| Other fish | 0 | 39 | 0 | 96,464 | 13,740 | 2,530 | 0 | 10,782 | **123,574** | **5.6** |
| **Cephalopods** | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 29 | 8,400 | 0 | 0 | 88 | **8,517** | **0.4** |
| **Totals** | | | | | | | | | | |
| **Total** | **52,977** | **107,704** | **38,528** | **259,986** | **73,754** | **170,738** | **126** | **87,350** | **2,214,034** | **100** |
| **%** | **2.4** | **4.9** | **1.7** | **11.7** | **3.3** | **7.7** | **0** | **3.9** | **100** |  |

Table 8: Regulatory uses by species and type of use (2016)

|  | **Quality** | | | | **Toxicity** | **Other** |  | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Quality: Batch safety testing** | **Quality: Pyrogenicity testing** | **Quality: Batch potency testing** | **Quality: Other quality controls** | **Toxicity and other safety testing including pharmacology** | **Other efficacy and tolerance testing** | **Total** | **%** |
| **Mammals** | | | | | | | | |
| **Rodents** | | | | | | | | |
| Mice | 96,993 | 1,050 | 633,305 | 50,300 | 242,767 | 93,518 | **1,117,933** | **50.5** |
| Rats | 11,666 | 0 | 151,394 | 1,603 | 381,032 | 7,998 | **553,693** | **25** |
| Guinea-Pigs | 16,574 | 0 | 63,566 | 2,160 | 33,808 | 210 | **116,318** | **5.3** |
| Hamsters (Syrian) | 14 | 0 | 5,889 | 2,959 | 1,017 | 790 | **10,669** | **0.5** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 230 | 0 | **230** | **0** |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 1,930 | 31 | **1,961** | **0.1** |
| Other rodents | 0 | 0 | 0 | 0 | 3,304 | 30 | **3,334** | **0.2** |
| **Rabbits** | | | | | | | | |
| Rabbits | 2,078 | 38,384 | 19,144 | 3,143 | 23,831 | 4,330 | **90,910** | **4.1** |
| **Carnivores** | | | | | | | | |
| Cats | 65 | 0 | 40 | 98 | 485 | 342 | **1,030** | **0** |
| Dogs | 148 | 0 | 87 | 403 | 10,071 | 1,124 | **11,833** | **0.5** |
| Ferrets | 277 | 0 | 127 | 0 | 17 | 40 | **461** | **0** |
| Other carnivores | 223 | 0 | 155 | 0 | 33 | 120 | **531** | **0** |
| **Farm animals** | | | | | | | | |
| Horses, donkeys and cross-breeds | 10 | 0 | 50 | 0 | 126 | 100 | **286** | **0** |
| Pigs | 1,891 | 0 | 2,291 | 867 | 4,543 | 4,328 | **13,920** | **0.6** |
| Goats | 8 | 0 | 48 | 0 | 18 | 16 | **90** | **0** |
| Sheep | 321 | 0 | 723 | 237 | 261 | 393 | **1,935** | **0.1** |
| Cattle | 193 | 0 | 1,120 | 87 | 596 | 1,088 | **3,084** | **0.1** |
| **Non-human primates** | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 18 | 0 | **18** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 0 | 0 | 0 | 0 | 6,364 | 69 | **6,433** | **0.3** |
| Rhesus monkey | 0 | 0 | 0 | 0 | 90 | 6 | **96** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 8 | 0 | **8** | **0** |
| **Birds** | | | | | | | | |
| Domestic fowl | 21,675 | 0 | 63,791 | 17,622 | 12,476 | 34,218 | **149,782** | **6.8** |
| Other birds | 229 | 0 | 368 | 885 | 4,694 | 2,116 | **8,292** | **0.4** |
| **Reptiles** | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 80 | 0 | **80** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 205 | 0 | **205** | **0** |
| Other amphibians | 0 | 0 | 0 | 0 | 72 | 0 | **72** | **0** |
| **Fish** | | | | | | | | |
| Zebra fish | 0 | 0 | 0 | 188 | 37,890 | 0 | **38,078** | **1.7** |
| Other fish | 78 | 0 | 2,915 | 728 | 65,717 | 14,112 | **83,550** | **3.8** |
| **Cephalopods** | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | |
| **Total** | **152,443** | **39,434** | **945,013** | **81,280** | **831,683** | **164,979** | **2,214,832** | **100** |
| **%** | **6.9** | **1.8** | **42.7** | **3.7** | **37.6** | **7.4** | **100** |  |

Table 9.1: Toxicity and other safety testing including pharmacology by species and type of use (Part 1) (2016)

|  | **Acute** | | |  | | | **Repeated Dose** | | |  | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **LD50, LC50** | **Other lethal methods** | **Non lethal methods** | **Skin irritation / corrosion** | **Skin sensitisation** | **Eye irritation / corrosion** | **up to 28 days** | **29 - 90 days** | **> 90 days** | **Carcinogenicity** | **Genotoxicity** | **Developmental toxicity** | **Safety testing in food and feed area** |
| **Mammals** | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | |
| Mice | 36,392 | 1,325 | 10,112 | 0 | 19,931 | 0 | 13,164 | 7,260 | 2,270 | 1,793 | 4,420 | 164 | 37,378 |
| Rats | 5,384 | 1,060 | 16,785 | 163 | 0 | 0 | 36,800 | 22,595 | 15,417 | 3,535 | 5,148 | 101,403 | 0 |
| Guinea-Pigs | 10 | 0 | 634 | 0 | 31,638 | 21 | 4 | 0 | 108 | 0 | 0 | 0 | 0 |
| Hamsters (Syrian) | 0 | 0 | 472 | 215 | 15 | 0 | 59 | 56 | 80 | 0 | 29 | 0 | 0 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 230 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rabbits** | | | | | | | | | | | | | |
| Rabbits | 12 | 0 | 701 | 2,832 | 54 | 1,054 | 730 | 927 | 352 | 0 | 0 | 9,678 | 9 |
| **Carnivores** | | | | | | | | | | | | | |
| Cats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 |
| Dogs | 0 | 0 | 534 | 0 | 0 | 0 | 2,465 | 1,371 | 1,802 | 0 | 0 | 0 | 0 |
| Ferrets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pigs | 0 | 0 | 111 | 12 | 7 | 0 | 681 | 523 | 242 | 0 | 0 | 0 | 148 |
| Goats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 148 |
| Cattle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| **Non-human primates** | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 11 | 0 | 409 | 0 | 0 | 0 | 1,399 | 1,572 | 1,522 | 0 | 0 | 0 | 0 |
| Rhesus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 24 | 34 | 0 | 0 | 0 | 0 |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | | | | | | |
| Other mammals | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Birds** | | | | | | | | | | | | | |
| Domestic fowl | 3,960 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1,747 |
| Other birds | 272 | 0 | 159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 854 |
| **Reptiles** | | | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | | | | | | |
| Zebra fish | 1,502 | 2,773 | 624 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,190 | 0 |
| Other fish | 15,531 | 0 | 865 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cephalopods** | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | | | | | | |
| **Total** | **63,152** | **5,158** | **31,406** | **3,222** | **51,645** | **1,075** | **55,323** | **34,558** | **21,839** | **5,328** | **9,597** | **117,435** | **40,310** |
| **%** | **7.6** | **0.6** | **3.8** | **0.4** | **6.2** | **0.1** | **6.7** | **4.2** | **2.6** | **0.6** | **1.2** | **14.2** | **4.9** |

Table 9.2: Toxicity and other safety testing including pharmacology by species and type of use (Part 2) (2016)

|  | | | | | | **EcoToxicity** | | | | | |  | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Target animal safety** | **Neurotoxicity** | **Kinetics** | **Pharmaco - dynamics (incl safety pharmacology)** | **Phototoxicity** | **Acute toxicity** | **Chronic toxicity** | **Reproductive toxicity** | **Endocrine activity** | **Bioaccumulation** | **Other ecotoxicity** | **Other toxicity / safety testing** | **Total** | **%** |
| **Mammals** | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | |
| Mice | 188 | 246 | 29,209 | 64,776 | 403 | 8,236 | 254 | 939 | 0 | 0 | 0 | 4,307 | **242,767** | **29.3** |
| Rats | 0 | 396 | 25,246 | 42,834 | 0 | 1,810 | 819 | 97,247 | 0 | 0 | 0 | 4,390 | **381,032** | **46** |
| Guinea-Pigs | 0 | 0 | 70 | 1,039 | 66 | 186 | 0 | 0 | 0 | 0 | 0 | 32 | **33,808** | **4.1** |
| Hamsters (Syrian) | 0 | 0 | 4 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | **1,017** | **0.1** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **230** | **0** |
| Mongolian gerbil | 0 | 0 | 0 | 1,930 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,930** | **0.2** |
| Other rodents | 3,054 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 180 | 0 | **3,304** | **0.4** |
| **Rabbits** | | | | | | | | | | | | | | |
| Rabbits | 76 | 0 | 746 | 1,835 | 0 | 9 | 5 | 4,598 | 0 | 24 | 0 | 180 | **23,822** | **2.9** |
| **Carnivores** | | | | | | | | | | | | | | |
| Cats | 83 | 0 | 378 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **485** | **0.1** |
| Dogs | 158 | 0 | 2,274 | 977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 490 | **10,071** | **1.2** |
| Ferrets | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | **17** | **0** |
| Other carnivores | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **33** | **0** |
| **Farm animals** | | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 8 | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | **126** | **0** |
| Pigs | 973 | 0 | 1,197 | 480 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 121 | **4,543** | **0.5** |
| Goats | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | **18** | **0** |
| Sheep | 0 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 7 | **261** | **0** |
| Cattle | 125 | 0 | 315 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | **596** | **0.1** |
| **Non-human primates** | | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **18** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 0 | 18 | 983 | 223 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 196 | **6,364** | **0.8** |
| Rhesus monkey | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **90** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **8** | **0** |
| **Birds** | | | | | | | | | | | | | | |
| Domestic fowl | 6,404 | 0 | 263 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 102 | **12,476** | **1.5** |
| Other birds | 274 | 0 | 9 | 0 | 0 | 607 | 158 | 0 | 0 | 0 | 0 | 0 | **2,333** | **0.3** |
| **Reptiles** | | | | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | **80** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 205 | 0 | 0 | 0 | 0 | 0 | 0 | **205** | **0** |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 0 | 0 | 0 | 0 | 0 | **72** | **0** |
| **Fish** | | | | | | | | | | | | | | |
| Zebra fish | 0 | 2,406 | 0 | 0 | 0 | 6,337 | 9,414 | 0 | 6,080 | 526 | 573 | 0 | **36,425** | **4.4** |
| Other fish | 646 | 0 | 0 | 0 | 0 | 29,039 | 12,585 | 0 | 1,689 | 3,690 | 1,432 | 0 | **65,477** | **7.9** |
| **Cephalopods** | | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | | | | | |
| **Total** | **12,022** | **3,066** | **60,917** | **114,208** | **469** | **46,581** | **23,235** | **102,815** | **7,769** | **4,258** | **2,261** | **9,959** | **827,608** | **100** |
| **%** | **1.5** | **0.4** | **7.4** | **13.8** | **0.1** | **5.6** | **2.8** | **12.4** | **0.9** | **0.5** | **0.3** | **1.2** | **100** |  |

Table 10: Regulatory uses by species and type of legislation (2016)

|  | **Legislation on medicinal products for human use** | **Legislation on medicinal products for veterinary use and their residues** | **Medical devices legislation** | **Industrial chemicals legislation** | **Plant protection product legislation** | **Biocides legislation** | **Food legislation including food contact material** | **Feed legislation including legislation for the safety of target animals, workers and environment** | **Other legislation** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | |
| Mice | 910,195 | 129,381 | 15,234 | 14,994 | 4,307 | 1,609 | 40,150 | 1,488 | 575 | **1,117,933** | **50.5** |
| Rats | 343,737 | 12,431 | 2,867 | 164,098 | 21,405 | 3,860 | 3,250 | 444 | 1,601 | **553,693** | **25** |
| Guinea-Pigs | 70,801 | 16,028 | 25,208 | 3,029 | 1,085 | 85 | 0 | 0 | 82 | **116,318** | **5.3** |
| Hamsters (Syrian) | 905 | 9,058 | 706 | 0 | 0 | 0 | 0 | 0 | 0 | **10,669** | **0.5** |
| Hamsters (Chinese) | 230 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **230** | **0** |
| Mongolian gerbil | 0 | 1,961 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,961** | **0.1** |
| Other rodents | 0 | 0 | 0 | 0 | 3,234 | 70 | 0 | 0 | 30 | **3,334** | **0.2** |
| **Rabbits** | | | | | | | | | | | |
| Rabbits | 65,163 | 14,701 | 3,073 | 5,710 | 954 | 68 | 9 | 0 | 1,232 | **90,910** | **4.1** |
| **Carnivores** | | | | | | | | | | | |
| Cats | 50 | 980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,030** | **0** |
| Dogs | 8,839 | 2,316 | 22 | 106 | 206 | 0 | 0 | 0 | 344 | **11,833** | **0.5** |
| Ferrets | 450 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | **461** | **0** |
| Other carnivores | 0 | 518 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | **531** | **0** |
| **Farm animals** | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 49 | 237 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **286** | **0** |
| Pigs | 3,215 | 9,233 | 210 | 44 | 0 | 0 | 16 | 1,073 | 129 | **13,920** | **0.6** |
| Goats | 50 | 24 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | **90** | **0** |
| Sheep | 42 | 1,673 | 90 | 0 | 0 | 0 | 110 | 17 | 3 | **1,935** | **0.1** |
| Cattle | 0 | 2,914 | 0 | 0 | 18 | 0 | 0 | 50 | 102 | **3,084** | **0.1** |
| **Non-human primates** | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **18** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 6,433 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6,433** | **0.3** |
| Rhesus monkey | 96 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **96** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | **8** | **0** |
| **Birds** | | | | | | | | | | | |
| Domestic fowl | 1,904 | 124,752 | 0 | 0 | 230 | 0 | 20 | 20,100 | 2,776 | **149,782** | **6.8** |
| Other birds | 0 | 3,555 | 0 | 0 | 3,623 | 0 | 0 | 1,114 | 0 | **8,292** | **0.4** |
| **Reptiles** | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 80 | 0 | 0 | 0 | 0 | **80** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 205 | 0 | 0 | 0 | 0 | **205** | **0** |
| Other amphibians | 0 | 0 | 0 | 0 | 72 | 0 | 0 | 0 | 0 | **72** | **0** |
| **Fish** | | | | | | | | | | | |
| Zebra fish | 1,880 | 872 | 1,040 | 12,977 | 14,474 | 805 | 0 | 0 | 6,030 | **38,078** | **1.7** |
| Other fish | 8,399 | 6,420 | 494 | 13,814 | 11,593 | 583 | 0 | 12,300 | 29,947 | **83,550** | **3.8** |
| **Cephalopods** | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | | |
| **Total** | **1,422,456** | **337,054** | **48,944** | **214,772** | **61,502** | **7,088** | **43,555** | **36,586** | **42,875** | **2,214,832** | **100** |
| **%** | **64.2** | **15.2** | **2.2** | **9.7** | **2.8** | **0.3** | **2** | **1.7** | **1.9** | **100** |  |

Table 11: Regulatory uses by species and origin of regulatory requirement (2016)

|  | **Legislation satisfying EU requirements** | **Legislation satisfying national requirements only [within EU]** | **Legislation satisfying Non-EU requirements only** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | |
| **Rodents** | | | | | |
| Mice | 1,032,534 | 16,404 | 68,995 | **1,117,933** | **50.5** |
| Rats | 546,510 | 1,111 | 6,072 | **553,693** | **25** |
| Guinea-Pigs | 109,983 | 62 | 6,273 | **116,318** | **5.3** |
| Hamsters (Syrian) | 10,663 | 0 | 6 | **10,669** | **0.5** |
| Hamsters (Chinese) | 230 | 0 | 0 | **230** | **0** |
| Mongolian gerbil | 1,961 | 0 | 0 | **1,961** | **0.1** |
| Other rodents | 3,304 | 30 | 0 | **3,334** | **0.2** |
| **Rabbits** | | | | | |
| Rabbits | 68,514 | 139 | 22,257 | **90,910** | **4.1** |
| **Carnivores** | | | | | |
| Cats | 1,024 | 0 | 6 | **1,030** | **0** |
| Dogs | 11,737 | 19 | 77 | **11,833** | **0.5** |
| Ferrets | 461 | 0 | 0 | **461** | **0** |
| Other carnivores | 493 | 13 | 25 | **531** | **0** |
| **Farm animals** | | | | | |
| Horses, donkeys and cross-breeds | 284 | 0 | 2 | **286** | **0** |
| Pigs | 12,315 | 2 | 1,603 | **13,920** | **0.6** |
| Goats | 90 | 0 | 0 | **90** | **0** |
| Sheep | 1,928 | 3 | 4 | **1,935** | **0.1** |
| Cattle | 2,963 | 91 | 30 | **3,084** | **0.1** |
| **Non-human primates** | | | | | |
| Prosimians | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 18 | 0 | 0 | **18** | **0** |
| Squirrel monkey | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 6,411 | 0 | 22 | **6,433** | **0.3** |
| Rhesus monkey | 96 | 0 | 0 | **96** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | |
| Other mammals | 8 | 0 | 0 | **8** | **0** |
| **Birds** | | | | | |
| Domestic fowl | 144,335 | 130 | 5,317 | **149,782** | **6.8** |
| Other birds | 8,276 | 0 | 16 | **8,292** | **0.4** |
| **Reptiles** | | | | | |
| Reptiles | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | |
| Rana | 80 | 0 | 0 | **80** | **0** |
| Xenopus | 205 | 0 | 0 | **205** | **0** |
| Other amphibians | 72 | 0 | 0 | **72** | **0** |
| **Fish** | | | | | |
| Zebra fish | 36,518 | 1,560 | 0 | **38,078** | **1.7** |
| Other fish | 57,540 | 25,867 | 143 | **83,550** | **3.8** |
| **Cephalopods** | | | | | |
| Cephalopods | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | |
| **Total** | **2,058,553** | **45,431** | **110,848** | **2,214,832** | **100** |
| **%** | **92.9** | **2.1** | **5** | **100** |  |

Table 12: Routine production uses by species and product type (2016)

|  | **Blood based products** | **Other product types** | **Monoclonal antibody by mouse ascites method** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | |
| **Rodents** | | | | | |
| Mice | 1,192 | 2,591 | 48,289 | **52,072** | **11.4** |
| Rats | 1,684 | 442 | 16 | **2,142** | **0.5** |
| Guinea-Pigs | 772 | 11 | 0 | **783** | **0.2** |
| Hamsters (Syrian) | 238 | 11 | 0 | **249** | **0.1** |
| Hamsters (Chinese) | 0 | 0 | 0 | **0** | **0** |
| Mongolian gerbil | 0 | 198 | 0 | **198** | **0** |
| Other rodents | 0 | 0 | 0 | **0** | **0** |
| **Rabbits** | | | | | |
| Rabbits | 191,190 | 36,706 | 629 | **228,525** | **50.2** |
| **Carnivores** | | | | | |
| Cats | 6 | 21 | 0 | **27** | **0** |
| Dogs | 170 | 2 | 0 | **172** | **0** |
| Ferrets | 14 | 0 | 0 | **14** | **0** |
| Other carnivores | 3 | 0 | 0 | **3** | **0** |
| **Farm animals** | | | | | |
| Horses, donkeys and cross-breeds | 8,187 | 0 | 0 | **8,187** | **1.8** |
| Pigs | 20 | 225 | 0 | **245** | **0.1** |
| Goats | 61 | 15 | 0 | **76** | **0** |
| Sheep | 44,014 | 1,097 | 0 | **45,111** | **9.9** |
| Cattle | 123 | 26 | 0 | **149** | **0** |
| **Non-human primates** | | | | | |
| Prosimians | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 16 | 0 | 0 | **16** | **0** |
| Squirrel monkey | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 958 | 64 | 0 | **1,022** | **0.2** |
| Rhesus monkey | 0 | 3 | 0 | **3** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 13 | 0 | **13** | **0** |
| Baboons | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | |
| Other mammals | 10 | 19 | 0 | **29** | **0** |
| **Birds** | | | | | |
| Domestic fowl | 1,655 | 104,214 | 0 | **105,869** | **23.2** |
| Other birds | 9,915 | 314 | 0 | **10,229** | **2.2** |
| **Reptiles** | | | | | |
| Reptiles | 0 | 300 | 0 | **300** | **0.1** |
| **Amphibians** | | | | | |
| Rana | 0 | 0 | 0 | **0** | **0** |
| Xenopus | 0 | 0 | 0 | **0** | **0** |
| Other amphibians | 0 | 0 | 0 | **0** | **0** |
| **Fish** | | | | | |
| Zebra fish | 0 | 0 | 0 | **0** | **0** |
| Other fish | 0 | 0 | 0 | **0** | **0** |
| **Cephalopods** | | | | | |
| Cephalopods | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | |
| **Total** | **260,228** | **146,272** | **48,934** | **455,434** | **100** |
| **%** | **57.1** | **32.1** | **10.7** | **100** |  |

