Part 1: Numbers of animals used for the first time for research, testing, routine production and educational (including training) purposes

Numbers of animals used for the first time by species

| Mice147,82958.90%Rats33,02813.16%Guinea-Pigs2,2490.90%Hamsters (Syrian)1080.04%Hamsters (Chinese) | Animal Species | Number of animals | Percentage |
|---|----------------------------|-------------------|------------|
| Guinea-Pigs2,2490.90%Hamsters (Syrian)1080.04%Hamsters (Chinese) | Mice | 147,829 | 58.90% |
| Hamsters (Syrian)Inters (Syrian)0.004%Hamsters (Chinese)IntersMongolian gerbilIntersOther rodentsIntersRabbits2.33440.93%Cats0.00%0.00%Dogs5270.21%FerretsIntersIntersOther camivores5.9482.37%Horses, donkeys and cross- breeds10.00%Pigs3.86543.45%Goats2.70.01%SheepIntersectionIntersectionCattle110.00%ProsimiansIntersectionIntersectionMarmoset and tamarinsIntersectionIntersectionCynomolgus monkeyIntersectionIntersectionSquirrel monkeyIntersectionIntersectionOther species of New World Monkeys (Ceroopithecoidea)IntersectionOther species of New World Monkeys (Ceroopithecoidea)IntersectionOther nammalsIntersectionIntersectionDonestic fowlIntersectionIntersectionReptilesIntersectionIntersectionReptilesIntersectionIntersectionCher nammalsIntersectionIntersectionDensetic fowlIntersectionIntersectionCher namhalsIntersectionIntersectionDensetic fowlIntersectionIntersectionCher namhalsIntersectionIntersectionDensetic fowlIntersectionIntersectionCher namhalisIntersection <td>Rats</td> <td>33,028</td> <td>13.16%</td> | Rats | 33,028 | 13.16% |
| Hamsters (Chinese)Image (Chinese)Mongolian gerbilImage (Chinese)Mongolian gerbilImage (Chinese)Cother rodentsImage (Chinese)Rabbits2,3440.93%CatsCats0.00%Dogs5270.21%FerretsImage (Chinese)Image (Chinese)Other carnivoresS.9482.37%Horses, donkeys and cross- breedsImage (Chinese)Image (Chinese)PigsCats2.37%GoatsImage (Chinese)Image (Chinese)GoatsImage (Chinese)Image (Chinese)SheepImage (Chinese)Image (Chinese)CattleImage (Chinese)Image (Chinese)Marmoset and tamarinsImage (Chinese)Image (Chinese)Cynomolgus monkeyImage (Chinese)Image (Chinese)ProsimiansImage (Chinese)Image (Chinese)Marmoset and tamarinsImage (Chinese)Image (Chinese)Cynomolgus monkeyImage (Chinese)Image (Chinese)Vervets (Chinocebus spp.)Image (Chinese)Image (Chinese)BaboonsImage (Chinese)Image (Chinese)Squirrel monkeyImage (Chinese)Image (Chinese)Other species of New World Monkeys (Ceboidea)Image (Chinese)ApesImage (Chinese)Image (Chinese)Other marmalsImage (Chinese)Image (Chinese)Image (Chinese)Image (Chinese)Image (Chinese)Other species of New World Monkeys (Ceboidea)Image (Chinese)Ima | Guinea-Pigs | 2,249 | 0.90% |
| Mongolian gerbilIdentifyOther rodentsIdentifyRabbits2,3440.93%Cats0.60.00%Dogs5270.21%FerretsIdentify0.00%Other carnivores5.9482.37%Horses, donkeys and cross- breeds110.00%Pigs8.6543.45%Goats270.01%Sheep200.02%Cattle4510.18%ProsimiansIdentifyIdentifyRhesus monkeyIdentifyIdentifyVervets (Chlorocebus spp.)IdentifyIdentifyBaboonsIdentifyIdentifySquirrel monkeyIdentifyIdentifyOther species of Old World Monkeys (Cercopithecoidea)IdentifyOther mammals350.01%Domestic fowlIdentifyIdentifyReptiles210.01%Rana7920.32%Xenopus3900.16%Chter amphibiansIdentifyIdentifyOther amphibiansIdentifyIdentifyCher amphibiansIdentifyIdentifyCattle3900.16%Cattle7720.32%XenopusIdentifyIdentifyCattle7733.08%Other fish39745Ids.84% | Hamsters (Syrian) | 108 | 0.04% |