Table 13: Reuses of animals by species and main categories of scientific purposes in research, testing routine production and education (2016)

|  | **Reuse** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 14,006 | 8,806 | 26,148 | 180 | 0 | 0 | 5,394 | 0 | 54,534 | 0.9 |
| No | 3,259,099 | 1,498,987 | 1,091,785 | 51,892 | 2,252 | 14,410 | 70,856 | 132 | 5,989,413 | 99.1 |
| **Total** | **3,273,105** | **1,507,793** | **1,117,933** | **52,072** | **2,252** | **14,410** | **76,250** | **132** | **6,043,947** | **100.0** |
| **Rats** | Yes | 6,462 | 4,959 | 3,250 | 138 | 0 | 0 | 2,826 | 40 | 17,675 | 1.5 |
| No | 328,387 | 246,910 | 550,443 | 2,004 | 4,531 | 224 | 40,622 | 14 | 1,173,135 | 98.5 |
| **Total** | **334,849** | **251,869** | **553,693** | **2,142** | **4,531** | **224** | **43,448** | **54** | **1,190,810** | **100.0** |
| **Guinea-Pigs** | Yes | 31 | 50 | 518 | 5 | 0 | 0 | 118 | 0 | 722 | 0.5 |
| No | 23,477 | 9,185 | 115,800 | 778 | 0 | 0 | 1,745 | 0 | 150,985 | 99.5 |
| **Total** | **23,508** | **9,235** | **116,318** | **783** | **0** | **0** | **1,863** | **0** | **151,707** | **100.0** |
| **Hamsters (Syrian)** | Yes | 25 | 4 | 6 | 11 | 0 | 0 | 12 | 0 | 58 | 0.3 |
| No | 2,828 | 4,678 | 10,663 | 238 | 0 | 0 | 207 | 0 | 18,614 | 99.7 |
| **Total** | **2,853** | **4,682** | **10,669** | **249** | **0** | **0** | **219** | **0** | **18,672** | **100.0** |
| **Hamsters (Chinese)** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 287 | 230 | 0 | 0 | 0 | 2 | 0 | 519 | 100.0 |
| **Total** | **0** | **287** | **230** | **0** | **0** | **0** | **2** | **0** | **519** | **100.0** |
| **Mongolian gerbil** | Yes | 30 | 397 | 0 | 0 | 0 | 0 | 0 | 0 | 427 | 7.0 |
| No | 1,531 | 1,870 | 1,961 | 198 | 0 | 0 | 85 | 0 | 5,645 | 93.0 |
| **Total** | **1,561** | **2,267** | **1,961** | **198** | **0** | **0** | **85** | **0** | **6,072** | **100.0** |
| **Other rodents** | Yes | 337 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 337 | 2.4 |
| No | 9,316 | 559 | 3,334 | 0 | 444 | 40 | 19 | 0 | 13,712 | 97.6 |
| **Total** | **9,653** | **559** | **3,334** | **0** | **444** | **40** | **19** | **0** | **14,049** | **100.0** |
| **Rabbits** | Yes | 133 | 278 | 12,022 | 932 | 5 | 0 | 357 | 0 | 13,727 | 3.8 |
| No | 26,825 | 15,168 | 78,888 | 227,593 | 191 | 0 | 1,740 | 0 | 350,405 | 96.2 |
| **Total** | **26,958** | **15,446** | **90,910** | **228,525** | **196** | **0** | **2,097** | **0** | **364,132** | **100.0** |
| **Cats** | Yes | 426 | 703 | 403 | 6 | 0 | 0 | 206 | 0 | 1,744 | 47.2 |
| No | 379 | 916 | 627 | 21 | 0 | 0 | 8 | 0 | 1,951 | 52.8 |
| **Total** | **805** | **1,619** | **1,030** | **27** | **0** | **0** | **214** | **0** | **3,695** | **100.0** |
| **Dogs** | Yes | 881 | 2,985 | 3,436 | 143 | 0 | 0 | 316 | 0 | 7,761 | 33.1 |
| No | 909 | 6,269 | 8,397 | 29 | 0 | 0 | 87 | 0 | 15,691 | 66.9 |
| **Total** | **1,790** | **9,254** | **11,833** | **172** | **0** | **0** | **403** | **0** | **23,452** | **100.0** |
| **Ferrets** | Yes | 2 | 24 | 0 | 0 | 0 | 0 | 54 | 0 | 80 | 5.0 |
| No | 194 | 851 | 461 | 14 | 0 | 0 | 10 | 0 | 1,530 | 95.0 |
| **Total** | **196** | **875** | **461** | **14** | **0** | **0** | **64** | **0** | **1,610** | **100.0** |
| **Other carnivores** | Yes | 346 | 4 | 40 | 3 | 0 | 0 | 0 | 0 | 393 | 21.4 |
| No | 451 | 381 | 491 | 0 | 69 | 52 | 0 | 0 | 1,444 | 78.6 |
| **Total** | **797** | **385** | **531** | **3** | **69** | **52** | **0** | **0** | **1,837** | **100.0** |
| **Horses, donkeys and cross-breeds** | Yes | 1,131 | 247 | 26 | 8,077 | 2 | 0 | 167 | 0 | 9,650 | 73.5 |
| No | 1,274 | 1,666 | 260 | 110 | 10 | 20 | 134 | 0 | 3,474 | 26.5 |
| **Total** | **2,405** | **1,913** | **286** | **8,187** | **12** | **20** | **301** | **0** | **13,124** | **100.0** |
| **Pigs** | Yes | 347 | 1,168 | 606 | 0 | 75 | 0 | 965 | 0 | 3,161 | 3.8 |
| No | 18,800 | 36,807 | 13,314 | 245 | 447 | 0 | 10,354 | 62 | 80,029 | 96.2 |
| **Total** | **19,147** | **37,975** | **13,920** | **245** | **522** | **0** | **11,319** | **62** | **83,190** | **100.0** |
| **Goats** | Yes | 766 | 5 | 0 | 6 | 30 | 0 | 45 | 0 | 852 | 38.4 |
| No | 487 | 527 | 90 | 70 | 20 | 0 | 171 | 0 | 1,365 | 61.6 |
| **Total** | **1,253** | **532** | **90** | **76** | **50** | **0** | **216** | **0** | **2,217** | **100.0** |
| **Sheep** | Yes | 3,576 | 316 | 246 | 42,277 | 0 | 0 | 239 | 0 | 46,654 | 68.7 |
| No | 5,677 | 9,749 | 1,689 | 2,834 | 41 | 0 | 1,158 | 92 | 21,240 | 31.3 |
| **Total** | **9,253** | **10,065** | **1,935** | **45,111** | **41** | **0** | **1,397** | **92** | **67,894** | **100.0** |
| **Cattle** | Yes | 2,600 | 2,645 | 336 | 19 | 1,653 | 0 | 3,268 | 0 | 10,521 | 31.6 |
| No | 7,440 | 9,086 | 2,748 | 130 | 380 | 28 | 2,945 | 25 | 22,782 | 68.4 |
| **Total** | **10,040** | **11,731** | **3,084** | **149** | **2,033** | **28** | **6,213** | **25** | **33,303** | **100.0** |
| **Prosimians** | Yes | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 62.7 |
| No | 43 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 37.3 |
| **Total** | **117** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **118** | **100.0** |
| **Marmoset and tamarins** | Yes | 40 | 26 | 9 | 16 | 0 | 0 | 0 | 0 | 91 | 24.2 |
| No | 203 | 72 | 9 | 0 | 0 | 0 | 1 | 0 | 285 | 75.8 |
| **Total** | **243** | **98** | **18** | **16** | **0** | **0** | **1** | **0** | **376** | **100.0** |
| **Squirrel monkey** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 100.0 |
| **Total** | **8** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **8** | **100.0** |
| **Cynomolgus monkey** | Yes | 42 | 671 | 1,054 | 968 | 0 | 0 | 43 | 0 | 2,778 | 29.9 |
| No | 519 | 549 | 5,379 | 54 | 0 | 0 | 2 | 0 | 6,503 | 70.1 |
| **Total** | **561** | **1,220** | **6,433** | **1,022** | **0** | **0** | **45** | **0** | **9,281** | **100.0** |
| **Rhesus monkey** | Yes | 128 | 87 | 26 | 3 | 0 | 0 | 4 | 0 | 248 | 43.8 |
| No | 126 | 121 | 70 | 0 | 0 | 0 | 1 | 0 | 318 | 56.2 |
| **Total** | **254** | **208** | **96** | **3** | **0** | **0** | **5** | **0** | **566** | **100.0** |
| **Vervets Chlorocebus spp** | Yes | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 53.7 |
| No | 6 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 19 | 46.3 |
| **Total** | **6** | **22** | **0** | **13** | **0** | **0** | **0** | **0** | **41** | **100.0** |
| **Baboons** | Yes | 20 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 38.0 |
| No | 51 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 62.0 |
| **Total** | **71** | **29** | **0** | **0** | **0** | **0** | **0** | **0** | **100** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Yes | 8 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 100.0 |
| No | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **18** | **0** | **0** | **0** | **0** | **0** | **0** | **26** | **100.0** |
| **Other mammals** | Yes | 211 | 50 | 0 | 0 | 5 | 0 | 3 | 0 | 269 | 6.9 |
| No | 2,935 | 145 | 8 | 29 | 177 | 259 | 84 | 0 | 3,637 | 93.1 |
| **Total** | **3,146** | **195** | **8** | **29** | **182** | **259** | **87** | **0** | **3,906** | **100.0** |
| **Domestic fowl** | Yes | 2,670 | 494 | 2,284 | 63 | 0 | 0 | 980 | 0 | 6,491 | 1.3 |
| No | 134,501 | 106,059 | 147,498 | 105,806 | 3,281 | 709 | 2,530 | 536 | 500,920 | 98.7 |
| **Total** | **137,171** | **106,553** | **149,782** | **105,869** | **3,281** | **709** | **3,510** | **536** | **507,411** | **100.0** |
| **Other birds** | Yes | 1,763 | 185 | 140 | 0 | 108 | 0 | 409 | 0 | 2,605 | 2.7 |
| No | 58,448 | 15,361 | 8,152 | 10,229 | 1,439 | 855 | 306 | 14 | 94,804 | 97.3 |
| **Total** | **60,211** | **15,546** | **8,292** | **10,229** | **1,547** | **855** | **715** | **14** | **97,409** | **100.0** |
| **Reptiles** | Yes | 5,026 | 0 | 0 | 300 | 0 | 0 | 9 | 0 | 5,335 | 62.2 |
| No | 3,141 | 16 | 0 | 0 | 65 | 0 | 18 | 0 | 3,240 | 37.8 |
| **Total** | **8,167** | **16** | **0** | **300** | **65** | **0** | **27** | **0** | **8,575** | **100.0** |
| **Rana** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 676 | 0 | 80 | 0 | 1,450 | 0 | 2,276 | 0 | 4,482 | 100.0 |
| **Total** | **676** | **0** | **80** | **0** | **1,450** | **0** | **2,276** | **0** | **4,482** | **100.0** |
| **Xenopus** | Yes | 8,786 | 585 | 0 | 0 | 0 | 0 | 22 | 0 | 9,393 | 33.7 |
| No | 16,593 | 996 | 205 | 0 | 608 | 0 | 109 | 0 | 18,511 | 66.3 |
| **Total** | **25,379** | **1,581** | **205** | **0** | **608** | **0** | **131** | **0** | **27,904** | **100.0** |
| **Other amphibians** | Yes | 106 | 24 | 0 | 0 | 239 | 0 | 0 | 0 | 369 | 1.9 |
| No | 7,523 | 3,214 | 72 | 0 | 2,051 | 6,417 | 281 | 0 | 19,558 | 98.1 |
| **Total** | **7,629** | **3,238** | **72** | **0** | **2,290** | **6,417** | **281** | **0** | **19,927** | **100.0** |
| **Zebra fish** | Yes | 5,244 | 0 | 134 | 0 | 0 | 0 | 0 | 0 | 5,378 | 1.0 |
| No | 385,959 | 86,731 | 37,944 | 0 | 855 | 127 | 1,395 | 0 | 513,011 | 99.0 |
| **Total** | **391,203** | **86,731** | **38,078** | **0** | **855** | **127** | **1,395** | **0** | **518,389** | **100.0** |
| **Other fish** | Yes | 8,948 | 50 | 92 | 0 | 0 | 0 | 49 | 0 | 9,139 | 1.1 |
| No | 466,210 | 123,524 | 83,458 | 0 | 57,975 | 48,711 | 11,848 | 0 | 791,726 | 98.9 |
| **Total** | **475,158** | **123,574** | **83,550** | **0** | **57,975** | **48,711** | **11,897** | **0** | **800,865** | **100.0** |
| **Cephalopods** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **No** | **352** | **8,517** | **0** | **0** | **0** | **0** | **15** | **0** | **8,884** | **100.0** |
| **Total** | **352** | **8,517** | **0** | **0** | **0** | **0** | **15** | **0** | **8,884** | **100.0** |
| **All Species** | **Yes** | **64,165** | **24,821** | **50,776** | **53,147** | **2,117** | **0** | **15,486** | **40** | **210,552** | **2.1** |
| **No** | **4,764,368** | **2,189,213** | **2,164,056** | **402,287** | **76,286** | **71,852** | **149,009** | **875** | **9,817,946** | **97.9** |
| **Total** | **4,828,533** | **2,214,034** | **2,214,832** | **455,434** | **78,403** | **71,852** | **164,495** | **915** | **10,028,498** | **100.0** |

Table 14: Genetic status of animals used by species and main categories of scientific purposes (2016)

|  | **Genetic status** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Not altered | 1,448,135 | 1,026,697 | 1,067,308 | 51,402 | 2,203 | 333 | 67,499 | 64 | 3,663,641 | 60.6 |
| Non harmful | 1,546,445 | 356,991 | 49,339 | 670 | 49 | 13,876 | 8,224 | 40 | 1,975,634 | 32.7 |
| Harmful | 278,525 | 124,105 | 1,286 | 0 | 0 | 201 | 527 | 28 | 404,672 | 6.7 |
| **Total** | **3,273,105** | **1,507,793** | **1,117,933** | **52,072** | **2,252** | **14,410** | **76,250** | **132** | **6,043,947** | **100.0** |
| **Rats** | Not altered | 317,730 | 243,625 | 551,023 | 1,840 | 4,517 | 82 | 43,185 | 54 | 1,162,056 | 97.6 |
| Non harmful | 13,013 | 3,988 | 2,620 | 302 | 14 | 142 | 251 | 0 | 20,330 | 1.7 |
| Harmful | 4,106 | 4,256 | 50 | 0 | 0 | 0 | 12 | 0 | 8,424 | 0.7 |
| **Total** | **334,849** | **251,869** | **553,693** | **2,142** | **4,531** | **224** | **43,448** | **54** | **1,190,810** | **100.0** |
| **Guinea-Pigs** | Not altered | 23,508 | 9,235 | 116,318 | 783 | 0 | 0 | 1,863 | 0 | 151,707 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **23,508** | **9,235** | **116,318** | **783** | **0** | **0** | **1,863** | **0** | **151,707** | **100.0** |
| **Hamsters (Syrian)** | Not altered | 2,853 | 4,682 | 10,669 | 249 | 0 | 0 | 219 | 0 | 18,672 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **2,853** | **4,682** | **10,669** | **249** | **0** | **0** | **219** | **0** | **18,672** | **100.0** |
| **Hamsters (Chinese)** | Not altered | 0 | 287 | 230 | 0 | 0 | 0 | 2 | 0 | 519 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **0** | **287** | **230** | **0** | **0** | **0** | **2** | **0** | **519** | **100.0** |
| **Mongolian gerbil** | Not altered | 1,561 | 2,267 | 1,961 | 198 | 0 | 0 | 85 | 0 | 6,072 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,561** | **2,267** | **1,961** | **198** | **0** | **0** | **85** | **0** | **6,072** | **100.0** |
| **Other rodents** | Not altered | 9,653 | 559 | 3,334 | 0 | 444 | 40 | 19 | 0 | 14,049 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **9,653** | **559** | **3,334** | **0** | **444** | **40** | **19** | **0** | **14,049** | **100.0** |
| **Rabbits** | Not altered | 26,899 | 15,446 | 90,910 | 200,806 | 196 | 0 | 2,097 | 0 | 336,354 | 92.4 |
| Non harmful | 29 | 0 | 0 | 27,719 | 0 | 0 | 0 | 0 | 27,748 | 7.6 |
| Harmful | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0.0 |
| **Total** | **26,958** | **15,446** | **90,910** | **228,525** | **196** | **0** | **2,097** | **0** | **364,132** | **100.0** |
| **Cats** | Not altered | 805 | 1,619 | 1,030 | 27 | 0 | 0 | 214 | 0 | 3,695 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **805** | **1,619** | **1,030** | **27** | **0** | **0** | **214** | **0** | **3,695** | **100.0** |
| **Dogs** | Not altered | 1,777 | 9,223 | 11,833 | 172 | 0 | 0 | 403 | 0 | 23,408 | 99.8 |
| Non harmful | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0.1 |
| Harmful | 13 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0.1 |
| **Total** | **1,790** | **9,254** | **11,833** | **172** | **0** | **0** | **403** | **0** | **23,452** | **100.0** |
| **Ferrets** | Not altered | 196 | 875 | 461 | 14 | 0 | 0 | 64 | 0 | 1,610 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **196** | **875** | **461** | **14** | **0** | **0** | **64** | **0** | **1,610** | **100.0** |
| **Other carnivores** | Not altered | 797 | 385 | 531 | 3 | 69 | 52 | 0 | 0 | 1,837 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **797** | **385** | **531** | **3** | **69** | **52** | **0** | **0** | **1,837** | **100.0** |
| **Horses, donkeys and cross-breeds** | Not altered | 2,405 | 1,913 | 286 | 8,187 | 12 | 20 | 301 | 0 | 13,124 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **2,405** | **1,913** | **286** | **8,187** | **12** | **20** | **301** | **0** | **13,124** | **100.0** |
| **Pigs** | Not altered | 19,069 | 37,704 | 13,920 | 245 | 522 | 0 | 11,319 | 62 | 82,841 | 99.6 |
| Non harmful | 54 | 124 | 0 | 0 | 0 | 0 | 0 | 0 | 178 | 0.2 |
| Harmful | 24 | 147 | 0 | 0 | 0 | 0 | 0 | 0 | 171 | 0.2 |
| **Total** | **19,147** | **37,975** | **13,920** | **245** | **522** | **0** | **11,319** | **62** | **83,190** | **100.0** |
| **Goats** | Not altered | 1,253 | 532 | 90 | 76 | 50 | 0 | 216 | 0 | 2,217 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,253** | **532** | **90** | **76** | **50** | **0** | **216** | **0** | **2,217** | **100.0** |
| **Sheep** | Not altered | 9,233 | 10,065 | 1,935 | 45,111 | 41 | 0 | 1,397 | 92 | 67,874 | 100.0 |
| Non harmful | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **9,253** | **10,065** | **1,935** | **45,111** | **41** | **0** | **1,397** | **92** | **67,894** | **100.0** |
| **Cattle** | Not altered | 10,040 | 11,731 | 3,084 | 149 | 2,033 | 28 | 6,213 | 25 | 33,303 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **10,040** | **11,731** | **3,084** | **149** | **2,033** | **28** | **6,213** | **25** | **33,303** | **100.0** |
| **Prosimians** | Not altered | 117 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 118 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **117** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **118** | **100.0** |
| **Marmoset and tamarins** | Not altered | 243 | 98 | 18 | 16 | 0 | 0 | 1 | 0 | 376 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **243** | **98** | **18** | **16** | **0** | **0** | **1** | **0** | **376** | **100.0** |
| **Squirrel monkey** | Not altered | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **8** | **100.0** |
| **Cynomolgus monkey** | Not altered | 561 | 1,220 | 6,433 | 1,022 | 0 | 0 | 45 | 0 | 9,281 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **561** | **1,220** | **6,433** | **1,022** | **0** | **0** | **45** | **0** | **9,281** | **100.0** |
| **Rhesus monkey** | Not altered | 254 | 208 | 96 | 3 | 0 | 0 | 5 | 0 | 566 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **254** | **208** | **96** | **3** | **0** | **0** | **5** | **0** | **566** | **100.0** |
| **Vervets Chlorocebus spp** | Not altered | 6 | 22 | 0 | 13 | 0 | 0 | 0 | 0 | 41 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **6** | **22** | **0** | **13** | **0** | **0** | **0** | **0** | **41** | **100.0** |
| **Baboons** | Not altered | 71 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **71** | **29** | **0** | **0** | **0** | **0** | **0** | **0** | **100** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Not altered | 8 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8** | **18** | **0** | **0** | **0** | **0** | **0** | **0** | **26** | **100.0** |
| **Other mammals** | Not altered | 3,146 | 195 | 8 | 29 | 182 | 259 | 87 | 0 | 3,906 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **3,146** | **195** | **8** | **29** | **182** | **259** | **87** | **0** | **3,906** | **100.0** |
| **Domestic fowl** | Not altered | 136,789 | 106,214 | 149,782 | 105,869 | 3,281 | 709 | 3,510 | 536 | 506,690 | 99.9 |
| Non harmful | 354 | 339 | 0 | 0 | 0 | 0 | 0 | 0 | 693 | 0.1 |
| Harmful | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0.0 |
| **Total** | **137,171** | **106,553** | **149,782** | **105,869** | **3,281** | **709** | **3,510** | **536** | **507,411** | **100.0** |
| **Other birds** | Not altered | 60,211 | 15,546 | 8,292 | 10,229 | 1,547 | 855 | 715 | 14 | 97,409 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **60,211** | **15,546** | **8,292** | **10,229** | **1,547** | **855** | **715** | **14** | **97,409** | **100.0** |
| **Reptiles** | Not altered | 8,167 | 16 | 0 | 300 | 65 | 0 | 27 | 0 | 8,575 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **8,167** | **16** | **0** | **300** | **65** | **0** | **27** | **0** | **8,575** | **100.0** |
| **Rana** | Not altered | 676 | 0 | 80 | 0 | 1,450 | 0 | 2,276 | 0 | 4,482 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **676** | **0** | **80** | **0** | **1,450** | **0** | **2,276** | **0** | **4,482** | **100.0** |
| **Xenopus** | Not altered | 20,363 | 1,508 | 205 | 0 | 608 | 0 | 131 | 0 | 22,815 | 81.8 |
| Non harmful | 4,452 | 73 | 0 | 0 | 0 | 0 | 0 | 0 | 4,525 | 16.2 |
| Harmful | 564 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 564 | 2.0 |
| **Total** | **25,379** | **1,581** | **205** | **0** | **608** | **0** | **131** | **0** | **27,904** | **100.0** |
| **Other amphibians** | Not altered | 7,194 | 3,238 | 72 | 0 | 2,290 | 6,417 | 281 | 0 | 19,492 | 97.8 |
| Non harmful | 435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 435 | 2.2 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **7,629** | **3,238** | **72** | **0** | **2,290** | **6,417** | **281** | **0** | **19,927** | **100.0** |
| **Zebra fish** | Not altered | 115,779 | 33,684 | 38,078 | 0 | 855 | 68 | 1,056 | 0 | 189,520 | 36.6 |
| Non harmful | 259,374 | 48,473 | 0 | 0 | 0 | 59 | 339 | 0 | 308,245 | 59.5 |
| Harmful | 16,050 | 4,574 | 0 | 0 | 0 | 0 | 0 | 0 | 20,624 | 4.0 |
| **Total** | **391,203** | **86,731** | **38,078** | **0** | **855** | **127** | **1,395** | **0** | **518,389** | **100.0** |
| **Other fish** | Not altered | 471,548 | 119,675 | 83,395 | 0 | 57,975 | 48,711 | 11,897 | 0 | 793,201 | 99.0 |
| Non harmful | 3,078 | 3,899 | 155 | 0 | 0 | 0 | 0 | 0 | 7,132 | 0.9 |
| Harmful | 532 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 532 | 0.1 |
| **Total** | **475,158** | **123,574** | **83,550** | **0** | **57,975** | **48,711** | **11,897** | **0** | **800,865** | **100.0** |
| **Cephalopods** | Not altered | 352 | 8,517 | 0 | 0 | 0 | 0 | 15 | 0 | 8,884 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **352** | **8,517** | **0** | **0** | **0** | **0** | **15** | **0** | **8,884** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **All Species** | **Harmful** | **299,872** | **133,099** | **1,336** | **0** | **0** | **201** | **539** | **28** | **435,075** | **4.3** |
| **Non harmful** | **1,827,254** | **413,901** | **52,114** | **28,691** | **63** | **14,077** | **8,814** | **40** | **2,344,954** | **23.4** |
| **Not altered** | **2,701,407** | **1,667,034** | **2,161,382** | **426,743** | **78,340** | **57,574** | **155,142** | **847** | **7,248,469** | **72.3** |
| **Total** | **4,828,533** | **2,214,034** | **2,214,832** | **455,434** | **78,403** | **71,852** | **164,495** | **915** | **10,028,498** | **100.0** |