| Other rodentsImage: Constraint of the section of the sec | Hamsters (Chinese) | | |
| Rabbits2,3440.93%Cats60.00%Dogs5270.21%FerretsOther carnivores3.9482.37%Horses, donkeys and cross- breeds110.00%Pigs8,6543.45%Goats270.01%Sheep6620.02%Cattle4510.18%ProsiniansMarmoset and tamarinsCynomolgus monkeyRhesus monkeyVervets (Chlorocebus spp.)BaboonsSquirrel monkeyOther species of Old World Monkeys (Ceboidea)Other species of New World Monkeys (Ceboidea)Other mammals300.16%Reptiles210.01%Rana7920.32%Xenopus3900.16%Cyter afish7,7313.08%Other fish39,74515.84% | Mongolian gerbil | | |
| Cats0.00%Dogs5270.21%FerretsOther carnivores5,9482.37%Horses, donkeys and cross- breeds110.00%Pigs8,6543.45%Goats270.01%Sheep620.02%Cattle4510.18%ProsimiansMarmoset and tamarinsCynomolgus monkeyVervets (Chlorocebus spp.)BaboonsSquirrel monkeyOther species of Old World Monkeys (Ceboidea)Other mammals350.01%Domestic fowl6210.25%Other parcies of New World Reptiles3900.16%Reptiles2110.01%Conpus3900.16%Reptiles3900.16%Cher amphibians60.00%Zeora fish7,7313.08%Other fish39,74515.84% | Other rodents | | |
| Dogs5270.21%Dogs5270.21%Ferrets00Other carnivores5,9482.37%Horses, donkeys and cross- breeds110.00%Pigs8,6543.45%Goats270.01%Sheep620.02%Cattle4510.18%Prosinians10Marmoset and tamarins11Cynomolgus monkey11Rhesus monkey11Vervets (Chlorocebus spp.)11Baboons11Squirrel monkey11Other species of Old World Monkeys (Cercopithecoidea)1Other species of New World Monkeys (Ceboidea)20.01%Domestic fowl210.01%Rana7920.32%Xenopus3900.16%Reptiles3900.16%Cher amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84% | Rabbits | 2,344 | 0.93% |
| FormetsImage: constraint of the section o | Cats | 6 | 0.00% |
| Other carnivores5,9482.37%Horses, donkeys and cross- breeds110.00%Pigs8,6543.45%Goats270.01%Sheep620.02%Cattle4510.18%Prosimians10.18%Marmoset and tamarins10.18%Cynomolgus monkey11Rhesus monkey11Vervets (Chlorocebus spp.)11Baboons11Squirrel monkey11Other species of Old World Monkeys (Ceboidea)11Other species of New World Monkeys (Ceboidea)11Other mammals30.01%Domestic fowl20.25%Other birds3900.16%Rana7920.32%Xenopus3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84% | Dogs | 527 | 0.21% |
| Horses, donkeys and cross- breeds110.00%Pigs8,6543.45%Goats270.01%Sheep620.02%Cattle4510.18%Prosimians11Marnoset and tamarins11Cynomolgus monkey11Rhesus monkey11Vervets (Chlorocebus spp.)11Baboons11Squirrel monkey11Other species of Old World Monkeys (Cercopithecoidea)1Other species of New World Monkeys (Ceboidea)0.01%Domestic fowl2010.01%Rana3900.16%Reptiles3900.16%Reptiles3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84% | Ferrets | | |
| breeds110.00%Pigs8,6543.45%Goats270.01%Sheep620.02%Cattle4510.18%ProsimiansMarnoset and tamarinsCynomolgus monkeyRhesus monkeyVervets (Chlorocebus spp.)BaboonsSquirrel monkeyOther species of Old World Monkeys (Cercopithecoidea)Other mammals350.01%Domestic fowl6210.25%Other birds3900.16%Reptiles210.01%Rana7920.32%Xenopus3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84% | Other carnivores | 5,948 | 2.37% |
| Goats270.01%Sheep620.02%Cattle4510.18%Prosimians11Marmoset and tamarins11Cynomolgus monkey11Rhesus monkey11Vervets (Chlorocebus spp.)11Baboons11Squirrel monkey11Other species of Old World Monkeys (Cercopithecoidea)11Other species of New World Monkeys (Ceboidea)11Other mammals350.01%Domestic fowl6210.25%Other birds3900.16%Reptiles210.01%Chana3900.16%Apas3900.16%Cher amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84% | | 11 | 0.00% |
| Sheep620.02%Cattle44510.18%ProsimiansInternationInternationMarmoset and tamarinsInternationInternationCynomolgus monkeyInternationInternationRhesus monkeyInternationInternationVervets (Chlorocebus spp.)InternationInternationBaboonsInternationInternationSquirrel monkeyInternationInternationOther species of Old World Monkeys (Cercopithecoidea)InternationOther species of New World Monkeys (Ceboidea)InternationOther mammalsInternationInternationDomestic fowlInternationInternationOther birdsInternationInternationRanaInternationInternationXenopusInternationInternationOther amphibiansInternationInternationOther fishInternationInternationCephalopodsInternationInternation | Pigs | 8,654 | 3.45% |
| Cattle4510.18%Cattle4510.18%ProsimiansMarmoset and tamarinsCynomolgus monkeyRhesus monkeyVervets (Chlorocebus spp.)BaboonsSquirrel monkeyOther species of Old World Monkeys (Cercopithecoidea)Other species of New World Monkeys (Ceboidea)ApesOther mammals350.01%Domestic fowl6210.25%Other birds3000.16%Reptiles210.01%Kana7920.32%Xenopus3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84% | Goats | 27 | 0.01% |
| ProsimiansImage: constraint of the sector of th | Sheep | 62 | 0.02% |
| Marmoset and tamarinsImage: Addition of the species of Old World Monkeys (Cercopithecoidea)Image: Addition of the species of New World Monkeys (Cercopithecoidea)Image: A | Cattle | 451 | 0.18% |
| Cynomolgus monkeyImage: Cynomolgus monkeyRhesus monkeyImage: Cynomolgus monkeyVervets (Chlorocebus spp.)Image: Cynomolgus monkeyBaboonsImage: Cynomolgus monkeySquirrel monkeyImage: Cynomolgus monkeyOther species of Old World Monkeys (Cercopithecoidea)Image: Cynomolgus monkeyOther species of New World Monkeys (Ceboidea)Image: Cynomolgus monkeyOther species of New World Monkeys (Ceboidea)Image: Cynomolgus monkeyOther mammalsImage: Cynomolgus monkeyOther mammalsImage: Cynomolgus monkeyOther birdsImage: Cynomolgus monkeyOther birdsImage: Cynomolgus monkeyRanaImage: Cynomolgus monkeyXenopusImage: Cynomolgus monkeyOther amphibiansImage: Cynomolgus monkeyOther fishImage: Cynomolgus monkeyOther fishImage: Cynomolgus monkeyCynomolgus monkeyImage: Cynomolgus monkeyOther fishImage: Cynomolgus monkeyCynomolgus monkeyImage: Cynomolgus monkey< | Prosimians | | |
| Rhesus monkeyImage: Chlorocebus spp.)Image: Chlorocebus spp.)BaboonsImage: Chlorocebus spp.)BaboonsImage: Chlorocebus spp.)Squirrel monkeyImage: Chlorocebus spp.)Other species of Old World Monkeys (Cercopithecoidea)Image: Chlorocebus spp.)Other species of New World Monkeys (Ceboidea)Image: Chlorocebus spp.)ApesImage: Chlorocebus spp.)Other mammalsImage: Chlorocebus spp.)Other birdsImage: Chlorocebus spp.)Other birdsImage: Chlorocebus spp.)Chlorocebus spp.)Image: Chlorocebus spp.)RanaImage: Chlorocebus spp.)Other amphibiansImage: Chlorocebus spp.)Other fishImage: Chlorocebus spp.)Image: Chlorocebus spp.)Ima | Marmoset and tamarins | | |