#### Part 3: Numbers and uses of animals for the creation and maintenance of genetically altered animals in the EU

Table 15: Use of animals for the creation of new genetically altered animal lines by research type species and severity (2016)

|  | **Severity** | **Basic research** | **Translational and applied research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 11,199 | 1,429 | 12,628 | 3.5 |
| Mild | 253,536 | 16,280 | 269,816 | 75.0 |
| Moderate | 56,436 | 12,345 | 68,781 | 19.1 |
| Severe | 7,988 | 681 | 8,669 | 2.4 |
| **Total** | **329,159** | **30,735** | **359,894** | **100.0** |
| **Rats** | Non-recovery | 519 | 12 | 531 | 8.8 |
| Mild | 2,990 | 416 | 3,406 | 56.4 |
| Moderate | 1,670 | 53 | 1,723 | 28.5 |
| Severe | 347 | 32 | 379 | 6.3 |
| **Total** | **5,526** | **513** | **6,039** | **100.0** |
| **Guinea-Pigs** | Non-recovery | 47 | 0 | 47 | 100.0 |
| Mild | 0 | 0 | 0 | 0.0 |
| Moderate | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **47** | **0** | **47** | **100.0** |
| **Other rodents** | Non-recovery | 6 | 0 | 6 | 100.0 |
| Mild | 0 | 0 | 0 | 0.0 |
| Moderate | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **6** | **0** | **6** | **100.0** |
| **Rabbits** | Non-recovery | 223 | 371 | 594 | 61.4 |
| Mild | 0 | 0 | 0 | 0.0 |
| Moderate | 17 | 356 | 373 | 38.6 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **240** | **727** | **967** | **100.0** |
| **Pigs** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 184 | 12 | 196 | 69.0 |
| Moderate | 61 | 0 | 61 | 21.5 |
| Severe | 27 | 0 | 27 | 9.5 |
| **Total** | **272** | **12** | **284** | **100.0** |
| **Sheep** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 24 | 0 | 24 | 12.6 |
| Moderate | 167 | 0 | 167 | 87.4 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **191** | **0** | **191** | **100.0** |
| **Domestic fowl** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 401 | 114 | 515 | 100.0 |
| Moderate | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **401** | **114** | **515** | **100.0** |
| **Xenopus** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 965 | 85 | 1,050 | 95.5 |
| Moderate | 50 | 0 | 50 | 4.5 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **1,015** | **85** | **1,100** | **100.0** |
| **Zebra fish** | Non-recovery | 1,643 | 0 | 1,643 | 1.3 |
| Mild | 107,496 | 1,779 | 109,275 | 89.5 |
| Moderate | 8,868 | 0 | 8,868 | 7.3 |
| Severe | 2,033 | 263 | 2,296 | 1.9 |
| **Total** | **120,040** | **2,042** | **122,082** | **100.0** |
| **Other fish** | Non-recovery | 558 | 0 | 558 | 5.2 |
| Mild | 10,040 | 0 | 10,040 | 93.5 |
| Moderate | 139 | 0 | 139 | 1.3 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **10,737** | **0** | **10,737** | **100.0** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **14,195** | **1,812** | **16,007** | **3.2** |
| **Mild** | **375,636** | **18,686** | **394,322** | **78.6** |
| **Moderate** | **67,408** | **12,754** | **80,162** | **16.0** |
| **Severe** | **10,395** | **976** | **11,371** | **2.3** |
| **Total** | **467,634** | **34,228** | **501,862** | **100.0** |

Table 16: Use of animals for the creation of new genetically altered animal lines by research type species and severity (2016)

|  | **Reuse** | **Basic research** | **Translational and applied research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 2,396 | 21 | 2,417 | 0.7 |
| No | 326,763 | 30,714 | 357,477 | 99.3 |
| **Total** | **329,159** | **30,735** | **359,894** | **100.0** |
| **Rats** | Yes | 0 | 0 | 0 | 0.0 |
| No | 5,526 | 513 | 6,039 | 100.0 |
| **Total** | **5,526** | **513** | **6,039** | **100.0** |
| **Guinea-Pigs** | Yes | 0 | 0 | 0 | 0.0 |
| No | 47 | 0 | 47 | 100.0 |
| **Total** | **47** | **0** | **47** | **100.0** |
| **Other rodents** | Yes | 0 | 0 | 0 | 0.0 |
| No | 6 | 0 | 6 | 100.0 |
| **Total** | **6** | **0** | **6** | **100.0** |
| **Rabbits** | Yes | 0 | 0 | 0 | 0.0 |
| No | 240 | 727 | 967 | 100.0 |
| **Total** | **240** | **727** | **967** | **100.0** |
| **Pigs** | Yes | 0 | 0 | 0 | 0.0 |
| No | 272 | 12 | 284 | 100.0 |
| **Total** | **272** | **12** | **284** | **100.0** |
| **Sheep** | Yes | 0 | 0 | 0 | 0.0 |
| No | 191 | 0 | 191 | 100.0 |
| **Total** | **191** | **0** | **191** | **100.0** |
| **Domestic fowl** | Yes | 0 | 0 | 0 | 0.0 |
| No | 401 | 114 | 515 | 100.0 |
| **Total** | **401** | **114** | **515** | **100.0** |
| **Xenopus** | Yes | 0 | 0 | 0 | 0.0 |
| No | 1,015 | 85 | 1,100 | 100.0 |
| **Total** | **1,015** | **85** | **1,100** | **100.0** |
| **Zebra fish** | Yes | 6,289 | 0 | 6,289 | 5.2 |
| No | 113,751 | 2,042 | 115,793 | 94.8 |
| **Total** | **120,040** | **2,042** | **122,082** | **100.0** |
| **Other fish** | Yes | 0 | 0 | 0 | 0.0 |
| No | 10,737 | 0 | 10,737 | 100.0 |
| **Total** | **10,737** | **0** | **10,737** | **100.0** |
|  |  |  |  |  |  |
| **All Species** | **Yes** | **8,685** | **21** | **8,706** | **1.7** |
| **No** | **458,949** | **34,207** | **493,156** | **98.3** |
| **Total** | **467,634** | **34,228** | **501,862** | **100.0** |

Table 17: Uses of animals for the creation of new genetically altered animal lines in basic research by species and type of research (2016)

|  | **Oncology** | **Cardiovascular Blood and Lymphatic System** | **Nervous System** | **Respiratory System** | **Gastrointestinal System including Liver** | **Musculoskeletal System** | **Immune System** | **Urogenital/Reproductive System** | **Sensory Organs (skin, eyes and ears)** | **Endocrine System/Metabolism** | **Multisystemic** | **Ethology / Animal Behaviour /Animal Biology** | **Other basic research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| Mice | 60,864 | 13,916 | 52,874 | 213 | 6,317 | 5,259 | 35,124 | 12,918 | 8,165 | 13,900 | 87,472 | 207 | 31,930 | **329,159** | **70.4** |
| Rats | 0 | 1,272 | 1,697 | 0 | 1 | 0 | 283 | 34 | 0 | 0 | 1,336 | 0 | 903 | **5,526** | **1.2** |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 0 | **47** | **0** |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | **6** | **0** |
| **Rabbits** | | | | | | | | | | | | | | | |
| Rabbits | 0 | 76 | 0 | 0 | 0 | 116 | 0 | 24 | 0 | 0 | 0 | 0 | 24 | **240** | **0.1** |
| **Farm animals** | | | | | | | | | | | | | | | |
| Pigs | 0 | 3 | 27 | 0 | 0 | 0 | 135 | 0 | 0 | 13 | 94 | 0 | 0 | **272** | **0.1** |
| Sheep | 0 | 0 | 2 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 167 | 0 | 0 | **191** | **0** |
| **Non-human primates** | | | | | | | | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 54 | 0 | 0 | 249 | 0 | 0 | **401** | **0.1** |
| **Amphibians** | | | | | | | | | | | | | | | |
| Xenopus | 0 | 201 | 176 | 0 | 0 | 0 | 0 | 0 | 300 | 198 | 0 | 0 | 140 | **1,015** | **0.2** |
| **Fish** | | | | | | | | | | | | | | | |
| Zebra fish | 2,879 | 24,519 | 23,840 | 0 | 540 | 2,245 | 9,585 | 5,934 | 11,439 | 2,164 | 25,629 | 2,300 | 8,966 | **120,040** | **25.7** |
| Other fish | 126 | 6 | 558 | 0 | 0 | 0 | 0 | 1,573 | 7,601 | 0 | 860 | 0 | 13 | **10,737** | **2.3** |
| **Totals** | | | | | | | | | | | | | | | |
| **Total** | **63,869** | **39,993** | **79,174** | **235** | **6,858** | **7,620** | **45,225** | **20,584** | **27,505** | **16,275** | **115,807** | **2,513** | **41,976** | **467,634** | **100** |
| **%** | **13.7** | **8.6** | **16.9** | **0.1** | **1.5** | **1.6** | **9.7** | **4.4** | **5.9** | **3.5** | **24.8** | **0.5** | **9** | **100** |  |

Table 18.1: Uses of animals for the creation of new genetically altered animal lines in basic, translational and applied research by species and type of research (Part 1) (2016)

|  | **Human Cancer** | **Human Infectious Disorders** | **Human Cardiovascular Disorders** | **Human Nervous and Mental Disorders** | **Human Respiratory Disorders** | **Human Gastrointestinal Disorders including Liver** | **Human Musculoskeletal Disorders** | **Human Immune Disorders** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | |
| **Rodents** | | | | | | | | |
| Mice | 14,063 | 386 | 2,391 | 2,950 | 407 | 1,117 | 481 | 745 |
| Rats | 99 | 0 | 0 | 0 | 0 | 0 | 88 | 0 |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rabbits** | | | | | | | | |
| Rabbits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | |
| Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Non-human primates** | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Birds** | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | |
| Zebra fish | 0 | 461 | 100 | 0 | 0 | 0 | 396 | 0 |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | |
| **Total** | **14,162** | **847** | **2,491** | **2,950** | **407** | **1,117** | **965** | **745** |
| **%** | **41.7** | **2.5** | **7.3** | **8.7** | **1.2** | **3.3** | **2.8** | **2.2** |

Table 18.2: Uses of animals for the creation of new genetically altered animal lines in basic translational and applied research by species and type of research (Part 2) (2016)

|  | **Human Urogenital/Reproductive Disorders** | **Human Sensory Organ Disorders (skin, eyes and ears)** | **Human Endocrine/Metabolism Disorders** | **Other Human Disorders** | **Animal Diseases and Disorders** | **Animal Welfare** | **Diagnosis of diseases** | **Non-regulatory toxicology and ecotoxicology** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | |
| **Rodents** | | | | | | | | | | |
| Mice | 481 | 487 | 5,682 | 1,107 | 197 | 0 | 239 | 2 | **30,735** | **89.8** |
| Rats | 0 | 234 | 0 | 0 | 0 | 92 | 0 | 0 | **513** | **1.5** |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Rabbits** | | | | | | | | | | |
| Rabbits | 0 | 0 | 565 | 0 | 162 | 0 | 0 | 0 | **727** | **2.1** |
| **Farm animals** | | | | | | | | | | |
| Pigs | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | **12** | **0** |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Non-human primates** | | | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 20 | 94 | 0 | 0 | 0 | **114** | **0.3** |
| **Amphibians** | | | | | | | | | | |
| Xenopus | 0 | 85 | 0 | 0 | 0 | 0 | 0 | 0 | **85** | **0.2** |
| **Fish** | | | | | | | | | | |
| Zebra fish | 0 | 1,073 | 0 | 12 | 0 | 0 | 0 | 0 | **2,042** | **6** |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | |
| **Total** | **481** | **1,879** | **6,247** | **1,139** | **465** | **92** | **239** | **2** | **34,228** | **100** |
| **%** | **1.4** | **5.5** | **18.3** | **3.3** | **1.4** | **0.3** | **0.7** | **0** | **100** |  |

Table 19: Uses of animals for the maintenance of colonies of established genetically altered animal lines by species, severity and genetic status (2016)

|  | **Severity** | **Genetically altered with a harmful phenotype** | **Genetically altered without a harmful phenotype** | **Not genetically altered** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 244 | 425 | 47 | 716 | 0.1 |
| Mild | 133,810 | 372,090 | 32,786 | 538,686 | 86.3 |
| Moderate | 22,041 | 15,269 | 8,357 | 45,667 | 7.3 |
| Severe | 29,336 | 9,515 | 68 | 38,919 | 6.2 |
| **Total** | **185,431** | **397,299** | **41,258** | **623,988** | **100.0** |
| **Rats** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 3,887 | 3,101 | 258 | 7,246 | 78.0 |
| Moderate | 436 | 56 | 1,059 | 1,551 | 16.7 |
| Severe | 428 | 47 | 22 | 497 | 5.3 |
| **Total** | **4,751** | **3,204** | **1,339** | **9,294** | **100.0** |
| **Dogs** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 0 | 0 | 0 | 0.0 |
| Moderate | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 17 | 0 | 0 | 17 | 100.0 |
| **Total** | **17** | **0** | **0** | **17** | **100.0** |
| **Other mammals** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 0 | 4 | 4 | 100.0 |
| Moderate | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **0** | **0** | **4** | **4** | **100.0** |
| **Domestic fowl** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 345 | 32 | 377 | 64.8 |
| Moderate | 135 | 0 | 0 | 135 | 23.2 |
| Severe | 70 | 0 | 0 | 70 | 12.0 |
| **Total** | **205** | **345** | **32** | **582** | **100.0** |
| **Xenopus** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 141 | 79 | 220 | 84.9 |
| Moderate | 0 | 14 | 0 | 14 | 5.4 |
| Severe | 0 | 25 | 0 | 25 | 9.7 |
| **Total** | **0** | **180** | **79** | **259** | **100.0** |
| **Zebra fish** | Non-recovery | 0 | 286 | 29 | 315 | 0.5 |
| Mild | 3,018 | 55,371 | 4,217 | 62,606 | 93.7 |
| Moderate | 480 | 2,694 | 187 | 3,361 | 5.0 |
| Severe | 3 | 503 | 6 | 512 | 0.8 |
| **Total** | **3,501** | **58,854** | **4,439** | **66,794** | **100.0** |
| **Other fish** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 1 | 0 | 0 | 1 | 0.2 |
| Moderate | 0 | 570 | 0 | 570 | 99.8 |
| Severe | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1** | **570** | **0** | **571** | **100.0** |
|  |  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **244** | **711** | **76** | **1,031** | **0.1** |
| **Mild** | **140,716** | **431,048** | **37,376** | **609,140** | **86.8** |
| **Moderate** | **23,092** | **18,603** | **9,603** | **51,298** | **7.3** |
| **Severe** | **29,854** | **10,090** | **96** | **40,040** | **5.7** |
| **Total** | **193,906** | **460,452** | **47,151** | **701,509** | **100.0** |

Table 20: Uses of animals for the maintenance of colonies of established genetically altered animal lines by species, reuse and genetic status (2016)

|  | **Reuse** | **Not genetically altered** | **Genetically altered without a harmful phenotype** | **Genetically altered with a harmful phenotype** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 0 | 191 | 0 | 191 | 0.0 |
| No | 41,258 | 397,108 | 185,431 | 623,797 | 100.0 |
| **Total** | **41,258** | **397,299** | **185,431** | **623,988** | **100.0** |
| **Rats** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 1,339 | 3,204 | 4,751 | 9,294 | 100.0 |
| **Total** | **1,339** | **3,204** | **4,751** | **9,294** | **100.0** |
| **Dogs** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 0 | 17 | 17 | 100.0 |
| **Total** | **0** | **0** | **17** | **17** | **100.0** |
| **Other mammals** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 4 | 0 | 0 | 4 | 100.0 |
| **Total** | **4** | **0** | **0** | **4** | **100.0** |
| **Domestic fowl** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 32 | 345 | 205 | 582 | 100.0 |
| **Total** | **32** | **345** | **205** | **582** | **100.0** |
| **Xenopus** | Yes | 69 | 41 | 0 | 110 | 42.5 |
| No | 10 | 139 | 0 | 149 | 57.5 |
| **Total** | **79** | **180** | **0** | **259** | **100.0** |
| **Zebra fish** | Yes | 303 | 369 | 0 | 672 | 1.0 |
| No | 4,136 | 58,485 | 3,501 | 66,122 | 99.0 |
| **Total** | **4,439** | **58,854** | **3,501** | **66,794** | **100.0** |
| **Other fish** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 570 | 1 | 571 | 100.0 |
| **Total** | **0** | **570** | **1** | **571** | **100.0** |
|  |  |  |  |  |  |  |
| **All Species** | **Yes** | **372** | **601** | **0** | **973** | **0.1** |
| **No** | **46,779** | **459,851** | **193,906** | **700,536** | **99.9** |
| **Total** | **47,151** | **460,452** | **193,906** | **701,509** | **100.0** |

### EU statistical tables 2017

#### Part 1: Numbers of animals used for research, testing, routine production and educational purposes in the EU

Table 1: Numbers of animals used for the first time by species (2017)

|  | **Number of animals** | **%** |
| --- | --- | --- |
| **Mammals** | | |
| **Rodents** | | |
| Mice | 5,707,471 | **60.8** |
| Rats | 1,146,299 | **12.2** |
| Guinea-Pigs | 144,824 | **1.5** |
| Hamsters (Syrian) | 12,700 | **0.1** |
| Hamsters (Chinese) | 187 | **0** |
| Mongolian gerbil | 5,239 | **0.1** |
| Other rodents | 25,172 | **0.3** |
| **Rabbits** | | |
| Rabbits | 351,961 | **3.7** |
| **Carnivores** | | |
| Cats | 1,879 | **0** |
| Dogs | 13,688 | **0.1** |
| Ferrets | 2,016 | **0** |
| Other carnivores | 2,386 | **0** |
| **Farm animals** | | |
| Horses, donkeys and cross-breeds | 2,414 | **0** |
| Pigs | 71,522 | **0.8** |
| Goats | 1,563 | **0** |
| Sheep | 18,812 | **0.2** |
| Cattle | 30,643 | **0.3** |
| **Non-human primates** | | |
| Prosimians | 98 | **0** |
| Marmoset and tamarins | 465 | **0** |
| Squirrel monkey | 8 | **0** |
| Other species of new world monkeys (Ceboidea) | 3 | **0** |
| Cynomolgus monkey | 7,227 | **0.1** |
| Rhesus monkey | 353 | **0** |
| Vervets (Chlorocebus spp.) | 33 | **0** |
| Baboons | 25 | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 23 | **0** |
| **Other mammals** | | |
| Other mammals | 26,335 | **0.3** |
| **Birds** | | |
| Domestic fowl | 464,553 | **4.9** |
| Other birds | 99,410 | **1.1** |
| **Reptiles** | | |
| Reptiles | 2,937 | **0** |
| **Amphibians** | | |
| Rana | 3,485 | **0** |
| Xenopus | 13,539 | **0.1** |
| Other amphibians | 10,683 | **0.1** |
| **Fish** | | |
| Zebra fish | 499,763 | **5.3** |
| Other fish | 719,932 | **7.7** |
| **Cephalopods** | | |
| Cephalopods | 514 | **0** |
| **Totals** | | |
| **Total** | **9,388,162** | **100** |
| **%** | **100** |  |

Table 2: Place of birth by species (other than non-human primates) (2017)

|  | **Animals born in the EU at a registered breeder** | **Animals born in the EU but not at a registered breeder** | **Animals born in rest of Europe** | **Animals born in rest of world** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | |
| **Rodents** | | | | | | |
| Mice | 5,444,375 | 204,383 | 14,171 | 44,542 | **5,707,471** | **60.8** |
| Rats | 1,125,076 | 14,131 | 1,909 | 5,183 | **1,146,299** | **12.2** |
| Guinea-Pigs | 143,202 | 1,622 | 0 | 0 | **144,824** | **1.5** |
| Hamsters (Syrian) | 11,573 | 0 | 9 | 1,118 | **12,700** | **0.1** |
| Hamsters (Chinese) | 175 | 0 | 0 | 12 | **187** | **0** |
| Mongolian gerbil | 4,998 | 230 | 0 | 11 | **5,239** | **0.1** |
| Other rodents | 9,415 | 15,104 | 98 | 555 | **25,172** | **0.3** |
| **Rabbits** | | | | | | |
| Rabbits | 348,078 | 2,242 | 148 | 1,493 | **351,961** | **3.8** |
| **Carnivores** | | | | | | |
| Cats | 893 | 828 | 0 | 158 | **1,879** | **0** |
| Dogs | 4,740 | 4,408 | 0 | 4,540 | **13,688** | **0.1** |
| Ferrets | 1,836 | 100 | 24 | 56 | **2,016** | **0** |
| Other carnivores | 829 | 1,550 | 7 | 0 | **2,386** | **0** |
| **Farm animals** | | | | | | |
| Horses, donkeys and cross-breeds | 510 | 1,904 | 0 | 0 | **2,414** | **0** |
| Pigs | 37,465 | 33,994 | 54 | 9 | **71,522** | **0.8** |
| Goats | 497 | 1,055 | 11 | 0 | **1,563** | **0** |
| Sheep | 8,069 | 10,472 | 271 | 0 | **18,812** | **0.2** |
| Cattle | 9,174 | 21,234 | 235 | 0 | **30,643** | **0.3** |
| **Other mammals** | | | | | | |
| Other mammals | 1,855 | 6,399 | 4 | 18,077 | **26,335** | **0.3** |
| **Birds** | | | | | | |
| Domestic fowl | 345,031 | 119,522 | 0 | 0 | **464,553** | **5** |
| Other birds | 38,965 | 59,241 | 563 | 641 | **99,410** | **1.1** |
| **Reptiles** | | | | | | |
| Reptiles | 53 | 2,357 | 259 | 268 | **2,937** | **0** |
| **Amphibians** | | | | | | |
| Rana | 2,462 | 1,023 | 0 | 0 | **3,485** | **0** |
| Xenopus | 9,627 | 598 | 96 | 3,218 | **13,539** | **0.1** |
| Other amphibians | 3,630 | 6,924 | 73 | 56 | **10,683** | **0.1** |
| **Fish** | | | | | | |
| Zebra fish | 467,011 | 28,081 | 2,376 | 2,295 | **499,763** | **5.3** |
| Other fish | 417,282 | 224,826 | 52,644 | 25,180 | **719,932** | **7.7** |
| **Cephalopods** | | | | | | |
| Cephalopods | 450 | 60 | 0 | 4 | **514** | **0** |
| **Totals** | | | | | | |
| **Total** | **8,437,271** | **762,288** | **72,952** | **107,416** | **9,379,927** | **100** |
| **%** | **90** | **8.1** | **0.8** | **1.1** | **100** |  |

Table 3: Source of non-human primates by species (2017)

|  | **Animals born at a registered breeder within EU** | **Animals born in rest of Europe** | **Animals born in Asia** | **Animals born in America** | **Animals born in Africa** | **Animals born elsewhere** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-human primates** | | | | | | | | |
| **New World Monkeys** | | | | | | | | |
| Prosimians | 98 | 0 | 0 | 0 | 0 | 0 | **98** | **1.2** |
| Marmoset and tamarins | 377 | 0 | 0 | 0 | 42 | 46 | **465** | **5.6** |
| Squirrel monkey | 5 | 0 | 0 | 2 | 0 | 1 | **8** | **0.1** |
| Other species of new world monkeys (Ceboidea) | 3 | 0 | 0 | 0 | 0 | 0 | **3** | **0** |
| **Old World Monkeys** | | | | | | | | |
| Cynomolgus monkey | 218 | 5 | 2,591 | 0 | 4,290 | 123 | **7,227** | **87.8** |
| Rhesus monkey | 317 | 0 | 14 | 19 | 3 | 0 | **353** | **4.3** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 33 | 0 | 0 | **33** | **0.4** |
| Baboons | 25 | 0 | 0 | 0 | 0 | 0 | **25** | **0.3** |
| Other species of old world monkeys (Cercopithecoidea) | 14 | 0 | 9 | 0 | 0 | 0 | **23** | **0.3** |
| **Totals** | | | | | | | | |
| **Total** | **1,057** | **5** | **2,614** | **54** | **4,335** | **170** | **8,235** | **100** |
| **%** | **12.8** | **0.1** | **31.7** | **0.7** | **52.6** | **2.1** | **100** |  |

Table 4: Generation of non-human primates by species (2017)

|  | **F0** | **F1** | **F2 or greater** | **Self-sustaining colony** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Non-human primates** | | | | | | |
| **New World Monkeys** | | | | | | |
| Prosimians | 0 | 0 | 0 | 98 | **98** | **1.2** |
| Marmoset and tamarins | 0 | 0 | 244 | 221 | **465** | **5.6** |
| Squirrel monkey | 0 | 2 | 6 | 0 | **8** | **0.1** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 3 | 0 | **3** | **0** |
| **Old World Monkeys** | | | | | | |
| Cynomolgus monkey | 0 | 1,335 | 3,956 | 1,936 | **7,227** | **87.8** |
| Rhesus monkey | 0 | 7 | 109 | 237 | **353** | **4.3** |
| Vervets (Chlorocebus spp.) | 0 | 14 | 19 | 0 | **33** | **0.4** |
| Baboons | 0 | 5 | 8 | 12 | **25** | **0.3** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 23 | 0 | **23** | **0.3** |
| **Totals** | | | | | | |
| **Total** | **0** | **1,363** | **4,368** | **2,504** | **8,235** | **100** |
| **%** | **0** | **16.6** | **53** | **30.4** | **100** |  |

#### Part 2: Details of all uses of animals for research, testing, routine production and educational purposes in the EU

Table 5: Uses of animals by species, main categories of scientific purposes and severities (2017)

|  | **Severity** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 325,637 | 41,412 | 2,526 | 59 | 3 | 0 | 17,895 | 0 | 387,532 | 6.7 |
| Mild | 1,301,419 | 553,601 | 533,064 | 2,536 | 2,360 | 13,313 | 45,524 | 8 | 2,451,825 | 42.6 |
| Moderate | 1,161,119 | 716,532 | 223,700 | 15,291 | 330 | 39 | 21,420 | 0 | 2,138,431 | 37.2 |
| Severe | 246,193 | 219,421 | 280,515 | 31,664 | 54 | 0 | 486 | 0 | 778,333 | 13.5 |
| **Total** | **3,034,368** | **1,530,966** | **1,039,805** | **49,550** | **2,747** | **13,352** | **85,325** | **8** | **5,756,121** | **100.0** |
| **Rats** | Non-recovery | 66,361 | 23,448 | 5,187 | 1,203 | 6 | 0 | 22,105 | 0 | 118,310 | 10.2 |
| Mild | 83,756 | 86,567 | 368,165 | 1,319 | 127 | 0 | 13,407 | 0 | 553,341 | 47.5 |
| Moderate | 130,341 | 109,438 | 173,627 | 23 | 1,004 | 0 | 5,582 | 0 | 420,015 | 36.1 |
| Severe | 43,573 | 15,886 | 11,590 | 150 | 1,247 | 0 | 55 | 0 | 72,501 | 6.2 |
| **Total** | **324,031** | **235,339** | **558,569** | **2,695** | **2,384** | **0** | **41,149** | **0** | **1,164,167** | **100.0** |
| **Guinea-Pigs** | Non-recovery | 18,948 | 878 | 282 | 266 | 0 | 0 | 265 | 0 | 20,639 | 14.1 |
| Mild | 1,352 | 4,240 | 63,258 | 498 | 10 | 0 | 1,619 | 0 | 70,977 | 48.6 |
| Moderate | 1,735 | 2,190 | 34,927 | 229 | 0 | 0 | 207 | 0 | 39,288 | 26.9 |
| Severe | 140 | 227 | 14,765 | 0 | 0 | 0 | 1 | 0 | 15,133 | 10.4 |
| **Total** | **22,175** | **7,535** | **113,232** | **993** | **10** | **0** | **2,092** | **0** | **146,037** | **100.0** |
| **Hamsters (Syrian)** | Non-recovery | 143 | 23 | 0 | 0 | 0 | 0 | 34 | 0 | 200 | 1.6 |
| Mild | 461 | 1,089 | 4,314 | 54 | 0 | 0 | 228 | 0 | 6,146 | 48.3 |
| Moderate | 678 | 1,677 | 347 | 34 | 0 | 0 | 5 | 0 | 2,741 | 21.5 |
| Severe | 208 | 1,222 | 2,149 | 12 | 0 | 0 | 45 | 0 | 3,636 | 28.6 |
| **Total** | **1,490** | **4,011** | **6,810** | **100** | **0** | **0** | **312** | **0** | **12,723** | **100.0** |
| **Hamsters (Chinese)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 2.7 |
| Mild | 3 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 62 | 33.2 |
| Moderate | 0 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 90 | 48.1 |
| Severe | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 16.0 |
| **Total** | **3** | **120** | **59** | **0** | **0** | **0** | **5** | **0** | **187** | **100.0** |
| **Mongolian gerbil** | Non-recovery | 323 | 0 | 0 | 0 | 0 | 0 | 53 | 0 | 376 | 7.0 |
| Mild | 570 | 911 | 1,438 | 81 | 0 | 10 | 49 | 0 | 3,059 | 56.8 |
| Moderate | 600 | 1,074 | 6 | 28 | 0 | 0 | 7 | 0 | 1,715 | 31.8 |
| Severe | 1 | 198 | 36 | 0 | 0 | 0 | 0 | 0 | 235 | 4.4 |
| **Total** | **1,494** | **2,183** | **1,480** | **109** | **0** | **10** | **109** | **0** | **5,385** | **100.0** |
| **Other rodents** | Non-recovery | 344 | 15 | 33 | 0 | 1 | 0 | 37 | 0 | 430 | 1.7 |
| Mild | 13,314 | 398 | 9,057 | 0 | 53 | 52 | 248 | 0 | 23,122 | 90.8 |
| Moderate | 821 | 44 | 108 | 0 | 35 | 25 | 0 | 0 | 1,033 | 4.1 |
| Severe | 754 | 7 | 26 | 0 | 80 | 0 | 0 | 0 | 867 | 3.4 |
| **Total** | **15,233** | **464** | **9,224** | **0** | **169** | **77** | **285** | **0** | **25,452** | **100.0** |
| **Rabbits** | Non-recovery | 3,256 | 2,088 | 12,304 | 20 | 0 | 0 | 812 | 0 | 18,480 | 5.1 |
| Mild | 12,849 | 3,936 | 56,131 | 170,117 | 316 | 0 | 924 | 0 | 244,273 | 67.0 |
| Moderate | 3,825 | 4,826 | 24,511 | 57,180 | 13 | 0 | 235 | 0 | 90,590 | 24.9 |
| Severe | 3,584 | 1,011 | 1,369 | 5,122 | 2 | 0 | 0 | 0 | 11,088 | 3.0 |
| **Total** | **23,514** | **11,861** | **94,315** | **232,439** | **331** | **0** | **1,971** | **0** | **364,431** | **100.0** |
| **Cats** | Non-recovery | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 1.0 |
| Mild | 686 | 1,008 | 1,087 | 10 | 0 | 0 | 73 | 0 | 2,864 | 85.8 |
| Moderate | 29 | 114 | 285 | 0 | 0 | 0 | 0 | 0 | 428 | 12.8 |
| Severe | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0.3 |
| **Total** | **750** | **1,133** | **1,372** | **10** | **0** | **0** | **73** | **0** | **3,338** | **100.0** |
| **Dogs** | Non-recovery | 43 | 92 | 89 | 10 | 0 | 0 | 5 | 0 | 239 | 1.1 |
| Mild | 1,347 | 7,176 | 6,271 | 308 | 15 | 0 | 505 | 0 | 15,622 | 73.1 |
| Moderate | 229 | 839 | 4,072 | 11 | 0 | 0 | 50 | 0 | 5,201 | 24.4 |
| Severe | 4 | 87 | 205 | 1 | 0 | 0 | 0 | 0 | 297 | 1.4 |
| **Total** | **1,623** | **8,194** | **10,637** | **330** | **15** | **0** | **560** | **0** | **21,359** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Ferrets** | Non-recovery | 6 | 0 | 0 | 6 | 0 | 0 | 8 | 0 | 20 | 0.9 |
| Mild | 90 | 526 | 476 | 57 | 0 | 0 | 64 | 0 | 1,213 | 57.4 |
| Moderate | 218 | 577 | 0 | 0 | 0 | 0 | 0 | 0 | 795 | 37.6 |
| Severe | 5 | 79 | 0 | 0 | 0 | 0 | 0 | 0 | 84 | 4.0 |
| **Total** | **319** | **1,182** | **476** | **63** | **0** | **0** | **72** | **0** | **2,112** | **100.0** |
| **Other carnivores** | Non-recovery | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 3.3 |
| Mild | 213 | 291 | 183 | 20 | 39 | 107 | 0 | 0 | 853 | 33.9 |
| Moderate | 580 | 294 | 573 | 0 | 40 | 14 | 0 | 0 | 1,501 | 59.7 |
| Severe | 0 | 33 | 0 | 0 | 44 | 0 | 0 | 0 | 77 | 3.1 |
| **Total** | **876** | **618** | **756** | **20** | **123** | **121** | **0** | **0** | **2,514** | **100.0** |
| **Horses, donkeys and cross-breeds** | Non-recovery | 0 | 17 | 0 | 0 | 0 | 0 | 19 | 0 | 36 | 0.3 |
| Mild | 1,691 | 1,484 | 276 | 9,575 | 6 | 0 | 268 | 0 | 13,300 | 97.6 |
| Moderate | 63 | 67 | 44 | 33 | 0 | 0 | 69 | 0 | 276 | 2.0 |
| Severe | 0 | 2 | 0 | 10 | 0 | 0 | 0 | 0 | 12 | 0.1 |
| **Total** | **1,754** | **1,570** | **320** | **9,618** | **6** | **0** | **356** | **0** | **13,624** | **100.0** |
| **Pigs** | Non-recovery | 4,303 | 2,512 | 560 | 47 | 0 | 0 | 7,282 | 0 | 14,704 | 19.4 |
| Mild | 8,629 | 18,424 | 8,091 | 401 | 374 | 2 | 1,462 | 36 | 37,419 | 49.3 |
| Moderate | 4,420 | 9,277 | 3,825 | 12 | 234 | 0 | 2,283 | 0 | 20,051 | 26.4 |
| Severe | 970 | 2,502 | 221 | 0 | 0 | 0 | 8 | 0 | 3,701 | 4.9 |
| **Total** | **18,322** | **32,715** | **12,697** | **460** | **608** | **2** | **11,035** | **36** | **75,875** | **100.0** |
| **Goats** | Non-recovery | 17 | 110 | 0 | 0 | 0 | 0 | 3 | 0 | 130 | 5.7 |
| Mild | 817 | 322 | 105 | 44 | 0 | 0 | 184 | 0 | 1,472 | 64.9 |
| Moderate | 285 | 264 | 12 | 2 | 0 | 0 | 42 | 0 | 605 | 26.7 |
| Severe | 25 | 32 | 4 | 0 | 0 | 0 | 0 | 0 | 61 | 2.7 |
| **Total** | **1,144** | **728** | **121** | **46** | **0** | **0** | **229** | **0** | **2,268** | **100.0** |
| **Sheep** | Non-recovery | 140 | 403 | 0 | 0 | 0 | 0 | 599 | 0 | 1,142 | 1.7 |
| Mild | 7,060 | 5,284 | 1,076 | 45,608 | 105 | 0 | 724 | 88 | 59,945 | 91.5 |
| Moderate | 1,049 | 1,950 | 278 | 49 | 14 | 0 | 159 | 0 | 3,499 | 5.3 |
| Severe | 308 | 617 | 8 | 8 | 0 | 0 | 0 | 0 | 941 | 1.4 |
| **Total** | **8,557** | **8,254** | **1,362** | **45,665** | **119** | **0** | **1,482** | **88** | **65,527** | **100.0** |
| **Cattle** | Non-recovery | 30 | 2 | 0 | 0 | 0 | 0 | 50 | 0 | 82 | 0.2 |
| Mild | 14,321 | 8,436 | 3,288 | 595 | 2,445 | 0 | 3,078 | 26 | 32,189 | 86.4 |
| Moderate | 439 | 1,789 | 468 | 6 | 8 | 0 | 2,120 | 0 | 4,830 | 13.0 |
| Severe | 7 | 160 | 1 | 0 | 0 | 0 | 7 | 0 | 175 | 0.5 |
| **Total** | **14,797** | **10,387** | **3,757** | **601** | **2,453** | **0** | **5,255** | **26** | **37,276** | **100.0** |
| **Prosimians** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 87 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 | 50.3 |
| Moderate | 86 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 86 | 49.7 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **173** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **173** | **100.0** |
| **Marmoset and tamarins** | Non-recovery | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0.6 |
| Mild | 107 | 71 | 53 | 86 | 0 | 0 | 1 | 0 | 318 | 49.2 |
| Moderate | 73 | 81 | 162 | 0 | 0 | 0 | 0 | 0 | 316 | 48.9 |
| Severe | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1.2 |
| **Total** | **182** | **162** | **215** | **86** | **0** | **0** | **1** | **0** | **646** | **100.0** |
| **Squirrel monkey** | Non-recovery | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 75.0 |
| Mild | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Moderate | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 25.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **7** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **8** | **100.0** |
| **Other species of new world monkeys (Ceboidea)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 100.0 |
| Moderate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **3** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **100.0** |
| **Cynomolgus monkey** | Non-recovery | 11 | 8 | 0 | 4 | 0 | 0 | 3 | 0 | 26 | 0.3 |
| Mild | 302 | 711 | 3,437 | 1,049 | 0 | 0 | 8 | 0 | 5,507 | 55.0 |
| Moderate | 216 | 307 | 3,780 | 0 | 0 | 0 | 6 | 0 | 4,309 | 43.1 |
| Severe | 0 | 99 | 66 | 0 | 0 | 0 | 0 | 0 | 165 | 1.6 |
| **Total** | **529** | **1,125** | **7,283** | **1,053** | **0** | **0** | **17** | **0** | **10,007** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Rhesus monkey** | Non-recovery | 21 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 3.5 |
| Mild | 81 | 162 | 11 | 29 | 0 | 0 | 4 | 0 | 287 | 45.7 |
| Moderate | 143 | 169 | 0 | 0 | 0 | 0 | 0 | 0 | 312 | 49.7 |
| Severe | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1.1 |
| **Total** | **250** | **334** | **11** | **29** | **0** | **0** | **4** | **0** | **628** | **100.0** |
| **Vervets (Chlorocebus spp.)** | Non-recovery | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 20.8 |
| Mild | 11 | 15 | 0 | 5 | 0 | 0 | 0 | 0 | 31 | 58.5 |
| Moderate | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 20.8 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **22** | **26** | **0** | **5** | **0** | **0** | **0** | **0** | **53** | **100.0** |
| **Baboons** | Non-recovery | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2.2 |
| Mild | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 43.5 |
| Moderate | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 41.3 |
| Severe | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 13.0 |
| **Total** | **10** | **36** | **0** | **0** | **0** | **0** | **0** | **0** | **46** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 14 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 74.3 |
| Moderate | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 25.7 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **14** | **21** | **0** | **0** | **0** | **0** | **0** | **0** | **35** | **100.0** |
| **Other mammals** | Non-recovery | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 60 | 0.2 |
| Mild | 4,074 | 21,523 | 0 | 1 | 71 | 274 | 121 | 0 | 26,064 | 96.3 |
| Moderate | 893 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 900 | 3.3 |
| Severe | 9 | 10 | 0 | 0 | 23 | 0 | 0 | 0 | 42 | 0.2 |
| **Total** | **5,036** | **21,540** | **0** | **1** | **94** | **274** | **121** | **0** | **27,066** | **100.0** |
| **Domestic fowl** | Non-recovery | 5,886 | 839 | 261 | 189 | 0 | 0 | 387 | 0 | 7,562 | 1.6 |
| Mild | 70,751 | 81,809 | 112,004 | 87,000 | 2,406 | 343 | 1,705 | 315 | 356,333 | 75.5 |
| Moderate | 30,401 | 15,663 | 29,352 | 15,089 | 353 | 0 | 2,120 | 0 | 92,978 | 19.7 |
| Severe | 1,347 | 8,712 | 4,871 | 127 | 0 | 0 | 82 | 0 | 15,139 | 3.2 |
| **Total** | **108,385** | **107,023** | **146,488** | **102,405** | **2,759** | **343** | **4,294** | **315** | **472,012** | **100.0** |
| **Other birds** | Non-recovery | 625 | 671 | 0 | 0 | 0 | 0 | 54 | 0 | 1,350 | 1.3 |
| Mild | 49,265 | 10,880 | 4,288 | 303 | 2,567 | 690 | 464 | 0 | 68,457 | 66.9 |
| Moderate | 7,187 | 805 | 563 | 22,518 | 0 | 6 | 172 | 0 | 31,251 | 30.5 |
| Severe | 279 | 736 | 153 | 0 | 0 | 0 | 120 | 0 | 1,288 | 1.3 |
| **Total** | **57,356** | **13,092** | **5,004** | **22,821** | **2,567** | **696** | **810** | **0** | **102,346** | **100.0** |
| **Reptiles** | Non-recovery | 237 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 255 | 3.9 |
| Mild | 1,912 | 63 | 0 | 0 | 8 | 70 | 100 | 0 | 2,153 | 32.8 |
| Moderate | 4,118 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 4,154 | 63.3 |
| Severe | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **6,267** | **117** | **0** | **0** | **8** | **70** | **100** | **0** | **6,562** | **100.0** |
| **Rana** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 138 | 0 | 138 | 3.9 |
| Mild | 290 | 0 | 0 | 0 | 0 | 0 | 257 | 0 | 547 | 15.6 |
| Moderate | 400 | 108 | 0 | 0 | 200 | 0 | 1,906 | 0 | 2,614 | 74.7 |
| Severe | 108 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 199 | 5.7 |
| **Total** | **798** | **108** | **91** | **0** | **200** | **0** | **2,301** | **0** | **3,498** | **100.0** |
| **Xenopus** | Non-recovery | 1,268 | 0 | 0 | 0 | 0 | 0 | 257 | 0 | 1,525 | 7.1 |
| Mild | 12,845 | 3,530 | 0 | 0 | 2 | 0 | 107 | 0 | 16,484 | 76.9 |
| Moderate | 650 | 116 | 0 | 210 | 900 | 0 | 38 | 0 | 1,914 | 8.9 |
| Severe | 867 | 0 | 653 | 0 | 0 | 0 | 0 | 0 | 1,520 | 7.1 |
| **Total** | **15,630** | **3,646** | **653** | **210** | **902** | **0** | **402** | **0** | **21,443** | **100.0** |
| **Other amphibians** | Non-recovery | 95 | 336 | 0 | 0 | 1,565 | 0 | 190 | 0 | 2,186 | 20.0 |
| Mild | 3,401 | 623 | 0 | 0 | 246 | 336 | 15 | 0 | 4,621 | 42.2 |
| Moderate | 2,691 | 60 | 0 | 0 | 0 | 62 | 0 | 0 | 2,813 | 25.7 |
| Severe | 1,235 | 32 | 59 | 0 | 0 | 0 | 0 | 0 | 1,326 | 12.1 |
| **Total** | **7,422** | **1,051** | **59** | **0** | **1,811** | **398** | **205** | **0** | **10,946** | **100.0** |
| **Zebra fish** | Non-recovery | 19,020 | 400 | 188 | 0 | 2 | 0 | 296 | 0 | 19,906 | 3.9 |
| Mild | 288,687 | 69,735 | 13,369 | 0 | 2,414 | 140 | 1,344 | 0 | 375,689 | 74.5 |
| Moderate | 39,965 | 26,291 | 14,892 | 0 | 0 | 0 | 41 | 0 | 81,189 | 16.1 |
| Severe | 6,664 | 3,811 | 16,924 | 0 | 0 | 0 | 0 | 0 | 27,399 | 5.4 |
| **Total** | **354,336** | **100,237** | **45,373** | **0** | **2,416** | **140** | **1,681** | **0** | **504,183** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Other fish** | Non-recovery | 17,181 | 3,788 | 4 | 0 | 1,649 | 2,245 | 692 | 0 | 25,559 | 3.5 |
| Mild | 244,988 | 35,901 | 99,525 | 49 | 54,888 | 52,866 | 2,695 | 0 | 490,912 | 67.9 |
| Moderate | 41,294 | 17,304 | 8,144 | 0 | 42,704 | 8,286 | 125 | 0 | 117,857 | 16.3 |
| Severe | 27,298 | 36,729 | 19,017 | 0 | 5,791 | 13 | 0 | 0 | 88,848 | 12.3 |
| **Total** | **330,761** | **93,722** | **126,690** | **49** | **105,032** | **63,410** | **3,512** | **0** | **723,176** | **100.0** |
| **Cephalopods** | Non-recovery | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 22 | 450 | 0 | 0 | 24 | 0 | 4 | 0 | 500 | 97.3 |
| Moderate | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1.0 |
| Severe | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 1.8 |
| **Total** | **22** | **455** | **0** | **0** | **33** | **0** | **4** | **0** | **514** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **464,092** | **77,064** | **21,434** | **1,804** | **3,226** | **2,245** | **51,189** | **0** | **621,054** | **6.5** |
| **Mild** | **2,125,428** | **919,188** | **1,289,026** | **319,745** | **68,476** | **68,203** | **75,182** | **473** | **4,865,721** | **50.8** |
| **Moderate** | **1,434,549** | **912,034** | **523,676** | **110,715** | **45,835** | **8,432** | **36,587** | **0** | **3,071,828** | **32.1** |
| **Severe** | **333,584** | **291,670** | **352,723** | **37,094** | **7,250** | **13** | **804** | **0** | **1,023,138** | **10.7** |
| **Total** | **4,357,653** | **2,199,956** | **2,186,859** | **469,358** | **124,787** | **78,893** | **163,762** | **473** | **9,581,741** | **100.0** |