| Vervets (Chlorocebus spp.)Image: Chlorocebus spp.)BaboonsImage: Chlorocebus spp.)Squirrel monkeyImage: Chlorocebus spl.)Other species of Old World Monkeys (Cercopithecoidea)Image: Chlorocebus spl.)Other species of New World Monkeys (Ceboidea)Image: Chlorocebus spl.)ApesImage: Chlorocebus spl.)Other mammalsImage: Chlorocebus spl.)Domestic fowlImage: Chlorocebus spl.)Other birdsImage: Chlorocebus spl.)ReptilesImage: Chlorocebus spl.)RanaImage: Chlorocebus spl.)XenopusImage: Chlorocebus spl.)Other amphibiansImage: Chlorocebus spl.)Other fishImage: Chlorocebus s | Cynomolgus monkey | | |
| BaboonsImage: Squirrel monkeyImage: Squirrel monkeyOther species of Old World Monkeys (Cercopithecoidea)Image: Squirrel monkeyOther species of New World Monkeys (Ceboidea)Image: Squirrel monkeyApesImage: Squirrel monkeyOther mammals35Domestic fowl621Other birds390Reptiles21Rana792Xenopus390Other amphibians6Other fish7,731Other fish399,745Other fish397,45 | Rhesus monkey | | |
| Squirrel monkeyImage: Cercopithecoidea)Image: Cercopithecoidea)Other species of New World Monkeys (Ceboidea)Image: Ceboidea)ApesImage: Ceboidea)Other mammals35Other mammals0.01%Domestic fowl621Other birds390Other birds0.16%Reptiles21Other amphibians0.16%Other amphibians0.16%Other fish39,745Other fish39,745 | Vervets (Chlorocebus spp.) | | |
| Other species of Old World Monkeys (Cercopithecoidea)Image: Cercopithecoidea)Other species of New World Monkeys (Ceboidea)Image: Ceboidea)ApesImage: Ceboidea)Other mammals35Domestic fowl621Other birds390Other birds390Reptiles21Rana792Xenopus390Other amphibians6Cebra fish7,7313.08%Other fish39,745 | Baboons | | |
| Monkeys (Cercopithecoidea)Image: Cercopithecoidea)Other species of New World Monkeys (Ceboidea)Image: Ceboidea)ApesImage: Ceboidea)Other mammals305Domestic fowl621Other birds390Other birds390Other birds390Reptiles21Rana792Xenopus390Other amphibians6Cebra fish7,731Other fish399,745Other fish39,745 | Squirrel monkey | | |
| Monkeys (Ceboidea)Image: Ceboidea (Ceboidea)ApesComment (Ceboidea)Other mammals0.01%Domestic fowl621Other birds390Other birds390Reptiles21Rana792Xenopus390Other amphibians6Cebra fish7,731Other fish39,745Cephalopods0.00% | | | |
| Other mammals 35 0.01% Domestic fowl 621 0.25% Other birds 390 0.16% Reptiles 21 0.01% Rana 792 0.32% Xenopus 390 0.16% Other amphibians 6 0.00% Zebra fish 7,731 3.08% Other fish 39,745 15.84% | | | |
| Domestic fowl 621 0.25% Other birds 390 0.16% Reptiles 21 0.01% Rana 792 0.32% Xenopus 390 0.16% Other amphibians 6 0.00% Zebra fish 7,731 3.08% Other fish 39,745 15.84% | Apes | | |
| Other birds3900.16%Reptiles210.01%Rana7920.32%Xenopus3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84%Cephalopods | Other mammals | 35 | 0.01% |
| Reptiles210.01%Rana7920.32%Xenopus3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84%Cephalopods60.00% | Domestic fowl | 621 | 0.25% |
| Rana7920.32%Xenopus3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84%Cephalopods66 | Other birds | 390 | 0.16% |
| Xenopus3900.16%Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84%Cephalopods66 | Reptiles | 21 | 0.01% |
| Other amphibians60.00%Zebra fish7,7313.08%Other fish39,74515.84%Cephalopods15.84%15.84% | Rana | 792 | 0.32% |
| Zebra fish 7,731 3.08% Other fish 39,745 15.84% Cephalopods | Xenopus | 390 | 0.16% |
| Other fish 39,745 15.84% Cephalopods | Other amphibians | 6 | 0.00% |
| Cephalopods | Zebra fish | 7,731 | 3.08% |
| | Other fish | 39,745 | 15.84% |
| Total uses 250,975 100.00% | Cephalopods | | |
| | Total uses | 250,975 | 100.00% |

Place of birth of animals other than non-human primate

| Place of Birth | Number of animals | Percentage |
|--|----------------------|------------|
| Animals born in the EU at a registered breeder | 178,352 | 71.06% |
| Animals born in the EU but not at a registered breeder | 66,820 | 26.62% |
| Animals born in rest of Europe | 483 | 0.19% |
| Animals born in rest of world | 5,320 | 2.12% |
| Total uses | 250,975 | 100.00% |

Source of non-human primates

| NHP Source (origin) | Number of animals | |
|--|----------------------|--|
| 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 uses | | |

Generation of non-human primates

| NHP Generation | Number of animals | |
|------------------------|----------------------|--|
| F0 | | |
| F1 | | |
| F2 or greater | | |
| Self-sustaining colony | | |
| Total uses | | |

Part 2: Numbers of all uses of animals for research, testing, routine production and educational (including training) purposes

| Animal Species | First uses | Reuses | Percentage of reuses | Total uses |
|--|------------|--------|----------------------|------------|
| Mice | 147,829 | 1,209 | 0.81% | 149,038 |
| Rats | 33,028 | 321 | 0.96% | 33,349 |
| Guinea-Pigs | 2,249 | 0 | 0.00% | 2,249 |
| Hamsters (Syrian) | 108 | 3 | 2.70% | 111 |
| Hamsters (Chinese) | | | | |
| Mongolian gerbil | | | | |
| Other rodents | | | | |
| Rabbits | 2,344 | 0 | 0.00% | 2,344 |
| Cats | 6 | 0 | 0.00% | 6 |
| Dogs | 527 | 62 | 10.53% | 589 |
| Ferrets | | | | |
| Other carnivores | 5,948 | 180 | 2.94% | 6,128 |
| Horses, donkeys and cross- breeds | 11 | 5 | 31.25% | 16 |
| Pigs | 8,654 | 162 | 1.84% | 8,816 |
| Goats | 27 | 0 | 0.00% | 27 |
| Sheep | 62 | 5 | 7.46% | 67 |
| Cattle | 451 | 292 | 39.30% | 743 |
| Prosimians | | | | |
| Marmoset and tamarins | | | | |
| Cynomolgus monkey | | | | |
| Rhesus monkey | | | | |
| Vervets (Chlorocebus spp.) | | | | |
| Baboons | | | | |
| Squirrel monkey | | | | |
| Other species of Old World Monkeys (Cercopithecoidea) | | | | |
| Other species of New World Monkeys (Ceboidea) | | | | |
| Apes | | | | |
| Other mammals | 35 | 1 | 2.78% | 36 |
| Domestic fowl | 621 | 0 | 0.00% | 621 |
| Other birds | 390 | 11 | 2.74% | 401 |
| Reptiles | 21 | 3 | 12.50% | 24 |
| Rana | 792 | 0 | 0.00% | 792 |
| Xenopus | 390 | 0 | 0.00% | 390 |
| Other amphibians | 6 | 10 | 62.50% | 16 |
| Zebra fish | 7,731 | 0 | 0.00% | 7,731 |
| Other fish | 39,745 | 36 | 0.09% | 39,781 |
| Cephalopods | | | | |
| Total uses | 250,975 | 2,300 | 0.91% | 253,275 |

Uses of animals in research, testing, routine production and education (including training) by main categories of scientific purposes

| Purpose Category | Number of uses | Percentage |
|--|----------------|------------|
| Basic Research | 83,090 | 32.81% |
| Translational and applied research | 141,984 | 56.06% |
| Regulatory use and Routine production | 20,426 | 8.06% |
| Protection of the natural environment in the interests of the health or welfare of human beings or animals | 3,031 | 1.20% |
| Preservation of species | 913 | 0.36% |
| Higher education or training for the acquisition, maintenance or improvement of vocational skills | 3,831 | 1.51% |
| Forensic enquiries | | |
| Total uses | 253,275 | 100.00% |

Basic research related uses

| Basic Research | Number of uses | Percentage |
|---|----------------|------------|
| Oncology | 10,434 | 12.56% |
| Cardiovascular Blood and Lymphatic System | 2,943 | 3.54% |
| Nervous System | 17,459 | 21.01% |
| Respiratory System | 859 | 1.03% |
| Gastrointestinal System including Liver | 7,285 | 8.77% |
| Musculoskeletal System | 1,334 | 1.61% |
| Immune System | 16,942 | 20.39% |
| Urogenital/Reproductive System | 2,396 | 2.88% |
| Sensory Organs (skin, eyes and ears) | 522 | 0.63% |
| Endocrine System/Metabolism | 13,952 | 16.79% |
| Multisystemic | 1,970 | 2.37% |
| Ethology / Animal Behaviour /Animal Biology | 659 | 0.79% |
| Other basic research | 6,335 | 7.62% |
| Total uses | 83,090 | 100.00% |