Table 5.1: Uses of animals in all sub-categories of research and testing by severities (2017)

|  | **Non-recovery** | **Mild** | **Moderate** | **Severe** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Basic research** | | | | | | |
| Oncology | 30,689 | 229,180 | 296,237 | 56,238 | **612,344** | **6.4** |
| Cardiovascular Blood and Lymphatic System | 60,428 | 131,992 | 101,476 | 17,780 | **311,676** | **3.3** |
| Nervous System | 105,674 | 433,216 | 342,511 | 87,874 | **969,275** | **10.1** |
| Respiratory System | 8,594 | 27,781 | 30,959 | 6,612 | **73,946** | **0.8** |
| Gastrointestinal System including Liver | 16,627 | 52,466 | 49,801 | 10,699 | **129,593** | **1.4** |
| Musculoskeletal System | 4,388 | 42,345 | 35,170 | 8,500 | **90,403** | **0.9** |
| Immune System | 57,067 | 365,100 | 250,156 | 74,584 | **746,907** | **7.8** |
| Urogenital/Reproductive System | 9,048 | 57,656 | 27,085 | 1,686 | **95,475** | **1** |
| Sensory Organs (skin, eyes and ears) | 7,430 | 39,000 | 16,115 | 2,956 | **65,501** | **0.7** |
| Endocrine System/Metabolism | 21,328 | 101,642 | 71,957 | 20,285 | **215,212** | **2.2** |
| Multisystemic | 11,865 | 127,470 | 65,864 | 10,063 | **215,262** | **2.2** |
| Ethology / Animal Behaviour /Animal Biology | 6,499 | 356,298 | 83,480 | 9,198 | **455,475** | **4.8** |
| Other basic research | 124,455 | 161,282 | 63,738 | 27,109 | **376,584** | **3.9** |
| **Translational and applied research** | | | | | | |
| Human Cancer | 4,005 | 198,550 | 342,158 | 39,888 | **584,601** | **6.1** |
| Human Infectious Disorders | 3,508 | 156,726 | 80,143 | 31,470 | **271,847** | **2.8** |
| Human Cardiovascular Disorders | 14,250 | 21,383 | 29,194 | 4,779 | **69,606** | **0.7** |
| Human Nervous and Mental Disorders | 13,728 | 127,972 | 136,480 | 27,602 | **305,782** | **3.2** |
| Human Respiratory Disorders | 4,340 | 28,926 | 30,002 | 4,127 | **67,395** | **0.7** |
| Human Gastrointestinal Disorders including Liver | 1,823 | 15,014 | 27,091 | 4,702 | **48,630** | **0.5** |
| Human Musculoskeletal Disorders | 3,276 | 10,966 | 17,835 | 6,238 | **38,315** | **0.4** |
| Human Immune Disorders | 3,390 | 25,176 | 30,471 | 16,305 | **75,342** | **0.8** |
| Human Urogenital/Reproductive Disorders | 1,715 | 6,603 | 7,801 | 1,050 | **17,169** | **0.2** |
| Human Sensory Organ Disorders (skin, eyes and ears) | 1,012 | 31,072 | 20,000 | 757 | **52,841** | **0.6** |
| Human Endocrine/Metabolism Disorders | 4,515 | 39,634 | 51,836 | 4,678 | **100,663** | **1.1** |
| Other Human Disorders | 8,802 | 9,395 | 17,927 | 6,530 | **42,654** | **0.4** |
| Animal Diseases and Disorders | 3,809 | 112,447 | 47,606 | 52,859 | **216,721** | **2.3** |
| Animal Welfare | 2,313 | 51,656 | 4,452 | 3,946 | **62,367** | **0.7** |
| Diagnosis of diseases | 3,580 | 25,417 | 39,451 | 81,239 | **149,687** | **1.6** |
| Plant diseases | 0 | 87 | 89 | 0 | **176** | **0** |
| Non-regulatory toxicology and ecotoxicology | 2,998 | 58,164 | 29,498 | 5,500 | **96,160** | **1** |
| **Regulatory use** | | | | | | |
| **Quality control (incl batch safety and potency testing)** | | | | | | |
| Batch safety testing | 0 | 120,743 | 12,381 | 6,478 | **139,602** | **1.5** |
| Pyrogenicity testing | 80 | 18,070 | 16,716 | 306 | **35,172** | **0.4** |
| Batch potency testing | 13,658 | 382,887 | 231,545 | 264,633 | **892,723** | **9.3** |
| Other quality controls | 343 | 44,827 | 14,060 | 4,853 | **64,083** | **0.7** |
| **Toxicity and other safety testing including pharmacology** | | | | | | |
| **Acute and sub-acute toxicity testing methods** | | | | | | |
| LD50, LC50 | 0 | 28,599 | 5,188 | 13,152 | **46,939** | **0.5** |
| Other lethal methods | 0 | 498 | 3,519 | 1,231 | **5,248** | **0.1** |
| Non lethal methods | 0 | 17,791 | 12,557 | 870 | **31,218** | **0.3** |
| Skin irritation/corrosion | 0 | 3,267 | 825 | 28 | **4,120** | **0** |
| Skin sensitisation | 0 | 41,502 | 5,490 | 349 | **47,341** | **0.5** |
| Eye irritation/corrosion | 0 | 320 | 473 | 21 | **814** | **0** |
| **Repeated dose toxicity** | | | | | | |
| up to 28 days | 0 | 34,793 | 23,635 | 2,916 | **61,344** | **0.6** |
| 29 - 90 days | 110 | 20,248 | 14,281 | 292 | **34,931** | **0.4** |
| > 90 days | 0 | 11,808 | 6,088 | 402 | **18,298** | **0.2** |
| Carcinogenicity | 100 | 6,200 | 5,871 | 322 | **12,493** | **0.1** |
| Genotoxicity | 125 | 8,337 | 1,509 | 332 | **10,303** | **0.1** |
| Reproductive toxicity | 0 | 105,468 | 31,161 | 3,884 | **140,513** | **1.5** |
| Developmental toxicity | 0 | 66,352 | 18,792 | 12,527 | **97,671** | **1** |
| Neurotoxicity | 0 | 1,934 | 193 | 642 | **2,769** | **0** |
| Kinetics | 244 | 43,187 | 25,315 | 627 | **69,373** | **0.7** |
| Pharmaco-dynamics (incl safety pharmacology) | 5,235 | 57,740 | 32,878 | 3,500 | **99,353** | **1** |
| Phototoxicity | 0 | 353 | 142 | 30 | **525** | **0** |
| **Ecotoxicity** | | | | | | |
| Acute toxicity | 188 | 25,364 | 2,934 | 16,429 | **44,915** | **0.5** |
| Chronic toxicity | 0 | 8,855 | 17,709 | 2,174 | **28,738** | **0.3** |
| Reproductive ecotoxicity | 0 | 546 | 904 | 0 | **1,450** | **0** |
| Endocrine activity | 0 | 5,724 | 0 | 200 | **5,924** | **0.1** |
| Bioaccumulation | 0 | 2,796 | 540 | 774 | **4,110** | **0** |
| Other ecotoxicity | 33 | 8,705 | 18 | 454 | **9,210** | **0.1** |
| Safety testing in food and feed area | 0 | 34,115 | 703 | 10,982 | **45,800** | **0.5** |
| Target animal safety | 4 | 7,357 | 1,272 | 84 | **8,717** | **0.1** |
| Other toxicity/safety testing | 4 | 6,906 | 3,837 | 511 | **11,258** | **0.1** |
| **Other efficacy and tolerance testing** | | | | | | |
| Other efficacy and tolerance testing | 1,310 | 173,734 | 33,140 | 3,720 | **211,904** | **2.2** |
| **Routine production** | | | | | | |
| Blood based products | 1,585 | 202,172 | 55,736 | 287 | **259,780** | **2.7** |
| Monoclonal antibody by mouse ascites method | 0 | 892 | 12,468 | 31,664 | **45,024** | **0.5** |
| Other product types | 219 | 116,681 | 42,511 | 5,143 | **164,554** | **1.7** |
| **Other** | | | | | | |
| Protection of the natural environment in the interests of the health or welfare of human beings or animals | 3,226 | 68,476 | 45,835 | 7,250 | **124,787** | **1.3** |
| Preservation of species | 2,245 | 68,203 | 8,432 | 13 | **78,893** | **0.8** |
| Higher education or training for the acquisition, maintenance or improvement of vocational skills | 51,189 | 75,182 | 36,587 | 804 | **163,762** | **1.7** |
| Forensic enquiries | 0 | 473 | 0 | 0 | **473** | **0** |
| **Total** | **621,054** | **4,865,721** | **3,071,828** | **1,023,138** | **9,581,741** | **100** |
| **%** | **6.5** | **50.8** | **32.1** | **10.7** | **100** |  |

Table 6: Basic research related uses by species and type of research (2017)

|  | **Oncology** | **Cardiovascular Blood and Lymphatic System** | **Nervous System** | **Respiratory System** | **Gastrointestinal System including Liver** | **Musculoskeletal System** | **Immune System** | **Urogenital/Reproductive System** | **Sensory Organs (skin, eyes and ears)** | **Endocrine System/Metabolism** | **Multisystemic** | **Ethology / Animal Behaviour /Animal Biology** | **Other basic research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| Mice | 527,825 | 239,271 | 684,862 | 64,452 | 97,905 | 68,564 | 660,554 | 80,681 | 52,436 | 161,545 | 156,029 | 17,344 | 222,900 | **3,034,368** | **69.6** |
| Rats | 6,004 | 41,095 | 146,460 | 5,846 | 13,624 | 6,040 | 10,819 | 6,350 | 5,775 | 31,344 | 12,564 | 15,209 | 22,901 | **324,031** | **7.4** |
| Guinea-Pigs | 54 | 499 | 562 | 1,275 | 5 | 24 | 163 | 4 | 572 | 137 | 7 | 50 | 18,823 | **22,175** | **0.5** |
| Hamsters (Syrian) | 100 | 0 | 153 | 0 | 136 | 0 | 198 | 0 | 0 | 168 | 274 | 23 | 438 | **1,490** | **0** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | **3** | **0** |
| Mongolian gerbil | 0 | 76 | 627 | 0 | 9 | 11 | 262 | 0 | 265 | 0 | 0 | 41 | 203 | **1,494** | **0** |
| Other rodents | 127 | 0 | 693 | 90 | 0 | 0 | 1,561 | 20 | 153 | 284 | 111 | 5,234 | 6,960 | **15,233** | **0.3** |
| **Rabbits** | | | | | | | | | | | | | | | |
| Rabbits | 162 | 1,371 | 226 | 868 | 149 | 456 | 607 | 715 | 579 | 1,642 | 269 | 8,367 | 8,103 | **23,514** | **0.5** |
| **Carnivores** | | | | | | | | | | | | | | | |
| Cats | 0 | 0 | 70 | 0 | 24 | 5 | 0 | 0 | 8 | 49 | 303 | 0 | 291 | **750** | **0** |
| Dogs | 8 | 143 | 53 | 0 | 67 | 225 | 100 | 97 | 49 | 31 | 105 | 54 | 691 | **1,623** | **0** |
| Ferrets | 0 | 0 | 249 | 62 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | **319** | **0** |
| Other carnivores | 0 | 4 | 0 | 0 | 78 | 0 | 521 | 0 | 0 | 0 | 0 | 263 | 10 | **876** | **0** |
| **Farm animals** | | | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 55 | 0 | 48 | 9 | 185 | 411 | 251 | 0 | 567 | 4 | 88 | 136 | **1,754** | **0** |
| Pigs | 57 | 1,899 | 635 | 285 | 4,809 | 346 | 1,628 | 446 | 109 | 1,940 | 1,303 | 3,025 | 1,840 | **18,322** | **0.4** |
| Goats | 0 | 14 | 0 | 0 | 17 | 8 | 117 | 141 | 0 | 158 | 0 | 574 | 115 | **1,144** | **0** |
| Sheep | 24 | 431 | 66 | 17 | 544 | 1,020 | 1,414 | 438 | 0 | 422 | 110 | 2,104 | 1,967 | **8,557** | **0.2** |
| Cattle | 0 | 55 | 30 | 95 | 1,188 | 4 | 6,006 | 1,066 | 17 | 1,351 | 1,061 | 2,790 | 1,134 | **14,797** | **0.3** |
| **Non-human primates** | | | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 82 | 0 | 87 | 0 | **173** | **0** |
| Marmoset and tamarins | 1 | 0 | 51 | 0 | 0 | 0 | 0 | 12 | 0 | 24 | 6 | 46 | 42 | **182** | **0** |
| Squirrel monkey | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | **3** | **0** |
| Cynomolgus monkey | 0 | 40 | 144 | 35 | 0 | 2 | 9 | 0 | 6 | 4 | 7 | 0 | 282 | **529** | **0** |
| Rhesus monkey | 0 | 51 | 116 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 32 | 0 | 27 | **250** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 11 | **22** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | **10** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | **14** | **0** |
| **Other mammals** | | | | | | | | | | | | | | | |
| Other mammals | 0 | 9 | 228 | 0 | 11 | 1 | 0 | 22 | 28 | 0 | 89 | 4,427 | 221 | **5,036** | **0.1** |
| **Birds** | | | | | | | | | | | | | | | |
| Domestic fowl | 785 | 248 | 3,211 | 0 | 6,559 | 102 | 7,123 | 392 | 138 | 4,352 | 2,210 | 70,390 | 12,875 | **108,385** | **2.5** |
| Other birds | 0 | 234 | 549 | 0 | 43 | 33 | 106 | 79 | 1 | 439 | 10 | 53,443 | 2,419 | **57,356** | **1.3** |
| **Reptiles** | | | | | | | | | | | | | | | |
| Reptiles | 0 | 110 | 260 | 0 | 0 | 10 | 0 | 0 | 3 | 43 | 0 | 5,756 | 85 | **6,267** | **0.1** |
| **Amphibians** | | | | | | | | | | | | | | | |
| Rana | 0 | 0 | 400 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 112 | 286 | **798** | **0** |
| Xenopus | 822 | 390 | 4,365 | 3 | 0 | 848 | 0 | 1,417 | 356 | 39 | 1,584 | 39 | 5,767 | **15,630** | **0.4** |
| Other amphibians | 0 | 0 | 1,117 | 0 | 0 | 1,092 | 7 | 27 | 0 | 240 | 33 | 4,118 | 788 | **7,422** | **0.2** |
| **Fish** | | | | | | | | | | | | | | | |
| Zebra fish | 76,185 | 25,098 | 122,697 | 0 | 3,017 | 10,817 | 18,659 | 2,818 | 4,456 | 6,641 | 35,347 | 12,400 | 36,201 | **354,336** | **8.1** |
| Other fish | 190 | 583 | 1,434 | 870 | 1,395 | 610 | 36,593 | 499 | 547 | 3,710 | 3,804 | 249,458 | 31,068 | **330,761** | **7.6** |
| **Cephalopods** | | | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | **22** | **0** |
| **Totals** | | | | | | | | | | | | | | | |
| **Total** | **612,344** | **311,676** | **969,275** | **73,946** | **129,593** | **90,403** | **746,907** | **95,475** | **65,501** | **215,212** | **215,262** | **455,475** | **376,584** | **4,357,653** | **100** |
| **%** | **14.1** | **7.2** | **22.2** | **1.7** | **3** | **2.1** | **17.1** | **2.2** | **1.5** | **4.9** | **4.9** | **10.5** | **8.6** | **100** |  |

Table 7.1: Translational and applied research related uses by species and type of research (Part 1) (2017)

|  | **Human Cancer** | **Human Infectious Disorders** | **Human Cardiovascular Disorders** | **Human Nervous and Mental Disorders** | **Human Respiratory Disorders** | **Human Gastrointestinal Disorders including Liver** | **Human Musculoskeletal Disorders** | **Human Immune Disorders** | **Human Urogenital/Reproductive Disorders** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | |
| **Rodents** | | | | | | | | | |
| Mice | 575,924 | 201,086 | 41,449 | 194,708 | 47,685 | 36,526 | 24,908 | 70,565 | 11,299 |
| Rats | 5,442 | 5,236 | 21,612 | 87,139 | 15,302 | 9,425 | 9,634 | 3,960 | 4,960 |
| Guinea-Pigs | 66 | 1,391 | 619 | 276 | 2,486 | 14 | 0 | 287 | 0 |
| Hamsters (Syrian) | 213 | 1,708 | 27 | 197 | 0 | 0 | 0 | 0 | 0 |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 1,453 | 0 | 118 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 320 | 0 | 0 | 82 | 0 | 0 | 30 | 0 |
| **Rabbits** | | | | | | | | | |
| Rabbits | 1,927 | 1,140 | 913 | 181 | 862 | 59 | 779 | 319 | 162 |
| **Carnivores** | | | | | | | | | |
| Cats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dogs | 12 | 30 | 160 | 134 | 59 | 18 | 118 | 60 | 0 |
| Ferrets | 0 | 995 | 0 | 0 | 0 | 96 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 395 | 0 | 0 | 0 | 6 | 7 | 3 | 0 |
| Pigs | 266 | 235 | 3,382 | 431 | 646 | 2,311 | 214 | 68 | 485 |
| Goats | 7 | 18 | 30 | 2 | 0 | 0 | 21 | 0 | 1 |
| Sheep | 16 | 183 | 863 | 181 | 79 | 0 | 547 | 0 | 203 |
| Cattle | 12 | 40 | 6 | 0 | 45 | 6 | 0 | 0 | 0 |
| **Non-human primates** | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 3 | 87 | 0 | 59 | 0 | 0 | 0 | 11 | 0 |
| Squirrel monkey | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 26 | 319 | 36 | 139 | 23 | 12 | 0 | 30 | 54 |
| Rhesus monkey | 0 | 328 | 0 | 4 | 0 | 0 | 0 | 0 | 2 |
| Vervets (Chlorocebus spp.) | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 19 | 14 | 0 | 0 | 0 | 0 | 0 | 3 |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | | |
| Other mammals | 31 | 18,217 | 19 | 0 | 8 | 0 | 0 | 2 | 0 |
| **Birds** | | | | | | | | | |
| Domestic fowl | 33 | 751 | 72 | 2 | 118 | 157 | 0 | 7 | 0 |
| Other birds | 0 | 5,202 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Reptiles** | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 185 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | | |
| Zebra fish | 438 | 32,655 | 400 | 22,186 | 0 | 0 | 2,087 | 0 | 0 |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Cephalopods** | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | | |
| **Total** | **584,601** | **271,847** | **69,606** | **305,782** | **67,395** | **48,630** | **38,315** | **75,342** | **17,169** |
| **%** | **26.6** | **12.4** | **3.2** | **13.9** | **3.1** | **2.2** | **1.7** | **3.4** | **0.8** |