Translational and applied research related uses

| Translational and applied research | Number of uses | Percentage |
|---|----------------|------------|
| Human Cancer | 18,838 | 13.27% |
| Human Infectious Disorders | 10,334 | 7.28% |
| Human Cardiovascular Disorders | 4,031 | 2.84% |
| Human Nervous and Mental Disorders | 20,002 | 14.09% |
| Human Respiratory Disorders | 316 | 0.22% |
| Human Gastrointestinal Disorders including Liver | 2,087 | 1.47% |
| Human Musculoskeletal Disorders | 860 | 0.61% |
| Human Immune Disorders | 4,509 | 3.18% |
| Human Urogenital/Reproductive Disorders | 2,263 | 1.59% |
| Human Sensory Organ Disorders (skin, eyes and ears) | 208 | 0.15% |
| Human Endocrine/Metabolism Disorders | 30,931 | 21.78% |
| Other Human Disorders | 1,742 | 1.23% |
| Animal Diseases and Disorders | 35,931 | 25.31% |
| Animal Welfare | 7,222 | 5.09% |
| Diagnosis of diseases | 870 | 0.61% |
| Plant diseases | | |
| Non-regulatory toxicology and ecotoxicology | 1,840 | 1.30% |
| Total uses | 141,984 | 100.00% |

Regulatory uses and Routine production

| 5 7 1 | | |
|--|----------------|------------|
| Regulatory uses and Routine production | Number of uses | Percentage |
| Quality control (incl batch safety and potency testing) | 15,544 | 76.10% |
| Other efficacy and tolerance testing | 1,091 | 5.34% |
| Toxicity and other safety testing including pharmacology | 2,733 | 13.38% |
| Routine production | 1,058 | 5.18% |
| Total uses | 20,426 | 100.00% |

Regulatory uses - Quality control (including batch safety and potency testing)

| Regulatory uses - Quality control (including batch safety and potency testing) | Number of uses | Percentage |
|--|----------------|------------|
| Batch safety testing | 2,366 | 15.22% |
| Pyrogenicity testing | | |
| Batch potency testing | 13,137 | 84.51% |
| Other quality controls | 41 | 0.26% |
| Total uses | 15,544 | 100.00% |

Regulatory uses - Toxicity and other safety testing including pharmacology

| Regulatory uses - Toxicity and other safety testing including pharmacology | Number of uses | Percentage |
|--|----------------|------------|
| Acute and sub-acute | 26 | 0.95% |
| Skin irritation/corrosion | 3 | 0.11% |
| Skin sensitisation | 32 | 1.17% |
| Eye irritation/corrosion | | |
| Repeated dose toxicity | 1,662 | 60.81% |
| Carcinogenicity | | |
| Genotoxicity | | |
| Reproductive toxicity | | |
| Developmental toxicity | 6 | 0.22% |
| Neurotoxicity | | |
| Kinetics | 253 | 9.26% |
| Pharmaco-dynamics (incl safety pharmacology) | 751 | 27.48% |
| Phototoxicity | | |
| Ecotoxicity | | |
| Safety testing in food and feed area | | |
| Target animal safety | | |
| Other toxicity/safety testing | | |
| Total uses | 2,733 | 100.00% |

Regulatory uses – Toxicity and other safety testing including pharmacology – Acute and subacute toxicity testing methods

| Regulatory uses – Toxicity and other safety testing including pharmacology – Acute and sub-acute toxicity testing methods | Number of uses | Percentage |
|--|----------------|------------|
| LD50, LC50 | | |
| Other lethal methods | | |
| Non lethal methods | 26 | 100.00% |
| Total uses | 26 | 100.00% |

Regulatory uses – Toxicity and other safety testing including pharmacology – Repeated dose toxicity

| Regulatory uses – Toxicity and other safety testing including pharmacology – Repeated dose toxicity | Number of uses | Percentage |
|--|----------------|------------|
| up to 28 days | 866 | 52.11% |
| 29 - 90 days | 502 | 30.20% |
| > 90 days | 294 | 17.69% |
| Total uses | 1,662 | 100.00% |