Table 7.2: Translational and applied research related uses by species and type of research (Part 2) (2017)

|  | **Human Sensory Organ Disorders (skin, eyes and ears)** | **Human Endocrine/Metabolism Disorders** | **Other Human Disorders** | **Animal Diseases and Disorders** | **Animal Welfare** | **Diagnosis of diseases** | **Plant diseases** | **Non-regulatory toxicology and ecotoxicology** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | |
| **Rodents** | | | | | | | | | | |
| Mice | 43,473 | 68,703 | 24,626 | 30,449 | 1,063 | 139,893 | 119 | 18,490 | **1,530,966** | **69.6** |
| Rats | 5,851 | 25,865 | 17,111 | 1,605 | 613 | 3,928 | 25 | 17,631 | **235,339** | **10.7** |
| Guinea-Pigs | 373 | 62 | 101 | 900 | 9 | 473 | 0 | 478 | **7,535** | **0.3** |
| Hamsters (Syrian) | 0 | 677 | 17 | 1,172 | 0 | 0 | 0 | 0 | **4,011** | **0.2** |
| Hamsters (Chinese) | 0 | 0 | 0 | 120 | 0 | 0 | 0 | 0 | **120** | **0** |
| Mongolian gerbil | 0 | 0 | 0 | 612 | 0 | 0 | 0 | 0 | **2,183** | **0.1** |
| Other rodents | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 15 | **464** | **0** |
| **Rabbits** | | | | | | | | | | |
| Rabbits | 1,017 | 241 | 300 | 2,697 | 133 | 858 | 32 | 241 | **11,861** | **0.5** |
| **Carnivores** | | | | | | | | | | |
| Cats | 0 | 0 | 0 | 1,057 | 0 | 70 | 0 | 6 | **1,133** | **0.1** |
| Dogs | 30 | 81 | 49 | 5,029 | 84 | 264 | 0 | 2,066 | **8,194** | **0.4** |
| Ferrets | 0 | 0 | 4 | 82 | 0 | 5 | 0 | 0 | **1,182** | **0.1** |
| Other carnivores | 0 | 0 | 0 | 364 | 254 | 0 | 0 | 0 | **618** | **0** |
| **Farm animals** | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 0 | 0 | 1,025 | 51 | 83 | 0 | 0 | **1,570** | **0.1** |
| Pigs | 401 | 1,032 | 232 | 14,915 | 7,530 | 326 | 0 | 241 | **32,715** | **1.5** |
| Goats | 0 | 0 | 0 | 394 | 178 | 77 | 0 | 0 | **728** | **0** |
| Sheep | 0 | 56 | 176 | 2,968 | 1,954 | 995 | 0 | 33 | **8,254** | **0.4** |
| Cattle | 0 | 182 | 0 | 7,134 | 2,878 | 67 | 0 | 17 | **10,387** | **0.5** |
| **Non-human primates** | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **162** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 43 | 52 | 16 | 0 | 0 | 0 | 0 | 375 | **1,125** | **0.1** |
| Rhesus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **334** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **26** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **36** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | **21** | **0** |
| **Other mammals** | | | | | | | | | | |
| Other mammals | 0 | 3 | 0 | 29 | 3,201 | 30 | 0 | 0 | **21,540** | **1** |
| **Birds** | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 77,727 | 25,183 | 1,746 | 0 | 1,227 | **107,023** | **4.9** |
| Other birds | 0 | 0 | 0 | 5,791 | 1,345 | 222 | 0 | 528 | **13,092** | **0.6** |
| **Reptiles** | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 56 | 61 | 0 | 0 | 0 | **117** | **0** |
| **Amphibians** | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 108 | **108** | **0** |
| Xenopus | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 3,415 | **3,646** | **0.2** |
| Other amphibians | 0 | 0 | 11 | 200 | 0 | 0 | 0 | 840 | **1,051** | **0** |
| **Fish** | | | | | | | | | | |
| Zebra fish | 1,651 | 3,543 | 2 | 787 | 0 | 0 | 0 | 36,488 | **100,237** | **4.6** |
| Other fish | 0 | 145 | 0 | 61,586 | 17,380 | 650 | 0 | 13,961 | **93,722** | **4.3** |
| **Cephalopods** | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 5 | 450 | 0 | 0 | 0 | **455** | **0** |
| **Totals** | | | | | | | | | | |
| **Total** | **52,841** | **100,663** | **42,654** | **216,721** | **62,367** | **149,687** | **176** | **96,160** | **2,199,956** | **100** |
| **%** | **2.4** | **4.6** | **1.9** | **9.9** | **2.8** | **6.8** | **0** | **4.4** | **100** |  |

Table 8: Regulatory uses by species and type of use (2017)

|  | **Quality** | | | | **Toxicity** | **Other** |  | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Quality: Batch safety testing** | **Quality: Pyrogenicity testing** | **Quality: Batch potency testing** | **Quality: Other quality controls** | **Toxicity and other safety testing including pharmacology** | **Other efficacy and tolerance testing** | **Total** | **%** |
| **Mammals** | | | | | | | | |
| **Rodents** | | | | | | | | |
| Mice | 82,331 | 0 | 594,913 | 40,267 | 245,984 | 76,310 | **1,039,805** | **47.5** |
| Rats | 4,287 | 0 | 157,176 | 1,717 | 386,969 | 8,420 | **558,569** | **25.5** |
| Guinea-Pigs | 16,612 | 0 | 62,104 | 1,097 | 32,530 | 889 | **113,232** | **5.2** |
| Hamsters (Syrian) | 20 | 0 | 3,826 | 2,285 | 383 | 296 | **6,810** | **0.3** |
| Hamsters (Chinese) | 0 | 0 | 0 | 0 | 59 | 0 | **59** | **0** |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 1,421 | 59 | **1,480** | **0.1** |
| Other rodents | 104 | 0 | 0 | 0 | 9,060 | 60 | **9,224** | **0.4** |
| **Rabbits** | | | | | | | | |
| Rabbits | 1,257 | 35,172 | 22,318 | 2,121 | 30,864 | 2,583 | **94,315** | **4.3** |
| **Carnivores** | | | | | | | | |
| Cats | 33 | 0 | 121 | 110 | 772 | 336 | **1,372** | **0.1** |
| Dogs | 307 | 0 | 58 | 328 | 8,845 | 1,099 | **10,637** | **0.5** |
| Ferrets | 192 | 0 | 250 | 0 | 34 | 0 | **476** | **0** |
| Other carnivores | 359 | 0 | 310 | 0 | 81 | 6 | **756** | **0** |
| **Farm animals** | | | | | | | | |
| Horses, donkeys and cross-breeds | 2 | 0 | 0 | 0 | 71 | 247 | **320** | **0** |
| Pigs | 1,354 | 0 | 2,158 | 690 | 4,672 | 3,823 | **12,697** | **0.6** |
| Goats | 0 | 0 | 12 | 0 | 75 | 34 | **121** | **0** |
| Sheep | 271 | 0 | 445 | 91 | 313 | 242 | **1,362** | **0.1** |
| Cattle | 449 | 0 | 1,065 | 33 | 1,078 | 1,132 | **3,757** | **0.2** |
| **Non-human primates** | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 215 | 0 | **215** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 0 | 0 | 0 | 0 | 7,191 | 92 | **7,283** | **0.3** |
| Rhesus monkey | 0 | 0 | 0 | 8 | 3 | 0 | **11** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | | | | |
| Domestic fowl | 31,808 | 0 | 43,316 | 14,479 | 14,058 | 42,827 | **146,488** | **6.7** |
| Other birds | 180 | 0 | 728 | 673 | 974 | 2,449 | **5,004** | **0.2** |
| **Reptiles** | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 91 | 0 | **91** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 653 | 0 | **653** | **0** |
| Other amphibians | 0 | 0 | 0 | 0 | 59 | 0 | **59** | **0** |
| **Fish** | | | | | | | | |
| Zebra fish | 0 | 0 | 0 | 84 | 45,289 | 0 | **45,373** | **2.1** |
| Other fish | 36 | 0 | 3,923 | 100 | 51,631 | 71,000 | **126,690** | **5.8** |
| **Cephalopods** | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | |
| **Total** | **139,602** | **35,172** | **892,723** | **64,083** | **843,375** | **211,904** | **2,186,859** | **100** |
| **%** | **6.4** | **1.6** | **40.8** | **2.9** | **38.6** | **9.7** | **100** |  |

Table 9.1: Toxicity and other safety testing including pharmacology by species and type of use (Part 1) (2017)

|  | **Acute** | | |  | | | **Repeated Dose** | | |  | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **LD50, LC50** | **Other lethal methods** | **Non lethal methods** | **Skin irritation / corrosion** | **Skin sensitisation** | **Eye irritation / corrosion** | **up to 28 days** | **29 - 90 days** | **> 90 days** | **Carcinogenicity** | **Genotoxicity** | **Developmental toxicity** | **Safety testing in food and feed area** |
| **Mammals** | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | |
| Mice | 30,521 | 666 | 11,694 | 28 | 16,478 | 0 | 13,621 | 7,359 | 1,783 | 5,971 | 4,236 | 977 | 40,556 |
| Rats | 5,006 | 1,042 | 16,778 | 244 | 0 | 0 | 40,791 | 23,460 | 13,522 | 6,522 | 6,067 | 70,778 | 0 |
| Guinea-Pigs | 40 | 0 | 543 | 0 | 30,785 | 0 | 92 | 92 | 0 | 0 | 0 | 0 | 0 |
| Hamsters (Syrian) | 0 | 0 | 225 | 84 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamsters (Chinese) | 0 | 0 | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mongolian gerbil | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rabbits** | | | | | | | | | | | | | |
| Rabbits | 0 | 10 | 776 | 3,691 | 68 | 814 | 1,354 | 834 | 270 | 0 | 0 | 14,910 | 0 |
| **Carnivores** | | | | | | | | | | | | | |
| Cats | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 30 | 0 | 0 | 0 | 0 |
| Dogs | 0 | 0 | 703 | 0 | 0 | 0 | 2,567 | 1,277 | 1,272 | 0 | 0 | 88 | 0 |
| Ferrets | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other carnivores | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pigs | 0 | 0 | 76 | 26 | 10 | 0 | 774 | 287 | 323 | 0 | 0 | 0 | 41 |
| Goats | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 144 |
| Cattle | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 145 |
| **Non-human primates** | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 129 | 46 | 3 | 0 | 0 | 0 | 0 |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cynomolgus monkey | 0 | 0 | 311 | 0 | 0 | 0 | 1,979 | 1,576 | 1,095 | 0 | 0 | 264 | 0 |
| Rhesus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Birds** | | | | | | | | | | | | | |
| Domestic fowl | 5,555 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,437 |
| Other birds | 162 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| **Reptiles** | | | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | | | | | | |
| Zebra fish | 475 | 3,530 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,774 | 0 |
| Other fish | 5,180 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 880 | 420 |
| **Cephalopods** | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | | | | | | |
| **Total** | **46,939** | **5,248** | **31,218** | **4,120** | **47,341** | **814** | **61,344** | **34,931** | **18,298** | **12,493** | **10,303** | **97,671** | **45,800** |
| **%** | **5.6** | **0.6** | **3.7** | **0.5** | **5.6** | **0.1** | **7.3** | **4.1** | **2.2** | **1.5** | **1.2** | **11.6** | **5.4** |

Table 9.2: Toxicity and other safety testing including pharmacology by species and type of use (Part 2) (2017)

|  | | | | | | **EcoToxicity** | | | | | |  | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Target animal safety** | **Neurotoxicity** | **Kinetics** | **Pharmaco - dynamics (incl safety pharmacology)** | **Phototoxicity** | **Acute toxicity** | **Chronic toxicity** | **Reproductive toxicity** | **Endocrine activity** | **Bioaccumulation** | **Other ecotoxicity** | **Other toxicity / safety testing** | **Total** | **%** |
| **Mammals** | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | |
| Mice | 549 | 332 | 36,480 | 57,482 | 440 | 9,764 | 50 | 1,762 | 0 | 0 | 447 | 4,788 | **245,984** | **29.2** |
| Rats | 33 | 420 | 26,659 | 36,615 | 85 | 1,035 | 1,107 | 132,639 | 0 | 0 | 0 | 3,652 | **386,455** | **45.9** |
| Guinea-Pigs | 0 | 0 | 110 | 506 | 0 | 138 | 0 | 0 | 0 | 0 | 142 | 82 | **32,530** | **3.9** |
| Hamsters (Syrian) | 0 | 0 | 0 | 68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **383** | **0** |
| Hamsters (Chinese) | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **59** | **0** |
| Mongolian gerbil | 0 | 0 | 66 | 1,355 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,421** | **0.2** |
| Other rodents | 2,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6,554 | 0 | **9,060** | **1.1** |
| **Rabbits** | | | | | | | | | | | | | | |
| Rabbits | 121 | 0 | 539 | 1,141 | 0 | 0 | 86 | 5,097 | 0 | 0 | 0 | 1,121 | **30,832** | **3.7** |
| **Carnivores** | | | | | | | | | | | | | | |
| Cats | 167 | 0 | 424 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **772** | **0.1** |
| Dogs | 112 | 0 | 1,728 | 976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 122 | **8,845** | **1.1** |
| Ferrets | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **34** | **0** |
| Other carnivores | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **81** | **0** |
| **Farm animals** | | | | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 8 | 0 | 42 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | **71** | **0** |
| Pigs | 891 | 0 | 1,121 | 423 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 700 | **4,672** | **0.6** |
| Goats | 0 | 0 | 23 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **75** | **0** |
| Sheep | 124 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | **313** | **0** |
| Cattle | 288 | 0 | 184 | 357 | 0 | 0 | 0 | 0 | 0 | 72 | 20 | 12 | **1,078** | **0.1** |
| **Non-human primates** | | | | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | **215** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 0 | 0 | 1,414 | 254 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 298 | **7,191** | **0.9** |
| Rhesus monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **3** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | | | | | | | | | | |
| Domestic fowl | 3,385 | 0 | 361 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 308 | **14,058** | **1.7** |
| Other birds | 200 | 0 | 168 | 0 | 0 | 27 | 0 | 128 | 0 | 0 | 39 | 135 | **974** | **0.1** |
| **Reptiles** | | | | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | **91** | **0** |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 128 | 0 | 0 | 0 | 525 | 0 | 0 | **653** | **0.1** |
| Other amphibians | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 0 | **59** | **0** |
| **Fish** | | | | | | | | | | | | | | |
| Zebra fish | 0 | 2,017 | 0 | 0 | 0 | 9,458 | 12,497 | 887 | 5,040 | 369 | 294 | 0 | **44,385** | **5.3** |
| Other fish | 224 | 0 | 0 | 0 | 0 | 24,203 | 14,998 | 0 | 884 | 3,144 | 1,698 | 0 | **51,631** | **6.1** |
| **Cephalopods** | | | | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | | | | | |
| **Total** | **8,717** | **2,769** | **69,373** | **99,353** | **525** | **44,915** | **28,738** | **140,513** | **5,924** | **4,110** | **9,210** | **11,258** | **841,925** | **100** |
| **%** | **1** | **0.3** | **8.2** | **11.8** | **0.1** | **5.3** | **3.4** | **16.7** | **0.7** | **0.5** | **1.1** | **1.3** | **100** |  |

Table 10: Regulatory uses by species and type of legislation (2017)

|  | **Legislation on medicinal products for human use** | **Legislation on medicinal products for veterinary use and their residues** | **Medical devices legislation** | **Industrial chemicals legislation** | **Plant protection product legislation** | **Biocides legislation** | **Food legislation including food contact material** | **Feed legislation including legislation for the safety of target animals, workers and environment** | **Other legislation** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | |
| Mice | 839,113 | 121,753 | 18,850 | 8,752 | 7,545 | 826 | 41,515 | 889 | 562 | **1,039,805** | **47.5** |
| Rats | 317,250 | 17,220 | 3,879 | 182,624 | 29,679 | 1,011 | 2,641 | 3,211 | 1,054 | **558,569** | **25.5** |
| Guinea-Pigs | 69,557 | 15,199 | 26,208 | 2,080 | 89 | 73 | 0 | 0 | 26 | **113,232** | **5.2** |
| Hamsters (Syrian) | 542 | 5,916 | 346 | 0 | 0 | 6 | 0 | 0 | 0 | **6,810** | **0.3** |
| Hamsters (Chinese) | 0 | 0 | 47 | 12 | 0 | 0 | 0 | 0 | 0 | **59** | **0** |
| Mongolian gerbil | 0 | 1,480 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,480** | **0.1** |
| Other rodents | 104 | 0 | 0 | 0 | 9,054 | 6 | 0 | 0 | 60 | **9,224** | **0.4** |
| **Rabbits** | | | | | | | | | | | |
| Rabbits | 63,997 | 10,828 | 4,862 | 10,648 | 2,697 | 263 | 18 | 24 | 978 | **94,315** | **4.3** |
| **Carnivores** | | | | | | | | | | | |
| Cats | 24 | 1,348 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,372** | **0.1** |
| Dogs | 8,343 | 2,093 | 31 | 20 | 136 | 0 | 0 | 0 | 14 | **10,637** | **0.5** |
| Ferrets | 442 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **476** | **0** |
| Other carnivores | 0 | 756 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **756** | **0** |
| **Farm animals** | | | | | | | | | | | |
| Horses, donkeys and cross-breeds | 38 | 261 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | **320** | **0** |
| Pigs | 3,456 | 8,464 | 214 | 3 | 0 | 0 | 0 | 557 | 3 | **12,697** | **0.6** |
| Goats | 12 | 78 | 4 | 0 | 27 | 0 | 0 | 0 | 0 | **121** | **0** |
| Sheep | 39 | 1,118 | 79 | 0 | 0 | 0 | 99 | 27 | 0 | **1,362** | **0.1** |
| Cattle | 0 | 3,570 | 0 | 0 | 44 | 0 | 0 | 143 | 0 | **3,757** | **0.2** |
| **Non-human primates** | | | | | | | | | | | |
| Prosimians | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 215 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **215** | **0** |
| Squirrel monkey | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 7,283 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7,283** | **0.3** |
| Rhesus monkey | 3 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | **11** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | | | | | | | |
| Domestic fowl | 2,398 | 126,181 | 0 | 0 | 391 | 0 | 0 | 17,498 | 20 | **146,488** | **6.7** |
| Other birds | 130 | 4,213 | 0 | 10 | 278 | 0 | 0 | 373 | 0 | **5,004** | **0.2** |
| **Reptiles** | | | | | | | | | | | |
| Reptiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | | | | | | | |
| Rana | 0 | 0 | 0 | 0 | 91 | 0 | 0 | 0 | 0 | **91** | **0** |
| Xenopus | 0 | 0 | 0 | 525 | 128 | 0 | 0 | 0 | 0 | **653** | **0** |
| Other amphibians | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 0 | **59** | **0** |
| **Fish** | | | | | | | | | | | |
| Zebra fish | 9,158 | 209 | 3,250 | 14,142 | 10,004 | 1,620 | 0 | 145 | 6,845 | **45,373** | **2.1** |
| Other fish | 6,844 | 4,765 | 534 | 11,361 | 14,983 | 324 | 0 | 71,627 | 16,252 | **126,690** | **5.8** |
| **Cephalopods** | | | | | | | | | | | |
| Cephalopods | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | | |
| **Total** | **1,328,948** | **325,486** | **58,312** | **230,177** | **75,205** | **4,129** | **44,273** | **94,515** | **25,814** | **2,186,859** | **100** |
| **%** | **60.8** | **14.9** | **2.7** | **10.5** | **3.4** | **0.2** | **2** | **4.3** | **1.2** | **100** |  |

Table 11: Regulatory uses by species and origin of regulatory requirement (2017)

|  | **Legislation satisfying EU requirements** | **Legislation satisfying national requirements only [within EU]** | **Legislation satisfying Non-EU requirements only** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | |
| **Rodents** | | | | | |
| Mice | 987,608 | 8,465 | 43,732 | **1,039,805** | **47.5** |
| Rats | 552,596 | 1,812 | 4,161 | **558,569** | **25.5** |
| Guinea-Pigs | 106,808 | 1,244 | 5,180 | **113,232** | **5.2** |
| Hamsters (Syrian) | 6,140 | 0 | 670 | **6,810** | **0.3** |
| Hamsters (Chinese) | 59 | 0 | 0 | **59** | **0** |
| Mongolian gerbil | 1,480 | 0 | 0 | **1,480** | **0.1** |
| Other rodents | 9,158 | 66 | 0 | **9,224** | **0.4** |
| **Rabbits** | | | | | |
| Rabbits | 73,568 | 61 | 20,686 | **94,315** | **4.3** |
| **Carnivores** | | | | | |
| Cats | 1,372 | 0 | 0 | **1,372** | **0.1** |
| Dogs | 10,579 | 12 | 46 | **10,637** | **0.5** |
| Ferrets | 476 | 0 | 0 | **476** | **0** |
| Other carnivores | 756 | 0 | 0 | **756** | **0** |
| **Farm animals** | | | | | |
| Horses, donkeys and cross-breeds | 320 | 0 | 0 | **320** | **0** |
| Pigs | 11,350 | 0 | 1,347 | **12,697** | **0.6** |
| Goats | 121 | 0 | 0 | **121** | **0** |
| Sheep | 1,356 | 0 | 6 | **1,362** | **0.1** |
| Cattle | 3,717 | 32 | 8 | **3,757** | **0.2** |
| **Non-human primates** | | | | | |
| Prosimians | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 215 | 0 | 0 | **215** | **0** |
| Squirrel monkey | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 7,107 | 131 | 45 | **7,283** | **0.3** |
| Rhesus monkey | 11 | 0 | 0 | **11** | **0** |
| Vervets (Chlorocebus spp.) | 0 | 0 | 0 | **0** | **0** |
| Baboons | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | |
| Other mammals | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | |
| Domestic fowl | 140,752 | 35 | 5,701 | **146,488** | **6.7** |
| Other birds | 4,989 | 0 | 15 | **5,004** | **0.2** |
| **Reptiles** | | | | | |
| Reptiles | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | |
| Rana | 91 | 0 | 0 | **91** | **0** |
| Xenopus | 653 | 0 | 0 | **653** | **0** |
| Other amphibians | 59 | 0 | 0 | **59** | **0** |
| **Fish** | | | | | |
| Zebra fish | 44,123 | 1,250 | 0 | **45,373** | **2.1** |
| Other fish | 115,618 | 9,774 | 1,298 | **126,690** | **5.8** |
| **Cephalopods** | | | | | |
| Cephalopods | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | |
| **Total** | **2,081,082** | **22,882** | **82,895** | **2,186,859** | **100** |
| **%** | **95.2** | **1** | **3.8** | **100** |  |