Regulatory uses – Toxicity and other safety testing including pharmacology – Ecotoxicity

| Regulatory uses – Toxicity and other safety testing including pharmacology – Ecotoxicity | Number of uses | Percentage |
|--|----------------|------------|
| Acute toxicity | | |
| Chronic toxicity | | |
| Reproductive ecotoxicity | | |
| Endocrine activity | | |
| Bioaccumulation | | |
| Other ecotoxicity | | |
| Total uses | | |

Regulatory uses by type of legislation

| Type of legislation | Number of uses | Percentage |
|--|----------------|------------|
| Legislation on medicinal products for human use | 19,314 | 99.72% |
| Legislation on medicinal products for veterinary use and their residues | | |
| Medical devices legislation | 6 | 0.03% |
| 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 | | |
| Cosmetics legislation | | |
| Other legislation | 48 | 0.25% |
| Total uses | 19,368 | 100.00% |

Regulatory uses by origin of regulatory requirement

| Origine of legislative requirement | Number of uses | Percentage |
|---|----------------|------------|
| Legislation satisfying EU requirements | 19,286 | 99.58% |
| Legislation satisfying national requirements only [within EU] | 48 | 0.25% |
| Legislation satisfying Non-EU requirements only | 34 | 0.18% |
| Total uses | 19,368 | 100.00% |

Routine production uses by product type

| Product type | Number of uses | Percentage |
|---|----------------|------------|
| Blood based products | 996 | 94.14% |
| Monoclonal antibody by mouse ascites method | | |
| Other product types | 62 | 5.86% |
| Total uses | 1,058 | 100.00% |

Uses of animals in research, testing, routine production and education (including training) by severity

| Severity | Number of uses | Percentage |
|----------------------------|----------------|------------|
| Non-recovery | 7,599 | 3.00% |
| Mild [up to and including] | 123,862 | 48.90% |
| Moderate | 118,035 | 46.60% |
| Severe | 3,779 | 1.49% |
| Total uses | 253,275 | 100.00% |

Uses of animals in research, testing, routine production and education (including training) by genetic status of animals

| Genetic Status | Number of uses | Percentage |
|--|----------------|------------|
| Not genetically altered | 215,370 | 85.03% |
| Genetically altered without a harmful phenotype | 31,960 | 12.62% |
| Genetically altered with a harmful phenotype | 5,945 | 2.35% |
| Total uses | 253,275 | 100.00% |

Part 3: Creation and maintenance of genetically altered animal lines

Part 3.A : Creation of genetically altered animals lines

All uses of animals for the creation of new genetically altered animal lines by species, first uses and reuses

| Animal Species | First uses | Reuses | Percentage of reuses | Total uses |
|---|---------------|--------|-------------------------|---------------|
| Mice | 441 | 39 | 8.13% | 480 |
| Rats | | | | |
| Guinea-Pigs | | | | |
| Hamsters (Syrian) | | | | |
| Hamsters (Chinese) | | | | |
| Mongolian gerbil | | | | |
| Other rodents | | | | |
| Rabbits | | | | |
| Cats | | | | |
| Dogs | | | | |
| Ferrets | | | | |
| Other carnivores | | | | |
| Horses, donkeys and cross- breeds | | | | |
| Pigs | | | | |
| Goats | | | | |
| Sheep | | | | |
| Cattle | | | | |
| Prosimians | | | | |
| Marmoset and tamarins | | | | |
| Cynomolgus monkey | | | | |
| Rhesus monkey | | | | |
| Vervets (Chlorocebus spp.) | | | | |
| Baboons | | | | |
| Squirrel monkey | | | | |
| Other species of Old World Monkeys (Cercopithecoidea) | | | | |
| Other species of New World Monkeys (Ceboidea) | | | | |
| Apes | | | | |
| Other mammals | | | | |
| Domestic fowl | | | | |
| Other birds | | | | |
| Reptiles | | | | |
| Rana | | | | |
| Xenopus | | | | |
| Other amphibians | | | | |
| Zebra fish | 808 | | | 808 |
| Other fish | | | | |
| Cephalopods | | | | |
| Total uses | 1,249 | 39 | 3.03% | 1,288 |

Uses of animals for the creation of new genetically altered animal lines by severity

| Severity | Number of uses | Percentage |
|----------------------------|-------------------|------------|
| Non-recovery | | |
| Mild [up to and including] | 1,098 | 85.25% |
| Moderate | 190 | 14.75% |
| Severe | | |
| Total uses | 1,288 | 100.00% |