Table 12: Routine production uses by species and product type (2017)

|  | **Blood based products** | **Other product types** | **Monoclonal antibody by mouse ascites method** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | |
| **Rodents** | | | | | |
| Mice | 1,623 | 3,353 | 44,574 | **49,550** | **10.6** |
| Rats | 2,437 | 225 | 33 | **2,695** | **0.6** |
| Guinea-Pigs | 954 | 39 | 0 | **993** | **0.2** |
| Hamsters (Syrian) | 0 | 100 | 0 | **100** | **0** |
| Hamsters (Chinese) | 0 | 0 | 0 | **0** | **0** |
| Mongolian gerbil | 0 | 109 | 0 | **109** | **0** |
| Other rodents | 0 | 0 | 0 | **0** | **0** |
| **Rabbits** | | | | | |
| Rabbits | 196,761 | 35,261 | 417 | **232,439** | **49.5** |
| **Carnivores** | | | | | |
| Cats | 0 | 10 | 0 | **10** | **0** |
| Dogs | 274 | 56 | 0 | **330** | **0.1** |
| Ferrets | 37 | 26 | 0 | **63** | **0** |
| Other carnivores | 20 | 0 | 0 | **20** | **0** |
| **Farm animals** | | | | | |
| Horses, donkeys and cross-breeds | 9,577 | 41 | 0 | **9,618** | **2** |
| Pigs | 17 | 443 | 0 | **460** | **0.1** |
| Goats | 45 | 1 | 0 | **46** | **0** |
| Sheep | 44,308 | 1,357 | 0 | **45,665** | **9.7** |
| Cattle | 375 | 226 | 0 | **601** | **0.1** |
| **Non-human primates** | | | | | |
| Prosimians | 0 | 0 | 0 | **0** | **0** |
| Marmoset and tamarins | 86 | 0 | 0 | **86** | **0** |
| Squirrel monkey | 0 | 0 | 0 | **0** | **0** |
| Other species of new world monkeys (Ceboidea) | 0 | 0 | 0 | **0** | **0** |
| Cynomolgus monkey | 854 | 199 | 0 | **1,053** | **0.2** |
| Rhesus monkey | 29 | 0 | 0 | **29** | **0** |
| Vervets (Chlorocebus spp.) | 5 | 0 | 0 | **5** | **0** |
| Baboons | 0 | 0 | 0 | **0** | **0** |
| Other species of old world monkeys (Cercopithecoidea) | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | |
| Other mammals | 0 | 1 | 0 | **1** | **0** |
| **Birds** | | | | | |
| Domestic fowl | 2,345 | 100,060 | 0 | **102,405** | **21.8** |
| Other birds | 33 | 22,788 | 0 | **22,821** | **4.9** |
| **Reptiles** | | | | | |
| Reptiles | 0 | 0 | 0 | **0** | **0** |
| **Amphibians** | | | | | |
| Rana | 0 | 0 | 0 | **0** | **0** |
| Xenopus | 0 | 210 | 0 | **210** | **0** |
| Other amphibians | 0 | 0 | 0 | **0** | **0** |
| **Fish** | | | | | |
| Zebra fish | 0 | 0 | 0 | **0** | **0** |
| Other fish | 0 | 49 | 0 | **49** | **0** |
| **Cephalopods** | | | | | |
| Cephalopods | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | |
| **Total** | **259,780** | **164,554** | **45,024** | **469,358** | **100** |
| **%** | **55.3** | **35.1** | **9.6** | **100** |  |

Table 13: Reuses of animals by species and main categories of scientific purposes in research, testing routine production and education (2017)

|  | **Reuse** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 20,981 | 11,335 | 11,544 | 412 | 0 | 7 | 4,371 | 0 | 48,650 | 0.8 |
| No | 3,013,387 | 1,519,631 | 1,028,261 | 49,138 | 2,747 | 13,345 | 80,954 | 8 | 5,707,471 | 99.2 |
| **Total** | **3,034,368** | **1,530,966** | **1,039,805** | **49,550** | **2,747** | **13,352** | **85,325** | **8** | **5,756,121** | **100.0** |
| **Rats** | Yes | 6,662 | 4,395 | 3,777 | 535 | 0 | 0 | 2,499 | 0 | 17,868 | 1.5 |
| No | 317,369 | 230,944 | 554,792 | 2,160 | 2,384 | 0 | 38,650 | 0 | 1,146,299 | 98.5 |
| **Total** | **324,031** | **235,339** | **558,569** | **2,695** | **2,384** | **0** | **41,149** | **0** | **1,164,167** | **100.0** |
| **Guinea-Pigs** | Yes | 25 | 142 | 586 | 55 | 0 | 0 | 405 | 0 | 1,213 | 0.8 |
| No | 22,150 | 7,393 | 112,646 | 938 | 10 | 0 | 1,687 | 0 | 144,824 | 99.2 |
| **Total** | **22,175** | **7,535** | **113,232** | **993** | **10** | **0** | **2,092** | **0** | **146,037** | **100.0** |
| **Hamsters (Syrian)** | Yes | 8 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 23 | 0.2 |
| No | 1,482 | 4,011 | 6,810 | 100 | 0 | 0 | 297 | 0 | 12,700 | 99.8 |
| **Total** | **1,490** | **4,011** | **6,810** | **100** | **0** | **0** | **312** | **0** | **12,723** | **100.0** |
| **Hamsters (Chinese)** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 3 | 120 | 59 | 0 | 0 | 0 | 5 | 0 | 187 | 100.0 |
| **Total** | **3** | **120** | **59** | **0** | **0** | **0** | **5** | **0** | **187** | **100.0** |
| **Mongolian gerbil** | Yes | 45 | 101 | 0 | 0 | 0 | 0 | 0 | 0 | 146 | 2.7 |
| No | 1,449 | 2,082 | 1,480 | 109 | 0 | 10 | 109 | 0 | 5,239 | 97.3 |
| **Total** | **1,494** | **2,183** | **1,480** | **109** | **0** | **10** | **109** | **0** | **5,385** | **100.0** |
| **Other rodents** | Yes | 254 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 280 | 1.1 |
| No | 14,979 | 464 | 9,224 | 0 | 169 | 77 | 259 | 0 | 25,172 | 98.9 |
| **Total** | **15,233** | **464** | **9,224** | **0** | **169** | **77** | **285** | **0** | **25,452** | **100.0** |
| **Rabbits** | Yes | 159 | 524 | 10,286 | 992 | 0 | 0 | 509 | 0 | 12,470 | 3.4 |
| No | 23,355 | 11,337 | 84,029 | 231,447 | 331 | 0 | 1,462 | 0 | 351,961 | 96.6 |
| **Total** | **23,514** | **11,861** | **94,315** | **232,439** | **331** | **0** | **1,971** | **0** | **364,431** | **100.0** |
| **Cats** | Yes | 511 | 211 | 719 | 0 | 0 | 0 | 18 | 0 | 1,459 | 43.7 |
| No | 239 | 922 | 653 | 10 | 0 | 0 | 55 | 0 | 1,879 | 56.3 |
| **Total** | **750** | **1,133** | **1,372** | **10** | **0** | **0** | **73** | **0** | **3,338** | **100.0** |
| **Dogs** | Yes | 1,111 | 2,774 | 3,144 | 274 | 0 | 0 | 368 | 0 | 7,671 | 35.9 |
| No | 512 | 5,420 | 7,493 | 56 | 15 | 0 | 192 | 0 | 13,688 | 64.1 |
| **Total** | **1,623** | **8,194** | **10,637** | **330** | **15** | **0** | **560** | **0** | **21,359** | **100.0** |
| **Ferrets** | Yes | 5 | 35 | 0 | 0 | 0 | 0 | 56 | 0 | 96 | 4.5 |
| No | 314 | 1,147 | 476 | 63 | 0 | 0 | 16 | 0 | 2,016 | 95.5 |
| **Total** | **319** | **1,182** | **476** | **63** | **0** | **0** | **72** | **0** | **2,112** | **100.0** |
| **Other carnivores** | Yes | 101 | 12 | 0 | 0 | 12 | 3 | 0 | 0 | 128 | 5.1 |
| No | 775 | 606 | 756 | 20 | 111 | 118 | 0 | 0 | 2,386 | 94.9 |
| **Total** | **876** | **618** | **756** | **20** | **123** | **121** | **0** | **0** | **2,514** | **100.0** |
| **Horses, donkeys and cross-breeds** | Yes | 1,305 | 174 | 63 | 9,494 | 4 | 0 | 170 | 0 | 11,210 | 82.3 |
| No | 449 | 1,396 | 257 | 124 | 2 | 0 | 186 | 0 | 2,414 | 17.7 |
| **Total** | **1,754** | **1,570** | **320** | **9,618** | **6** | **0** | **356** | **0** | **13,624** | **100.0** |
| **Pigs** | Yes | 1,415 | 785 | 1,270 | 0 | 0 | 0 | 883 | 0 | 4,353 | 5.7 |
| No | 16,907 | 31,930 | 11,427 | 460 | 608 | 2 | 10,152 | 36 | 71,522 | 94.3 |
| **Total** | **18,322** | **32,715** | **12,697** | **460** | **608** | **2** | **11,035** | **36** | **75,875** | **100.0** |
| **Goats** | Yes | 546 | 12 | 24 | 19 | 0 | 0 | 104 | 0 | 705 | 31.1 |
| No | 598 | 716 | 97 | 27 | 0 | 0 | 125 | 0 | 1,563 | 68.9 |
| **Total** | **1,144** | **728** | **121** | **46** | **0** | **0** | **229** | **0** | **2,268** | **100.0** |
| **Sheep** | Yes | 3,041 | 819 | 327 | 42,309 | 2 | 0 | 217 | 0 | 46,715 | 71.3 |
| No | 5,516 | 7,435 | 1,035 | 3,356 | 117 | 0 | 1,265 | 88 | 18,812 | 28.7 |
| **Total** | **8,557** | **8,254** | **1,362** | **45,665** | **119** | **0** | **1,482** | **88** | **65,527** | **100.0** |
| **Cattle** | Yes | 1,665 | 1,391 | 550 | 215 | 151 | 0 | 2,661 | 0 | 6,633 | 17.8 |
| No | 13,132 | 8,996 | 3,207 | 386 | 2,302 | 0 | 2,594 | 26 | 30,643 | 82.2 |
| **Total** | **14,797** | **10,387** | **3,757** | **601** | **2,453** | **0** | **5,255** | **26** | **37,276** | **100.0** |
| **Prosimians** | Yes | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 43.4 |
| No | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 56.6 |
| **Total** | **173** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **173** | **100.0** |
| **Marmoset and tamarins** | Yes | 32 | 51 | 12 | 86 | 0 | 0 | 0 | 0 | 181 | 28.0 |
| No | 150 | 111 | 203 | 0 | 0 | 0 | 1 | 0 | 465 | 72.0 |
| **Total** | **182** | **162** | **215** | **86** | **0** | **0** | **1** | **0** | **646** | **100.0** |
| **Squirrel monkey** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 100.0 |
| **Total** | **7** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **8** | **100.0** |
| **Other species of new world monkeys (Ceboidea)** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| No | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 100.0 |
| **Total** | **3** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **100.0** |
| **Cynomolgus monkey** | Yes | 130 | 523 | 1,100 | 1,017 | 0 | 0 | 10 | 0 | 2,780 | 27.8 |
| No | 399 | 602 | 6,183 | 36 | 0 | 0 | 7 | 0 | 7,227 | 72.2 |
| **Total** | **529** | **1,125** | **7,283** | **1,053** | **0** | **0** | **17** | **0** | **10,007** | **100.0** |
| **Rhesus monkey** | Yes | 143 | 103 | 0 | 29 | 0 | 0 | 0 | 0 | 275 | 43.8 |
| No | 107 | 231 | 11 | 0 | 0 | 0 | 4 | 0 | 353 | 56.2 |
| **Total** | **250** | **334** | **11** | **29** | **0** | **0** | **4** | **0** | **628** | **100.0** |
| **Vervets (Chlorocebus spp.)** | Yes | 0 | 15 | 0 | 5 | 0 | 0 | 0 | 0 | 20 | 37.7 |
| No | 22 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 62.3 |
| **Total** | **22** | **26** | **0** | **5** | **0** | **0** | **0** | **0** | **53** | **100.0** |
| **Baboons** | Yes | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 45.7 |
| No | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 54.3 |
| **Total** | **10** | **36** | **0** | **0** | **0** | **0** | **0** | **0** | **46** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Yes | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 34.3 |
| No | 14 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 65.7 |
| **Total** | **14** | **21** | **0** | **0** | **0** | **0** | **0** | **0** | **35** | **100.0** |
| **Other mammals** | Yes | 605 | 124 | 0 | 0 | 0 | 0 | 2 | 0 | 731 | 2.7 |
| No | 4,431 | 21,416 | 0 | 1 | 94 | 274 | 119 | 0 | 26,335 | 97.3 |
| **Total** | **5,036** | **21,540** | **0** | **1** | **94** | **274** | **121** | **0** | **27,066** | **100.0** |
| **Domestic fowl** | Yes | 488 | 4,694 | 1,339 | 153 | 240 | 0 | 545 | 0 | 7,459 | 1.6 |
| No | 107,897 | 102,329 | 145,149 | 102,252 | 2,519 | 343 | 3,749 | 315 | 464,553 | 98.4 |
| **Total** | **108,385** | **107,023** | **146,488** | **102,405** | **2,759** | **343** | **4,294** | **315** | **472,012** | **100.0** |
| **Other birds** | Yes | 2,182 | 139 | 0 | 21 | 278 | 1 | 315 | 0 | 2,936 | 2.9 |
| No | 55,174 | 12,953 | 5,004 | 22,800 | 2,289 | 695 | 495 | 0 | 99,410 | 97.1 |
| **Total** | **57,356** | **13,092** | **5,004** | **22,821** | **2,567** | **696** | **810** | **0** | **102,346** | **100.0** |
| **Reptiles** | Yes | 3,601 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 3,625 | 55.2 |
| No | 2,666 | 117 | 0 | 0 | 8 | 70 | 76 | 0 | 2,937 | 44.8 |
| **Total** | **6,267** | **117** | **0** | **0** | **8** | **70** | **100** | **0** | **6,562** | **100.0** |
| **Rana** | Yes | 4 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 13 | 0.4 |
| No | 794 | 108 | 91 | 0 | 200 | 0 | 2,292 | 0 | 3,485 | 99.6 |
| **Total** | **798** | **108** | **91** | **0** | **200** | **0** | **2,301** | **0** | **3,498** | **100.0** |
| **Xenopus** | Yes | 6,750 | 873 | 0 | 210 | 0 | 0 | 71 | 0 | 7,904 | 36.9 |
| No | 8,880 | 2,773 | 653 | 0 | 902 | 0 | 331 | 0 | 13,539 | 63.1 |
| **Total** | **15,630** | **3,646** | **653** | **210** | **902** | **0** | **402** | **0** | **21,443** | **100.0** |
| **Other amphibians** | Yes | 72 | 11 | 0 | 0 | 180 | 0 | 0 | 0 | 263 | 2.4 |
| No | 7,350 | 1,040 | 59 | 0 | 1,631 | 398 | 205 | 0 | 10,683 | 97.6 |
| **Total** | **7,422** | **1,051** | **59** | **0** | **1,811** | **398** | **205** | **0** | **10,946** | **100.0** |
| **Zebra fish** | Yes | 4,396 | 18 | 0 | 0 | 0 | 0 | 6 | 0 | 4,420 | 0.9 |
| No | 349,940 | 100,219 | 45,373 | 0 | 2,416 | 140 | 1,675 | 0 | 499,763 | 99.1 |
| **Total** | **354,336** | **100,237** | **45,373** | **0** | **2,416** | **140** | **1,681** | **0** | **504,183** | **100.0** |
| **Other fish** | Yes | 2,177 | 514 | 122 | 0 | 392 | 0 | 39 | 0 | 3,244 | 0.4 |
| No | 328,584 | 93,208 | 126,568 | 49 | 104,640 | 63,410 | 3,473 | 0 | 719,932 | 99.6 |
| **Total** | **330,761** | **93,722** | **126,690** | **49** | **105,032** | **63,410** | **3,512** | **0** | **723,176** | **100.0** |
| **Cephalopods** | Yes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **No** | **22** | **455** | **0** | **0** | **33** | **0** | **4** | **0** | **514** | **100.0** |
| **Total** | **22** | **455** | **0** | **0** | **33** | **0** | **4** | **0** | **514** | **100.0** |
| **All Species** | **Yes** | **58,499** | **29,798** | **34,863** | **55,826** | **1,259** | **11** | **13,323** | **0** | **193,579** | **2.0** |
| **No** | **4,299,154** | **2,170,158** | **2,151,996** | **413,532** | **123,528** | **78,882** | **150,439** | **473** | **9,388,162** | **98.0** |
| **Total** | **4,357,653** | **2,199,956** | **2,186,859** | **469,358** | **124,787** | **78,893** | **163,762** | **473** | **9,581,741** | **100.0** |

Table 14: Genetic status of animals used by species and main categories of scientific purposes (2017)

|  | **Genetic status** | **Basic research** | **Translational and applied research** | **Regulatory use** | **Routine production** | **Protection of the natural environment in the interests of the health or welfare of human beings or animals** | **Preservation of species** | **Higher education or training for the acquisition, maintenance or improvement of vocational skills** | **Forensic enquiries** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Not altered | 1,399,831 | 1,038,855 | 994,986 | 49,235 | 2,747 | 540 | 73,126 | 0 | 3,559,320 | 61.8 |
| Non harmful | 1,366,539 | 369,566 | 43,196 | 315 | 0 | 12,434 | 11,539 | 0 | 1,803,589 | 31.3 |
| Harmful | 267,998 | 122,545 | 1,623 | 0 | 0 | 378 | 660 | 8 | 393,212 | 6.8 |
| **Total** | **3,034,368** | **1,530,966** | **1,039,805** | **49,550** | **2,747** | **13,352** | **85,325** | **8** | **5,756,121** | **100.0** |
| **Rats** | Not altered | 303,734 | 226,481 | 556,201 | 2,572 | 2,384 | 0 | 40,396 | 0 | 1,131,768 | 97.2 |
| Non harmful | 15,959 | 4,910 | 2,270 | 123 | 0 | 0 | 712 | 0 | 23,974 | 2.1 |
| Harmful | 4,338 | 3,948 | 98 | 0 | 0 | 0 | 41 | 0 | 8,425 | 0.7 |
| **Total** | **324,031** | **235,339** | **558,569** | **2,695** | **2,384** | **0** | **41,149** | **0** | **1,164,167** | **100.0** |
| **Guinea-Pigs** | Not altered | 22,175 | 7,535 | 113,232 | 993 | 10 | 0 | 2,092 | 0 | 146,037 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **22,175** | **7,535** | **113,232** | **993** | **10** | **0** | **2,092** | **0** | **146,037** | **100.0** |
| **Hamsters (Syrian)** | Not altered | 1,490 | 3,824 | 6,810 | 100 | 0 | 0 | 312 | 0 | 12,536 | 98.5 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 187 | 0 | 0 | 0 | 0 | 0 | 0 | 187 | 1.5 |
| **Total** | **1,490** | **4,011** | **6,810** | **100** | **0** | **0** | **312** | **0** | **12,723** | **100.0** |
| **Hamsters (Chinese)** | Not altered | 3 | 120 | 59 | 0 | 0 | 0 | 5 | 0 | 187 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **3** | **120** | **59** | **0** | **0** | **0** | **5** | **0** | **187** | **100.0** |
| **Mongolian gerbil** | Not altered | 1,494 | 2,183 | 1,480 | 109 | 0 | 10 | 109 | 0 | 5,385 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,494** | **2,183** | **1,480** | **109** | **0** | **10** | **109** | **0** | **5,385** | **100.0** |
| **Other rodents** | Not altered | 15,233 | 464 | 9,224 | 0 | 169 | 77 | 285 | 0 | 25,452 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **15,233** | **464** | **9,224** | **0** | **169** | **77** | **285** | **0** | **25,452** | **100.0** |
| **Rabbits** | Not altered | 23,398 | 11,800 | 94,315 | 204,998 | 331 | 0 | 1,959 | 0 | 336,801 | 92.4 |
| Non harmful | 88 | 61 | 0 | 27,441 | 0 | 0 | 12 | 0 | 27,602 | 7.6 |
| Harmful | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0.0 |
| **Total** | **23,514** | **11,861** | **94,315** | **232,439** | **331** | **0** | **1,971** | **0** | **364,431** | **100.0** |
| **Cats** | Not altered | 750 | 1,133 | 1,372 | 10 | 0 | 0 | 73 | 0 | 3,338 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **750** | **1,133** | **1,372** | **10** | **0** | **0** | **73** | **0** | **3,338** | **100.0** |
| **Dogs** | Not altered | 1,519 | 8,166 | 10,637 | 330 | 15 | 0 | 560 | 0 | 21,227 | 99.4 |
| Non harmful | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0.1 |
| Harmful | 104 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 0.6 |
| **Total** | **1,623** | **8,194** | **10,637** | **330** | **15** | **0** | **560** | **0** | **21,359** | **100.0** |
| **Ferrets** | Not altered | 319 | 1,182 | 476 | 63 | 0 | 0 | 72 | 0 | 2,112 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **319** | **1,182** | **476** | **63** | **0** | **0** | **72** | **0** | **2,112** | **100.0** |
| **Other carnivores** | Not altered | 876 | 618 | 756 | 20 | 123 | 121 | 0 | 0 | 2,514 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **876** | **618** | **756** | **20** | **123** | **121** | **0** | **0** | **2,514** | **100.0** |
| **Horses, donkeys and cross-breeds** | Not altered | 1,754 | 1,570 | 320 | 9,618 | 6 | 0 | 356 | 0 | 13,624 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,754** | **1,570** | **320** | **9,618** | **6** | **0** | **356** | **0** | **13,624** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **Pigs** | Not altered | 18,182 | 32,394 | 12,697 | 460 | 608 | 2 | 10,995 | 36 | 75,374 | 99.3 |
| Non harmful | 121 | 172 | 0 | 0 | 0 | 0 | 40 | 0 | 333 | 0.4 |
| Harmful | 19 | 149 | 0 | 0 | 0 | 0 | 0 | 0 | 168 | 0.2 |
| **Total** | **18,322** | **32,715** | **12,697** | **460** | **608** | **2** | **11,035** | **36** | **75,875** | **100.0** |
| **Goats** | Not altered | 1,144 | 728 | 121 | 46 | 0 | 0 | 229 | 0 | 2,268 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **1,144** | **728** | **121** | **46** | **0** | **0** | **229** | **0** | **2,268** | **100.0** |
| **Sheep** | Not altered | 8,552 | 8,254 | 1,362 | 45,665 | 119 | 0 | 1,482 | 88 | 65,522 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0.0 |
| **Total** | **8,557** | **8,254** | **1,362** | **45,665** | **119** | **0** | **1,482** | **88** | **65,527** | **100.0** |
| **Cattle** | Not altered | 14,797 | 10,387 | 3,757 | 601 | 2,453 | 0 | 5,255 | 26 | 37,276 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **14,797** | **10,387** | **3,757** | **601** | **2,453** | **0** | **5,255** | **26** | **37,276** | **100.0** |
| **Prosimians** | Not altered | 173 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 173 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **173** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **173** | **100.0** |
| **Marmoset and tamarins** | Not altered | 182 | 162 | 215 | 86 | 0 | 0 | 1 | 0 | 646 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **182** | **162** | **215** | **86** | **0** | **0** | **1** | **0** | **646** | **100.0** |
| **Squirrel monkey** | Not altered | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **7** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **8** | **100.0** |
| **Other species of new world monkeys (Ceboidea)** | Not altered | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **3** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **3** | **100.0** |
| **Cynomolgus monkey** | Not altered | 529 | 1,125 | 7,283 | 1,053 | 0 | 0 | 17 | 0 | 10,007 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **529** | **1,125** | **7,283** | **1,053** | **0** | **0** | **17** | **0** | **10,007** | **100.0** |
| **Rhesus monkey** | Not altered | 250 | 334 | 11 | 29 | 0 | 0 | 4 | 0 | 628 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **250** | **334** | **11** | **29** | **0** | **0** | **4** | **0** | **628** | **100.0** |
| **Vervets (Chlorocebus spp.)** | Not altered | 22 | 26 | 0 | 5 | 0 | 0 | 0 | 0 | 53 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **22** | **26** | **0** | **5** | **0** | **0** | **0** | **0** | **53** | **100.0** |
| **Baboons** | Not altered | 10 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **10** | **36** | **0** | **0** | **0** | **0** | **0** | **0** | **46** | **100.0** |
| **Other species of old world monkeys (Cercopithecoidea)** | Not altered | 14 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **14** | **21** | **0** | **0** | **0** | **0** | **0** | **0** | **35** | **100.0** |
| **Other mammals** | Not altered | 5,013 | 21,540 | 0 | 1 | 94 | 274 | 121 | 0 | 27,043 | 99.9 |
| Non harmful | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 0.1 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **5,036** | **21,540** | **0** | **1** | **94** | **274** | **121** | **0** | **27,066** | **100.0** |
| **Domestic fowl** | Not altered | 107,748 | 107,023 | 146,488 | 102,405 | 2,759 | 343 | 4,294 | 315 | 471,375 | 99.9 |
| Non harmful | 637 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 637 | 0.1 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **108,385** | **107,023** | **146,488** | **102,405** | **2,759** | **343** | **4,294** | **315** | **472,012** | **100.0** |
| **Other birds** | Not altered | 57,356 | 13,092 | 5,004 | 22,821 | 2,567 | 696 | 810 | 0 | 102,346 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **57,356** | **13,092** | **5,004** | **22,821** | **2,567** | **696** | **810** | **0** | **102,346** | **100.0** |
| **Reptiles** | Not altered | 6,267 | 117 | 0 | 0 | 8 | 70 | 100 | 0 | 6,562 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **6,267** | **117** | **0** | **0** | **8** | **70** | **100** | **0** | **6,562** | **100.0** |
| **Rana** | Not altered | 798 | 108 | 91 | 0 | 200 | 0 | 2,301 | 0 | 3,498 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **798** | **108** | **91** | **0** | **200** | **0** | **2,301** | **0** | **3,498** | **100.0** |
| **Xenopus** | Not altered | 13,688 | 3,454 | 653 | 210 | 902 | 0 | 390 | 0 | 19,297 | 90.0 |
| Non harmful | 1,583 | 192 | 0 | 0 | 0 | 0 | 12 | 0 | 1,787 | 8.3 |
| Harmful | 359 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 359 | 1.7 |
| **Total** | **15,630** | **3,646** | **653** | **210** | **902** | **0** | **402** | **0** | **21,443** | **100.0** |
| **Other amphibians** | Not altered | 6,751 | 1,051 | 59 | 0 | 1,811 | 398 | 205 | 0 | 10,275 | 93.9 |
| Non harmful | 671 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 671 | 6.1 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **7,422** | **1,051** | **59** | **0** | **1,811** | **398** | **205** | **0** | **10,946** | **100.0** |
| **Zebra fish** | Not altered | 70,628 | 60,841 | 45,323 | 0 | 2,416 | 7 | 1,227 | 0 | 180,442 | 35.8 |
| Non harmful | 254,763 | 38,893 | 0 | 0 | 0 | 133 | 454 | 0 | 294,243 | 58.4 |
| Harmful | 28,945 | 503 | 50 | 0 | 0 | 0 | 0 | 0 | 29,498 | 5.9 |
| **Total** | **354,336** | **100,237** | **45,373** | **0** | **2,416** | **140** | **1,681** | **0** | **504,183** | **100.0** |
| **Other fish** | Not altered | 328,729 | 90,734 | 126,690 | 49 | 105,023 | 63,410 | 3,512 | 0 | 718,147 | 99.3 |
| Non harmful | 1,828 | 2,988 | 0 | 0 | 9 | 0 | 0 | 0 | 4,825 | 0.7 |
| Harmful | 204 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 204 | 0.0 |
| **Total** | **330,761** | **93,722** | **126,690** | **49** | **105,032** | **63,410** | **3,512** | **0** | **723,176** | **100.0** |
| **Cephalopods** | Not altered | 22 | 455 | 0 | 0 | 33 | 0 | 4 | 0 | 514 | 100.0 |
| Non harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Harmful | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **22** | **455** | **0** | **0** | **33** | **0** | **4** | **0** | **514** | **100.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |
| **All Species** | **Harmful** | **302,000** | **127,348** | **1,771** | **0** | **0** | **378** | **701** | **8** | **432,206** | **4.5** |
| **Non harmful** | **1,642,212** | **416,794** | **45,466** | **27,879** | **9** | **12,567** | **12,769** | **0** | **2,157,696** | **22.5** |
| **Not altered** | **2,413,441** | **1,655,814** | **2,139,622** | **441,479** | **124,778** | **65,948** | **150,292** | **465** | **6,991,839** | **73.0** |
| **Total** | **4,357,653** | **2,199,956** | **2,186,859** | **469,358** | **124,787** | **78,893** | **163,762** | **473** | **9,581,741** | **100.0** |