Uses of animals for the creation of new genetically altered animal lines by genetic status of the animals

| Genetic Status | Number of uses | Percentage |
|---|-------------------|------------|
| Not genetically altered | 204 | 15.84% |
| Genetically altered without a harmful phenotype | 1,043 | 80.98% |
| Genetically altered with a harmful phenotype | 41 | 3.18% |
| Total uses | 1,288 | 100.00% |

Uses of animals for the creation of new genetically altered animal lines by type of basic research purposes

| Basic Research | Number of uses | Percentage |
|---|----------------|------------|
| Oncology | 35 | 2.77% |
| Cardiovascular Blood and Lymphatic System | 183 | 14.48% |
| Nervous System | 273 | 21.60% |
| Respiratory System | | |
| Gastrointestinal System including Liver | 150 | 11.87% |
| Musculoskeletal System | | |
| Immune System | | |
| Urogenital/Reproductive System | | |
| Sensory Organs (skin, eyes and ears) | | |
| Endocrine System/Metabolism | 148 | 11.71% |
| Multisystemic | | |
| Ethology / Animal Behaviour /Animal Biology | | |
| Other basic research | 475 | 37.58% |
| Total uses | 1,264 | 100.00% |

Uses of animals for the creation of new genetically altered animal lines by type of translational and applied research purposes

| Translational and applied research | Number of uses | Percentage |
|---|----------------|------------|
| Human Cancer | | |
| Human Infectious Disorders | | |
| Human Cardiovascular Disorders | | |
| Human Nervous and Mental Disorders | 12 | 50.00% |
| Human Respiratory Disorders | | |
| Human Gastrointestinal Disorders including Liver | | |
| Human Musculoskeletal Disorders | | |
| Human Immune Disorders | | |
| Human Urogenital/Reproductive Disorders | 12 | 50.00% |
| 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 uses | 24 | 100.00% |

Part 3.B : Maintenance of genetically altered animal lines

All uses of animals for the maintenance of established genetically altered animal lines by species

| Animal Species | First | Reuses | Percentage | Total |
|---|-------|--------|------------|-------|
| | uses | | of reuses | uses |
| Mice | 7,187 | | | 7,187 |
| Rats | | | | |
| Guinea-Pigs | | | | |
| Hamsters (Syrian) | | | | |
| Hamsters (Chinese) | | | | |
| Mongolian gerbil | | | | |
| Other rodents | | | | |
| Rabbits | | | | |
| Cats | | | | |
| Dogs | | | | |
| Ferrets | | | | |
| Other carnivores | | | | |
| Horses, donkeys and cross-breeds | | | | |
| Pigs | | | | |
| Goats | | | | |
| Sheep | | | | |
| Cattle | | | | |
| Prosimians | | | | |
| Marmoset and tamarins | | | | |
| Cynomolgus monkey | | | | |
| Rhesus monkey | | | | |
| Vervets (Chlorocebus spp.) | | | | |
| Baboons | | | | |
| Squirrel monkey | | | | |
| Other species of Old World Monkeys (Cercopithecoidea) | | | | |
| Other species of New World Monkeys (Ceboidea) | | | | |
| Apes | | | | |
| Other mammals | | | | |
| Domestic fowl | | | | |
| Other birds | | | | |
| Reptiles | | | | |
| Rana | | | | |
| Xenopus | | | | |
| Other amphibians | | | | |
| Zebra fish | | | | |
| Other fish | | | | |
| Cephalopods | | | | |
| Total uses | 7,187 | | | 7,187 |

Uses of animals for the maintenance of established genetically altered animal lines by severity

| Severity | Number of uses | Percentage |
|----------------------------|-------------------|------------|
| Non-recovery | 395 | 5.50% |
| Mild [up to and including] | 5,267 | 73.29% |
| Moderate | 1,517 | 21.11% |
| Severe | 8 | 0.11% |
| Total uses | 7,187 | 100.00% |

Uses of animals for the maintenance of established genetically altered animal lines by genetic status of the animals

| Genetic Status | Number of uses | Percentage |
|--|-------------------|------------|
| Not genetically altered | 7,147 | 99.44% |
| Genetically altered without a harmful phenotype | 40 | 0.56% |
| Genetically altered with a harmful phenotype | | |
| Total uses | 7,187 | 100.00% |