#### Part 3: Numbers and uses of animals for the creation and maintenance of genetically altered animals in the EU

Table 15: Use of animals for the creation of new genetically altered animal lines by research type species and severity (2017)

|  | **Severity** | **Basic research** | **Translational and applied research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 23,615 | 382 | 23,997 | 4.9 |
| Mild | 356,584 | 18,048 | 374,632 | 76.3 |
| Moderate | 70,843 | 8,809 | 79,652 | 16.2 |
| Severe | 12,014 | 422 | 12,436 | 2.5 |
| **Total** | **463,056** | **27,661** | **490,717** | **100.0** |
| **Rats** | Non-recovery | 153 | 0 | 153 | 1.5 |
| Mild | 6,613 | 523 | 7,136 | 71.6 |
| Moderate | 1,036 | 685 | 1,721 | 17.3 |
| Severe | 554 | 396 | 950 | 9.5 |
| **Total** | **8,356** | **1,604** | **9,960** | **100.0** |
| **Rabbits** | Non-recovery | 102 | 133 | 235 | 49.5 |
| Mild | 24 | 0 | 24 | 5.1 |
| Moderate | 109 | 107 | 216 | 45.5 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **235** | **240** | **475** | **100.0** |
| **Pigs** | Non-recovery | 2 | 6 | 8 | 3.5 |
| Mild | 133 | 74 | 207 | 91.2 |
| Moderate | 2 | 0 | 2 | 0.9 |
| Severe | 10 | 0 | 10 | 4.4 |
| **Total** | **147** | **80** | **227** | **100.0** |
| **Sheep** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 14 | 0 | 14 | 82.4 |
| Moderate | 3 | 0 | 3 | 17.6 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **17** | **0** | **17** | **100.0** |
| **Marmoset and tamarins** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 9 | 0 | 9 | 90.0 |
| Moderate | 1 | 0 | 1 | 10.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **10** | **0** | **10** | **100.0** |
| **Other mammals** | Non-recovery | 16 | 0 | 16 | 26.2 |
| Mild | 34 | 0 | 34 | 55.7 |
| Moderate | 11 | 0 | 11 | 18.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **61** | **0** | **61** | **100.0** |
| **Domestic fowl** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 620 | 27 | 647 | 100.0 |
| Moderate | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **620** | **27** | **647** | **100.0** |
| **Xenopus** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 250 | 0 | 250 | 100.0 |
| Moderate | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **250** | **0** | **250** | **100.0** |
| **Zebra fish** | Non-recovery | 1,018 | 40 | 1,058 | 0.7 |
| Mild | 127,533 | 4,503 | 132,036 | 87.7 |
| Moderate | 15,114 | 190 | 15,304 | 10.2 |
| Severe | 2,198 | 0 | 2,198 | 1.5 |
| **Total** | **145,863** | **4,733** | **150,596** | **100.0** |
| **Other fish** | Non-recovery | 0 | 0 | 0 | 0.0 |
| Mild | 4,562 | 0 | 4,562 | 99.8 |
| Moderate | 7 | 0 | 7 | 0.2 |
| Severe | 0 | 0 | 0 | 0.0 |
| **Total** | **4,569** | **0** | **4,569** | **100.0** |
|  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **24,906** | **561** | **25,467** | **3.9** |
| **Mild** | **496,376** | **23,175** | **519,551** | **79.0** |
| **Moderate** | **87,126** | **9,791** | **96,917** | **14.7** |
| **Severe** | **14,776** | **818** | **15,594** | **2.4** |
| **Total** | **623,184** | **34,345** | **657,529** | **100.0** |

Table 16: Use of animals for the creation of new genetically altered animal lines by research type species and severity (2017)

|  | **Reuse** | **Basic research** | **Translational and applied research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 1,895 | 225 | 2,120 | 0.4 |
| No | 461,161 | 27,436 | 488,597 | 99.6 |
| **Total** | **463,056** | **27,661** | **490,717** | **100.0** |
| **Rats** | Yes | 0 | 0 | 0 | 0.0 |
| No | 8,356 | 1,604 | 9,960 | 100.0 |
| **Total** | **8,356** | **1,604** | **9,960** | **100.0** |
| **Rabbits** | Yes | 0 | 0 | 0 | 0.0 |
| No | 235 | 240 | 475 | 100.0 |
| **Total** | **235** | **240** | **475** | **100.0** |
| **Pigs** | Yes | 0 | 3 | 3 | 1.3 |
| No | 147 | 77 | 224 | 98.7 |
| **Total** | **147** | **80** | **227** | **100.0** |
| **Sheep** | Yes | 0 | 0 | 0 | 0.0 |
| No | 17 | 0 | 17 | 100.0 |
| **Total** | **17** | **0** | **17** | **100.0** |
| **Marmoset and tamarins** | Yes | 0 | 0 | 0 | 0.0 |
| No | 10 | 0 | 10 | 100.0 |
| **Total** | **10** | **0** | **10** | **100.0** |
| **Other mammals** | Yes | 0 | 0 | 0 | 0.0 |
| No | 61 | 0 | 61 | 100.0 |
| **Total** | **61** | **0** | **61** | **100.0** |
| **Domestic fowl** | Yes | 0 | 0 | 0 | 0.0 |
| No | 620 | 27 | 647 | 100.0 |
| **Total** | **620** | **27** | **647** | **100.0** |
| **Xenopus** | Yes | 0 | 0 | 0 | 0.0 |
| No | 250 | 0 | 250 | 100.0 |
| **Total** | **250** | **0** | **250** | **100.0** |
| **Zebra fish** | Yes | 20,621 | 80 | 20,701 | 13.7 |
| No | 125,242 | 4,653 | 129,895 | 86.3 |
| **Total** | **145,863** | **4,733** | **150,596** | **100.0** |
| **Other fish** | Yes | 0 | 0 | 0 | 0.0 |
| No | 4,569 | 0 | 4,569 | 100.0 |
| **Total** | **4,569** | **0** | **4,569** | **100.0** |
|  |  |  |  |  |  |
| **All Species** | **Yes** | **22,516** | **308** | **22,824** | **3.5** |
| **No** | **600,668** | **34,037** | **634,705** | **96.5** |
| **Total** | **623,184** | **34,345** | **657,529** | **100.0** |

Table 17: Uses of animals for the creation of new genetically altered animal lines in basic research by species and type of research (2017)

|  | **Oncology** | **Cardiovascular Blood and Lymphatic System** | **Nervous System** | **Respiratory System** | **Gastrointestinal System including Liver** | **Musculoskeletal System** | **Immune System** | **Urogenital/Reproductive System** | **Sensory Organs (skin, eyes and ears)** | **Endocrine System/Metabolism** | **Multisystemic** | **Ethology / Animal Behaviour /Animal Biology** | **Other basic research** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | | | | | | |
| **Rodents** | | | | | | | | | | | | | | | |
| Mice | 77,684 | 16,920 | 62,701 | 1,227 | 10,587 | 12,912 | 47,995 | 22,816 | 10,793 | 16,200 | 117,781 | 474 | 64,966 | **463,056** | **74.3** |
| Rats | 0 | 3,180 | 1,815 | 0 | 0 | 0 | 673 | 29 | 0 | 0 | 973 | 0 | 1,686 | **8,356** | **1.3** |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Rabbits** | | | | | | | | | | | | | | | |
| Rabbits | 0 | 81 | 0 | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 94 | **235** | **0** |
| **Farm animals** | | | | | | | | | | | | | | | |
| Pigs | 0 | 5 | 4 | 0 | 0 | 11 | 79 | 0 | 0 | 0 | 39 | 0 | 9 | **147** | **0** |
| Sheep | 0 | 0 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **17** | **0** |
| **Non-human primates** | | | | | | | | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | **10** | **0** |
| **Other mammals** | | | | | | | | | | | | | | | |
| Other mammals | 0 | 0 | 61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **61** | **0** |
| **Birds** | | | | | | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 0 | 0 | 495 | 0 | 0 | **620** | **0.1** |
| **Amphibians** | | | | | | | | | | | | | | | |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | **250** | **0** |
| **Fish** | | | | | | | | | | | | | | | |
| Zebra fish | 4,109 | 45,549 | 28,686 | 0 | 109 | 3,728 | 10,786 | 4,140 | 5,787 | 2,549 | 19,260 | 6,917 | 14,243 | **145,863** | **23.4** |
| Other fish | 69 | 24 | 1 | 0 | 0 | 0 | 0 | 778 | 2,394 | 0 | 1,296 | 0 | 7 | **4,569** | **0.7** |
| **Totals** | | | | | | | | | | | | | | | |
| **Total** | **81,862** | **65,759** | **93,284** | **1,228** | **10,696** | **16,651** | **59,533** | **27,948** | **18,974** | **18,749** | **139,844** | **7,391** | **81,265** | **623,184** | **100** |
| **%** | **13.1** | **10.6** | **15** | **0.2** | **1.7** | **2.7** | **9.6** | **4.5** | **3** | **3** | **22.4** | **1.2** | **13** | **100** |  |

Table 18.1: Uses of animals for the creation of new genetically altered animal lines in basic, translational and applied research by species and type of research (Part 1) (2017)

|  | **Human Cancer** | **Human Infectious Disorders** | **Human Cardiovascular Disorders** | **Human Nervous and Mental Disorders** | **Human Respiratory Disorders** | **Human Gastrointestinal Disorders including Liver** | **Human Musculoskeletal Disorders** | **Human Immune Disorders** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | |
| **Rodents** | | | | | | | | |
| Mice | 9,346 | 490 | 2,074 | 2,866 | 263 | 2,544 | 305 | 2,265 |
| Rats | 44 | 0 | 149 | 971 | 0 | 0 | 408 | 0 |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Rabbits** | | | | | | | | |
| Rabbits | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Farm animals** | | | | | | | | |
| Pigs | 26 | 0 | 9 | 11 | 0 | 0 | 13 | 0 |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Non-human primates** | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other mammals** | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Birds** | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Amphibians** | | | | | | | | |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Fish** | | | | | | | | |
| Zebra fish | 0 | 730 | 1,480 | 242 | 0 | 0 | 155 | 0 |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Totals** | | | | | | | | |
| **Total** | **9,416** | **1,220** | **3,712** | **4,090** | **263** | **2,544** | **881** | **2,265** |
| **%** | **27.8** | **3.6** | **11** | **12.1** | **0.8** | **7.5** | **2.6** | **6.7** |

Table 18.2: Uses of animals for the creation of new genetically altered animal lines in basic translational and applied research by species and type of research (Part 2) (2017)

|  | **Human Urogenital/Reproductive Disorders** | **Human Sensory Organ Disorders (skin, eyes and ears)** | **Human Endocrine/Metabolism Disorders** | **Other Human Disorders** | **Animal Diseases and Disorders** | **Animal Welfare** | **Diagnosis of diseases** | **Non-regulatory toxicology and ecotoxicology** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mammals** | | | | | | | | | | |
| **Rodents** | | | | | | | | | | |
| Mice | 654 | 67 | 4,469 | 502 | 1,816 | 0 | 0 | 0 | **27,661** | **80.5** |
| Rats | 0 | 15 | 0 | 0 | 0 | 17 | 0 | 0 | **1,604** | **4.7** |
| Guinea-Pigs | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| Other rodents | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Rabbits** | | | | | | | | | | |
| Rabbits | 0 | 0 | 232 | 0 | 8 | 0 | 0 | 0 | **240** | **0.7** |
| **Farm animals** | | | | | | | | | | |
| Pigs | 0 | 12 | 5 | 4 | 0 | 0 | 0 | 0 | **80** | **0.2** |
| Sheep | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Non-human primates** | | | | | | | | | | |
| Marmoset and tamarins | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Other mammals** | | | | | | | | | | |
| Other mammals | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Birds** | | | | | | | | | | |
| Domestic fowl | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | **27** | **0.1** |
| **Amphibians** | | | | | | | | | | |
| Xenopus | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Fish** | | | | | | | | | | |
| Zebra fish | 0 | 1,074 | 0 | 40 | 0 | 0 | 502 | 510 | **4,733** | **13.8** |
| Other fish | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** | **0** |
| **Totals** | | | | | | | | | | |
| **Total** | **654** | **1,168** | **4,706** | **546** | **1,851** | **17** | **502** | **510** | **34,345** | **100** |
| **%** | **1.9** | **3.4** | **13.7** | **1.6** | **5.4** | **0** | **1.5** | **1.5** | **100** |  |

Table 19: Uses of animals for the maintenance of colonies of established genetically altered animal lines by species, severity and genetic status (2017)

|  | **Severity** | **Genetically altered with a harmful phenotype** | **Genetically altered without a harmful phenotype** | **Not genetically altered** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Non-recovery | 417 | 225 | 71 | 713 | 0.1 |
| Mild | 48,209 | 359,141 | 30,784 | 438,134 | 77.7 |
| Moderate | 37,965 | 37,786 | 3,358 | 79,109 | 14.0 |
| Severe | 22,525 | 23,197 | 106 | 45,828 | 8.1 |
| **Total** | **109,116** | **420,349** | **34,319** | **563,784** | **100.0** |
| **Rats** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 2,271 | 816 | 590 | 3,677 | 54.1 |
| Moderate | 830 | 755 | 391 | 1,976 | 29.1 |
| Severe | 1,132 | 14 | 0 | 1,146 | 16.9 |
| **Total** | **4,233** | **1,585** | **981** | **6,799** | **100.0** |
| **Dogs** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 0 | 0 | 0 | 0.0 |
| Moderate | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 10 | 0 | 10 | 100.0 |
| **Total** | **0** | **10** | **0** | **10** | **100.0** |
| **Domestic fowl** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 242 | 26 | 268 | 73.0 |
| Moderate | 93 | 0 | 0 | 93 | 25.3 |
| Severe | 6 | 0 | 0 | 6 | 1.6 |
| **Total** | **99** | **242** | **26** | **367** | **100.0** |
| **Xenopus** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 0 | 376 | 14 | 390 | 99.5 |
| Moderate | 0 | 0 | 0 | 0 | 0.0 |
| Severe | 0 | 1 | 1 | 2 | 0.5 |
| **Total** | **0** | **377** | **15** | **392** | **100.0** |
| **Zebra fish** | Non-recovery | 0 | 1 | 26 | 27 | 0.0 |
| Mild | 15,297 | 48,754 | 3,830 | 67,881 | 95.8 |
| Moderate | 128 | 2,034 | 2 | 2,164 | 3.1 |
| Severe | 127 | 637 | 4 | 768 | 1.1 |
| **Total** | **15,552** | **51,426** | **3,862** | **70,840** | **100.0** |
| **Other fish** | Non-recovery | 0 | 0 | 0 | 0 | 0.0 |
| Mild | 2 | 114 | 0 | 116 | 18.1 |
| Moderate | 0 | 524 | 0 | 524 | 81.9 |
| Severe | 0 | 0 | 0 | 0 | 0.0 |
| **Total** | **2** | **638** | **0** | **640** | **100.0** |
|  |  |  |  |  |  |  |
| **All Species** | **Non-recovery** | **417** | **226** | **97** | **740** | **0.1** |
| **Mild** | **65,779** | **409,443** | **35,244** | **510,466** | **79.4** |
| **Moderate** | **39,016** | **41,099** | **3,751** | **83,866** | **13.0** |
| **Severe** | **23,790** | **23,859** | **111** | **47,760** | **7.4** |
| **Total** | **129,002** | **474,627** | **39,203** | **642,832** | **100.0** |

Table 20: Uses of animals for the maintenance of colonies of established genetically altered animal lines by species, reuse and genetic status (2017)

|  | **Reuse** | **Not genetically altered** | **Genetically altered without a harmful phenotype** | **Genetically altered with a harmful phenotype** | **Total** | **%** |
| --- | --- | --- | --- | --- | --- | --- |
| **Mice** | Yes | 0 | 72 | 69 | 141 | 0.0 |
| No | 34,319 | 420,277 | 109,047 | 563,643 | 100.0 |
| **Total** | **34,319** | **420,349** | **109,116** | **563,784** | **100.0** |
| **Rats** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 981 | 1,585 | 4,233 | 6,799 | 100.0 |
| **Total** | **981** | **1,585** | **4,233** | **6,799** | **100.0** |
| **Dogs** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 10 | 0 | 10 | 100.0 |
| **Total** | **0** | **10** | **0** | **10** | **100.0** |
| **Domestic fowl** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 26 | 242 | 99 | 367 | 100.0 |
| **Total** | **26** | **242** | **99** | **367** | **100.0** |
| **Xenopus** | Yes | 4 | 193 | 0 | 197 | 50.3 |
| No | 11 | 184 | 0 | 195 | 49.7 |
| **Total** | **15** | **377** | **0** | **392** | **100.0** |
| **Zebra fish** | Yes | 149 | 463 | 0 | 612 | 0.9 |
| No | 3,713 | 50,963 | 15,552 | 70,228 | 99.1 |
| **Total** | **3,862** | **51,426** | **15,552** | **70,840** | **100.0** |
| **Other fish** | Yes | 0 | 0 | 0 | 0 | 0.0 |
| No | 0 | 638 | 2 | 640 | 100.0 |
| **Total** | **0** | **638** | **2** | **640** | **100.0** |
|  |  |  |  |  |  |  |
| **All Species** | **Yes** | **153** | **728** | **69** | **950** | **0.1** |
| **No** | **39,050** | **473,899** | **128,933** | **641,882** | **99.9** |
| **Total** | **39,203** | **474,627** | **129,002** | **642,832** | **100.0** |